# The Egyptian Physiotherapist Journey to Emancipation: A Grounded Theory Study

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**Abstract**

Autonomy is considered the most determinist feature of professions that distinguish their identity from occupations and para-professions. The literature revealed no information about the autonomy of physiotherapists in Egypt, which raised questions about how physiotherapy is perceived as a profession. The purpose of this study was to explore the identity of Egyptian physiotherapy from the perceptions of physiotherapists, patients and physicians.

A total of 74 participants were interviewed in Arabic individually or in focus groups. Participants included 32 physiotherapists, 26 physicians and 16 patients. The data was collected and analysed according to constructivist grounded theory methodology.

The findings suggest that most participants perceived Egyptian physiotherapy as a para-profession undertaking a process of professionalisation. However, during undergraduate education, physiotherapists developed expectations of autonomy in a work culture where physiotherapy would be fully professionalised. Yet, the most prevailing working culture was one where physiotherapists had no autonomy, and the content of their work was dictated by physiatrists. This culture jarred with the physiotherapist's individual professional identity.

The grounded theory constructed posits that the Egyptian physiotherapist's professional identity underwent a continuous process of development and change throughout their academic and career experiences. This process consisted of 3 stages. 'Constructing' occurred during undergraduate education where physiotherapists formed their nascent professional identity as doctors of physiotherapy. 'Struggling' happened as physiotherapists transitioned into an incompatible employment scenario. The struggle involved both internal struggles with role conflict, and external power struggles with physiatrists to gain autonomy. 'Emancipating' occurred through self-empowerment using continuous professional development and self-reflection that enabled professional identity transformation in a way helped physiotherapists to change the culture in the workplace. Successful transformation of professional identity required forming a community of practice that supported personal and professional growth and harnessed the collective efforts of physiotherapists to forge collaborative relationships with physiatrists.

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**Candidate declaration**

I hereby declare that:

1. I have been enrolled for another award of the University, or other academic or professional organisation, whilst undertaking my research degree. I was an enrolled student for the following award:

   Name of award: MRes Sociology, Planning and Policy

   Awarding body: Sheffield Hallam University

2. None of the material contained in the thesis has been used in any other submission for an academic award.

3. I am aware of and understand the University's policy on plagiarism and certify that this thesis is my own work. The use of all published or other sources of material consulted have been properly and fully acknowledged.

4. The work undertaken towards the thesis has been conducted in accordance with the SHU Principles of Integrity in Research and the SHU Research Ethics Policy.

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# Chapter 1: The Research Context

## 1.1 Introduction

The attainment of autonomy has been deemed a priority for and characteristic feature any profession (Sullivan, 2000). Autonomy is a terms that refers to the ability and freedom of individual professional to act and make independent decisions within their professional role (Swisher and Page, 2005). It has been noted that there are two types of autonomy: namely clinical and socio-economic (Sandstorm, 2007). Clinical autonomy was described as control over procedures and decisions related to practice and professional role performance, while socio-economic autonomy was related to the ability of professional to allocate and control economic resources within their role. Bithell (1999) identified that autonomy was the most deterministic feature of professions that distinguish their work and identity from occupations.

The attainment of autonomy in physiotherapy varied between countries based on the local legislations that govern physiotherapy practice and the cultural context and healthcare system in which physiotherapists worked (Ovretveit, 1985). Australian physiotherapists were considered pioneers in the development of physiotherapy towards autonomous practice as they were able to become first-contact practitioners in 1976 (Galley, 1976). Similar developments with regards to clinical autonomy and first-contact practice have been achieved by physiotherapy practice in the UK and the United States which led to the establishment of a professional status (Massey, 2002).

The degree to which physiotherapy progressed as a profession in certain western countries is demonstrated, in part, by the new skills and tasks that physiotherapists have included within their role. For instance, physiotherapists are able to work as first contact and extended scope practitioners, clinical specialists and consultants in the UK, United States, Canada and Australia, and have obtained additional responsibilities and skills such as drug and imaging prescription rights and injection therapy (Fricke, 2005; Kersten et al., 2007). Although the fundamental necessity of autonomy for physiotherapy is acknowledged by the World Confederation of Physical Therapy (WCPT, 2007), the degree of autonomy varies amongst countries (Chanou and Sellars, 2009).

Anecdotal reports suggest that physiotherapists in Egypt might have not established an autonomous status yet (Egyptian General Physiotherapy Syndicate, 2015). Over the last decade, the Egyptian government issued several legislations to define the role of physiotherapists and regulate their practice. These legislations indicate that physiotherapists work in a semi-autonomous fashion whereby referrals are initiated after a visit to a medical professional, yet the physiotherapist determines the choice of treatment. However, it has been reported that some physicians prescribe the physiotherapy interventions to be provided by the physiotherapist (EGPTS, 2015). It has also been mentioned that Doctor of Physical Medicine (physiatrists hereafter) tends to dictate the practice of physiotherapists (EGPTS, 2015). This knowledge alludes towards dominance of the medical profession over physiotherapy which has the potential to create limitations to the level of clinical autonomy experienced by physiotherapists within their role, which could impact the care they are able to deliver to patients.

There have been debates between the medical profession, particularly physiatry, and physiotherapy regarding issues of autonomy (Egyptian Medical Syndicate, 2015). These debates have frequently appeared in national newspapers and there is no indication that they have been resolved (Egypt Today, 2014). This raises questions about how physiotherapy is perceived as a 'profession' in Egypt and about the role of physiotherapists and their level of autonomy. Additional debates between physiotherapy and medical authorities around physiotherapists' use of the doctor title have made national headlines in multiple news sources over the years. The Egyptian General Physiotherapy Syndicate has argued that physiotherapists should be able to use the doctor title and benefit from the professional status it bestows like physicians, dentists, pharmacists and veterinarians. On the other hand, the Egyptian Medical Syndicate opposed that physiotherapists use the 'Dr' prefix on the grounds that physiotherapy education is not on par with medicine, dentistry, pharmacology and veterinary medicine. So far, no policies have been issued to determine if physiotherapists can legally refer to themselves as doctors of physiotherapy, however physiotherapists continue to use the doctor title resulting into unresolved tensions with the medical profession.

There are no studies that report on physician and patient perceptions of physiotherapy and physiotherapists with regards to the professional role, autonomy and status. Similarly, there is no knowledge around how physiotherapists perceive their own 'profession'. Physiotherapists' perspectives of their role and both their individual and collective level of autonomy and professional stature as an occupational group are unknown. These knowledge gaps point towards a lack of clarity around the identity of Egyptian physiotherapy.

This research uses constructivist grounded theory methodology to explore the identity of Egyptian physiotherapy from the perspectives of physiotherapists, patients and physicians (including physiatrists); it aims to gain insight into their understandings of the professional role and autonomy in physiotherapy along with the overall status of physiotherapy as a 'profession'. The research also examines the nature of inter-professional relationships between physiotherapists and physicians and how it might affect physiotherapy practice and profession development in Egypt as well as its potential impacts on patient care.

## 1.2 Background

This chapter sets the scene by introducing the background of physiotherapy practice in Egypt. The Egyptian healthcare context is outlined to elaborate on the nation's health challenges. This is followed by a review of the historical development of physiotherapy in Egypt; which is discussed at length to chart its professionalisation in chronological order to highlight the issues that informed the research question and justified conducting this study.

### 1.2.1 Egypt and healthcare

The 2014 census described 15.3% of the Egyptian population as disabled. Egypt has the highest burden of disabilities in the Middle East measured at 6000 days of life lost to disability/ 100, 000 individuals (Moradi-Lakeh et al., 2013). Egypt's population exceeded a 100 million in 2019; of which 42.8% are living below the poverty line of 2$ a day (World Bank, 2019). Ninety-nine percent of the population inhabits only 5.5% of the land resulting into overcrowding, the mean life expectancy is 70.9 years and more than 52.23% of the population is under the age of 24 (United Nations Fund for Population Activities, 2017). The Egyptian middle-class has been growing, but it has been estimated that 8.9% of the population were unemployed in 2018 and about 25.8% Egyptians remain illiterate (Trading Economics, 2019; United Nations Fund for Population Activities, 2017).

According to the latest available data Egypt spends 5.6% of its GDP on health, which is lower than the average in low income African countries that spend around 6% of GDP (WHO, 2014). There are 8.1 doctors and 14.3 nurses per 10, 000 of the Egyptian population and an estimate of 0.3 physiotherapists

(Pande, El-Shalakani and Hamed, 2017). The World Health Organisation indicated that the supply-demand gap of healthcare professionals in Egypt was substantial and reported that human resources limitations caused significant geographical variations in health outcomes and the standards of healthcare services particularly in rural areas (WHO, 2015). There also are differences in the access and provision of healthcare between social groups, different income levels and between both genders (Bush and Ayeb, 2012). With regards to healthcare, Egypt has two faces; the nation with good quality private services for middle and upper class Egyptians in urban areas, and the Egypt whose public services fall-short of the needs of working-class citizens especially women and children in rural areas (Bush and Ayeb, 2012).

### 1.2.2 Physiotherapy in Egypt

Physiotherapy practice in Egypt began nearly a century ago and its professional body the Egyptian General Physiotherapy Syndicate (EGPTS) has been a member of the World Confederation of Physical Therapy since its establishment in 1994. Physiotherapy in Egypt today appeared to be dominated by physicians who continue to dictate the choice of physiotherapy treatment. Over the last decade there have been many national legislatures to regulate physiotherapy practice, but none seem to have been successful in securing the autonomy of physiotherapists as Egypt faces considerable challenges to create a healthcare system that meets the population's needs and the prerogatives and viewpoints of all healthcare 'professions' competing for their standing in the hierarchy.

The history of Egyptian physiotherapy appeared to be one of conflict with the medical profession opposing self-directed practice in allied-health, and thus physiotherapy continues to lobby the government for professional autonomy

(EGPTS, 2015). In the coming sections, a review of the origin and development of Egyptian physiotherapy is presented and supported with the most recent references. Due to the absence of scholarly articles on the topic, the events described and information included in this review were obtained from grey literature including laws and policy documents, national newspaper articles and the publications of several organisations. These organisations included the Egyptian Ministry of Health and Population (EMoHP), Egyptian General Physiotherapy Syndicate (EGPTS), Faculty of Physiotherapy Cairo University (FPTCU), Egyptian Medical Syndicate (EMS), World Health Organization (WHO) and World Confederation of Physical Therapy (WCPT). Nonetheless, the paucity of published information about Egyptian physiotherapy required the researcher to contact the EGPTS by phone to obtain clarifications and key information about the events involved in the development of physiotherapy in Egypt.

## 1.3 The history and development of Egyptian physiotherapy

### 1.3.1 The 1950s foundations in physical education

The World Health Organisation introduced physiotherapy to the Egyptian healthcare system in the 1950s, but it was mostly practiced by small numbers of western clinicians. Thus, the Egyptian government started creating its own physiotherapy workforce (EGPTS, 2015).

The initial step towards building this workforce began with formalising physiotherapy training. In 1954, the state founded the first department of physiotherapy at the Higher Institute of Physical Education at Cairo University

(FPTCU, 2012). Physicians delivered physiotherapy training which consisted of massage, exercises, and heat and cold applications. The qualified physical education practitioners held a 4 year diploma in physical education with additional training in physiotherapy and their occupational title was physiotherapy technicians (Parliamentary decree No.3, 1985).

In 1956, the tripartite war warranted the development of physiotherapy practice to rehabilitate war victims (Parliamentary decree No.209, 1994). The state provided overseas training in Britain, America and Germany to several physiotherapy technicians. Returnees were given teaching posts at the Higher Institute of Physical Education to pass their skills to peers (FPTCU, 2012). In 1962, the state established the Higher Institute of Physiotherapy to provide extensive physiotherapy training and the teaching staff included physiotherapy technicians and physicians. The new physiotherapy institute was under the authority of Cairo University and it offered a 4-year bachelor program and postgraduate studies in physiotherapy.

The first cohort of students at the Institute of Physiotherapy included 22 students; 3 males and 19 females suggesting that Egyptian physiotherapy began as a feminine occupation (FPTCU, 2012). Knowledge from the UK suggested that physiotherapy attracted more women initially as it emerged from other feminine allied-health professions such as nursing and midwifery (Barclay, 1994).

In Egypt, the progressive rise of physical disabilities due to the polio-endemic had a direct impact on physiotherapy development given the need to improve the expertise of the physiotherapy workforce in order to improve the quality of care (Parliamentary decree No.3, 1985). Several physiotherapy technicians

were given state-funded scholarships to complete postgraduate studies in different American and European institutions (Parliamentary decree No.3, 1985). accordingly, the collective knowledge of physiotherapy technicians increased and gradually the institute of physiotherapy began employing its own graduates as teaching staff. Overtime physicians moved to teaching medical subjects only, while physiotherapy modules were delivered by physiotherapy technicians. Over the years, more physicians continued to teach at the Higher Institute of Physiotherapy which increased the number and content of the medical modules in its undergraduate and postgraduate programmes (Member of EGPTS council, personal communication).

### 1.3.2 The 1980s social and political recognition

The growing potential of physiotherapeutic techniques and the rise of disability increased public demands for physiotherapy services (Parliamentary decree No.3, 1985). Being socially necessary was leverage for the political recognition of physiotherapy, which was achieved via state accreditation of physiotherapy as an allied-health occupation in 1985.

State accreditation was a key mechanism in the development of physiotherapy because it facilitated the achievement of some external occupational closure by excluding future graduates of the Higher Institute of Physical Education from the practice of physiotherapy as shown below:

*"Physiotherapy practice is restricted to state-licenced physiotherapists who graduated from the Higher Institute of Physiotherapy" (Article 3, Parliamentary decree No.3, 1985)*

The professional title was also changed from 'technicians' to 'physiotherapists', but the role of physiotherapists was restricted to therapeutic delivery and not diagnosis:

*"Physiotherapists cannot see patients without medical referrals, diagnoses and written reports from physicians. Physicians determine the patients' prognosis and discharge from physiotherapy'' (Article 8, Parliamentary decree No.3, 1985).*

The 1985 decree, gave physiotherapists the right to run their private clinics within a framework of medical referral and prescription of physiotherapy treatment by a physician. Moreover, physiatrists directly supervised and dictated the work of physiotherapists given that physiatrists' are specialised in physical medicine and rehabilitation; thus have a similar role to physiotherapists.

### 1.3.3 The establishment of university education in 1992

As the number of self-employed physiotherapists increased; they were able to secure a share in the private healthcare market; given that during the 1990s, 45% of the population were not covered by the National Health Insurance Organisation thus did not have access to government funded healthcare (Rannan Eliya et al., 1997). This market share empowered physiotherapists to lobby the state to establish the Faculty of Physiotherapy at Cairo University in 1992 (Member of council EGPTS, personal communication).

The aspiration to achieve the status of university education emerged from the ambitions of physiotherapy educators, students and practitioners (EGPTS,

2015). Those ambitions were driven by the desire to improve the quality of physiotherapy services and to elevate the professional status of physiotherapy.

For physiotherapy education to be upgraded to a university level, it was required to meet the demands of the Ministry of Higher Education and the Ministry of Health and Population. Educationally, there were demands for a focus on science and theory (Fayad, 2002). Clinically, there were greater requirements for curative and preventive interventions to improve the population's health and productivity (Fayad, 2002). To accommodate these demands, the length of the bachelor of physiotherapy was increased from four to five years upon the establishment of the faculty in 1992 (FPTCU, 2012). The number of medical modules taught by physicians was increased. The new medical modules included radiology, cardiology, cardiovascular and plastic surgery. Also, visiting lecturers from the Faculty of Biomedical Sciences were asked to deliver a number of modules on biophysics in both the undergraduate and postgraduate physiotherapy programmes (FPTCU, 2012). It is possible to argue that these strategies were employed to draw on existing sciences that could help physiotherapy to develop its education and accordingly legitimise its claims for autonomy.

The faculty also started a scientific journal in 1996 to encourage physiotherapists to undertake and publish research to advance evidence-based practice in Egypt (FPTCU, 2012). However, this journal is not available online which explain the limited visibility of Egyptian physiotherapists' research contributions.

To ensure high standards of clinical practice, the faculty established its own outpatient clinic in 1992 which continues to train students. The clinic operates

as tertiary public healthcare facility that receives state-funding and generates additional income by charging affordable fees for its services (FPTCU, 2012). Moreover, several continuous professional education courses were made available for qualified physiotherapists on either a scholarship basis or at economic fees to encourage ongoing professional development. Finally, to meet the requirement for improving people's health; regular therapeutic campaigns were undertaken as a form of community outreach which was identified as an integral part of the faculty's mission (FPTCU, 2012).

It could be argued that the achievement of university education was a key strategy that began the professionalisation of physiotherapy. The state facilitated this process by funding the faculty. The transition to university-level education gave physiotherapy educators a degree of academic freedom to plan and deliver programs that ensured professional competence (FPTCU, 2012). This permitted the professional socialisation of the values and practices of physiotherapy amongst students to define their role and shape their identity. These values were described as follows:

*"Physiotherapy education was established based on science and we continued to develop physiotherapy in our country by ensuring that our students are knowledgeable, skilled, respectful and compassionate" (FPTCU, 2012)*

### 1.3.4 The establishment of a professional body in 1994

The physiotherapy workforce grew in size and reputation, which required the establishment of a professional body to oversee the work of physiotherapists (Parliamentary decree No. 209, 1994). The state founded the Egyptian General Physiotherapy Syndicate (EGPTS) in 1994 and it has since been a member of the WCPT (WCPT, 2018).

The political pressure to take legislative actions to ensure the safety of people with physical disabilities and protect them from being exploited or harmed by sham practitioners moved the government to found the EGPTS:

*"To protect people with physical disabilities from impostors, physiotherapy practice is restricted to physiotherapist who are registered with the General Physiotherapy Syndicate and the Ministry of Health and Population…Physiotherapists who violate the syndicate's ethical code will be disbarred" (Parliamentary decree No. 209, 1994)*

This policy reform gave physiotherapy, in the form of the EGPTS, a measure of self-regulation in defining its professional standards, selecting its members and governing their conduct and practice. The EGPTS represents the interests of more than 35, 000 physiotherapists in Egypt (WCPT, 2003).

### 1.3.5 The ongoing struggle for professional autonomy, exclusivity and status: 1996 to present day

Based on Article 8 of the 1985 decree that specified the role of physiotherapists and is quoted in section 1.3.3, physiotherapists did not have clinical autonomy and physicians dictated the content of their work. Physicians were in charge of physiotherapy referral, assessment, management planning and discharge. This created frustration on behalf of physiotherapists who wanted to practice independently. This frustration was heightened after physiotherapy achieved university-level education that met the educational, clinical and research-related standards required by the ministries of health and higher education (see section 1.3.3 for a discussion on these requirements).

The EGPTS lobbied the state to issue policies to clearly define physiotherapists' role and their level of autonomy within specified professional

boundaries. Two similar policies have been released in 1996 and in 2016. Both policies indicated that physiotherapists have a semi-autonomous role that is initiated and terminated by medical referral, but the content of their work was not to be dictated and they were not to be supervised by any physician including physiatrists:

*"Chartered physiotherapists are the only lawful providers of physiotherapy services. Their role involves patient evaluation, treatment planning and provision. Within this role, physiotherapists have the freedom of clinical decision-making based on their evaluation and a written referral from a chartered physician. Physiotherapists cannot begin their work without a medical referral, which should include the diagnosis and the physician's observations. Medical referrals should not include any instructions from the physician that indicate choice to treatment for the physiotherapist" (Article 3, Policy No. 166, 2016)*

*"Physiotherapists are not to be clinically supervised by any physician" (Article 5, Policy No. 166, 2016)*

Both policies indicate that physiotherapists' role involve patient evaluation, therapy planning and delivery which should give physiotherapists more clinical autonomy than they previously had. However, physiotherapists are still not allowed to practice as first-contact practitioners and cannot see patients without medical referral. Accordingly, physiotherapists' autonomy is still limited. Yet, physiotherapists' scope of practice was meant to have been protected because they are by law the only healthcare care providers of physiotherapy services. However, the professional boundaries of the medical profession are very broad; they extend over nearly all allied-health disciplines including nursing, physiotherapy, midwifery, radiography and optometry; as evident in the Medical Act of 1948:

*"No-one is allowed to provide any medical consultation or attend to any patient or perform any form of invasive or non-invasive medical procedure or assist in child birth or prescribe and provide any treatment whether medical, natural, manual or herbal, or request and conduct any medical investigations or prescribe and provide medical glasses, unless they are a chartered physician or working directly under physicians' supervision' (Article 1, Act No. 142, 1948)*.

Based on the Medical Act of 1948, some physicians continue to prescribe and/or provide physiotherapy treatments. Physiatrists still directly supervise and instruct physiotherapists on the treatment choice and approach (EGPTS, 2015). Anecdotal reports suggest that physiotherapists' clinical autonomy might be limited, despite the recent developments in physiotherapy education. For instance, the acceptance criteria for admission to the bachelor of physiotherapy programme are being continuously raised. Also, in 2017, the duration of the bachelor was increased from 5 to 6 years making it the longest programme amongst healthcare professions after medicine whose undergraduate education consists of 7 years (FPTCU, 2012). All these changes suggested that physiotherapy is actively trying to acquire autonomy, improve its professional standing and safeguard its professional identity. Nonetheless, it has been reported that the size of the physiotherapy workforce is significantly below the resources needed to address the population's health needs, which presents Egyptian physiotherapy with another challenge to increase the number of its members and continue developing their expertise (WHO global disability report 2011).

In summary, the history of Egyptian physiotherapy shows that its professional project has been sought for several decades during which its education was

developed from a diploma to university level. It has been transformed from being a sub-section of physical education to being a distinct occupational group. There has been an increase in state recognition of a regulatory body, codes of practice and expertise in the field of physiotherapy. However, several state legislatures have failed to secure autonomy in physiotherapy and ensure effective governance of its practice.

## 1.4 Conclusion

Previous studies showed that the professionalisation of physiotherapy in different countries had similar objectives including acquiring more autonomy and higher status, but it has occurred at considerably variable rates (Bergman and Marklund, 1989; Kenny and Adamson, 1992; Nicholls and Cheek, 2006; Oliveira and Nunes, 2015). Physiotherapists in western or developed countries are mostly autonomous, while the opposite is true to physiotherapists in some developing countries, such as India, Greece and Nigeria (Balogun, 2015). Thus, the identity of physiotherapy in different countries, including its professional scope, role and status, is perceived differently by its members and outsiders, and its practice tends to vary based on culture and socioeconomic factors and on organisation issues related to the healthcare infrastructure (Delheye and Vangrunderbeek, 2015).

It is difficult to determine the level of Egyptian physiotherapists' autonomy or the extent of medical dominance over physiotherapy practice because there are no published studies that report on the perspectives and experiences of individual physiotherapists and physicians including physiatrists. Nevertheless, the

opinions of patients on the ability of physiotherapists to practice in an informed and self-directed fashion remain unknown. There is no knowledge on how physiotherapists' understand and perform their role, and how they see their professional status; the same knowledge is also missing from the perspectives of patients and physicians. It is also not clear how issues of autonomy impact upon the practice of physiotherapists and the inter-professional relationships with the medical profession; along with the potential effects on the quality of patient care. Accordingly, the identity of Egyptian physiotherapy as perceived by its members and by outsiders appeared to be ambiguous.

The identity of physiotherapy in most western countries is that of an established profession whose role and scope of practice are well understood by its members and recognised by service users and other healthcare providers. Consequently, western physiotherapy has high levels of autonomy, pay and professional status compared to some developing countries where the identity of physiotherapy is unclear (Mbada, Ola-Ojo, Olubusola; 2015). Knowledge from India showed that direct access to physiotherapy was inhibited by limited public awareness about the scope of physiotherapy which justified the need for a medical-referral based system (Shimpi et al., 2014). A comparable situation has been reported by a Greek study which showed that not having a clear public profile that defines physiotherapists' role and expertise reduced service users' awareness and understanding of physiotherapy (Chanou and Sellars, 2009). This perpetuated medical dominance and reduced physiotherapists' autonomy given that doctors remained in charge of physiotherapy assessment, therapy planning and discharge. Greek physiotherapists attributed their unsatisfactory level of autonomy, professional status and remuneration to not

having a clear public profile that would enable physiotherapy to demonstrate its competencies and revoke medical dominance.

From an intra-professional perspective, Richardson (1999) argued that the physiotherapy profession must have a clear identity and defined role to allow for effective socialisation through which physiotherapists would build their individual professional identity in ways that reflect the profession's values, practices and social standing. In contradiction, a profession with an ill-defined identity delivers ineffective socialisation that fosters confusion and a reduced sense of belonging which decrease the ability of its members to construct and uphold strong individual identity that reflect a shared understanding of the profession. This decreases the individual and collective capacity of members to address the challenges that their profession might be facing due to the lack of a clear conceptualisation of the purpose, strength and weaknesses of the profession (Chadda, 2008).

Furthermore, the demand for multidisciplinary healthcare from a consumer and policy perspective, presents physiotherapists with the challenge of being team players whilst emphasising their distinctive role through which they can protect their professional boundaries and autonomy in inter-professional settings (Kell and Owen, 2008). Egyptian physiotherapy might continue to struggle with autonomy limitations and failed legislatures or become overlooked in future health reforms, if it fails to demonstrate to patients, funding organisations and policy makers the value of its role through a unique identity. It might also struggle to attract new members if its role and professional status in the healthcare hierarchy are not clear and known. All such arguments highlight the

importance of exploring the identity of Egyptian physiotherapy from the perceptions of physiotherapists, patients and physicians. The generated knowledge can be used as a framework for self-reflection to consider the strength and weaknesses of physiotherapy in Egypt which be used to guide the professional project of physiotherapy and to inform the socialisation of students. Understanding individual physiotherapists' and physician's perceptions of the role of physiotherapy could be useful in constructing a meaningful conversation between both occupational groups around autonomy and inter-professional collaboration; this conversation could result into better collegiality for better quality patient care.

Nevertheless, a survey by Akinpelu et al. (2011) showed that Nigerian physiotherapy students ranked medicine as having higher status and usefulness to the society because medicine's role was better understood by the patients. Therefore, Egyptian physiotherapy's quest for professional recognition requires an exploration of patients' expectations of physiotherapy together with their perceptions of its role, scope and status to better understanding how its identity is perceived. Knowledge of patients' discourse can identify areas where public awareness could be increased. It could also inform an understanding of patients' views and needs in an attempt to increase their involvement in shaping the development of physiotherapy. All such factors could contribute to patient empowerment and satisfaction in Egypt and demonstrate physiotherapy's responsiveness, accountability and commitment to public service; which all could have positive impacts on its professional standing.

## 1.5 Research questions

The primary research question to be addressed in this study is:

What is the identity of the Egyptian physiotherapy profession?

To facilitate the exploration of the identity of Egyptian physiotherapy, several secondary research questions will be investigated. Those questions are:

i- How do Egyptian physiotherapists perceive their professional role, autonomy, values and status; both individually and as a collective or an occupational group?

ii- What are the underlying factors that impact upon physiotherapists' perceptions?

iii- What are the patient and physician expectations and perceptions of the professional role, autonomy, values and status of physiotherapists?

iv- How do patients and physicians perceive the overall standing of physiotherapy as a 'profession' in the Egyptian healthcare hierarchy?

v- What are the underlying factors that impact upon patient and physician perceptions?

vi- What is the nature of inter-professional relationships between physiotherapy and medicine from the perceptions of both physiotherapists and physicians?

vii- How does the inter-professional relationship between physiotherapists and physicians affect upon patient care?

It is important to define the constructs of 'identity' and 'profession' to provide a conceptual framework that enables the exploration of the research questions. The next chapter elaborates on the definition of these terms in detail.

## 1.6 Thesis structure

The thesis consists of eight chapters. A brief overview of the content and structure for each chapter is presented below.

### Chapter 1- The research context

In this chapter, the area of research and the context in which it is set are introduced. The aim of the research is described, and the research questions are outlined in addition to an overview of the contents of the thesis.

### Chapter 2: Literature review

This chapter provides the background literature around the constructs of identity and professions. It discusses a wide range of psychological and psychosocial identity theories and explains the concept of professional identity before providing a detailed justification for selecting a psychosocial approach to exploring professional identity in this research. The chapter also provides a summary of identity studies in physiotherapy literature and explains how the knowledge from previous research informed the current study.

### Chapter 3: Epistemology, theoretical framework and methodology

This chapter discusses the epistemological and ontological underpinning of the research and outlines the researcher's own philosophical stance. The decision to adopt constructivist epistemology, relativist ontology and the interpretative theoretical perspective of symbolic interactionism in this research are justified, before moving to a detailed discussion on the history, development and evolution of different versions of grounded theory methodology. The chapter then explains the rational for selecting constructivist grounded theory methodology as the most suitable version of grounded theory for this research. The chapter concludes that

the existence of different versions of grounded theory caused the methodology to be applied in various ways by researchers that could be inconsistent with the fundamental tenets of the grounded theory. Consequently, the next chapter presents a systematic review that evaluated the methodological rigor of grounded theory studies in physiotherapy to better understand the methodology.

**Chapter 4: A systematic review of grounded theory studies in physiotherapy**

This chapter reports on a systematic review conducted to appraise grounded theory research in physiotherapy in order to understand how grounded theory methods have been applied and to produce recommendations that could inform this study and future research. The chapter begins by defining grounded theory methods and presenting the literature around the methodological rigor of grounded theory. The steps followed in conducting the systematic review are then outlined including the search strategy, study filtration process and quality assessment. The findings of the review are presented, and a discussion is provided with a number of methodological recommendations.

**Chapter 5: Methods and procedures**

In this chapter, the methods used in this study to gather data and derive meaning from these data through analysis, in line with the iterative nature of constructivist grounded theory are discussed. The chapter begins by outlining the strategies used to access, recruit and sample participants for this study. The chapter then presents an explicit and detailed account of the methods of data collection and analysis which were employed to construct a grounded theory around the

development and transformation of the Egyptian physiotherapist professional identity. Therefore, this chapter serves as an audit trail, thereby increasing the dependability of the study.

**Chapter 6: Findings**

This chapter presents the descriptive categories of the study findings. These are 4 categories that form the basis of the theoretical model and underpin the core category around professional identity development. The chapter discusses each category in detail, outlining subcategories and relationships. Along the way, each aspect of the categories is supported by quotations from participant interviews and serves as supportive evidence for the theoretical claims made.

**Chapter 7: Core category:**

The Egyptian physiotherapist journey to emancipation

This chapter presents the final and core category of the grounded theory constructed in this research. The core category consists of 3 subcategories that are discussed in detail and supported by participants' quotations. The full theory of the nature of the Egyptian physiotherapist journey to emancipation is outlined and discussed in relation to relevant literature.

**Chapter 8: Discussion**

In this chapter, the findings in the context of the extant literature are discussed further. The chapter begins by re-visiting the research question and outlining how the findings have addressed it. The chapter summarises the key findings and outlines the main recommendations for Egyptian physiotherapy. The

trustworthiness of the research is examined as the study and the constructed theory are examined and critiqued, so that the reader can judge the quality of the thesis. This is followed by offering suggestions for further research and providing several implications for physiotherapy practice and education.

# Chapter 2: Literature review

## 2.1 Introduction

This research explores the identity of the Egyptian physiotherapy profession. The concept of a profession is socially constructed, and thus it could be formulated and understood differently based on the social context. Identity is also a socially produced construct that has been conceptualised from several ontological perspectives. Despite departures, most perspectives concurred that identity is a complex and dynamic construct; and consequently people and things have many identities (Stets and Bruke, 2003).

This chapter provides the background literature needed to understand the constructs of profession and identity. It aims to demonstrate and justify that conceptualising identity from a philosophical perspective that allows for a socially-situated perception of identity is imperative for understanding the identity of Egyptian physiotherapy. To achieve this aim, a range of theories are discussed namely psychological and psychosocial identity theories. A differentiation is made between identity at the macro-level of a profession and identity at micro-level of individual members, and the relationship between both levels of identity is explained. Finally, an overview of identity studies in physiotherapy is presented to inform the current research inquiry.

## 2.2 Identity and identification

At its most basic level, identity can be understood as a group of characteristics that define something or someone as similar or different to other entities, and therefore make them recognisable (Harre, 2001). Sociology employs the term

'identity' to refer to people's perception of themselves as distinctive and individual beings. Social interactions are central to a sociological conceptualisation of identity that is thought to develop through experiences which enable individuals to understand social roles and behaviours. In psychology, 'self' is used as a broad term to describe different aspects of personality; such as how people view themselves (self-image), regard their worth (self-esteem), evaluate their qualities, thinking and behaviours (self-reflection) and realise their potential and 'true' self (self-actualisation). Self-identity refers to understanding ourselves through experience and reflection and it is informed by the ways, through which we engage with the world (Giddens, 1991).

Jenkins (2018) explained that identity represents people's need to know and it has been related to individual characteristics (personal identity) and community membership (social identity). The latter also includes affiliation to particular task and institutional groups or what is known as professional and organisational identities (Roccas and Brewer, 2002). The construct of personal identity has been described as knowing who we are, while social identity was considered more complex hence it involves knowing who others are and others knowing us; together with knowing how others perceive us.

Professional and organisational identities refer to an occupational group and how members identify to a collective organisation while distinguishing themselves from other occupational groups (Tajfel, 1982). The identity of occupational groups has been classified into micro and macro levels (Wackerhausen, 2009). The micro-level or professional identity depends on the

individual perceptions of members and their affiliation to the profession and acknowledgement of its values, knowledge and practices. The macro-level or organisational identity relates to the character of the profession and is a factor of state and public recognition, service users and other profession's perceptions as well as how members view their own profession. Both the macro and micro levels of occupational identities are interconnected and co-dependent, yet they are distinctive phenomena hence the individual's professional identity is also informed by their own personal identity (Wynter, 2017).

Muir and Wetherell (2010) explained that identities can be studied by exploring how people perceive one another. As people interact they tend to evaluate and formulate opinions of others in order to create meanings that help them make sense of their lives. There is a vast array of social constructs used to evaluate and categorise people including race, gender, religion, marital status, class, profession, and so on (Costello, 2005). For instance, some people might perceive the author as a doctoral student, while others might see her as a qualified physiotherapist.

The contradiction between student/qualified reflects how the binaries embedded within the process of identification do not sufficiently interpret identity as lived. Consequently, the challenge involved in the process of identification is to discover one's 'real identity', for example, is the author's true identity a student or a qualified practitioner or a combination of both? Comparable problems would occur in the process of discovering one's real professional identity. Therefore, it has been concluded that identity is more intricate than the mere process of identification (Horobin, 2016). Several sociologists agreed

that identity is multi-layered because people often identify to several and possibly contradictory positions. Yet, identity is not a stable possession that can be acquired; instead it is a dynamic process between the individual and the world (Goffman, 2002). There are, however, contrasting ontological understandings of identity from various psychological and psychosocial perspectives (Smith and Sparkes, 2008). The following sections discuss these perspectives in detail; in order to appraise their usefulness for exploring identity in this research.

## 2.3 Psychological understandings of identity

There are many theoretical frameworks that emphasise the psychological nature of identity formation. Freudian understandings informed the majority of psychoanalytical conceptualisations of identity. From a Freudian perspective, identity is a progressive achievement of the ego and could be perceived as an ontological sense of self that develops across temporal, spatial and other dimensions (Frosh, 2010). Freudian psychoanalytical approaches highlight the important role of people's internal mental capacities or cognition and their subconscious supressed memories in structuring their identities since childhood. People conduct an inner discussion to decipher internal and external influences in continuous negotiations over time. As a result, identity is not fixed; it is rather a structure in process with significant psychological and individual aspects. People's social surroundings provide the context for individual identities hence external input is processed by the cognitive and perceptual systems and assimilated as components of the developing identity (Frosh, 2010).

The work of Locke (1960) has also been considered a significant contribution to psychoanalytical perceptions of identity. Like Freudian thought, Locke's theory of the mind understands the self as an enduring state of consciousness over time. Locke (1960) presumes that people are born as clean slates or tabula rasa without inherent understandings and it is through their perceptual abilities that people interpret their experiences to gain knowledge. Personal identity derives from consciousness and reflection to get to know one's own self (self-awareness). Psychoanalytical approaches that adopt Locke's ideas suggest that personal identity is not strictly determined by others; it is rather a primarily subjective feeling of being the same all throughout and in various circumstances. Therefore, people have a continuous sense of character in different scenarios that is acknowledged by others (Erikson, 1971).

From a psychoanalytical perspective, identity is predominantly formed in the individual mind. Segal (1997) explained that the risk in adopting psychoanalytical approaches is that the self or identity would be conceived as essentialist and deterministic aspects of people's destiny; in other words everyone ought to ultimately develop a clear sense of who they are. Brubaker and Cooper (2000) also argued that psychoanalysis perceives identity as mostly self-made or agentive, which poses limitations for understanding the professional identity of physiotherapists in this research. For example, conceptualising identity as purely a personal project might not enable for a critical analysis of the impact of professional socialisation. Based on psychoanalytical thought, professional identity weakness would primarily result from inappropriate self-fashioning on behalf of individual physiotherapists. Psychoanalysis assumes the essentialist belief that identity is an individualistic

endeavour and trait; so it might be difficult to identify other the reasons behind potential variations in physiotherapists' self-perceived and ascribed identities.

Another caveat of psychoanalytical conceptions of identity is that people are considered fully cognizant and always in charge of their identities (Hammond, 2013). The conscious performance of identity might be possible part of the time but in some situations people might behave unconsciously and cannot always control how others interpret their identity and behaviours. If people are active agents in conceiving and enacting their identities, then unconscious or unintended expressions of identity would be considered an individual error and not an outcome of interactions between the individual and others in a given context where other environmental, social or power dynamics are present and possibly influential. For example, if someone uses an angry tone in a conversation this would be seen as an error in the individual's performance rather than the product of a complex interplay where situational factors and other people might have motivated the individual's anger.

In this research, assuming a psychoanalytical perspective would mean that physiotherapists have full control over constructing their identities and that their opinions and behaviours must be analysed from this standpoint. As such, the research might overlook the critical role of other significant individuals (e.g. patients) together with their complex interactions and perceptions of physiotherapy and physiotherapists. Psychoanalysis would be useful for studies that seek to understand identity from an individual perspective. However, this research aims to generate a contextual conceptualisation of identity that considers how the day to day interactions between physiotherapists, patients and physicians in clinical setting impact on the identity of physiotherapy and

physiotherapists. Therefore, psychoanalytical theories were not considered a suitable framework for informing this research.

## 2.4 Psychosocial understandings of identity

There are several theories that conceptualise identity from psychosocial perspectives that resulted in the development of various personal identity theories. The next section focuses on two such theories; namely, identity theory and social identity theory. In doing so, a psychosocial approach will be justified as an appropriate conceptual framework to generate a socially-dependent understanding of the identity of Egyptian physiotherapy that dedicates analytical attention to individual, social and interactional aspects of identity formation and perception. Then, the construct of professional identity will be explained from a psychosocial perspective, and its relationship to personal and social identities will also be discussed.

### 2.4.1 Personal identity theories: Identity theory and social identity theory

Social identity theory emphasises within and between group interactions and processes, while identity theory focuses on understanding behavioural roles, the verification of one's perceived self and the salient impact of contextual factors on identities (Stryker and Burke, 2003). For both theories, personal identity is concerned with the interpersonal relationships between individuals and their surroundings. People identify themselves based on how they interpret the reactions of others towards them. They understand their impression and influence upon one another and employ this understanding to shape future expressions of identity. The individual would experience relationships with different people in various and possibly contradictory ways, and consequently

the individual would develop and expound multiple identities. Each individual constitutes and is constituted of several personal identities with respect to involvement with different social groups and related behaviours. Thus, it has been argued that psychosocial personal identity theories are said to be founded upon symbolic interactionism (Hogg, Terry and White, 1995).

Symbolic interactionism is an interpretivist theoretical perspective that emerged from the writings of Mead (1934) and continued to be developed by Goffman (1978). Contrary to psychoanalysis, symbolic interactionism focuses on understanding the social negotiations between people and how they interact based on the individual and collective meanings they ascribe to their physical and social worlds.

Symbolic interactionism underpins psychosocial identity theories through an understanding that people have multiple identities that are based upon social relationships in which they assume certain positions and perform roles. The varied roles played by an individual, such as wife, mother and friend, make the foundation of the individual's sense of self or personal identity and are connected to positions within a social matrix. Social roles give people the meaning needed to develop and sustain a concept of self (Haines and Saba, 2012). Personal identities are the product of internalizing social roles whose labels communicate the expected behaviours of individuals playing these roles. Social roles are defined from the outside through the expectations of others which set the normative behaviours related to each role and determine the standards of collective membership (Stryker and Burke, 2000). People internally define their identities as they conform to or reject role expectations. The identity

standard that is associated with a given role is the metric against which people verify their internalised identities. Given that people often assume various roles, each internalised identity will ascribe to a different set of identity standard rules.

Colbeck (2008) explained that when people accept and internalise role expectations (identity standard rules) within their identity, such expectations become a part of the cognitive system for understanding future experiences. Mead (1934) used 'I' to denote innate and instinctive dimensions, while 'me' represents internalised aspects and it is through an internal dialogue between the 'I' and 'me' that identity is individually constructed. Accordingly, symbolic interactionism and psychosocial identity theories stress the importance of the individual's mind and inner voice in conceptualizing and internalising identities as much as the role of external social interactions that shape and are shaped by the individual mind.

Deaux and Burke (2010) argued that personal identities are composites of several identities arranged in order of importance or salience. Identity salience relates to the stability of the assumed role and accompanying identity and the ways in which it relates to other identities that provide comparable meanings. Identities that have higher salience are those that we are committed to and those that have greater consequences in abandoning them as well as identities that have a similar framework of meaning. Social interactions are a key source of input according to which people compare their perceptions of the set of meanings associated with the identity standard and their internalised identity. Congruence between the internalised identity and the role-identity standard, results in self-identity verification that is accompanied with positive emotions,

such as improved self-esteem. If there is discrepancy, the individual would need to change the circumstances or adopt different behaviours to match both identities and attain salience (Burke, 2006). Significant or prolonged lack of congruency causes distress until the discrepancies are amended. However, self-verification is never finalized, thus continuous feedback is required, which is provided through social interactions. People value different types of feedback based on the extent to which they respect its source; they also tend to prefer positive feedback that validates their self-worth and thereby their self-identity. Additionally, people would choose roles and scenarios that seem to be congruent with their personal-identity so they would be able to adopt those roles and perform their identity.

Therefore, in adopting a psychosocial approach to understanding identity, it can be said that identity is a continuum of differences and similarities and that people have more than one identity (Bauman, 2004). The social context impacts upon identity which makes it fluid and responsive to external input and expectations. Personal identity encompasses the distinctive qualities that characterise an individual; it involves relationships and is determined by the individual's interpretations of the responses of others. Social identity is closely related to personal identity hence the former relates to self-classification or categorisation with a group. Categorisation is a process that requires evaluations and reflection; it involves making comparisons, both individually and as a group, to identify similar and different characteristics (Stets and Burke, 2003). Categorisation is an active process that requires doing, instead of a state of being that someone would have (Jenkins, 2008). Engaging in such evaluation, categorisation and identification is what develops a self-concept and

it is via complex interactions with other individuals and collectives that social identity develops (Tajfel, 1982).

Social identification takes places consciously and unconsciously and enables individuals to judge the extent to which they feel a sense of belonging to a collective. For instance, a young person in a new school might befriend a group of students who engage in disruptive behaviours because the new student needs to belong to a collective or he did not want to feel odd and thought that these behaviours are what adolescent boys do. At the same time, being disruptive might conflict with his personal values that have been informed by his up-bringing and previous experiences. This conflict might cause him to separate from the disruptive group and associate himself with another group with similar values. Alternatively, he might retain membership of different groups while selectively avoiding behaviours that contradict with his ethics and thereby avoid conflicts that might arise from rejecting a particular group. A similar categorisation process occurs in the development of professional identity which starts with an identification of the distinctive characteristics of the organisation (Gioia, Schultz and Corley, 2000). If these characteristics seem appealing, the individual would then evaluate them in relation to the individual's values and self-concept. This is followed by an assessment of the potential affiliation of the individual to the organisation and the rewards (e.g. self-esteem or social status) acquired through membership (Ellemers, Kortekass and Ouwerker, 1999). Therefore, the development of self-concept involves an awareness of the contributions of having group memberships (social and professional identities) to the construction of self-identity.

Social identity theory conceptualised identity as a process of "being or becoming" through dynamic interactions in which categories (differences and similarities) are continuously compared, and thus identities constantly evolve (Jenkins, 2008). These aspects of social identity theory align with symbolic interactionism and pragmatism because categories are themselves socially constructed and therefore never fixed and only recognised in relation to their usefulness to the individual at a certain period of time. In order for identity to inform behaviour, it cannot be disinterested or neutral. Identities are of significance to individuals and collectives; which opened a debate about whether it is the quest for identity or the quest for interests that is significant. It has been concluded that identity is an evolving product of people pursuing their own interests (Jenkins, 2008). As a result, an individual is attracted to a collective, whether a social group or profession, through the possible rewards acquired from membership (Ellemers Kortekaas and Ouwerkerk, 1999). It has been argued that the "value and emotional significance of membership" are enough to produce identity, especially social identities (Tajfel, 1982). Thus, seeking rewards is not only related to material acquisitions, but also to or self-esteem and the emotional achievement of a sense of belonging.

Most people are members of several groups and understanding the dynamics and structures of these memberships is invaluable given the effect of in-groups on the individual's self-concept (Roccas and Brewer, 2002). Turner (1999) developed and integrated two models that explained how individuals come to form a group and the effect of grouping on behaviour. The social cohesion model suggested that a group is formed because of shared attractions and reciprocal positive psychological bonds between members. This model postulated that social groups are underpinned by emotional and affective

factors or in another words individuals tend to join people that they like. On the other hand, the social identification model suggested that the individual's primary question is not whether they like the other members of the group, but is 'who am I'. Group membership is about self-perception and the resultant perception of commonality. Rather than joining people we like, we tend to like people we perceive we are linked to on some level. Group membership results from individuals' cognitive perception of themselves as part of the same social aggregation, which is based on each individual's understanding of their own selves and others through abstract categories that become a part of individual's self-concept and in return shape group behaviour.

Tuner (1999) combined the social cohesion and identification models and explained that identity is constructed through interplay between cognitive, social and psychological processes. Therefore, although psychosocial identity theories argued that identity is not an individual project because the meanings we ascribe to ourselves, others and things are not conceived and held inside our heads, they do not deny that cognitive and psychological processes are necessary for developing those meanings. Nonetheless, thinking itself does not create meaning; it is only when thoughts are shared through relationships that they become meaningful (Burr, 2003).

To summarise, psychosocial conceptualisations (social identity theory and identity theory) provide a framework that recognises that identity, in all its manifestations, can be viewed as an outcome of social interactions and negotiations. This establishes a conceptual grounding for this research in that it enables an understanding of identity as co-constructed between individual physiotherapists through interactions with peers, patients and other healthcare

providers in clinical settings. It would facilitate the generation of knowledge around physiotherapists' self-perceived and ascribed identity and role, and how physiotherapists position themselves and are positioned by others during day-to-day clinical practice. This will not only explore aspects that are important to physiotherapists, but also to patients and physicians and articulate how negotiating identities is not a solitary endeavour but a complex process of interaction and positioning between the involved stakeholders. In doing so, this research will critically examine the identity of Egyptian physiotherapy in relation to broader contextual factors that impact on practice.

### 2.4.2 Professional identity at the organisational and individual levels

A profession is a form of work that requires specific skills and is respected for its formal education. Professions can be considered a type of organisations in the sense that they constitute of "bounded networks of individuals" and thus tend to involve different and composite manifestations of individual and group identifications that determine roles and behaviours (Jenkins, 2008). Professions and organisations also have a collective sense of similarities that characterise their members and distinguish them from outsiders (Kenny, Whittle and Willmott, 2011). Therefore, the identity of a profession (macro-level organisational professional identity) and the identity of its members (micro-level individual professional identity) encompass knowing one's self and others, including insiders or members of the same organisation and outsiders such as clients, within distinct organisational bounds (Hatch and Cunliffe, 2013).

Organisational bounds include the profession's public image, structure, objectives, regulations and purposeful practices that sustain and advance the

profession. Within such bounds, identifications take place through formal and informal ways and with respect to expected roles, duties, appearance and mannerism. An individual's identity is, in part, shaped by being an employee occupying a particular role. The concept of organisational bounds implies that members would be attached to certain professional roles and values. In the case of physiotherapists, professional roles would encompass treating patients with physical conditions caused by injury or illness. Maximising movement and independence are integral to people's health from the perspective of the physiotherapy profession. Physiotherapists ought to identify and address movement and functional limitations as well as prevent injury and promote overall health and wellbeing. Thus, physiotherapists need to embody the qualities associated with the physiotherapy profession to be identified by members and non-members as belonging to it (Sparkes, 2000).

Gioia, Schultz and Corley (2000) added that identifications are also specified in relation to recruitment within the organisation through its rules and regulations that monitor compliance with set identifications. For example the performance expectations of an NHS physiotherapist relate to their position within the organisational hierarchy. A Band 5 physiotherapist is expected to manage their own caseload, keep accurate records and oversee support staff, while a Band 6 is also expected to train and support less experienced physiotherapists and take part in research activities. Each role is associated with a job description or specifications that also defines the individual's identity and make it recognisable to members of the organisation. Nonetheless, each member has a collective identity that is informed by the objectives of the organisation and the perceptions of other groups or individuals that interact with it. Within the context

of the NHS, other groups that deal with physiotherapists include managers, commissioners and other healthcare providers. Most importantly, it also encompasses service users or patient and carer perceptions of the physiotherapy identity.

Like all organisations, professions need to acquire and maintain a continuous influx of new members in order to survive. It has been suggested that the profession's uniqueness and prestige are key factors in attracting new members (Oakes and Turner, 1986). Yet, for a profession to have a unique, strong and desirable identity, such identity does not have to be universally positive. A study showed that nurses working in NHS Direct call centres experienced role-identity conflict between meeting managerial demands for short call durations and showing empathy to their patient callers (Mueller et al., 2008). In this instance, professional identity superseded the organisational bounds as determined by expected role performance and thus managerial targets were often not met which caused tension between managers and nurses. From a managerial perspective, the nursing profession might have been associated with a negative identity, but for nurses their professional identity was considered positive and thus worth the commitment which could also be desirable for new members who wish to realize that identity (Wynter, 2017).

As previously explained, identity perceive is a multi-dimensional and inter-connected concept which resulted into the generation of a plethora of personal identity theories (Stets and Burke, 2003). This thesis recognises the overlap between theories by adopting an integrative psychosocial approach to understanding identity. The links between different conceptualisation of identity

were utilised to provide a deeper understanding of the physiotherapy identity. Specifically, individual and organisational professional identities are linked to personal and social identities and in return influence the individual's self-identity (Stets and Burke, 2003). If personal identity is considered as 'I' and social identity is seen as 'me', then professional identity would be treated as both 'we' and 'us' (Hatch and Cunliffe, 2013). 'We' emerges as the personal aspect of professional identity and the equivalent of 'I' that develops as members interact with one another and outsiders to meet the responsibilities expected from 'us' which is the social aspect of professional identity and the equivalent to individual social identity 'me'.

Personal and social identities are closely linked hence personal identity or 'I' is constructed through social interactions and feedback about our qualities that ultimately leads to ownership of such qualities and the development of social identity 'me'. In return, owning and up-holding the social identity 'me' informs the production of self-concept and personal identity 'I' which then enables further assessment of where the individual is positioned within their social group. Similarly, intra and inter-professional relationships help individuals understand what 'us' (social professional identity) means in relation to professional roles, aims and responsibilities. Recognising what is expected of 'us' produces the individual professional identity 'we'. Knowing what 'we' means, for example we physiotherapists rehabilitate, becomes integrated into the individual's self-concept; in the form of 'I as a physiotherapist rehabilitate and this is what is expected of me'. This example shows how professional identity informs people's sense of self and their personal and social identities.

Wynter (2017) explained that students begin to develop an understanding of what it means to be physiotherapists (us) during university education and placements through their relationships with academics, clinical educators and patients, carers and other healthcare providers. Individual professional identity (we) is constructed through reflection on what (us) means which occurs during formal and informal discussions with colleagues and tutors. These discussions promote an exploration and assessment of what the profession is and does (macro-level organisational professional identity) and the amalgamation of its attributes within individual professional identity. The cognitive (perceptual), social and affective processes involved in individual professional identity construction are shaped by professional socialisation (Richardson, 1999a).

Professional socialisation is the processual development and continuous negotiations between the individual being socialized and their environment (Richardson, 1999b). It involves interactions between self and others, where individuals gradually form a framework of values that reflect a consensus on professional behaviours (Richardson et al., 2002). It is an integral aspect of preparing professionals for future practice by encouraging them to explore and internalise the identity of their profession. Professionals progress from knowing what to do, to knowing how to do it, then learn why to do it, and most importantly develop self-motivated insights which stem from caring why to do it. Therefore, professional socialization is not the passive learning of expected social roles; it is rather the active creation of what it means to be professional. Hatch and Cunliffe (2013) developed a model to explain how individual professional identity is constructed in relation to personal and social identities based on interactionist, pragmatic and social constructivist ideas. This model has been recreated in figure 2.1 and demonstrates how individual professional

identities develop at the intersection of personal and social identities and professional socialisation.

**Figure 2.1 the relationship between personal, social and professional identity**

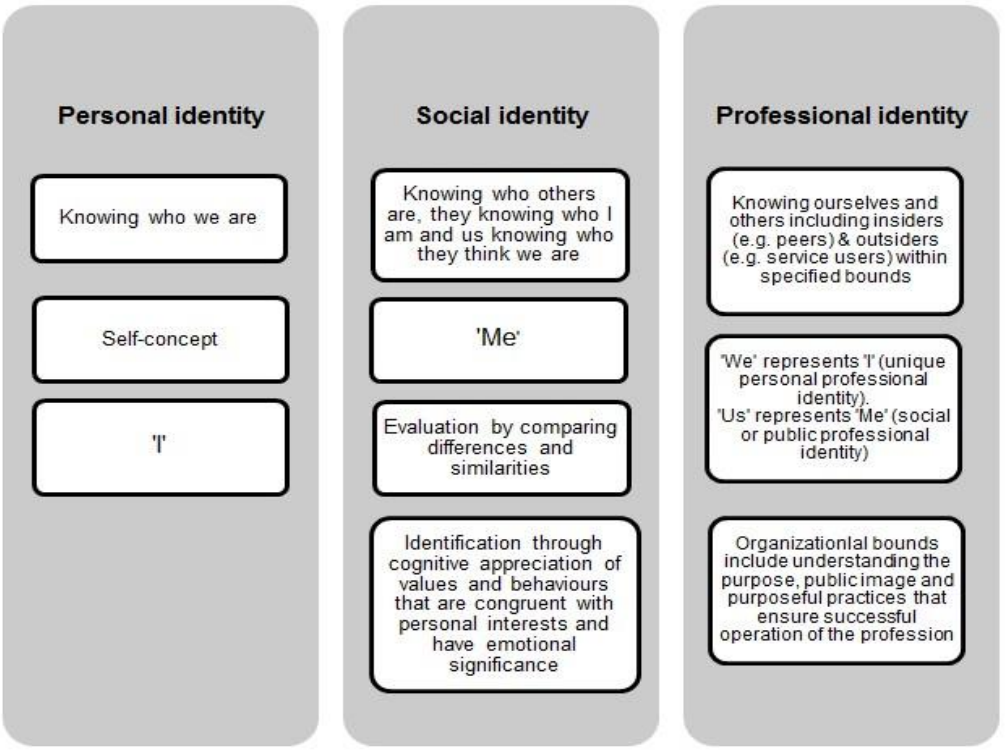



Figure 2.1 shows that all forms of identity are produced in action and interaction and thus are social constructions (Gioia, Schultz and Corley, 2000). Accepting this notion indicates that professional identity development is not a direct outcome of learning subject specific knowledge and skills; it is rather a result of a group of individuals collectively identifying themselves as distinctive and valuable. Hatch and Cunliffe (2013) argued that the organisational identity of professions could be more flexible and responsive to external influences, such as policy reforms, than individual professional identities. This argument has

been supported by the findings of Mueller et al., (2008) which showed that individual professional identity was critical to individual nurses and created resistance to changes that were deemed threatening to the meaning of said identity. Thus, Kenny, Whittle and Willmott (2011) argued that professional identity is a commodity desired for its psychological rewards such as self-esteem and actualisation and social rewards, including pay, career progression and status. This emphasises that identity is a cognitive, affective and socially motivated process (Berzonsky, 2008).

However, acquiring professional status does not result from simply joining a profession. The manner in which the individual presents themselves and engage with colleagues, clients and the public relate to social professional identity and are essential to being considered a professional. The relationship between professions and the public is formalized and regulated through professional body registration and the institutionalization of ethical codes of conduct that enable professions and their members to self-monitor their behaviour. This serves as a type of regulation to individuals who aspire to attain that professional status (Kenny, Whittle and Willmott, 2011). Evetts (2013) explained that the normalisation of certain behaviours within professional identity is a by-product of the society-profession relationship and a pre-requisite for having the rewards of such relationship. Autonomy has been considered one of the most valued professional rewards and is integral to the individual professional's identity (both personal and social) as well as the identity of the profession itself.

The identity of professions (organisational professional identity) has also been defined based on their shared characteristics as well as their values,

behavioural norms and practices that could be specific to each profession, but some of which might be shared between professions within the same field (Verma, Paterson and Medves, 2006). This approach is known as the trait theory which defines the identity of professions based on their common attributes. It considered a profession to be a self-appointed and self-regulated group of workers who hold themselves accountable for acting in the best interest of the public by means of their expertise that are based on a long period of exclusive education and rigorous training (Suddaby and Muzio, 2015). A profession must secure full-time work supported by a law-protected knowledge base and delivered by educational institutions and professional bodies that train and ensure the aptitude of its members. According to Dignwall (2016), the most deterministic feature of professions is a rightful claim to autonomy in the sense that professions have a degree of freedom that enables them to voluntarily create and comply with their own standards by themselves. Autonomy legitimates the self-disciplined nature of professions in organising their education and practice at their discretion and in accordance with esoteric knowledge and codes of ethics to fulfil their responsibilities (Abbott and Meerabeau, 1998; Mackenzie, 2008).

Responsibility was another attribute added to the identity of professions to reflect their life-long and altruistic dedication to serving their clients. The relationship between professions and the society is said to differ from that of occupations because the former is founded on trust compared to the latter that is primarily based on exchange (Kell and Owen, 2008). Trustworthiness is underpinned by competence and translated into autonomy, which requires professionals to uphold a common ethical code of values to shape professional tasks and behaviours in ways that guarantee the welfare of service users

(Ackroyd, 2016). The presence of ethical codes affirms that professions are dutiful in providing their services for the gain of the society and not strictly for their own benefit. Lester (2010) believed that a substantial difference between professions and occupations did not reside in altruism, but in professions' ability to provide career development, high levels of remuneration and prestige for their members within a framework of good service delivery. Turner (2001), Freidson (1994) and Shepperd (1994) and Whitfield et al., (1996) also agreed that the identity of successful professions was distinguished by their capacity to occupy a rewarding labour market shelter through occupational closure and marketing strategies.

Professionalisation refers to the processes, through which occupations transform their identities by acquiring the attributes of professions (Richardson, 1999a). It involves the establishment of official qualifications and the formation of trade unions or professional bodies to regulate practice and conduct (Oliveria and Nunes, 2015). These strategies allow for autonomy which differentiates the self-regulated identity of professions from occupations and demarcates their boundaries through external occupational closure which closes off professional entry to anyone who is not appropriately qualified, including armatures and outsiders from competing professions (Evetts, 2003). External occupational closure is usually accomplished by establishing formal academic credentials as perquisite for competence, and thereby professional entry can be protected through licensure (Witz, 2013). Professional bodies are often in charge of granting practice licenses to members who have passed accredited training, entrance examinations or acquired a membership with said bodies.

In addition to securing boundaries and reducing competition, licencing can also protect professional titles by prohibiting their use by none other than licensees (Borthwick, 1997). Title acts tend to vary for professions in different contexts. For instance, only licensees can call themselves 'physiotherapists' in Australia but not in India. This examples show that certain professional groups have been able to safeguard their identity based on the laws that protect their autonomy, boundaries and titles.

Title protection can be considered a feature that distinguishes the identity of professions because titles represent a form of symbolic capital that drives from a profession's distinctive identity. In healthcare, 'doctor' leads the hierarchy of titles because it draws esteem from the indispensable role of the medical profession in performing the most critical life-saving interventions that enabled the profession to gain high levels of public respect (Bourdieu, 1989). In return, the symbolic capital conveyed by the 'doctor' title gave medicine high social status. The title also affirmed medicine's unique identity that is associated with the historical construction of the identity of the doctor as knowledgeable, and consequently the medical profession has been able to secure its autonomy and boundaries.

This discussion shows how the identities of a profession and its members are intertwined as they draw meaning and value from one another (Ohman, Hagg and Dahlgren, 1999). In this sense professionalisation and professionalism are closely related. Professionalisation represents a dynamic process through which an occupational group can progress forwards on several fronts using recognisable measures including higher responsiveness to service user's needs through improved understandings, problem-solving approaches and

consideration to ethical issues (James and Willis, 2001). Professionalisation not only reflects the identity of occupations that achieved the rudimentary attributes of professions, but also their purposeful development towards higher standards of practice as informed by a continuously refined and growing body of knowledge to achieve higher degree of professionalism (Purdy, 1994).

Professionalism has been defined as the ways through which professionals perform and organise their work in a manner that applies the profession's sophisticated knowledge, skills and values in practice (Aguilar et al., 2013). The hallmarks of professionalism include the ability to perform complex tasks that have considerable levels of unpredictability, and thus require exclusive expertise, conscientious decision-making and commitment to life-long learning in order to improve professional functions within changing societal demands (Grace and Trede, 2013). If professionalism is seen as behaviour then it would facilitate professionalisation through the individual and collective values and actions of professionals and their understanding of and engagement with the profession's purpose.

Professional behaviour also involves continuously working to develop the profession by re-evaluating and re-defining its goals and methods particularly during times of policy reforms or challenges from competitors which need to be fought off to avoid downgrading or de-professionalisation (Richardson, 1999a). These arguments suggest that professionalism can be considered an essential component of professionalisation hence individual members can advance their profession through various techniques, such as leading an evidence-based practice or reporting unprofessional behaviour and malpractice.

To summarise, the attributes of professions include expert knowledge, autonomy of practice, and ethos of public service, occupational regulation of rewards and standards of practice (Bithell, 1999). Occupational groups that do not fully meet these attributes may be considered semi-professions or para-professions that are undertaking a process of professionalisation (Parker and Doel, 2013). On the other hand, established professions may become de-professionalised under the effect of bureaucratisation and corporatisation that restrict their autonomy, or technological advances that render their services obsolete. This further suggests that professions are evolving and context-dependent.

This section elaborated on the concepts of professions and professional identities at both the organisational macro-level and the personal micro-level. The literature presented showed that psychosocial theories argued against confining identity to identification because it suggests that aspects of identity (personal, social and professional identities) are exclusive, disjointed and unaltered or that identity is a material thing acquired since birth or can somehow be captured and incorporated into a tangible structure (Costello, 2005). The later assumptions are founded on the ontological perspective that individuals and phenomena possess a stable core essence, which contradicts the notion of identity as socially constructed. Subscribing to the perception of identity as a socially constructed continuum is critical to understanding identity in this research as interactional and interconnected. Approaching identity from such a standpoint allows for a contextualised and multi-dimensional exploration of the relationships between the identities of individual physiotherapists and that of the profession as perceived by physiotherapists and by relevant outsider stakeholders. Accepting that professional identity represents the characteristics

shared between physiotherapists and relates to the organisational identity of the Egyptian physiotherapy profession itself; would make it possible to understand both professional and organisational identities by exploring the views of physiotherapists, patients and physicians who deal with physiotherapists. These views could provide insight into different aspects related to the identity of Egyptian physiotherapy and physiotherapists that cannot be pre-determined or inferred from previous studies that have been conducted in western contexts. Yet, reviewing the existing professional identity studies in physiotherapy would provide initial guidance for the current research inquiry.

### 2.5 Professional identity research in physiotherapy

Several studies investigated the individual professional identity of physiotherapy educators, practitioners and students in both clinical and educational settings and in different countries. Ohman, Solomon and Finch (2002) looked at Canadian physiotherapy students' career choices and reported that all the students had good knowledge about the profession before beginning their studies. They concluded that pre-course identification is feasible and advantageous but individual professional identity develops through a learning process. This encompassed education, training and professional socialisation (Trede, Macklin and Bridges, 2012; Adams et al., 2006; Ohman, Solomon and Finch, 2002).

Lindquist, Engardt and Richardson (2004) used phenomenology to understand physiotherapy students' experiences in the UK and Sweden. The study demonstrated that students' interactions with one another and with clinical educators during placements were central to their learning experiences.

Lindquist et al., (2006b) also studied the processes through which students learned to become physiotherapists using thematic analysis. The findings presented four inter-related processes of identity development namely; practicing skills, searching the literature, communicating with others and reflection.

In another study, Richardson et al., (2002) explored the ways in which physiotherapy students understood and experienced their professional identities. First year students were interviewed to find out how they perceived their role upon qualifying in order to inform a more effective socialization and curriculum that guides their professional identity. Richardson et al., (2002) found that students conceptualised their future role along four key dimensions including behaving professionally, communicating, instructing and caring for patients.

Lidquist et al., (2006a) reported different findings upon interviewing the same group of students towards the time of their qualification. Their findings identified three distinctive types of professional identities as follows: the educator, the empowerer and the treater. The professional focus of the educator's identity was on teaching patients in order to facilitate self-management and better therapy outcomes. The empowerer identity type was described as patient centred and thus its clinical approach was shaped by patient needs and goals. This contradicted with the treater's identity type which was physiotherapist centred and characterised by a focus on clinical problem solving and interventions performed at an impairment level. As a whole, these studies highlighted that physiotherapy students have different perceptions of their role-

related identity and that their perceptions tend to change along the course of their studies.

In 2010, Lindquist, Engardt and Richardson synthesised knowledge from the four studies discussed above to understand the longitudinal learning pathways of becoming physiotherapists. Their analysis described three pathways including 'learning to cure', 'learning to educate' and learning to manage people's health' (Lindquist, Engardt and Richardson, 2010). These learning pathways had different foci and represented discrepant professional identities which provide implications for physiotherapy education. Specifically, educators need to consider the discrepancy in students' learning approaches and accordingly create diverse opportunities to guide their development.

The literature demonstrated the importance of exploring how physiotherapists construct and perform their identities through a variety of clinical and educational experiences in order to capture the dynamic nature of identity. It can be said that Webb (2004) presented such an in-depth analysis that showed the progressive development of physiotherapy students' identities as influenced by their interactions and conversations. The analysis used a constructivist discursive approach to build a theoretical model of transformation that explained students' approaches to negotiating their identities overtime (Webb, Fawns and Harre, 2009). Webb's model discussed how identities were developed through a process of negotiation between the profession's normalised identity standard and each student's agency in constructing their own identities. Although the model showed the complex and progressive processes involved in identity construction; the study adopted a psychological perspective that dedicated

more analytical attention to understanding student's agency. The presented analysis did not adequately consider the role of students' professional and social contexts and as a result it inadvertently suggested that the site of identity construction and remedy for ineffective professional socialisation did not exist within social structures but were rather the task of individual students.

Hammond, Cross and Moore (2016) provided a contextualised analysis that showed the impact of power-related factors in the workplace and the wider organisational and social structures on the ways through which physiotherapists constructed their identities in clinical practice. The findings demonstrated that peer discussions of ethical dilemma in the workplace promoted reflection which helped physiotherapists to attain a stronger conception of their professional identity. Therapeutic relationships and interactions with patients also shaped physiotherapists' identity as they faced challenges to re-conceive their role, autonomy and values in relation to patient-centeredness (Adams et al., 2006; Horbin, 2016; Roskell, 2009). Therefore, the existing studies highlighted that professional identity in physiotherapy is formulated through interactions with educators, peers and patients and that it is neither detached from contextual factors nor from other dimensions of the individual's sense of self such as personal identity.

Hammond (2013) found that physiotherapists conceptualised their professional identity in relation to their personal values, beliefs and motives. The interplay between personal and professional identities was further demonstrated in the work of Wynter (2017) who studied the journey of a group of physiotherapy students from pre-admission to employability. The author used a combined approach based on personal, social and professional identity frameworks to

understand the effect of personal attributes on physiotherapists' development. The findings identified six personal attributes that facilitated professional identity construction including conscientiousness, resilience and reflection, caring, attitudes to learning and interpersonal relationships.

The literature also showed the effect of experience on physiotherapists' identity. Corb et al., (1986) reported that expert physiotherapists tended to extend and redefine their identities as clinical educators, mentors and researchers. This suggested that professional identities develop with the situations and problems faced in practice and old identities could be transformed or substituted with new ones, signalling growth in professional insight. Professional growth has been described as a carapace, in which dimensions of professional identity are not solid entities with inseparable parts, but are rather interrelated and capable of acting independently (Kiger, 1993). An example of this metaphor lies in the experience of physiotherapists who recently moved to academia. Hurst (2010), Smythe (2008) and Sparkes (2002) explained how physiotherapy academics transformed their identities to become lecturers while activating various aspects of their previous clinical identities to inform their new roles.

Some studies explored physiotherapists' values including Aguilar et al., (2013 and 2014), Hayward and Charrette (2012) and Verma, Paterson and Medves (2005). These studies used a variety of methodologies including phenomenology, surveys and secondary literature reviews respectively. Although professional identity was not explicitly investigated, these studies provided insight into what professionalism meant to physiotherapists and how they applied their values in practice.

Additionally, there are a number of studies that explored the impact of gender on physiotherapists' professional identity formation. Ohman and Hagg (1998) is an example of such studies that used constructivist grounded theory methodology to produce gendered identity types whereby female physiotherapists perceived themselves as 'treaters' and 'supervisors', while males constructed their professional identity from the positions of being 'coaches' and 'entrepreneurs'. It was concluded the locus of identity formation was different in men and women hence the later was focused on patient-centeredness while the former revolved around leadership and self-actualisation. Heathcote (2010) and Robert and Smith (2002) also studied the lived experiences and identity of male physiotherapy students in university and on clinical placements. Both investigations argued that the physiotherapy profession in the UK was feminised. As a result, some male students tended to develop a culture characterised by masculine conversations and attitudes, such as athleticism, to enable their professional development in ways that coincided with their gender identity (Heathcote, 2010). Although caring qualities and behaviours were considered feminine, some male students did not experience as much conflict in adopting these behaviours which were seen as a part of playing the 'professional game' (Heathcote, 2010).

In another study by Dahl-Michelsen (2014), the social processes that first year physiotherapy students in Norway undergo as they become professionals was explored using interviews and observations. The analysis showed that 'being athletic' was a shared value through which students self-identified and were perceived as suitable physiotherapists. Both male and female students who displayed hyper-athleticism or sportiness were seen as more fitted to the ideal type of being a physiotherapist. Female students who had an ordinary level of

athleticism did not encounter barriers to constitute themselves as physiotherapists and were recognised as such. This is in contradiction to the position of male students with ordinary sportiness hence they struggled to consider themselves legitimate physiotherapists and consequently they were unsure about their future careers (Dahl-Michelsen, 2014).

This research does not aim to study professional identity from a gender perspective. However, the literature around physiotherapists' gender identities informed the current research through the understanding that professional identity cannot be constructed in isolation of other ways of being or identities. Moreover, gender-identity studies showed that the tension between discourses of 'femininity and caring' and 'masculinity and athleticism' were embedded within the identity of the physiotherapy profession and as a result had significant impacts on how physiotherapists perceived themselves and one another. This knowledge further justified the decision to explore professional identity in this research at both the macro and micro levels given their interconnectedness.

## 2.6 Conclusion

This chapter presented the background literature necessary to understand the construct of identity and professions. The complexity involved in defining and studying identity has been demonstrated by discussing different psychological and psychosocial theories; which also served to determine their appropriateness for this research. The limitations of adopting a psychological approach in this research have been discussed. It has been argued that a psychosocial conceptualisation of identity is essential to exploring individual opinions and experiences as well as the social interactions that shape the process of identity formation and perception. Thus, a psychological approach

would enable for studying how physiotherapists, patients and physicians ascribed meanings to being a physiotherapist and to physiotherapy as profession through their relationships in clinical practice.

Identity is inextricable from interpersonal relationships and is seen as a questionable subject in process; a subject who is responsive to external input and who is, therefore, without a static or unitary identity. Subscribing to such an understanding would enable for a contextualised, critical consideration of physiotherapists' agency in constructing their identities as influenced by their interactions, and the identities that others ascribe to them. In this regard, all perspectives will be treated equally and no particular perception of physiotherapy identity would be prioritised over another nor will any construction be treated as fixed or final. Accordingly, the research would remain open to multiple and potentially contradicting perceptions that are rooted in participants' narratives.

This chapter also showed that the term ‘profession’ is not a stable construct; it is rather a social construction whose definition varies with techno-scientific developments and the changes in societies’ needs within different cultural, economic and political structures (Evetts, 2003). Historically, the existence of professions derived from the community’s need for competent individuals to provide and manage the spiritual and physical requirements of people and to legalise and order their exchange of goods and services (Friedson, 1994). Professional competence has always been a factor of exclusive knowledge, thus in the 18th century only the three learned-professions were recognised and these included medicine, law and clergy (Kell and Owen, 2008). At that time,

physiotherapy would have not been considered a profession because its education was not formally delivered, and thereby physiotherapists would have not been identified as professionals by outsiders. This example shows that the external social identity of a profession and its members as perceived by outsiders tends to change with time and developments in the educational standards and practices of the profession.

Furthermore, the physiotherapy literature discussed in this chapter provided conceptual and methodological insights that will be adopted in this research. Conceptually, the internal professional identity of physiotherapy both at the macro organisational and micro individual levels will be treated as multifaceted and fluid across time and contexts, and co-constructed through interactions.

Physiotherapists continuously re-interpret their professional self-perception in an ongoing process shaped by their evolving personal characteristics and understandings of their role together with the profession's socialised behaviours and values and its surrounding social, cultural and political contexts. Making sense of what it's like to be a physiotherapist is never settled because it continues to develop as the individual responds to and manages varying opportunities and challenges. In order to unpack and capture the complexity of this process, the majority of professional identity studies were qualitative and often used semi-structured interviews and focus groups to allow for a flexible and an in-depth exploration of potentially varying subjective opinions and lived experiences. Accordingly, a qualitative study design was considered most appropriate for this research to understand how the professional identity of physiotherapy is perceived in Egypt. Chapter 3 discusses several epistemologies related to the qualitative and quantitative research traditions to

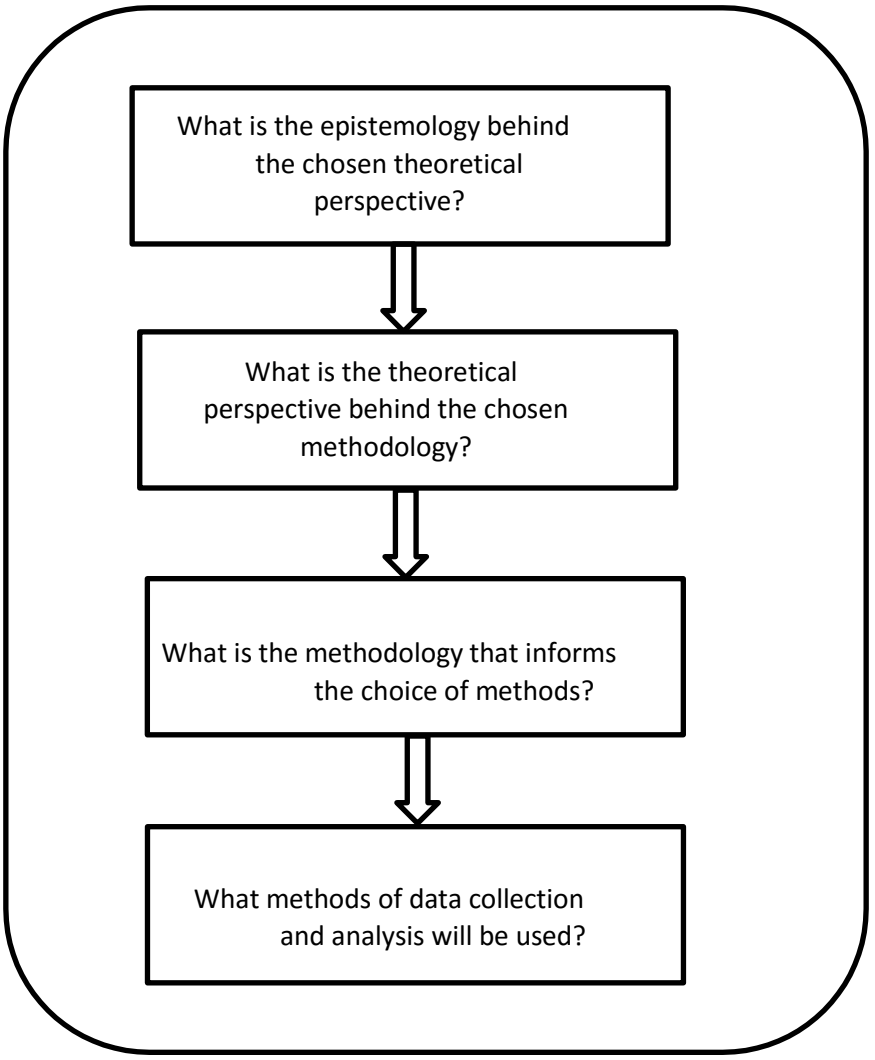
further justify adopting a qualitative approach. It also discusses some qualitative research approaches and identifies constructivist grounded theory methodology as the most suitable methodology for this research.

# Chapter 3: Epistemology, Theoretical Framework and Methodology

## 3.1 Introduction

This research project aims to provide a theoretical understanding of how the identity of physiotherapy as a profession and the identity of physiotherapists are perceived in Egypt. To achieve this aim a range of research approaches were initially considered and a decision was reached to follow grounded theory methodology (GTM). To explain how this decision was reached, it is imperative to discuss the epistemological and ontological underpinning of this research project as well as the researcher's own philosophical stance. Crotty (1998) proposes four questions that need to be answered in order to develop a research proposal as shown in figure 3.1 overleaf.

**Figure 3.1 Crotty's framework for developing research proposals (Reproduced from Crotty, 1998, P2).**




This chapter addresses the first three questions that Crotty proposes by presenting the epistemological, theoretical and methodological debates that were explored during the design phase of this research. Benton and Craib (2010) explain that adopting a particular philosophical position helps researchers to tease out and critique their presuppositions; which when left unquestioned can often interfere with and bias the research process. Bowling (2002) adds that researchers should elaborate on the philosophical underpinnings of a research project as a measure of scientific rigor that holds the researcher accountable to justifying the methodological and analytical

decisions made. Therefore, this chapter provides in-depth discussions of the philosophical and theoretical framework of the current research in order to justify why GTM was selected. Crotty's (1998) conceptual map for planning a research process was followed in the writing of this chapter to present the discussions in a logical approach which helps the readers identify and understand the decisions which led to selecting GTM. Therefore, this chapter enables the readers to appraise the rigor of this research by judging its transparency and authenticity.

## 3.2 Epistemology

Epistemologies are theories about the ways we can obtain valid and adequate knowledge about the world and thus guide the choice of methodology and methods (Potter, 2000). Ontologies are theories about the nature and relations of being which map the kinds of things and constructs that can exist and thereby determine the research questions and interpretation of findings (Bryman, 2016). Therefore, ontological and epistemological positions are correlated and jointly shape all research processes (Sarantakos, 2012). As shown in Figure 3.1 Crotty's framework omits ontology because ontologies and epistemologies are considered difficult to differentiate from one another on a conceptual level, therefore this chapter will primarily focus on discussing epistemologies.

However, several researchers have highlighted the issue of inconsistency in the terminologies used to describe the epistemological assumptions of different research methodologies (Denzin and Lincoln, 2008). This lack of consistency can be seen in the differentiation that some literature sources draw between the terms perspective and paradigm (Denzin and Lincoln, 2005). Guba (1990) describes a paradigm as a unified set of beliefs that inform actions, thereby a

paradigm encompasses the axiomatic principles that we lay according to our epistemological viewpoints. Denzin and Lincoln (2008) argue that perspectives are fluid opinions and are not as unified as paradigms; thereby perspectives are less fundamental to a given epistemology because they may change. However, the terms perspectives and paradigms are often used interchangeably to describe the principles of an underlying epistemology; which might suggest that epistemological theories are understood to encompass paradigmatic and fundamental principles as well as perspectival and fallible opinions (Krauss,

2005).

Nonetheless, Bryant and Charmaz (2007) argue that the epistemological claims (whether paradigmatic or perspectival) made by different research methodologies tend to vary, yet all epistemological claims ought to explain why and how the application of a given methodology enables the production of knowledge. Thus, epistemological claims provide the rational for selecting a given research methodology. The researcher's epistemological commitments inform their philosophical stance, which in return informs their selected methodology. Accordingly, the researcher's philosophical and theoretical stance exposes their assumptions and gives insight into the reasoning behind the selected research methodology (Hughes and Sharrock, 2016). Sections 3.2.1 to 3.3.5 of this chapter discuss a range of epistemologies and their accompanying theoretical viewpoints to understand how they inform different research methodologies. This chapter also covers examples showing how the current research might have been conducted from different epistemological perspectives as compared to the selected constructivist perspective from GTM

was applied in this research. Grounded theory methodology is then discussed towards the end of this chapter.

### 3.2.1 Objectivism

Objectivism is the epistemological stance that external reality exists independent of human consciousness whether that of scientists or laymen (Jonassen, 1991). Objectivism treats both social and natural phenomena as empirical objects that can be studied using unbiased scientific methods of observations and logical analysis (Delanty and Strydom, 2003). Scientific methods help scientists produce law-like statements reduced to the exact and simplest meaning of objects, to understand the 'True' nature of the physical and social world (Durkheim, 2013; Rorty, Williams and Bromwich, 1980). Positivism and post-positivism are the paradigms or theoretical perspectives associated with assuming an objectivist epistemology.

#### 3.2.1.1 Positivism and Post-positivism

Positivism can be regarded as a framework of perception that is objective in its comprehension of reality as well as its generation and application of knowledge (Savin-Baden and Major, 2013). Positivism requires for scientific knowledge to be exclusively based on facts that withstand tests of truth and/or falsity against similar observations to select the most reliable set of facts that precisely predict and explain states of affairs (Bernstein, 2011). To improve the reliability of scientific facts, positivist research often conducts randomised controlled trails to reduce the possibility of researcher bias and ensure that the measured findings are attributed to the phenomenon being studied (Robson and McCartan, 2016).

Initially, physiotherapy embraced positivism as a part of the evidence-based practice movement, before realising that conducting randomised trials in meticulously controlled settings may lack external validity because they fail to account for a wide array of psychosocial and environmental factors that impact upon physiotherapy outcomes in clinical practice (Plack, 2005). Consequently, there has been an observable transition from positivism to post-positivism in physiotherapy research, although an objectivist epistemological stance was not completely abandoned (Greenfield, Greene and Johanson, 2007).

On the contrary to positivism, post-positivism believes that reality cannot be fully understood but only relatively apprehended by the people experiencing this reality (Guba, 1990). Thus, post-positivism acknowledges the methodological inability to control all variables in different research contexts because some variables might be unpredictable. However, like positivism, post-positivism is also committed to an objectivist epistemological stance that it aims to attain by admitting to the presence of researcher bias and striving to minimize its influences through peer review processes and confirmation studies. Therefore, post-positivism disagrees with the positivist belief that a researcher can fully observe and completely understand the reality of any given phenomenon; and accordingly objectivism is seen as an ideal standard to aim for but one that cannot be fully attained.

It is suggested that a post-positivist approach can facilitate the generation of more pragmatic understandings of objective reality, but there is limited evidence to indicate that this standpoint has been holly embraced within physiotherapy research (Greenfield, Greene and Johanson, 2007). That is because

physiotherapists have been increasingly reflexive in exploring the theoretical underpinnings of physiotherapy through qualitative research and through several psychological and social theories to explore new research interests in physiotherapy (Olsen et al., 2013). This manifested itself in the shift from a medical to a bio-psychosocial model of physiotherapy practice and a growing recognition of epistemological positions other than objectivism within physiotherapy literature. Although positivist and post-positivist research traditions are still being utilised to test the effectiveness of different therapeutic interventions and gather survey data to inform the education and practice of physiotherapy; research objectivity is increasingly seen as not only unattainable but also undesirable (Plack, 2005).

Petty, Thomson and Stew (2012) argue that objectivist epistemological paradigms (positivism and post-positivism) might be incompatible with physiotherapy practice which is complex, subjective and artistic thus it requires more interpretative theoretical perspectives and methodologies which can generate evidence on these areas. Nicholls and Larmer (2005) also explained that physiotherapy must capitalise on its ability to deliver patient-centred care by widening the scope of evidence-based physiotherapy to include subjectivist epistemologies and qualitative research methodologies so that physiotherapists can holistically understand a wider range of psychosocial, cultural, environmental and political aspects of health that impact upon patients' experiences of physiotherapy. The current research project could have followed an objectivist standing by utilising pre-exiting literature about the identity and characteristics of professions to develop a questionnaire to survey participants' perceptions of physiotherapy in Egypt.

However, to identify the meanings, attitudes and processes that might be occurring upon conceptualising the identity of the Egyptian physiotherapy profession, a more interpretative research approach is needed. Thus, to achieve the aims of this research and in alignment with the interpretative shift in physiotherapy literature; objectivism was not considered a suitable epistemological approach for conducting this research.

### 3.2.2 Subjectivism

Subjectivism is the contradictory epistemological stance to objectivism and represents knowledge from the knowledge seekers' subjective view of phenomenon (White, 2007). Subjective meanings are ascribed to phenomena by those involved in observing it, thus the answer to the research problem lies within the researcher's beliefs and perspectives. If a strict subjectivist standing is assumed then the findings of any research represent the researcher's own understandings of and feelings concerning the research problem (Bunge, 1993).

It has been argued that purely subjectivist research findings might overlook the interplay between the researcher and the participants as well as other factors including social, cultural or power-related factors that might impact upon people's understandings (Ratner, 2008). Thus, subjectivism in its strictest sense has been criticised for generating a skewed account of social phenomena that are considered a product of several individuals reacting differently and unexpectedly to various factors and conditions (Gergen, 2001).

### 3.2.3 Constructionism and Constructivism

Denzin and Lincoln (2008) explain that there is a growing emphasis on exploring and assuming alternative epistemologies to objectivism. Within physiotherapy, Shaw, Connelly and Zecevic (2010) pointed to a distinctive paradigmatic shift towards interpretative, postmodern and critical realist approaches, which are usually related to a constructionist epistemology. According to constructionism, meanings are neither entirely objective nor subjective and meanings cannot be discovered because they are mutually constructed by people as they engage with the physical and social worlds. Constructionism believes that objects and phenomena cannot be understood without observers; who cannot be fully divorced from their culture and biography during the process of observation and meaning-making (Burr, 1995). For example, to explore the identity of Egyptian physiotherapy, a constructionist would engage with relevant stakeholders who have had experiences of physiotherapy, in an endeavour to decipher their collective perceptions of physiotherapy. As opposed to the positivist and post-positivist theoretical perspectives related to objectivism, constructionist research is not based on a priori assumptions or null hypotheses concerning the phenomenon under scrutiny. Thus, constructionism enables for a more explanatory approach to be followed.

Contrary to subjectivism, constructionism realises the need to explore the effect of and interplay between potential contextualising factors that might be involved in the study situation. The social negotiations and interactions involved in meaning making are central to constructionism. Constructivism is ontologically relativist because it acknowledges the existence of multiple realties and

perspectives (Ormston et al., 2014). Constructivism is concerned with the individualistic beliefs and reality of each person. Therefore, constructivism is often considered a paradigm rather than an epistemology because it stands for a set of beliefs undergirded by a constructionist epistemology (Guba and Lincoln, 2008). Gergen (1985) argued for making a distinction between constructivism and constructionism by labelling the latter as social constructionism to emphasis its perception of meanings as collectively generated and shaped by cultural and social processes, while constructivism focuses on understanding the meaning-making processes of the individual mind and sees objectivity and truth to be the product of individual understandings (Schwandt, 1994).

Nevertheless, constructivism does not deny the role of social and cultural influences on individual meaning-making processes; hence it acknowledges that there are a multitude of realities that are a product of people reacting differently to varying contextualizing factors as they endow objects and experiences with their own subjective meanings (Denzin and Lincoln, 2008). Therefore, constructivism sees all knowledge and realities as perspectival, local and provisional (Goldkuhl, 2012). Accordingly, a single, objective reality about social phenomena cannot be expected because people may have different views as influenced by a wide range of social and cultural norms; which are known as ‘social structures’ (Hacking, 1983). Constructivism does not believe that social structures are immutable or that they strictly determine people's perceptions and attitudes (Perkins, 1999). Sewell and William (1992) explain that constructivism subscribes to the influence of social structures in shaping people's opinion but at the same time it acknowledges the unpredictable role of

human agency. The unpredictability of human actions and their consequences suggests that people can change or reinforce the social structures that enabled them to act in the first place (Holling, 2001). Therefore, constructivism believes that human agency and social structures presuppose rather than oppose one another (Fay, 1980). The perception of people as knowers, doers and thinkers together with the perception of social structures as capable of being changed, highlight that people can act creatively to reproduce, transport or change social structures (Kimmel, 2004). This idea is imperative to understand the actions, resources and operations that shape and are shaped by the meanings generated by each person. It can be said that constructivist perceptions of social phenomena overcome the agent-proof problem of the traditional French structuralist ideal determinism and the traditional Marxist material determinism (Reckwitz, 2002).

Both constructivism and constructionism were considered during the design phase of this GTM research. In order to generate knowledge about the identity of Egyptian physiotherapy that is grounded in participants' perspectives and experiences, the effect of sociocultural, environmental and organizational factors need to be uncovered, theorized and reported on. From a constructionist view, knowledge about participants' perceptions on and attitudes towards physiotherapy are constructed through social negotiations and cultural exchange. However, in order to analyse participants' attitudes and understand their perceptions, the researcher's own interpretation of these socially constructed views will be integral. Therefore, the GTM followed in this thesis is representative of the constructivist paradigm due to the centrality of the researcher in data collection and analysis. Yet, to understand why GTM and

constructivism were chosen, it is substantive to discuss some of the theoretical perspectives related to constructivism.

### 3.3 Theoretical perspectives related to constructivism

There are different theoretical perspectives and paradigms related to the constructionist epistemology including feminism and critical theory. Elaborating on all of these perspectives at length is beyond the scope of this dissertation. Instead this section of chapter 3 provides details on the key theoretical perspectives which underpin constructivist GTM because it is the methodology that has been adopted in this research.

#### 3.3.1 Interpretivism

Interpretivism is a theoretical perspective that is integral to constructivist GTM. Interpretivism aligns with constructivism because both aspire to understand how individuals enact their realities, give them meanings and understand how these meanings and motives guide actions (Hammersley, 1993). The idea that people's actions have meanings is central to interpretivism and constructivism which seek to produce culturally and historically contextualised interpretations of human actions (Kukla, 2000). Contextualisation is the perception of all knowledge as situation dependent interpretations of observed phenomena (Goldkuhl, 2012). Contextualisation, interpretivism and constructivism are closely linked to the concept of 'Verstehen' which refers to understanding anything in relation to the situation/context in which it transpires but also realising that it is people who give anything or any situation its meaning (Weber, 1978). Therefore, interpretivism informs constructivist GTM by emphasising the importance of understanding the subjective meanings of people's actions in a

given context and reconstructing these meanings into theories that are seen to provide a provisional portrayal, rather than an accurate picture, of the studied phenomenon (Charmaz, 2012). There are 3 theoretical perspectives that represent interpretivism, namely, hermeneutics, phenomenology and symbolic interactionism. The next sections discuss those 3 theoretical perspectives.

### 3.3.2 Hermeneutics

Hermeneutics is the explanation of text and speech based on the premise that all forms of manmade knowledge and communications are expressions of meanings. It has been historically used to analyse biblical texts and to explore research problems where scriptures, historical documents and art provide the richest and usually the only available sources of information (Gadamer, 1989). Hermeneutics has since been increasingly used to provide a historical understanding of human actions and contemporary social institutions (Benton and Craib, 2010).

From a hermeneutics perspective, to understand the identity of Egyptian physiotherapy then the researcher ought to analyse the historical roots of several constructs that can potentially shape how physiotherapy is perceived such as the history of professions and the concepts of professional hierarchies and power within the context of the Egyptian culture. Hermeneutics suggests that people's prejudices and assumptions about a given moment in history are rich sources for understanding human behaviour. Therefore, an interpretation of the identity of Egyptian physiotherapy shall represent a negotiation between the information presented within relevant historical texts and the researcher's

prejudices as influenced by her personal history, experiences and by societal norms.

It is, however, argued that hermeneutics prioritises understanding history, culture and traditions over exploring more contemporary sources of data that can provide insight into human behaviour in modern societies.

### 3.3.3 Phenomenology

Phenomenology is the study of things, beliefs, actions, judgements and emotions (i.e. phenomena) themselves. Phenomenology is not a paradigm or doctrine because it does not have a unifying thematic or philosophical focus, therefore it is seen as a flexible theoretical perspective that is open to interpretation and is constantly under revision. As a result there are different approaches to utilising the ideas presented by phenomenology to study the social world. Phenomenological approaches include realist, existentialist and transcendental phenomenology. However, there are similarities between phenomenological approaches. The most prominent of these similarities is the argument that if we can suspend our preconceived understandings of a social phenomenon then we can reconceive new meanings of the same exact phenomenon.

From the phenomenological perspective, human action takes place within the context of relations between people, objects and events. Therefore, the phenomenologist seeks to understand the lived experiences of people inhabiting a given time and space and engaging in relationships; which makes corporeality, temporality, spatiality and relationality four key axes to understanding the ways in which people attend to the world. The lived

experience of any phenomenon is deemed to be the individual's perceptions of their presence in the world both physical and social, thus it is a subjective interpretation of their own state of being. Phenomenology then aims to uncover the core essence of what it means to experience something.

As previously mentioned, the aim of this research is to understand a phenomenon which seems to lack an adequate theoretical framework (how the identity of Egyptian physiotherapy is perceived). From the phenomenological viewpoint, the phenomenon under scrutiny (the identity of Egyptian physiotherapy) can be explained by studying the lived experiences (perceptions and interpretations) of those who embody the phenomenon (Egyptian physiotherapists, physicians and patients). Thus, a study conducted from the phenomenological viewpoint can generate an insightful understanding of the identity of physiotherapy in Egypt that is grounded in the lived experiences of key stakeholders. However, phenomenology provides a thick description of participants' reported interpretations rather than a theoretical explanation of the processes involved in how participants interpreted their experiences. Therefore, a decision was made to explore other interpretative perspectives that can inform the development of a theoretical model that explains, rather than describes, how participants formulate their opinions about physiotherapy as a profession.

### 3.3.4 Symbolic interactionism

Symbolic interactionism is another interpretivist theoretical perspective related to constructivism through its belief in people's ability to endow things with meanings that are created through social interactions (Goffman, 2005). It suggests that human behaviour is conscious and meaningful rather than

automated and entirely dictated by social structures. Symbolic interactionism subscribes to the simultaneously subjective and unremittingly social nature of the world and the self (Annells, 1996). It believes that the progressive development of meanings involved in the tuning of one's own ideas, beliefs and behaviours are pursuant to the perceptions we think others hold about us and about shared experiences, and through our interactions and negotiations we can construct a framework of meanings that meets social norms yet reflects who we think we are (Scheff, 2005). Social norms are thought to contextualise and inspire actions that in return reinforce or destabilize those norms, therefore symbolic interactionism emphasises the role of human agency in bringing new meanings into existence through actions (Fine, 1992).

This research seeks to understand how the identity of Egyptian physiotherapy is understood. Accepting that participants' perceptions of physiotherapy can generate insight into the mechanisms through which they developed their perceptions, would enable the researcher to develop an abstract theoretical explanation about how the identity of physiotherapy is constructed from participants' perspectives and through their meaningful actions. Accordingly, this research subscribed to symbolic interactionism and a perception of meanings as socially constructed. The selected methodology (GTM) was guided by the interpretative theoretical perspective of symbolic interactionism.

### 3.3.5 Positioning this research within the selected epistemological and theoretical framework

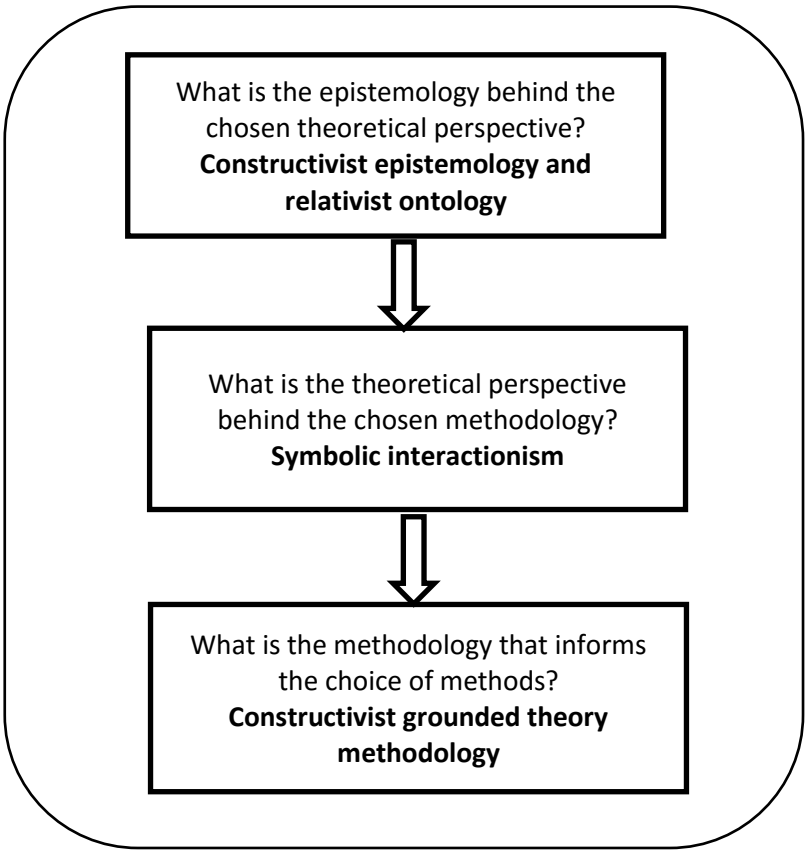
Interpretivism aims to understand social phenomena and believes that the context in which any research is undertaken is imperative to the analysis of the

collected data (Willis, 2007). The aim of interpretive qualitative research is to produce a contextual interpretation of social processes. The interpretative theoretical perspective of symbolic interactionism was considered suitable for exploring the identity of Egyptian physiotherapy. Symbolic interactionism has been recommended for the development of social theories owing to the interpretive stance it adopts and the methods it advocates to gather and analyse data (Blumer, 1986). As a result, a social theory that is developed through symbolic interactionism subscribes to the existence of multiple realities where facts and subjective opinions are interlinked, as a result the truth is intermediate and provisional and social life is processual (Charmaz, 2006).

Positioning this research within constructivism, relativism and symbolic interactionism involves clarifying that the research objective is to develop a theoretical model that would help to identify and explain the processes through which key stakeholders construct the identity of Egyptian physiotherapy. Subscribing to the chosen philosophical and theoretical framework means that this research acknowledges that there is possibly more than one reality about how physiotherapy is perceived in Egypt because participants' perceptions might vary depending on their experiences. It also means that the ways through which physiotherapy is perceived would be relevant within the Egyptian context and should not be transferred without a critical consideration of a wide range of cultural, organisational and individual factors that might impact on how physiotherapy is seen in a different research context. Finally, the study's constructivist epistemological orientation reflects the researcher's understanding of the findings generated by this study as a co-construction between the researcher and the study participants.

Accordingly, this chapter aimed to report on the constructivist epistemological and relativist ontological stance and the symbolic interactionist theoretical perspective adopted in this research to inform the application of a constructivist grounded theory methodology. Figure 3.3 below summarises the philosophical underpinnings of this study using the framework of Crotty (1998).

**Figure 3.2: Summary of the study's philosophical underpinnings**




## 3.4 Methodology

### 3.4.1 The Emergence of grounded theory methodology

GTM was developed by the American sociologists Glaser and Strauss in 1967 at a period of time when the social sciences were heavily reliant on objectivist

research methodologies that overlooked the importance of inductive qualitative research for generating social theories (Morse et al., 2009). They suggested that systematic analysis of qualitative data had its unique logic that enabled theory generation. Charmaz (2006) expounded that the discovery of GTM offered a substantive argument for the legitimisation of qualitative research as a valid methodological approach in its own right.

Glaser and Strauss (1967) introduced various novel research methods and ideas concerning qualitative research. They defied notions that qualitative methods were ill-defined, haphazard and impressionistic and that collecting and analysing data should be two separate methodological steps. They also questioned the dominant perception that qualitative research should only be preliminary to a more credible and scientifically valid quantitative research and therefore theories cannot be produced using qualitative research alone.

However, it is argued that Glaser and Strauss despite aiming to challenge the prevailing objectivist orientation of that time they did so using practices that resonated with some of the epistemological views of objectivism. Their original description of GTM assumed somewhat a positivistic epistemological standpoint with emphasis on research objectivity and an assumption that reality can be discovered and explained; hence theories can emerge from the data. Yet, it has

also been suggested that there were evidence of symbolic interactionist ideas in Glaser and Strauss's original book because they realised the role of individuals in constructing their realities (Bryant and Charmaz, 2007). Evidence of competing epistemological views in Glaser and Strauss's original writings is perhaps a reflection of the authors' worldviews and academic backgrounds. Glaser had more of a positivistic background at the University of Columbia; thus he equipped GTM with empiricism and systematic coding procedures to facilitate the emergence of theories from data. On the contrary, Strauss had a more pragmatic background at Chicago University and emphasised the importance of adopting an open-ended approach to qualitative theorizing to help capturing people's subjective interpretations (Morse et al., 2009). By incorporating both views, Glaser and Strauss professed that qualitative theorising can be conducted systematically using GTM, but presenting two contradicting schools of thought raised concerns that GTM might have been philosophically inconsistent (Layder, 1998). As a result, researchers from different fields debated to find the most appropriate philosophical approach to generate social theories that are grounded within data. Consequently, GTM has been understood and applied in different ways.

Whilst Glaser and Strauss's original description of GTM was critiqued for being abstract, Glaser criticised Strauss and Corbin's (1990) work for being prescriptive thereby forcing the data into distorted categories. These debates, known as the emergence versus forcing debates, resulted into the development of various revisions of GTM with various epistemologies. Glaserian GTM remained committed to empiricism and the original description of GTM procedures. On the other hand, Strauss (1987) developed the methodology by

addressing feedback about the lack of procedural clarity in applying GTM. Strauss then co-authored a number of books with Corbin to provide details of the exact techniques and procedures of GTM; thereby making it more usable. Many of Strauss's students developed subsequent revisions of GTM using more interpretivist schools of thought; thereby creating clear distinctions between the theoretical underpinnings, aims and procedures of Glaserian objectivist GTM, Straussian pragmatic and interactionist GTM and Charmaz's subsequent constructivist GTM (Charmaz, 2000). The next section below discusses the differences between versions of GTM in more details.

### 3.4.2 The evolution of grounded theory methodology

A review of grounded theory methodology related literature showed that the original approach and views developed by Glaser and Strauss in 1967 has been changed over the years (Morse et al., 2009). After their initial publications, Glaser and Strauss developed GTM along considerably different routes (Charmaz, 2003). Glaser did so in his own publications while Strauss worked with Corbin on his own approach to GTM. This departure from how GTM was originally described resulted into the development of two somewhat different doctrines of GTM, namely Glaserian GTM that was based on original GTM and Glaser's subsequent publications; and Straussian GTM that was based on the modifications that Strauss made to the original version of GTM in collaboration with Corbin (Heath and Cowley, 2004).

Bryant (2002) argued that there is a third doctrine in which researchers have taken and continued to develop GTM further away from the positivism associated with Glaser's version of GTM. It has been suggested that Glaserian

GTM has been reformulated into a different doctrine of Glaserian thought that was more akin to post-positivism. A comparable observation has been noted regarding Straussian GTM whereas Strauss's students moved GTM away from symbolic interactionist and towards constructivism (Seale, 2004). However, there is limited consensus in the literature about whether this development led to the development of a distinct doctrine of Straussian thought, because constructivist GTM draws heavily on its symbolic interactionist roots given that both constructivism and interactionism are interpretivist in their theoretical orientation (Clarke, 2005).

Upon planning a GTM investigation, it is imperative to consider the varying doctrines and methodological debates associated with GTM. Therefore, the researcher undertook an exhaustive review of GTM literature to understand the variations between the above mentioned doctrines of GTM. The literature review showed that such variations include both theoretical and methodological departures emanating from the differences between Glaser's and Strauss's epistemological and ontological perspectives as discussed in the previous section.

Some scholars argue that Glaserian GTM is critical realist in its ontological dispositions (Annells, 1996). Critical realism adopts an objectivist view where the world is thought to exist separate of our perceptions, and as a result researchers are independent of the research process and the generated knowledge. This worldview contradicts with the relativist ontological stance assumed by Straussian GTM where reality is arguably interpreted and perspectival. Accordingly, Straussian thought requires the researchers to be

engaged with and visible throughout a GTM investigation. Constructivist GTM can be said to have emerged from Straussian thought because it also has its ontological underpinnings in relativism (Briks and Mills, 2005). However, constructivist researchers assume a more reflexive standing on the methods of knowledge production and representation of studied phenomenon, hence they focus their analytical attention on people's individual rendering of their reality and reflect on their position in relation to people's subjective realities (Charmaz, 1990).

Glaser remained adherent to his description of GTM after the deviation of his version from that of Strauss. Glaser understands GTM as an empiricist methodology of discovery of a basic social process that emerges from the data. Strauss and Corbin reframed GTM to focus on the application of new analytical steps and coding procedures that are somewhat different than the procedures of the original version of GTM. Glaser (1992) considers his version of GTM to be more evolutionary (read objective) in waiting for formal theories to surface from the data, thereby is more rigorous than Straussian GTM whose new analytical steps force the data into preconceived categories that are distorted by researcher bias.

Constructivist GTM follows many of the basic methods of the original methodology, such as the synchronous collection and analysis of data, theoretical sampling and the constant comparative method. However, constructivist GTM does not conform to the positivist assumptions of the original version of GTM (Charmaz, 2012). In light of the paradigm, constructivist GTM

adopts flexible analytical procedures that enable researchers to reflexively and creatively engage with the process of iterative theoretical development.

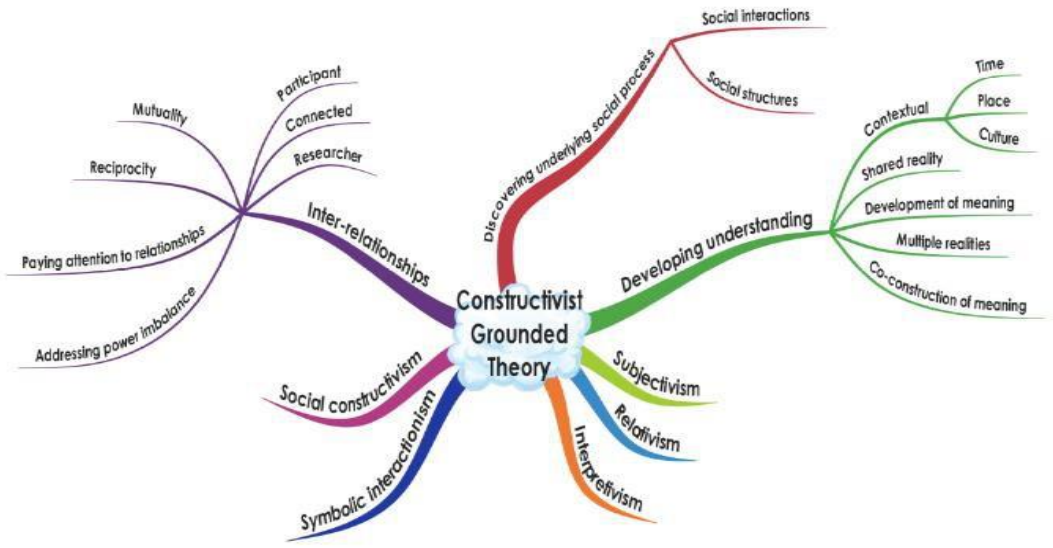
Clarke and Charmaz (2014) explained that constructivist GTM was developed to answer Glaser and Strauss's call in their original publications for researchers to apply the methodology in a flexible way that serves to meet their research objectives. Accordingly, Mills, Bonner and Francis (2007) argued that constructivist GTM has taken into consideration the epistemological, theoretical and methodological debates and developments in GTM. The next section discusses how constructivist GTM was developed from Straussian GTM to address these debates.

### 3.4.3 The emergence of constructivist grounded theory methodology and its relevance to this research

Pragmatism is a theoretical perspective postulating that it is through action and interaction in a given complex situation that people can creatively generate knowledge about the world to be applied in useful ways (Corbin and Strauss, 2008). Pragmatism sees reality as fluid and open to a multitude of interpretations and thus the truth is relative and contextual (Charmaz, 2006). As explained in section 3.3.4, symbolic interactionism is the interpretive theoretical perspective that people attribute individual meanings to their experiences through the process of interacting with one another and the world (Blumer, 1986). Symbolic interactionism emphasises that human action is based upon the meanings that people attach to symbols (for example nonhuman objects), and how these meanings are understood and conveyed using language. The meaning of any symbol does not emanate from the symbol itself but are rather constructed through social interactions between people.

Pragmatism and symbolic interactionism are 2 key theoretical perspectives that inform Straussian and constructivist GTM to enable for the development of theories by exploring social processes and interactions. The emphasis that both theoretical perspectives put on the process of individual and collective meaning making is imperative to develop an understanding of social phenomena that is rooted in the perspectives of the study participants. As such, during data collection the researcher is able to explore the perceptions and experiences behind the meanings that participants' attribute to concepts and symbols, rather than assuming what the participants meant. This facilitates the generation of a rich interpretation of what participants say, and what they withhold at times, that can then be compared to what has been learned from other participants during previous and subsequent data collection. Figure 3.2 overleaf is a reproduction of the GTM tree of knowledge that was used to show how the above mentioned theoretical underpinnings supporting constructivist GTM enables the understanding of social processes, mutual realities and inter-relationships.

**Figure 3.3: Grounded theory methodology tree of knowledge (Adapted from Gardner, McCutcheon and Fedoruk, 2010).**




Constructivist GTM sees grounded theory methods as a set of reflexive analytical exercises rather than prescriptive requirements (Charmaz, 2006). It provides a flexible guideline to theory development instead of procedural rules. However, Glaser (2002) criticised constructivist GTM for he argued that constructivist data, if it exists at all, it forms a limited proportion of the data that grounded theorists use. On the other hand, Charmaz (2003) explained that it is methodologically feasible to apply the main grounded theory methods that were developed in the mid-1960s and combine them with her fluid approach to generating theories based on people's subjective interpretations of the phenomenon under study. Charmaz's constructivist approach of GTM has been corroborated by several grounded theory scholars for its capacity to further push GTM around the interpretive turn of the twenty-first century.

Given the above mentioned philosophical departures, it was considered methodologically inconsistent to use more than one version of GTM in this

research. However, the work of Glaser, Strauss and Corbin, Charmaz and other GTM scholars was reviewed to help the researcher develop a broad understanding of the methodology before selecting constructivist GTM. Strauss and Corbin (2008) cautioned researchers against reducing grounded theory methods to a rigid set of procedures. This recommendation contributed to the researcher's rational to use constructivist GTM in the current research given its fluid approach that allows for flexibility and creativity.

### 3.4.4 Constructivist grounded theory methodology

As discussed in the previous section, Glaser and Strauss's original description of GTM suggested that theories can emerge from the data independent of the researcher's interpretations and biases (Glaser and Strauss, 1967). Thus, it was suggested that they relatively subscribed to the leading objectivist approaches and techniques of that time although they aimed to change. Subsequent revisions by Strauss and Corbin (1998) pushed GTM towards an interpretivist standing by recognising the impact of the researchers pre-existing knowledge and assumptions on theory development. However, they argued for adherence to the detailed methods of data collection and analysis they prescribed which was seen as a return to objectivism (Annells, 1996).

Glaser (1992), however, considered Strauss and Corbin's acknowledgement of the researchers' role in theory development as an infringement of the original theoretical commitments of GTM which require researchers to be neutral and detached from the objects of their study. Such arguments around the impact of researchers on knowledge production prompted Charmaz to develop another revision of GTM using the constructivist paradigm (Charmaz, 2000). Charmaz

argues that theories do not evolve out of the data and separate from the researcher's influences, but also theories are not in a dormant state within the data waiting to be discovered (Charmaz, 2003). Instead, it has been noted that researchers are active members of the social world they study and play a role as co-creators of knowledge (Starks and Trinidad, 2007).

Charmaz (2012) explained that qualitative researchers can no longer be perceived as giving immediate voice to participants; instead the generated theories are always mutually constructed through interactions between participants and the researcher; which further propels GTM beyond naïve representations. It can be said that the constructivist theoretical perspective infused GTM with an understanding of all realties, social and biological, as temporary and perspectival (Mead, 2009). Therefore, Charmaz (2003) understands constructivist GTM as a process of analytical deconstruction, co-construction and reconstruction of situated understandings rather than a tool that provided a snapshot of reality. Charmaz (2006) suggests that subscribing to the constructivist paradigm helps the researcher take the following ideas into consideration:

*"At each phase of the research journey, your readings of your work guide your next moves. The combination of involvement and interpretation leads you to the next step. The end point of your journey emerges from where you start, where you go, and with whom you interact, what you see and hear, and how you learn and think. In short the finished work is a construction - yours" (Charmaz, 2006; Pxi).*

Therefore, constructivist GTM is a flexible and progressive process that is capable of recognizing different interpretations of the human experience

because constructivism acknowledges that the same set of data is open to different interpretations thus it does not mandate rigid adherence to a prescribed set of methods. Nonetheless, to ensure that the methods followed in this study is consistent with the key principles of constructivist GTM; it is important to discuss some of the debates surrounding grounded theory methods before specifically describing how constructivist GTM can be applied.

### 3.4.5 Grounded Theory Methodology: Debates and their relations to this research

The potential of GTM has been widely discussed in the literature but also its limitations have been debated. Most of the critique concerns the role of researchers and the objectivist epistemological assumptions made by original and Glaserian GTM regarding knowledge production (Charmaz, 2000). Bryant (2002) has been critical of the notion of 'theoretical sensitivity' which requires researchers to begin the study without a prior knowledge. Thus, the use of literature during the early stages of GTM has been debated.

According to the procedures of constructivist GTM relevant literature can be used to steer the initial focus of data collection by identifying open-ended questions and points of discussion besides contradictions and knowledge gaps that the researcher may wish to pursue (Bowen, 2008). Clarke (2005) also advised analysts to draw on their knowledge of the topic under study to identify suitable types and sources of data in the early research phases. On the other hand, Glaserian GTM adopts an objectivist epistemological stance which assumes that researchers can and should enter the field of study as clean slates by suspending their knowledge and postponing the synthesis of an

exhaustive literature review until the analysis is finished; to avoid forcing the data into previously determined categories.

Suggesting that the researcher's ideas can be suspended to attain theoretical sensitivity means for Bryant that the researcher becomes a detached and "dispassionate, passive observer" (Bryant, 2002, P3). The author of this thesis agrees with Bryant (2002) on the assumption that researchers' previous knowledge, experiences and beliefs could not be "turned on and off like a tap". Therefore, the author also agrees with Birks and Mills (2005) that a review of the literature at the start of the research could preferably be limited to orientating the researcher with the study topic to develop and justify the research questions and objectives. During the later phases of data analysis and theory construction, conducting exhaustive literature reviews can sharpen the researcher's thinking so they could conceptualise the emerging theory without imposing the literature on it (Urquhart, Lehmann and Myers, 2010).

In this study, the researcher's decision regarding when and how to use relevant literature was informed by the regulations of the doctoral programme she was enrolled with. As a PhD student, the researcher had to review extant literature during the early phase of designing a proposal for the current research, to map the study area and justify the need for and value of the research. As the study progressed and during data analysis, specific literature relevant to the emerging analysis was reviewed to help the researcher explain what the theory was about.

Another key aspect of GTM that has been debated within the literature is the concept of theoretical saturation. Glaser and Strauss (1967) employed this term

to refer to the point in a research project where no further data could be found to offer new analytical insights. Dey (1999) used the term theoretical sufficiency to describe the stage where enough data has been collected because it is considered that data helps to suggest and elaborate on categories instead of saturating them. Given this study's constructivist commitments, achieving theoretical saturation/sufficiency meant that the researcher kept the analysis open to exploring several interpretations of the data to avoid finalizing the analysis before exhausting multiple analytical possibilities (Charmaz, 2006).

Nonetheless, as the popularity of GTM increased, researchers from various backgrounds became preoccupied with figuring out how to produce a grounded theory. These debates were reflected in the above mentioned variations between how different researchers applied GTM. Variations in the application of GTM might be due to the presence of multiple revisions of the methodology which enhanced the ability of GTM to be continuously modified to suit the peculiarities of different research contexts (Annells, 1996).

Alternatively, methodological inconsistencies in the application of GTM might be problematic, particularly for novice researchers, because it presents conflicting information concerning the methods constituting GTM. Therefore, Charmaz (2003) challenges the degree to which many studies actually followed the principles of GTM and she noted that, whether intended or not, there is a tendency to present a form of conceptual or thematic analyses instead of an explanatory theoretical model that is grounded. Suddaby (2006) agrees with Charmaz that the findings of many GTM based studies in different fields often provide a descriptive narrative of the constructs pertaining to a given

phenomenon, but do not identify the connections between these constructs to build a theory from which hypotheses can be inferred.

Bryant and Charmaz (2007) also explained that several researchers apply some key methods of GTM such as coding techniques and writing memos, but they usually fail to actively engage with higher order analytical exercises such as exploring the relationships between the developed categories. These methodological issues have been a cause of concern within the physiotherapy literature (Mellion and Tovin, 2002). Therefore, GTM has been described as a methodology that is in a constant state of flux and one that seems to have different meanings to researchers based on their philosophical orientations, skills and research experience (Corbin and Holt, 2004).

After considering these debates around the application of GTM, it seems that a description of the exact methods of grounded theory and how to apply these methods to achieve theory needs to be made clear. Therefore, Chapter 4 attempts to clarify the main methods involved in conducting GTM research independent of the version that has been followed. It has been argued that the variations between revisions of GTM are mostly technical differences to suit each version's epistemological underpinnings, however there are fundamental principles of GTM that need to be applied to achieve a grounded theory (Morse et al., 2009). Therefore, in order to ensure that the methods applied in this thesis are compatible with the main principles of GTM, Chapter 4 discusses the key tenets of GTM and the criteria used to ensure the rigor of a GTM driven investigation. To achieve this aim, Chapter 4 reports on a systematic review that has been conducted to appraise GTM applications within the field of

physiotherapy to identify how the key tenets or shared defining features of GTM are being integrated into research designs. The implications of this study can inform physiotherapy researchers and the wider research communities and will guide the methods adopted in this GTM research.

To summarise, at the beginning of this research, the author familiarised herself with different versions of GTM and the advantages and critique of each version. Consequently, Glaserian objectivist version of GTM was found inconsistent with the author's symbolic interactionism theoretical perspective. Glaser's understanding of theories as emergent from data by means of a neutral and detached researcher was also in contradiction with the author's worldview that there are many realities constructed through social interactions. Alternatively, Straussian GTM agreed with the author's stance through its pragmatist and symbolic interactionist roots (Corbin and Strauss, 2008). Yet, Straussian GTM was considered to be heavily focused on analytical and coding methods which made this version relatively rigid and complicated particularly as the author is a novice to GTM. Ultimately, Charmaz's version of GTM was deemed compatible with the author's philosophical orientations, constructivist epistemological disposition, relativist ontology and symbolic interactionist theoretical perspective. This version of GTM would enable the author to recognise her active role in generating, analysing and theorising the data. The following section provides additional justifications for choosing Charmaz's constructivist GTM for the current study.

### 3.4.6 Rationale for selecting constructivist grounded theory methodology

Charmaz's constructivist version has been a substantial redefining of GTM that was developed to address the philosophical critique levelled at previous versions. Constructivist GTM aimed to be more compatible with the epistemological and methodological advances in the methodology over the past decades (Charmaz, 2006), and it was the revision of GTM adopted in this study. Table 3.1 summarizes the differences between objectivist and constructivist GTM that have been discussed in this chapter.

**Table 3.1 Key differences between constructivist and objectivist GTM**

| **Version of GTM** | **Constructivist GTM**<br><br>(Annells, 1996; Charmaz, 2000; Clarke, 2005; Charmaz, 2006; Bryant and Charmaz, 2007) | **Objectivist GTM**<br><br>(Glaser and Strauss, 1967; Glaser, 1978 and 1992) |
|---|---|---|
| **Theoretical perspective** | Interpretivist | Positivist and post-positivist |
| **Role of the researcher** | Interactive, participatory and reflexive | Passive, objective and Detached |
| **Analysis** | Data is formed into building blocks of theory that represents the subjective understandings of those involved in theory generation (participants and researchers) | Codes, categories and patterns passively emerge from the data |
| **What is a grounded theory?** | Theory is constructed and represents a re-construction of multiple realities | Theory is there to be discovered and represents the facts of a real and external reality |

As shown in the above table, Glaserian or objectivist GTM concurs with the positivistic belief in an external world that can be studied, explained and predicted. If objectivist GTM was to be followed in this study, the researcher

would have needed to provide hard and undisputed evidence that the participants conveyed all of their perceptions exhaustively and truthfully. The researcher would have also needed to be completely detached and neutral in order to represent a first-hand account of such 'truth' as it is; without having to process what participants said to avoid manipulating the 'truth'.

Adopting objectivist GTM would have been incompatible with the researcher's own interactionist and relativist beliefs and her personal perception of identity as complex, fluid and perspectival. In contradiction, constructivist GTM sees the researcher as a co-creator of data and an active producer of the analysis via interactive engagements with participants and the data, and thus generating an interpretive picture of the identity of Egyptian physiotherapy that is partial and fallible; rather than complete and truthful. Constructivist GTM would enable the researcher to explore the various meanings and concepts that participants associate with physiotherapy and in doing so the data could give a "window on reality" (Charmaz, 2000, P523).

Concerning this study, constructivist GTM provides a progressive framework and flexible approach that does not limit the inquiry to pre-existing concepts because it remains open to exploring all analytical possibilities and constructs that emerge from the data itself. As a result, it would allow the development of a theoretical model to explain how the identity of physiotherapy is understood, which would include the various perceptions and ideas of the study participants.

Moreover, the constructivist approach recognises that the developed model should not be generalised as a final model of how physiotherapy is perceived in another time or culture; which emphasises that alternative theories could be generated from the findings of this research and from future studies. Therefore,

constructivist GTM as informed by relativist ontology and symbolic interactionist interpretive perspective has been selected as the most suitable methodology for addressing the research question and aims.

### 3.5 Summary

GTM has evolved and its methods have been interpreted in numerous ways based on the philosophical commitments and analytical skills of different researchers. Therefore, it is critical that researchers specify their epistemological and theoretical orientations to give a more transparent account of the research process and recognise the limitations and pitfalls of their work. Accordingly, this chapter aimed to report on the constructivist epistemological stance and the symbolic interactionist theoretical perspective adopted in this research to inform the application of a constructivist grounded theory methodology.

In Glaser and Strauss's original book they described how GTM can be used to build new theories rather than test or confirm previous theories (Glaser and Strauss, 1967). They recommended that researchers to look afresh at the data instead of using existing theoretical frameworks to analyse new data. However, there have been prolonged debates surrounding how to follow a 'true' GTM. It has been suggested that these methodological debates and inconsistencies might have result into confusion amongst researchers concerning which procedures to apply when conducting a GTM investigation. Therefore, it was important to investigate how grounded theory methodology was understood and conducted in physiotherapy research to generate recommendations that would inform the application of grounded theory methodology in this study and in

future research. To address this aim, the next chapter presents a systematic review that appraised the methodological quality of grounded theory research in physiotherapy.

# Chapter 4: A systematic review of grounded theory studies in physiotherapy

## 4.1 Introduction

In Chapter 3, the selection of grounded theory methodology (GTM) was justified hence it was considered the most suitable methodology for answering the research question. This decision was reached after careful consideration of the study objectives and epistemological and theoretical commitments. Chapter 3 also discussed how GTM has been understood and applied in different ways (Charmaz, 2003). Similar concerns have been raised within physiotherapy literature (Mellion and Tovin, 2002). Thus, it is imperative to specify the methods involved in conducting GTM and how these methods should be applied to further improve the methodological quality of GTM research.

The aim of this chapter is to report on a systematic review undertaken to critically appraise GTM research in physiotherapy, to understand how grounded theory methods have been applied and to produce methodological recommendations that could inform future GTM applications. To conduct this systematic review, grounded theory methods have been identified from previous literature and used as a guideline to appraise the quality of GTM research in the field of physiotherapy. The next section discusses the methods of GTM that represent the methodological rigor criteria embedded within GTM.

## 4.2 Grounded theory methods and appraising the methodological rigor of GTM research

Grounded theory methodology is a qualitative methodology that is widely used in physiotherapy research (Mellion and Tovin, 2002). As previously explained, grounded theory methodology (GTM) is one of the most rigorous methodologies because it provides systematic methods that enable qualitative theorising about areas where limited or no knowledge exists (Charmaz, 2012). Grounded theory methods are the techniques used to gather and analyse data to generate theories (Bryant and Charmaz, 2007). Grounded theories are theoretical hypotheses rooted in empirical evidence, and thus have the analytical ability to explain the phenomena under study.

There are various versions of GTM and each version employs relatively different methods based on its philosophical underpinnings (Morse et al., 2009). Glaserian GTM assumes an objectivist standpoint and an empiricist approach to data collection and analysis to allow the emergence of substantive theories directly from data (Glaser and Kaplan, 1996). Glaser (1998) advocates that researchers begin the inquiry as 'tabula rasa' by suspending their preconceptions and postponing the synthesis of an exhaustive literature review until the analysis is finished; to avoid the development of predetermined rationally-deduced concepts. Glaserian GTM analyses data using substantive and theoretical coding techniques that are guided by many coding genera to produce formal, parsimonious theories with the power to explain similar situations (Glaser, 2003).

Many key methods for grounded theory generation were discerned from Glaser's work (Charmaz, 2006). These strategies included: simultaneous involvement in data collection and analysis to create an iterative process where initial ideas can direct the following research procedures (theoretical sampling), the development of codes and categories as emerging from the data rather than predetermined categories, conducting systematic comparisons between the analysis and the data, and writing analytical memos to explain categories and relationships.

Straussian GTM draws on symbolic interactionism and is said to be more interpretative than Glaserian GTM because it recognizes the subjective nature of qualitative theorising whereby researchers interpret data through their own worldview (Annells, 1996). Strauss and Corbin (1990) provided a number of questions that can help researchers build valid theories. Strauss and Corbin's questions can be summarised as follows: how was the initial sample chosen, were the categories described, were indicators provided to explain the developed categories, how did theoretical sampling proceed, how and why was the core category selected, was there evidence to support the developed hypothesis, were there incidents that negated the hypothesis and why was this? Addressing these questions can help in making the theory generation process more transparent and the findings more reflective of participants' opinions and experiences.

Straussian GTM employs open, axial and selective coding to break-up data before regrouping it into the building blocks of theory. Corbin and Strauss (2008) argue for adherence to the prescribed coding procedures to limit researcher bias, which might reflect a return to post-positivism or critical realism

rather than interpretivism (Warburton, 2005). Still, Straussian GTM is criticized for forcing fractured data into categories that are distorted by researcher bias, while Glaserian GTM is critiqued for its inclination towards naïve realism which assumes that true theories can emerge separate from people's perceptions (Suddaby, 2006).

Constructivist GTM addresses the 'emergence versus forcing' debate by suggesting that grounded theories are neither emergent nor discovered (Charmaz, 2000). Charmaz (2006) explains that grounded theories are mutually developed between participants and researchers through interactions and negotiations that are always influenced by each person's experiences. Charmaz (2012) recommends fluid coding procedures (open and focused coding) to allow a progressive and reflective analysis where researchers are also participants and vice-versa. Theories developed using constructivist GTM cannot be generalized because people's views, experiences and ways of reflecting on these experiences tend to vary; although inferences can be critically drawn to provide insight into comparable research problems (Thornberg and Charmaz, 2014).

Charmaz (2006) also developed a list of questions to assess GTM research according to its credibility, originality, resonance and usefulness. Charmaz's criteria aim to move quality assessment beyond specific methodological procedures to focus on the entire thick description of the research which must be elaborate and pertinent to the study participants' and the researcher's understandings.

Hutchison, Johnston and Breckon (2011) argued that despite the philosophical departures between versions of GTM, there are multiple methodological

consistencies. They reviewed the procedures described by Glaser and Strauss (1967), Glaser (1978), Strauss and Corbin (1998) and Charmaz (2006) and identified key grounded theory methods which are considered tenets of GTM, thus integral to valid theory development. These tenets are: 1) synchronous data collection and analysis, 2) systematic coding procedures 3) the constant comparative method, 4) memo-writing, 5) theoretical sampling and 6) integration of the generated theoretical framework within pre-existing literature.

Synchronous data collection and analysis is a main tenet of GTM (Glaser, 1998). Data collection can begin with exploring sensitising constructs developed from previous literature or areas of interest specific to the research objectives (McCann and Clark, 2003). Data analysis is conducted early in the research to identify new concepts from the data that become the focus of subsequent data collection (Bryant, 2002). Systematic coding procedures of at least two steps of preliminary and higher-order coding are the link between collecting data and building a theory to interpret the data (Charmaz, 2008). The progressive development of abstract theories is facilitated by the constant comparative method which involves cycles of comparing data with data, data with codes and categories and categories with categories (Clarke, 2005). Memos are analytical notes used to question and clarify different aspects of the data to inform theoretical sampling (Corbin and Strauss, 2008).

Theoretical sampling ensures that data collection is aimed at theory generation by utilizing the ideas developed during the initial phases of analysis to determine the characteristics of subsequent participants and the focus of data collection (Charmaz, 2008). Thus, sampling, data collection and analysis are a cycle in GTM which continues until no new dimensions of the categories

emerge (Breckenridge and Jones, 2009). This is known as theoretical saturation and the point at which sampling and data collection end (Bowen, 2008). The final analytical step is to review pertinent literature to identify how and where the developed theory compares with pre-existing knowledge (Strauss and Corbin, 1998).

Hutchison, Johnston and Breckon (2011) developed a list of questions that can be used to assess the quality of GTM research by appraising the extent to which the key tenets or methods of GTM have been applied.

**Table 4.1: Quality assessment guideline for GTM (cited in Hutchison, Johnston and Breckon, 2011)**

| |
|---|
| **Is grounded theory an appropriate methodology for this research?**<br><br>- Was a justification presented for adopting a grounded theory approach? If so what was it?<br>- How was grounded theory defined? (e.g., as a research methodology or simply a data analysis tool?) |
| **Was sampling conducted in accordance with the tenets of grounded theory?**<br><br>- What evidence is there to suggest that sampling was conducted to facilitate theory generation?<br><br>- How was the initial sample selected? On what grounds?<br><br>- Did theoretical formulations guide some of the data collection, if so how?<br><br>- Based on the answers to the above two questions did theoretical sampling occur?<br><br>- Is there evidence of concurrent involvement in data collection and analysis? |
| **How were the initial concepts and categories developed?**<br><br>- What initial concepts and categories were presented?<br><br>- What techniques were used to construct or develop these categories (coding, memo writing, comparisons, questioning, use of attributes, etc.)?<br><br>- What evidence is there to suggest that these concepts or categories were generated from the data itself and not from pre-conceived logically deduced hypotheses?<br><br>- Do the initial categories cover a wide range of empirical observations, was the initial focus broad? |
| **How did theoretical development continue after the initial concept identification?**<br><br>- How did theory development advance during each step of data collection and analysis?<br><br>- What major categories were presented?<br><br>- What techniques were used to construct or develop these categories (e.g., axial or focused coding, systematic comparisons, questioning)?<br><br>- What evidence is there to suggest that the constant comparison method was used?<br><br>That is, were systematic comparisons made between observations and between categories?<br><br>- Are the categories theoretically dense? Are there clear links between individual categories and subcategories as well as between individual categories and the larger core category? Have the dimensions of categories and subcategories been explored? |

**Table 4.1: continued**

| **What was the end product of this research and how was it finally constructed?** |
| --- |
| - How and why was the core category selected? On what grounds were the final analytical decisions made? |
| - What evidence is there to suggest that the study achieved theoretical saturation? |
| - What conclusions were drawn? |
| - What evidence is there to suggest that the results offer new insight into the studied phenomenon? |

Hutchison, Johnston and Breckon (2011) used the questions in table 4.1 to evaluate the methodological quality of different GTM research in exercise psychology. The results of their review supported previous concerns reported by Annells (1996) which suggested that the variations between its versions caused GTM to be misunderstood and applied in multiple ways that are inconsistent with the fundamental tenets of the methodology. Consequently, the degree to which much GTM research offered informative grounded theories has been questioned (Stern, 1994). Within physiotherapy research, Mellion and Tovin (2002) raised similar concerns and called for greater adherence to the fundamental tenets of GTM to aid qualitative theorising and improve research rigor. The aim of the systematic review presented in this chapter was to critically appraise GTM research in physiotherapy, to understand how the methodology was used and to produce recommendations for future GTM research.

## 4.3 Study design

A systematic review was used to critically appraise and discuss the application of GTM in physiotherapy research studies. A systematic approach was considered best suited because it facilitated the extraction, evaluation and synthesis of in-depth information about how GTM is understood and utilized. Systematic reviews are also recommended for assessing the literature and

drawing valuable implications to inform application to practice and further research (Grant and Booth, 2009). Thus, it enabled the identification and discussion of methodological limitations in previous GTM studies, which can be avoided in future research. Moreover, this review was built on a thorough literature search to find and include all relevant studies that can help in answering the research question. The literature search strategy that was used is detailed in the next section.

### 4.4 Methods

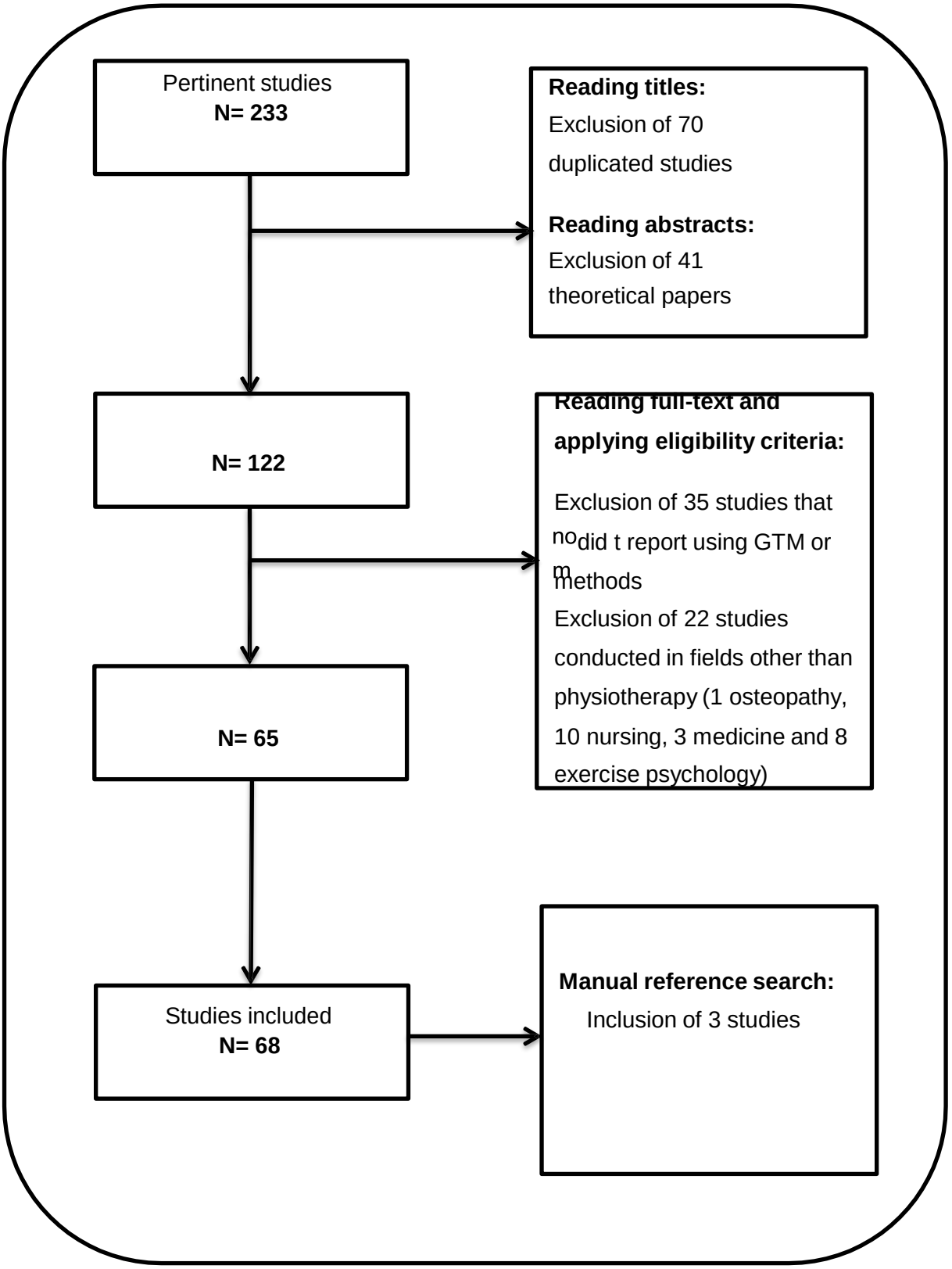
A systematic search was conducted in MEDLINE, CINHAL, SPORT Discus, Science Direct, PubMed, Scopus and Web of Science. Databases were searched from their commencement until November 2017 without restrictions. The search used citation pearl-growing technique (Booth, 2008). Initially, the terms (Physical therap* OR physiotherap*) AND (grounded theory) were used to retrieve relevant studies. The index terms and free text terms of relevant studies were examined to continuously identify and include additional search terms to expand subsequent search processes.

The final search used the following terms linked through Boolean logic: (Physical therap* OR physiotherap*) AND (rehabilitation OR management OR education OR perceptions OR experiences) AND (Grounded theory). The search was conducted by the researcher and peer-reviewed by one of her doctoral supervisors (KG).

The search produced meaningful results hence 233 studies were retrieved and seemed related to the research topic. The 233 studies were filtered to choose

relevant articles for the purpose of this review. The filtration process began by excluding 70 duplicated studies which were identified through the titles. Upon reading abstracts, 41 more articles were excluded because these were theoretical papers that discussed different qualitative research methodologies including GTM. The full text of the remaining 122 studies was read and the following eligibility criteria were applied. The inclusion criteria were 1) Peer-reviewed qualitative or mixed methods studies that reported using grounded theory methodology and/or methods in the title and/or abstract. 2) Studies conducted in the field of physiotherapy where at least one author is a physiotherapist or study participants included physiotherapists or physiotherapy students, educators or researchers, or patients or carers of patients receiving physiotherapy. Grounded theory methodology studies conducted in other health disciplines were excluded. Application of the eligibility criteria led to the exclusion of 35 studies that did not report using GTM in either the title or the abstract of the studies. Another 22 studies were also excluded because they were conducted in fields other than physiotherapy. The bibliographies of 65 eligible articles were hand-searched which led to the identification and inclusion of 3 more relevant studies. Figure 4.1 overleaf shows the study filtration processes to summarize how a total of 68 studies were included in this review.

**Figure 4.1: Study filtration processes**



The descriptive characteristics of all 68 studies were extracted using a data extraction form adapted by the researcher from pertinent literature (Chiovitti and Piran, 2003; Dixon-woods et al., 2006; Urqhart, Lehmann and Myers, 2010) and reviewed by one of the researcher's supervisors (KG). The form included the following questions: 1) country, 2) study aims, 3) study participants and data collection, 4) what approach of GTM was used, 5) was the use of GTM justified, 6) what was the role of GTM, 7) was the philosophical framework of the study discussed, 8) was the role of the researcher(s) discussed.

The methodological strategies followed by each study were extracted and appraised using the quality assessment guideline for GTM developed by Hutchison, Johnston and Breckon (2011). The full guideline is in table 4.1. This guideline was considered most suitable for the aim of this systematic review because it was specific to GTM and included questions about study aims, theoretical framework, methodological procedures and findings, thus was deemed thorough.

The methodological appraisal of the studies included in this review was independently conducted by the researcher and her supervisor (KG) to reduce potential bias. For each study, all the tenets of GTM included in the assessment guideline were rated as (Yes= 1 or No= 0) and an overall score was calculated by adding positive scores. Cohen's Kappa was used to measure the inter-rater agreement between the two reviewers. High levels of inter-rater agreement were calculated resulting in a Cohen's Kappa of 0.89, $p< 0.0001$ which is excellent agreement (Fleiss and Cohen, 1973; Landis and Koch, 1977).

Although the overall agreement was excellent, moderate agreement (Cohen's Kappa 0.507 p< 0.001) was calculated for only one item which is whether integration of the theoretical framework within pre-exiting literature was conducted or not. Details on the application of this tenet of GTM was often limited in many of the reviewed studies, perhaps due to word-count restrictions on journal articles, which hindered the authors' ability to agree on whether this tenet were overlooked or under-reported. It was not possible to get in touch with all of the authors' of the reviewed studies to obtain additional information. Thus, to resolve disagreements, the authors of this systematic review re-visited the literature on GTM to identify and agree on the minimal amount of information needed as evidence to support the application of this methodological tenet. Presentation of literature within the analysis was considered evidence of integrating the theoretical framework within pre-exiting literature. After several meetings the authors agreed on the methodological quality of all studies, despite the problem of inadequate reporting.

To ensure that the overall quality of each study was captured, the authors also discussed the methodological procedures reported by each study in relation to debates around the criticality required to assess the trustworthiness of qualitative research (Atkinson, 1995). It is debated that adherence to a prescriptive checklist can be misleading because it can overlook or oversimplify the reflexivity and artistry involved in the production of situated and perspectival knowledge using qualitative research (Emden and Sandelowski, 1999). Therefore, the authors used the questions proposed by Hutchison, Johnston and Breckon (2011) as a flexible guideline to facilitate the extraction and synthesis of information from studies and to encourage discussions between the authors. The methodology of each study was discussed in relation to the

philosophical lens through which the study was conducted and the extent to which the researchers' role was reported on; in order to capture the reflexivity involved in qualitative research.

## 4.5 Findings

### 4.5.1 Descriptive Characteristics of the studies

There were 68 studies included in this systematic review. The studies were conducted in 14 countries between 1998 and 2017. Twenty-seven studies (40%) gave no justification for selecting GTM. Forty-one studies (60%) justified using GTM because it enabled for systematic analysis. Twenty-nine studies (43%) reported that GTM was used only to analyse data. Thirty-nine studies (57%) stated that GTM was the methodology followed throughout data collection and analysis to generate hypotheses.

Strauss and Corbin's (1990, 1994, 1996 and 1998) approaches were the most commonly cited version of GTM featuring in twenty-two studies (32%). Three studies (4%) reported using Glasserian GTM, four studies (6%) reported using pragmatic GTM and cited either Barbour (2007) or Corbin and Strauss (2008). Six studies (9%) cited Glaser and Strauss (1967); six studies (9%) cited Charmaz's constructivist or constructionist revision and thirteen studies (19%) mentioned several types of GTM without specifying which version was followed. Nine studies (13%) did not provide any citations on GTM; four studies (6%) reported using the authors' modified approach to several versions of GTM; while one study (1%) reported using dimensional analysis and cited Bowers and Schatzman (2009) and Schatzman (2001). Thirteen studies (19%) mentioned several types of GTM without specifying which version was followed. Nine

studies (13%) did not provide any citations on GTM. Four studies (6%) used their own modified approach of GTM that did not include synchronous data collection and analysis and/or theoretical sampling.

The number of participants included in the studies ranged between 2 and 129 participants. Different methods of data collection were used. Forty-seven studies (69%) employed one method of data collection. Individual semi-structured interviews were the most commonly used method of data collection applied by thirty-four (50%) such studies. Seven studies (10%) used focus groups only, 3 studies (4%) conducted unstructured interviews, and 2 studies (3%) undertook document analysis and 1 study (1%) used an open-ended questionnaire.

Twenty-one studies (31%) collected data using more than one method. Seventeen studies (25%) combined two data collection methods and four studies (6%) used three different methods to gather information. Individual semi-structured interviews and focus groups were the most commonly used combination employed by 8 studies (12%), followed by individual semi-structured and unstructured interviews which were used by 3 studies (4%). Two studies (3%) employed semi-structured interviews and document analysis. One study (1%) combined semi-structured interviews and observations, 1 study (1%) used focus groups and non-participant observations, 1 study (1%) used semi-structured interviews and diaries to collect data from participants, while 1 study (1%) used semi-structured interviews and statement-ranking questionnaires.

Two studies (3%) used semi-structured interviews, document analysis and non-participant observations, 1 study (1%) used individual semi-structured, focus groups and document analysis and 1 study (1%) used structured, unstructured

and semi-structured individual interviews. Individual semi-structured interviews were the most commonly used method of data collection employed by 54 studies (79%) whether alone or in combination with other data collection methods.

Nineteen studies (28%) reported on their philosophical framework and epistemological underpinnings; while fifteen studies (22%) discussed the impact of the researchers' subjectivity on the quality of the study. Table 4.2 summarises the descriptive characteristics of the studies.

## Table 4.2: Details of study descriptive characteristics

| Author(s) & publication year | Country | Aims of the study | How was the data collected? | What version of GTM was used? | Was the use of GTM justified? | What was the role of GTM? | Was the philosophical framework of the study discussed? | Was the role of the researcher discussed reflexively? |
|---|---|---|---|---|---|---|---|---|
| Ohman and Hagg (1998) | Sweden | Explore the attitudes of novice physiotherapists towards their professional role | Individual semi-structured interviews with 8 novice physiotherapists | Glaser and Strauss (1967) | No | 'The analysis used grounded theory method of constant comparison' | Yes | No |
| Albert (1999) | Denmark | A mixed methods study design was used to evaluate group physiotherapy treatment for women with psychosomatic pelvic pain | 53 women filled questionnaires to describe their experiences with physiotherapy for psychosomatic pelvic pain and therapy effectiveness. The questionnaire also included open-ended questions to facilitate the gathering of participants' perceptions. | Strauss and Corbin (1990) | No | 'The women's descriptions of physiotherapy treatment were analysed according to the grounded theory method'. | No | No |
| Ohman, Hagg and Dahlgren (1999) | Sweden | Explore professional development and perceptions of the physiotherapy profession from the views of female physiotherapy educators | 4 physiotherapists and 4 occupational therapists undertook individual semi-structured interviews | Glaser and Strauss (1967) | No | 'The analysis was carried out through GT method of constant comparison' | Yes | Yes |
| Jensen, Gwyer Shepard and Hack (2000) | USA | Identify the dimensions of expert practice in physiotherapy | 12 expert physiotherapists in the fields of geriatrics, neurology, orthopaedics and paediatrics were interviewed using semi-structured interviews. 36 treatment sessions were video recorded and analysed | Strauss and Corbin (1994) | Yes | Guided by a grounded theory approach, a multiple case study research design was used' | No | No |
| Mackey and Sparling (2000) | USA | A single case study design was used to understand the needs of older women with cancer in relation to physiotherapy as a form of palliative treatment | 3 older women with different types of cancer participated in individual unstructured interviews | Strauss and Corbin (1990) | Yes | 'The analysis was conducted by grounded theory techniques of coding'. | No | No |
| Stephenson and Wiles (2000) | UK | Explore patients' views and perceptions of a home-delivered therapy service. | Semi-structured interviews were undertaken with 10 men and 5 women who have had at least 3 sessions of home physiotherapy | Multiple Glaser and Strauss (1967) & Strauss and Corbin (1990) | No | 'This study used a grounded theory approach in which a thematic analysis was conducted on transcripts' . | No | No |
| Stiller (2000) | USA | Describe the evolution of the physiotherapy profession in the USA and develop a conceptual framework to understand how professional ethos evolves. | Individual semi-structured interviews and focus groups were conducted with 13 physiotherapists and documents related to the history of physiotherapy in the USA were also analysed. | Glaser and Strauss (1967) | No | 'A qualitative data analysis was conducted using the constant comparative method and grounded theory' | No | No |
| Trede (2000) | Australia | Explore physiotherapists approaches to educating patients with low back pain and identify what patients expect to learn | 8 physiotherapists and 8 patients with low back pain were interviewed using individual semi-structured interviews | N/A | No | This qualitative study employed grounded theory and aimed to generate hypothesis' | No | No |

## Table 4.2: Continued

| Author(s) & publication year | Country | Aims of the study | How was the data collected? | What version of GTM was used? | Was the use of GTM justified? | What was the role of GTM? | Was the philosophical framework of the study discussed? | Was the role of the researcher discussed reflexively? |
|---|---|---|---|---|---|---|---|---|
| Jette, Grover and Keck (2003) | USA | Understand the decision-making processes of physiotherapists and occupational therapists when recommending discharge destinations for patients after acute hospitalization. | Unstructured interviews with 7 physiotherapists and 2 occupational therapists | Glaser (1992) | Yes | To develop an explanatory theory | No | No |
| Milligan (2003) | UK | Explore how orthopaedic registrars perceive the role of extended scope physiotherapists | Semi-structured interviews were conducted with 10 orthopaedic registers within the NHS | Multiple (Glaser and Strauss, 1967; Strauss and Corbin, 1998) | Yes | To generate theory | No | No |
| Edwards et al., (2004) | Australia | Understand the clinical reasoning strategies of expert physiotherapists | 12 expert physiotherapists were interviewed using semi-structured and unstructured interviews and their practice was observed over 79 treatment sessions | Strauss and Corbin (1994) | Yes | 'Grounded theory was used within case study design' | No | No |
| Ekerholt and Bergland (2004) | Norway | Understand patients' perceptions of body assessment undertaken in psychomotor physiotherapy | 10 patients (1 man and 9 women) who were receiving massage as a part of physiotherapy for different psychomotor problems, participated in semi-structured interviews | Corbin and Strauss (1996) | No | 'The data were analysed with the aid of grounded theory' | No | No |
| Heine, Koch and Goldie (2004) | Australia | Explore the perceptions of discharge readiness of people who had undergone a total hip replacement. | In-depth unstructured interviews were conducted with 5 patients after undergoing total hip replacement | Strauss and Corbin (1990 and 1998) | No | Grounded theory methodology was used to analyse the data | No | No |
| Johansson and Fjellman-Wiklund (2005) | Sweden | Understand body awareness from the perspectives of patients who are on mechanical ventilation | 15 individual semi-structured interviews with 7 persons on mechanical ventilation were conducted | Glaser and Strauss (1967) | Yes | 'The analysis was conducted using grounded theory method of constant comparison'. | No | No |
| Miller, Solomon, Giacomini and Abelson (2005) | Canada | Understand the experiences of novice physiotherapists practicing in acute care settings | 10 female, novice physiotherapists took part in semi-structured interviews and focus groups | Strauss and Corbin (1998) | Yes | 'A grounded theory approach was used to systematically collect and analyse data' | No | No |
| Piegorsch et al., (2005) | USA | Understand how physiotherapists and industrial engineering make decisions regarding ergonomic interventions to prevent and control low back pain | Individual semi-structured interviews with 12 industrial engineering and 9 physiotherapists | Multiple (Glaser and Strauss, 1967; Strauss and Corbin, 1998; Strauss, 1987) | Yes | To generate a conceptual framework | No | No |
| Reynolds (2005) | USA | Explore the outcomes and benefits that students can develop through service-learning education | 85 physical therapy graduates provided their final year reflection papers to be analysed. Quantitative data was also collected from one class using the physical therapy clinical performance instrument | Glaser and Strauss (1967), Glaser (1978 and 1992). Strauss (1987), Strauss and Corbin (1990 and 1998) | Yes | 'Grounded theory methodology was applied to the development and analysis of the study' | Yes | Yes |
| Solomon and Miller (2005) | Canada | Understand the experience of novice physiotherapists who practice in the private sector | 10 novice physiotherapists took part in semi-structured telephone interviews | Strauss and Corbin (1998) | Yes | 'The study used a grounded theory design' | No | No |

## Table 4.2: Continued

| Author(s) & publication year | Country | Aims of the study | How was the data collected? | What version of GTM was used? | Was the use of GTM justified? | What was the role of GTM? | Was the philosophical framework of the study discussed? | Was the role of the researcher discussed reflexively? |
|---|---|---|---|---|---|---|---|---|
| Solomon and Miller (2005) | Canada | Understand the experience of novice physiotherapists who practice in the private sector | 10 novice physiotherapists took part in semi-structured telephone interviews | Strauss and Corbin (1998) | Yes | 'The study used a grounded theory design' | No | No |
| Ekerholt and Bergland (2006) | Norway | Understand patients' experiences of massage in psychomotor physiotherapy | 10 patients (1 man and 9 women) who were receiving massage as a part of physiotherapy for different psychomotor problems, participated in semi-structured interviews | Strauss and Corbin (1996) | No | 'The data were analysed with the aid of grounded theory'. | Yes | No |
| Slingsby (2006) | Japan | Understand how Japanese healthcare providers approach stroke rehabilitation and explore the perceptions of service users | 55 stroke professionals, 48 patients and 26 carers were interviewed using unstructured and semi-structured interviews | Glaser and Strauss (1967) | No | 'This qualitative study was based on a grounded theory approach'. | No | No |
| Booth and Kendall (2007) | Australia | Explore the benefits and challenges in providing transitional care for patients with spinal cord injury | Analysis of policy documents and service records of 40 patients who participated in transitional care for spinal cord injuries and records of 29 patients who did not participate in the program | Multiple versions were referenced Glaser and Strauss (1967) and Strauss and Corbin (1998) | Yes | 'Grounded theory methods were used to collect and analyse multiple data sources using theoretical sampling, simultaneous data collection and analysis and constant comparison.' | No | No |
| McGlynn and Cott (2007) | Canada | Explore the process by which neurological physiotherapists make clinical decisions | 2 neurological physiotherapists participated in semi-structured interviews | Symbolic interactionist grounded theory (Strauss and Corbin, 1998) | Yes | 'A qualitative methodology using a grounded theory approach' | Yes | No |
| Ekerholt and Bergland (2008) | Norway | Explore patients' experience of breathing during psychomotor physiotherapy treatment sessions | 10 patients (1 man and 9 women) who were receiving massage as a part of physiotherapy for different psychomotor problems, participated in semi-structured interviews | Strauss and Corbin (1996) | No | 'The data were analysed with the aid of grounded theory'. | No | No |
| Hall et al., (2008) | Canada | Explore the physical and psychological aspects of living in knee osteoarthritis and identify patients' opinions on total knee arthroplasty | 15 patients waiting for knee arthroplasty were interviewed using in-depth semi-structured interviews | The authors' modified approach was guided by (Charmaz, 1990; Glaser, 1987; Strauss and Corbin, 1990) | No | A modified grounded theory approach was used to analyse the interview data'. | No | No |
| Lee et al., (2008) | China | Identify the factors that influence patient satisfaction with physiotherapy for nasopharyngeal carcinoma | 32 patients receiving physiotherapy for nasopharyngeal carcinoma participated in individual semi-structured interviews | N/A | No | 'Data collection and analysis used a grounded theory approach'. | No | No |
| Redmond and Parrish (2008) | UK | Identify the factors which influence adherence to physiotherapy amongst young adults with cerebral palsy | 26 young adults with cerebral palsy were involved in the study. Data collection used focus groups and follow up interviews. | Multiple (Glaser 1992 and Strauss and Corbin 1990) | Yes | 'The study utilized Glaser's and Strauss' approaches to generate a theory about adherence to physiotherapy'. | No | No |

## Table 4.2: Continued

| Author(s) & publication year | Country | Aims of the study | How was the data collected? | What version of GTM was used? | Was the use of GTM justified? | What was the role of GTM? | Was the philosophical framework of the study discussed? | Was the role of the researcher discussed reflexively? |
|---|---|---|---|---|---|---|---|---|
| Galvin, Cusack and Stokes (2009) | Ireland | Explore the experience of inpatient post-stroke physiotherapy from the perspectives of patients and physiotherapists | 10 people with stroke were individually interviewed and 10 physiotherapists participated in 1 focus group | N/A | No | Transcripts were analysed using the grounded theory approach'. | No | No |
| Hannes et al., (2009) | Belgium | Identify the obstacles that physiotherapists face upon applying evidence-based practice | 43 physiotherapists participated in 5 focus groups | Strauss and Corbin (1997) | No | 'Data collection and analysis were guided by a grounded theory approach' | No | No |
| McGinnis et al., (2009) | USA | Identify the factors that influence physiotherapists' choice of a balance assessment measure | 11 physiotherapists from in and outpatient settings participated in individual semi-structured interviews | N/A | No | 'A qualitative design using a grounded theory approach was chosen'. | No | No |
| Pechak and Thompson (2009) | USA | Develop a model of optimal international service learning in physiotherapy | Phone interviews with 14 faculty members and analysis of documents pertaining to the development and content of 5 ISL physiotherapy programs | Strauss and Corbin (1994) | Yes | 'A descriptive study where data was analysed using grounded theory methods' | No | No |
| Rindflesch (2009) | USA | Delineate the practice of patient education from the perspectives of physiotherapists | 9 physiotherapists working in outpatient, inpatient and acute care setting participated in a focus group. Data from the focus group was compared to observations of the practice of the same group of physiotherapists | Multiple (Charmaz 2000, Glaser and Strauss 1967, Strauss and Corbin 1990) | Yes | 'A qualitative grounded theory methodology was used' | No | Yes |
| Slade, Molloy and Keating (2009) | Australia | Understand the experience of people receiving an exercise program for chronic low back pain | Three focus groups were conducted with 18 participants who participated in an exercise programs for chronic low back pain | Strauss and Corbin (1998) | No | To analyse data | No | No |
| Blaney et al., (2010) | UK | Explore the barriers to and facilitators of exercise among patients with cancer-related fatigue | Five focus groups were conducted with 26 patients who were diagnosed with cancer | Strauss and Corbin (1998) | No | To analyse data | No | No |
| Mok et al., (2010) | China | Explore phenomenon of existential distress in patients with advanced cancer from the perspectives of healthcare professionals. | Data was collected using focus groups with 23 healthcare professionals including physiotherapists, occupational therapists, nurses, physicians and social workers | Multiple versions of grounded theory methodology were cited (Charmaz; 2006, Strauss and Corbin, 1998) | Yes | To develop a theory that explains participants' understandings | No | No |
| Olofsson, Fjellman-Wiklund and Soderman (2010) | Sweden | Explore the experiences of anterior cruciate ligament injury, rehabilitation and recovery from the perceptions of athletes | 7 athletes who underwent anterior cruciate ligament reconstruction surgery participated in semi-structured interviews | Multiple Glaser and Strauss (1967) and Strauss and Corbin (1990) | No | The study used a qualitative approach with grounded theory method of constant comparison to analyse the data'. | No | No |
| Pechak and Thompson (2010) | USA | Analyse the similarities between international service-learning programs in physiotherapy education | Semi-structured phone interviews with 14 faculty members and analysis of documents pertaining to the development and content of 5 physiotherapy programs | Strauss and Corbin (1994) | Yes | 'A descriptive study where data was analysed using grounded theory methods' | No | No |
| Wainwright, Shepard, Harman and Stephens (2010) | USA | Compare novice and expert physiotherapists use of reflection to guide decision making | 3 expert physiotherapists and 3 novice therapists participated in the study. Data was collected using semi-structured individual interviews, video recording of treatment sessions and analysis of participants' resume | N/A | No | 'Qualitative methods using grounded theory, within the philosophy of phenomenology, were used' | No | Yes |

## Table 4.2: Continue

| Author(s) & publication year | Country | Aim of the study | How was the data collected? | What version of GTM was used? | Was the use of GTM justified? | What was the role of GTM? | Was the philosophical framework of the study discussed? | Was the role of the researcher discussed reflexively? |
|---|---|---|---|---|---|---|---|---|
| Buccieri, Pivko and Olzenak (2011) | USA | Pilot study to understand how physiotherapists develop the skills needed to become clinical educators | 3 physiotherapy clinical educators were interviewed individually using semi-structured interviews | N/A | No | 'The interviews were coded using a grounded theory approach' | Yes | No |
| Masley et al., (2011) | USA | Explore American physiotherapists' understanding of their professional role and the clinical reasoning processes they use in practice | 18 physiotherapists working in 3 different academic centres participated in semi-structured interviews | N/A | Yes | Qualitative research methods with a grounded theory approach were used'. | No | No |
| Medina-Mirapeix et al., (2011) | Spain | Explore patients' experiences of outpatient rehabilitation of acute musculoskeletal injuries | 57 adults involved in outpatient rehabilitation for various musculoskeletal injuries, participated in 9 focus groups | The authors' modified approach of Corbin and Strauss (2008) | No | "Data was analysed using a modified grounded theory including coding methods and constant comparison but without the theory building component' | No | No |
| Middle-Brook and Mackenzie (2011) | Australia | Describe the processes through which physiotherapists and occupational therapists select falls prevention interventions for older patients | 4 physiotherapists and 4 occupational therapists undertook individual semi-structured interviews | Strauss and Corbin (1990) | Yes | 'A qualitative study using a GTM approach' | No | No |
| Ohman, Astrom and Malgren-Olsson (2011) | Sweden | Describe the experience of people with neck and shoulder pain who participated in a FeldenKrais group therapy program | Data was collected from 13 women using reflective diaries and individual thematic interviews | Multiple (Glaser and Strauss, 1967, Corbin and Strauss, 1990; Charmaz, 2006; Clarke, 2005). | Yes | Data were analysed in accordance with the grounded theory method of constant comparisons. | Yes | Yes |
| Petty, Scholes and Ellis (2011) | UK | Explore the learning of physiotherapy Master of Science Students | Twenty- six semi-structured interviews with 11 alumni of master's courses in the UK. The interviews were conducted either face to face or via phone | Dimensional analysis (Bowers and Schatzman, 2009; Schatzman, 2001) | Yes | To develop a substantive theory | Yes | Yes |
| Thomson and Hilton (2011) | UK | Evaluate students' perceptions on a physiotherapy college-based programme | 37 physiotherapy students participated in 7 individual interviews and 3 focus groups | Strauss and Corbin (1998) | Yes | 'Grounded theory methodology was selected to conduct this research and develop theory that is grounded in data' | No | No |

## Table 4.2: Continued

| Author(s) & publication year | Country | Aim of the study | How was the data collected? | What version of GTM was used? | Was the use of GTM justified? | What was the role of GTM? | Was the philosophical framework of the study discussed? | Was the role of the researcher discussed reflexively? |
|---|---|---|---|---|---|---|---|---|
| Wainwright, Shepard, Harman and Stephens (2011) | USA | Explore the factors that influence the clinical decision making of expert and novice physiotherapists | 3 expert physiotherapists and 3 novice therapists participated in the study. Data was collected using semi-structured individual interviews, video recording of treatment sessions and analysis of participants' resume | N/A | No | 'Qualitative methods using grounded theory, within the philosophy of phenomenology, were used' | No | No |
| Ahlqwist and Sallfors (2012) | Sweden | Generate a substantive theory that explained how young people with low back pain experience physiotherapy. | Semi-structured interviews with 14 young people who received physiotherapy for low back pain | Classical grounded theory methodology (Glaser, 2003) | Yes | To generate a substantive theory | No | Yes |
| Corrigan and McBurney (2012) | USA | Understand the skills that physiotherapists perceive as important for patients to walk post-stroke | 11 physiotherapists were interviewed individually using a semi-structured interview guide | N/A | Yes | 'Data was interpreted using GT methodology using coding' | No | No |
| Dunn, Smith, Whitehead and Keeling (2012) | New Zealand | To understand the decision-making processes of people with tetraplegia regarding considering reconstructive upper-limb surgery | Semi-structured interviews were conducted with 22 individuals with tetraplegia | Constructivist GTM (Charmaz, 2006) | Yes | GTM was used to collect and analyse the data to construct an explanatory theory | Yes | Yes |
| Harding, Stewart and Knight (2012) | UK | Assess healthcare providers' perceptions on quality of life for patients with Huntington's disease | Individual semi-structured interviews with 8 healthcare providers including physiotherapists, occupational therapists, nurses, dieticians, psychology, speech and language therapists | Strauss and Corbin (1994) | Yes | 'The data was analysed using grounded theory methodology' | No | No |
| Schmitt, Akroyd and Bruke (2012) | UK | Understand final year physiotherapy students' perceptions of person-centred care | 12 final year physiotherapy students took part in 2 focus groups | Pragmatic GTM as described by Barbour (2007) | Yes | 'Some elements of grounded theory were used'. | No | No |
| Stenberg, Fjellman-Wiklund and Ahlgren (2012) | USA | Explore the healthcare expectations of patients with neck and/or back pain, from a gendered perspective | 12 patients (7 women and 5 men) participated. Each was interviewed twice using individual thematised interviews | Strauss and Corbin (1998) | No | 'Thematised interviews were analysed according to grounded theory'. | Yes | No |
| Wedge et al., (2012) | USA | Identify the factors which affect physiotherapists' choice of outcome measures | 21 physiotherapists who worked in nursing facilities, in and outpatient setting, were individually interviewed using semi-structured interviews | Strauss and Corbin (1998) | Yes | 'A grounded theory approach was used for interviewing and data analysis' | No | No |
| Eriksson, Arne and Ahlgren (2013) | Sweden | Understand what exercise means to individuals with Parkinson's disease | Semi-structured interviews with 11 individuals who received exercise programs for Parkinson's disease | Constructivist GTM (Charmaz, 2006) | Yes | To construct an explanatory theory | Yes | Yes |
| Lindhal et al., (2013) | Denmark | Understand the elements that make good quality rehabilitation of fractures from patients, physiotherapists and occupational therapists' perspectives | Semi-structured interviews and focus groups were conducted with 8 occupational therapists, 15 physiotherapists and 7 patients who sustained bone fractures | Corbin and Strauss (2008) | No | 'Data were analysed using grounded theory method' | No | No |
| Medina-Mirapeix et al., (2013) | Spain | Find out the environmental elements important to patients in outpatient rehabilitation settings | Nine focus groups were conducted with 57 participants who received acute rehabilitation in outpatient settings. | The authors modified GTM (Corbin and Strauss, 2008) | No | Data analysis was undertaken using grounded theory | No | No |

## Table 4.2: Continued

| Author(s) & publication year | Country | Aim of the study | How was the data collected? | What version of GTM was used? | Was the use of GTM justified? | What was the role of GTM? | Was the philosophical framework of the study discussed? | Was the role of the researcher discussed reflexively? |
|---|---|---|---|---|---|---|---|---|
| Thomson and Love (2013) | UK | Explore the negative social evaluation of patients by senior physiotherapists providing residential care | 9 senior physiotherapists participated in 4 individual interviews and 1 focus group | Corbin and Strauss (2008) | Yes | Grounded theory methodology was used to generate theory through systematic data collection and analysis' | No | No |
| Dufour, Lucy and Brown (2014) | Canada | Explore Canadian physiotherapists' understanding of their professional role | 12 physiotherapists participated in 18 semi-structured interviews | Pragmatic grounded theory (Corbin and Strauss 2008) | Yes | 'Pragmatic grounded theory methodology was employed' | No | No |
| Ekerholt, Schau, Mathismoen and Bergland (2014) | Norway | Understand the perceptions and therapeutic processes involved in the collaborative practices of two strategically selected therapists | 1 psychomotor physiotherapist and 1 clinical psychologist participated in a mini-focus group | Strauss and Corbin (1996) | No | This study was based on a GTM approach' | Yes | No |
| Lloyd, Roberts and Freeman (2014) | UK | Explore physiotherapists' experiences of collaborative goal setting in sub-acute stroke | Semi-structured individual interviews with 9 physiotherapists | Constructivist Charmaz (2006) | Yes | 'Constructivist GTM was used to generate a theory of collaborative goal setting that is grounded in therapists' perspectives' | Yes | Yes |
| MacKay et al., (2014) | Canada | Explore the perceived consequences of living with Knee osteoarthritis | Fifty-one individuals with knee osteoarthritis were interviewed using individual semi-structured interviews and focus groups | Constructivist GTM (Charmaz, 2006; Morse et al., 2009) | Yes | To construct an explanatory theory | Yes | Yes |
| O'Brien, Clemson and Canning (2015) | Australia | Understand factors that influence the participation of people with parkinsonism in physiotherapy | Individual semi-structured interviews with 8 patients who undertook an arm exercise program to reduce the risk of falls for people with parkinsonism | Constructionist Charmaz (2006) | Yes | 'Grounded theory methodology as described by Charmaz (2006) was followed' | Yes | No |
| Fjellman-Wiklund, Nordin, Skelton and Lundin-Olsson (2016) | Sweden | Explore physiotherapists' perceptions and experiences in facilitating high-intensity exercises for older people with dementia | Semi-structured interviews and focus groups with 5 physiotherapists | The authors' modified approach to GTM (Strauss and Corbin, 1998) | Yes | A modified grounded theory methodology was used to analyse the data | No | Yes |
| Gosling and Rushton (2016) | UK | Identify the symptom presentation of adult knee primary bone tumours from onset to consultant diagnosis | Semi-structured interviews with 8 patients and 6 health care professionals including physiotherapists, oncology surgeons and nurses | Post-positivist GTM (Glaser and Strauss, 1967) | Yes | Some methods of grounded theory methodology were used to analyse the data | Yes | Yes |
| Hinman et al., (2016) | Australia | Understand the experience of physiotherapists, coaches and patients who participate in a program of telephone supervised exercises for knee osteoarthritis | 10 physiotherapists, 4 coaches and 6 patients with knee osteoarthritis undertook individual semi-structured interviews | Multiple Strauss (1987), Strauss ad Corbin (1998), Charmaz (2000 and 2011) | Yes | 'The interviews were thematically analysed drawing on two key tenets of grounded theory which are systematic ways of engaging with the data and constant comparison' | Yes | No |

## Table 4.2: Continued

| Author(s) & publication year | Country | Aim of the study | How was the data collected? | What version of GTM was used? | Was the use of GTM justified? | What was the role of GTM? | Was the philosophical framework of the study discussed? | Was the role of the researcher discussed reflexively? |
|---|---|---|---|---|---|---|---|---|
| Jachyra and Gibson (2016) | Canada | Explore the socio-behavioural mechanisms that motivate or dissuade boys' participation in physical activity as they transition to adolescence. | Unstructured, semi-structured and structured interviews with 15 boys were conducted | Glaserian GTM (Glaser, 2001) | Yes | Data was generated and analysed using techniques of grounded theory to develop a substantive theory | Yes | Yes |
| Timothy, Graham and Levack (2016) | New Zealand | Explore the experience of embodiment from the perceptions of stroke patients | 7 people with stroke were interviewed twice using structured telephone interviews and semi-structured face-to-face individual interviews | Charmaz (2003) | Yes | 'This study used Charmaz's constructivist approach to grounded theory | Yes | Yes |
| Clouder and Adefila (2017) | UK | Explore clinical educators' perspectives on giving student physiotherapists increasing levels of responsibility on clinical placement, and the factors considered when giving or withholding responsibility. | Twenty-six face-to-face, semi-structured interviews followed by completion of a Diamond Ranking Exercise. | Multiple versions of grounded theory methodology were cited (Charmaz, 2000; Strauss and Corbin, 1990, 2007) | Yes | Grounded theory methodology was used to collect and analyse the data | No | No |
| Giardini et al., (2017) | Italy | Describe the rehabilitation experience of Parkinson's inpatients taking part in a multidisciplinary intensive rehabilitation treatment | Semi-structured interviews were conducted with 27 patients face-to-face. | Multiple (Corbin and Strauss, 2008; Glaser and Strauss, 1967) | Yes | The interviews were analysed with grounded theory methodology | No | No |

GTM: Grounded theory methodology. N/A: Not Available. USA: United States of America. UK: United Kingdom

### 4.5.2 Methodological quality of the studies

Only a few studies applied all of the key tenets of GTM and the extent to which different tenets of GTM were applied varied between studies. Five studies (7%) were adherent to all six tenets of GTM, ten studies (15%) reported using five tenets and twenty studies (29%) followed four tenets of GTM. Fourteen studies (21%) applied three tenets of GTM, nine studies (13%) followed two tenets, and four studies (6%) applied one tenet of GTM, while six studies (9%) did not provide evidence to suggest that any aspect of GTM was used.

The constant comparative method was by reported by fifty-three studies (78%). The application of systematic coding procedures to analyse data was employed by fifty studies (74%). Forty-seven studies (69%) reported that data collection and analysis occurred simultaneously. Integration of the final theoretical framework within relevant literature was used by thirty studies (44%). The use of analytical memos to aid the analysis was utilized by twenty-nine studies (43%), while theoretical sampling was the least commonly used tenet of GTM reported by sixteen studies (24%).

Moderate to good quality studies (n=35, 51%) reported on applying six to four tenets of GTM and discussed how the resultant theories were developed. Poor quality studies (n=33, 49%) employed three to none of the tenets of GTM and gave limited evidence to show that abstract theorisation was conducted and/or core categories were identified; instead their findings were mostly synthesized using descriptive themes. The methodological quality of the reviewed studies is discussed below in detail.

#### 4.5.2.1 Did sampling follow the strategies of GTM?

Forty-seven studies (69%) reported that data collection and analysis occurred synchronously. Twelve studies (18%) did not report on the initial sampling methods used to recruit participants. Fifty-six studies (82%) initially used convenience, purposive or maximum variation sampling techniques. In fifty-two (76%) studies sampling progressed using purposive, maximum variation and snow-ball sampling, while sixteen studies (24%) reported that recruitment continued using theoretical sampling. Out of the fifty-two studies (76%) that did not use theoretical sampling, one study (1%) explained that theoretical sampling could not be used due to time constraints.

#### 4.5.2.2 How were the initial concepts developed?

Eighteen studies (26%) did not discuss coding procedures at all. Fifty studies (74%) reported formulating initial concepts using open or initial coding. The amount of details provided about initial codes differed between studies, whereas most studies (n= 34, 50%) did describe the nature, number and relevance of preliminary codes and concepts. Sixteen studies (24%) reported some or all of the initial codes which were identified through line by line coding of related ideas, actions or processes and were compared to one another and new data to form initial concepts. Twenty-four studies (35%) used qualitative data analysis software in addition to manual coding. The most commonly used software was Nvivo (n= 12, 18%), followed by ethnograph (n= 3, 4%), OpenCode (n= 2, 3%), MAX Qda2 (n= 2, 3%) and QRS-NUDist (n= 2, 3%) and Microsoft excel (n= 2, 3%), while ATCAS was used by one study (1%).

#### 4.5.2.3 How did theoretical development continue after the identification of initial concepts?

Fifty-three studies (78%) reported that theoretical development was advanced using the constant comparison method to compare different aspects of data and group similar codes together into categories. Fifty studies (74%) stated to have used systematic coding procedures, including focused, axial, substantive, selective or theoretical coding, to generate higher-order codes and abstract categories. Seventeen studies (25%) presented elaborate tables to explain how open codes were developed into focused codes, subcategories and categories. Twenty-nine studies (43%) reported writing analytical memos throughout the analysis to explore dimensions of the constructed categories. Twelve studies (18%) used reflective memos to identify possible biases and reflect on the researchers' interpretations of data.

#### 4.5.2.4 What was the outcome of the research and how was it finally constructed?

Thirty-eight studies (56%) reported reaching saturation. Four studies (6%) stated that saturation might not have been achieved in all categories and the decision to stop collecting and analysing data was unjustified. Twenty-six studies (38%) did not report on saturation.

Forty-seven studies (69%) reported on the final analytical processes which included refinement of the analysis through respondent validation, peer reviewing and consulting relevant literature. Eighteen studies (26%) used peer reviewing where the authors analysed data independently and then discussed the coding schemes until consensus was reached. Two studies (3%) employed respondent validation to ensure that participants found the findings meaningful

and comprehensive. Twenty-seven studies (40%) used both peer reviewing and respondent validation to fine-tune the constructed categories. Thirty studies (44%) reviewed the literature to consider how their findings related to existing knowledge and integrated literature into the analysis presentation.

Forty-five studies (66%) provided diagrams of their main findings. The findings of thirty-three studies (49%) were presented using descriptive narratives or themes and none of these studies justified how the final themes were chosen. Twelve such studies (18%) used diagrams to summarize some of their findings, but the diagrams reflected simple, linear or incomplete analyses hence the relations between major themes were not sufficiently discussed. Six studies (9%) acknowledged that the outcome of their research cannot be considered a theory but rather a thick description of data.

The findings of thirty-five studies (51%) were conceptualised in the form of theoretical hypotheses consisting of sub-categories, categories and abstract core categories. Core categories were selected on basis of data frequency and analytic power which referred to the ability of a category to explain central processes and concepts in data whilst linking to other categories. Thirty-three such studies (49%) supplemented their findings with diagrams that illustrated the complex relationships between different levels of the analysis. Two studies (3%) did not use diagrams; but the findings and discussion sections of these studies provided evidence of abstract theorisation whereby the complexities, similarities and differences within data were made explicate.

Finally, the methodological quality of the reviewed studies is summarised in tables 4.3 and 4.4 overleaf.

## Table 4.3: Details of study methodological quality

| Author(s) & publication date | Did sampling follow the strategies of GTM? | How were initial concepts developed? | How did theoretical development progress after initial concepts were mapped? | What was the outcome of the research & how was it constructed? |
|---|---|---|---|---|
| Ohman and Hagg (1998) | Convenience sampling was used to identify an appropriate initial sample. The sampling frame was justified. Theoretical sampling was not used. The study reported that data collection and analysis occurred simultaneously. | Analysis was conducted over 3 stages. Initial concepts were identified through rounds of coding and comparing data. Initial concepts were not presented. It was reported that participants validated the initial themes. | Theoretical development progressed through the constant comparative method, diagramming and discussions between the authors and participants regarding the meaningfulness and robustness of the developing categories. | The third stage of the analysis involved building a theoretical model. There was no discussion of how final categories were selected in relation to lower order codes to build the model. Theoretical saturation was not referred to. |
| Albert (1999) | A suitable sample was recruited via convenience sampling, the sample was justified but theoretical sampling was not used. Data analysis occurred after data collection. | The analysis was conducted in a linear manner after data collection. Open coding was used to extract similar meanings from the data. Open codes were not discussed, no examples were given. | Four categories were developed to encompass the meaning of all open codes. There was no discussion of how the codes were compared or selected to form categories. It was reported that theoretical development progressed by exploring the relationship between categories but such relationships were not discussed. | No depth or evidence of theoretical density was provided as the qualitative findings which were reported were limited and descriptive. No core category was provided, and no model or explanatory hypothesis was produced. Theoretical saturation was not reported on. |
| Ohman, Hagg and Dahlgren (1999) | Maximum variation sampling was used. The selected sample was justified as presenting with a wide range of experiences in physiotherapy education. Theoretical sampling was not used. Evidence was presented to explain how data collection and analysis occurred simultaneously. | Initial concepts were developed using open coding. A discussion was provided to describe how the open codes were developed from the data. Open codes were presented. Memos and field notes were used at every stage of the research. | Evidence was presented to show how the constant comparison method was used to formulate focused codes, sub-categories and categories from open codes. Detailed tables that described these processes were presented. The analysis occurred in a cyclic fashion hence the analysis was informed by new data. New concepts were discussed and included as the analysis progressed, suggesting evidence that the analysis remained open after the initial concepts were developed. | An explanatory model was presented through 3 core categories that included multiple sub-categories. The relationships between categories were discussed which provided theoretical density although theoretical saturation was not reported on. |
| Jensen et al., (2000) | Purposive sampling was used to recruit expert physiotherapists. The inclusion criteria set to identify potential experts were discussed and justified. Theoretical sampling was not used. A discussion was provided to describe the iterative process of data collection and analysis | Initial concepts were developed using open coding, but no examples of these codes were presented. | Axial coding was used to select the most appropriate higher order codes initial open codes. A revised coding scheme that enumerated and defined the selected focused codes was presented. Theory development was advanced by comparing codes to data, codes to codes and codes to sub-categories. | There was a clear discussion of how the final categories were selected. The study produced a model that explained 4 different aspects of expert practice. The model explained what, how and why expert physiotherapists practiced in such ways. Saturation was reported. |
| Mackey and Sparling (2000) | An appropriate convenience sample was identified and justified. Theoretical sampling was not used. There was not a discussion to suggest that data collection and analysis occurred simultaneously as guided by theoretical sampling. | Open coding was discussed to show how the data was labelled into initial codes. Examples of these codes were provided. | The analysis continued through axial and selective coding to group initial codes into higher order codes and sub-categories. | The output of the study was presented as 3 case studies. The findings were presented as descriptive narrative. Saturation was not reported on. |
| Stephenson and Wiles (2000) | Convenience sampling was used but the inclusion criteria were not justified, although the identified sample can be considered appropriate. Theoretical sampling was not referred to. | There was no reference to the coding procedures used. No codes were presented. | There was no discussion of coding procedures at any level of the analysis. No evidence to suggest that a theory was developed | The findings provided descriptive themes. Saturation was not reported. |

## Table 4.3: Continued

| Author(s) & publication year | Did sampling follow the strategies of GTM? | How were initial concepts developed? | How did theoretical development progress after initial concepts were mapped? | What was the outcome of the research & how was it constructed? |
|---|---|---|---|---|
| Stiller (2000) | An appropriate purposive sample was recruited. No evidence of theoretical sampling or iterative data collection & analysis. | There was no reference to initial coding procedures used at all. | Limited discussion was provided to suggest that at some point during the analysis codes were compared. The process of developing categories from codes was not described. | The findings provided a framework that explains the development of the ethos of the physiotherapy profession in the USA. However, it was not clear how the final themes were selected. Saturation was not reported. |
| Trede (2000) | The initial sample was identified using purposive sampling. The sample seemed appropriate and the inclusion criteria were justified. Sampling continued used snowball sampling. Theoretical sampling was not referred to. No evidence suggests that data collection and analysis occurred as informed by one another. | No discussion of how the data was analysed. There was no reference to any of the analytical procedures used at all. | The analytical procedures undertaking was not reported, expect that participants validated the developed themes. | The results explained the characteristics of a patients centred versus a therapist centred approach and the process of transformation from the former to the latter approaches. No model was provided, and no evidence was provided to suggest that the resultant themes were grounded in the data. Saturation was not reported on. |
| Jette, Grover and Keck (2003) | Convenience and purposive sampling were used to recruit the study participants. Theoretical sampling and saturation were not reported | Initial coding was used to generate preliminary concepts. The initial codes were not presented. | Although more advanced coding techniques were not reported, there is sufficient evidence to suggest that a systematic approach to coding the data was adopted which involved constant comparisons. The inquiry developed by using increasingly focused questions identified by comparing previously collected data to data and data to codes. Peer reviewing was used to discuss aspects of the developed categories. | A theoretical model was developed to explain therapists' decision-making processes. The final categories forming the model were discussed with participants and consensus between the research team, the study participants and an independent reviewer was reached on the final categories. |
| Milligan (2003) | The sampling frame was specified and justified, but the sampling strategy used was not specified. Theoretical sampling and the simultaneous data collection and analysis processes were not referred to. Although, the aim of the study was changed in light of the collected data, no evidence was given to show how the data informed the analysis | There was no reference to the coding procedures used. No codes were presented. | There was no discussion of coding procedures or any analytical techniques at any level of the analysis. | The findings provided descriptive themes. No core category was presented. It was reported that saturation has been reached, but no evidence of iterative data collection and analysis was provided to support the claims of theoretical saturation. |
| Edwards et al., (2004) | A pre-determined sample size of 12 physiotherapists was set but not justified. Physiotherapists were selected randomly from a bigger list of physiotherapists nominated by the Australian Physiotherapy Association. | Initial codes were developed by making comparisons between participants' narratives. None of the initial concepts were presented either. | The analysis progressed using the constant comparison method but it is not clear if the analysis continued to identify new concepts after initial coding | The findings described the process of clinical reasoning in physical therapy. The literature was consulted to fine-tune the findings. |
| Ekerholt and Bergland (2004) | A sample of 9 women and 1 man was purposively selected but neither the sample size nor the sampling criteria were justified. Theoretical sampling was not used. It was mentioned that data collection & analysis occurred consecutively, but there was no discussion to show how the knowledge gained from each phase of data collection & analysis fed into the next phase. | Initial concepts were identified using open coding, but the initial concepts were not reported. | The analysis progressed by comparing the initial concepts to identify similarities and differences. Then, axial coding was used to regroup the initial concepts in new groups by identifying new relationships between the concepts; to build categories. There was no evidence that new concepts were identified during axial coding. No evidence to suggest that the analysis remained open and continued to progress after the identification of the initial concepts. | The study presented several categories and sub-categories. The relationships between the categories were adequately discussed and the results were informative.<br>Theoretical saturation of the developed categories was not mentioned. |

## Table 4.3: Continued

| Author(s) & publication year | Did sampling follow the strategies of GTM? | How were initial concepts developed? | How did theoretical development progress after initial concepts were mapped? | What was the outcome of the research & how was it constructed? |
|---|---|---|---|---|
| Heine, Koch and Goldie (2004) | Purposive sampling was utilised to recruit participant. Theoretical sampling was not reported, but a discussion was provided to explain how subsequent interviews were used to seek more information about issues raised in previous interviews. | Open coding was used in the beginning of the analysis to identify initial concepts which were presented and thoroughly discussed. | Theory development continued using axial coding, discussions between the authors and the generation of more data to satisfy the properties of the developed categories. Constant comparisons between codes and categories were made to test the robustness and relevance of the generated categories. | The findings presented a hypothesis which explained participants' readiness to go home after total hip replacement surgery. The final categories were selected based on their abstract capacity to explain participants' experiences and map out their understandings. |
| Johansson and Fjellman-Wiklund (2005) | Maximum variation sampling was used to identify a suitable initial sample. Theoretical sampling was not reported on. | Open coding was used to break the data and identify similar units of information that were grouped together into open codes. | Focused coding was not discussed. It is not clear how theory development progressed; other than by grouping open codes together. There was no discussion to show that the analysis identified new concepts after open coding. | The results were presented around a core category that explained the experience of participants. The relationships between subcategories were thoroughly explained in relation to the core category to provide a theory that explained ventilated patients' experience of body awareness. The outcome of the study was consistent with the aim of GTM, but the methods section was short and lacking. It is not clear how the categories were developed or whether theoretical saturation was reached or not. |
| Miller et al., (2005) | Purposive sampling was used to recruit 10 newly qualified physiotherapists. Theoretical sampling was not used but a brief discussion was provided to show that data collection & analysis occurred iteratively hence the questions were modified based on previously collected data. | Initial concepts were identified using line-by-line coding of the interview transcripts to identify codes that describe the experience of participants. Initial concepts were not presented. | Axial coding was reported as the method used to progress the analysis by regrouping the initial codes into sub-themes and themes. Constant comparison was used to define the relationships between the codes and themes. There was no discussion to show that the analysis identified new concepts using axial coding. | The output of the research was presented as 5 key themes, which were validated by participants. Although no core category was presented a model was provided to describe the stages that novice physiotherapists undergo to adapt to their new professional role in acute care settings. It was mentioned that saturation was achieved but no evidence was provided to support this claim. |
| Piegorsch et al., (2005) | Theoretical sampling was used to recruit participants based on the questions generated from the study. | Initial coding procedures were not reported. | Coding procedures were not reported, but it was reported that a coding framework was developed based on information from the transcripts and applied to the data. The analysis was facilitated using NUDIST software. It is not clear how theoretical development progressed. | The findings were not descried by the authors as a grounded theory but rather as a conceptual framework which was informative and theoretically dense. |
| Reynolds (2005) | The sampling strategy used was not defined but it seems that convenience sampling was used throughout the study. Theoretical sampling was not reported on. | Open coding was used to analyse the data. There was a detailed discussion that explained how open coding was applied to open the data to all possibilities of grouping ideas into different codes and sub-themes during the initial phases of the analysis. | Theoretical development progressed using axial coding to identify new codes from new data. Also, the constant comparative method was used to compares new and old codes, to delineate the relationships between the data and satisfy the dimensions of each category. Selective coding was then used to integrate and refine the developed theoretical model. Memos were used to explain codes and document the analysis. | The outcome of the study was presented in the form of a substantive theory that explained how service-learning experiences benefit physiotherapy students' development. The results were presented around a central category and the relationships between major categories and subcategories were delineated using an explanatory diagram or matrix. Evidence for reaching theoretical saturation was provided |
| Solomon and Miller (2005) | It was mentioned that sampling, data collection and analysis occurred together over a period of 6 months until saturation was achieved. However, the type of sampling methods used was not defined. It was not possible to ascertain whether theoretical, purposive or convenience sampling was used. | Line-by-line open coding was used to generate initial concepts. A list was developed to define each code, but this list was not provided. | The analysis progressed using axial and selective coding and constant comparison to identify new codes and formulate categories. Memos were used to define the links between the codes. A discussion was provided to show that the data gained from each phase of data collection shaped the next one and the subsequent analysis. | The outcome of the study was judged to be consistent with the aim of GTM; hence a theoretical model that explained the experience of novice physiotherapists in private practice was provided. Evidence for reaching theoretical saturation was given and thoroughly discussed. |

## Table 4.3: Continued

| Author(s) & publication year | Did sampling follow the strategies of GTM? | How were initial concepts developed? | How did theoretical development progress after initial concepts were mapped? | What was the outcome of the research & how was it constructed? |
|---|---|---|---|---|
| Ekerholt and Bergland (2006) | The type of sampling methods used was not defined. It was not possible to ascertain whether theoretical, purposive or convenience sampling was used. | Open coding was used to identify discrete parts of the data which were compared to establish similarities and differences between the ideas, feelings and beliefs reported by the study participants. | Axial and selective coding and constant comparison were used to progress the analysis which was reported to have taken place at the same time as data collection. It was reported that axial coding was used to regroup the open codes in new ways but no evidence was provided to show that new codes were identified during axial or selective coding. | The study does not claim to have produced a theory but rather descriptive themes grouped around a core category or a main theme. The study reported that saturation was achieved but saturation was not defined and no information was given to explain how and why saturation was judged after interviewing 10 participants. |
| Slingsby (2006) | The authors did not specify the sampling technique they used to recruit the study participants. However, there was a sufficient discussion that explained how data collection and analysis guided one another. | A list of open codes was presented and a discussion was provided to explain how open coding was applied to the data. | The analysis progressed using axial and selective coding. Axial coding was used to identify new data and form categories, while selective coding was used to systematically map all the relationships between the developed categories through a process of constant comparison of codes to codes, codes to data and categories to categories. Tables were provided to show the development of the analysis from open to axial to selective coding and the construction of the final themes. | The study produced themes that explained how Japanese healthcare professionals manage stroke. The relationships between categories were made clear and the analysis provided showed theoretical depth and explanatory power. The study reported reaching theoretical saturation after 21 interviews. |
| Booth and Kendall (2007) | It was reported that simultaneous data collection and analysis were used, there is a discussion to describe how sampling & data collection were informed by previously gained knowledge, which may suggest that theoretical sampling was used. | Open coding was used to initially analyse the data line-by-line or by paragraph. It was reported that several open codes were identified and that the codes were not mutually exclusive at this stage. The number of open codes was not reported on and no examples of such codes were given | Axial and selective coding was used to collate similar open codes into categories that present similar meanings or ideas. There were no examples of the codes developed at any stage of the analysis. There was no evidence to suggest that the analysis remained open to identifying new concepts after the initial phase of open coding. | Themes were provided to explain the factors which affect people's participation in a rehabilitation program for spinal cord injury. Saturation was not mentioned. |
| McGlynn and Cott (2007) | Theoretical sampling was used to recruit a group of physiotherapists who can provide information on the concepts that emerging from the data. Some examples were provided to describe the process of theoretical sampling that focused the inquiry on concepts that were relevant to participants' experiences. | The analysis was described as iterative and inductive. The analysis began with open coding to break the data into initial concepts. | The next phase of the analysis was to group similar open codes into categories. This process was described as axial coding. The relationships between categories were explored using the constant comparative method, until the core category was developed. Then selective coding was to refine the developed categories in light of new data. | A theoretical matrix and theory were developed to explain how neurological physiotherapists apply evidence-based practice. The results revolved around a core category and the relationships between different levels of the analysis and the core category were made explicate It was reported that saturation was achieved when participants' responses appeared repetitive. |
| Ekreholt and Bergland (2008) | The type of sampling methods used was not defined. It was not possible to ascertain whether theoretical, purposive or convenience sampling was used. Moreover, a sample of 10 patients was considered sufficient but this decision seemed to be predetermined and was not justified based on the principles of theoretical saturation. | The process of open coding used to analyse initial interviews was described in details. Although, there were no examples to describe the content of the initial codes, it was mentioned that these codes described actions, experiences and beliefs reported by the study participants. At this stage, similar open codes were grouped together to form 3 categories that explained a distinct phenomenon that characterized participants' experience with Norwegian psychomotor physiotherapy. | During axial coding the data were put together in new ways to explore different analytical pathways and make the relationships between sub-categories and categories more explicate. Selective coding was then used to identify the core category based upon its repetitiveness, logical relationships with other categories, its level of abstraction and analytical usefulness in explaining the main concepts present within the data. The paper reported that the constant comparative method was used throughout the analysis. | The authors do not claim to have produced a theory; instead the findings were described as a set of inter-linked concepts that aligned around the axis of a core category. However, the results were informative and the inter-connectedness between the categories provided adequate theoretical density. Saturation was reported but not justified. |

## Table 4.3: Continued

| Author(s) & publication year | Did sampling follow the strategies of GTM? | How were initial concepts developed? | How did theoretical development progress after initial concepts were mapped? | What was the outcome of the research & how was it constructed? |
|---|---|---|---|---|
| Hall et al., (2008) | The authors reported that the study used a modified grounded theory approach because purposive sampling was used instead of theoretical sampling and the data was analysed after data collection, rather than simultaneously. | The analysis began with labelling parts of the data. The labels were described as codes that reflect distinct ideas or feelings. A coding scheme was developed at this stage. The analysis appeared inconsistent with GTM. | The coding scheme developed during early stages of the analysis was applied to subsequent interviews. It was reported that the coding scheme was modified but there was no discussion of how and why the coding scheme was modified. | The outcome of the study was described as a thick description rather than a theory. Despite the presentation of a core category, the results were descriptive. It was reported that saturation was not achieved for all categories and the decision to cease data collection was not justified. |
| Lee et al., (2008) | A suitable purposive sample was identified and justified. It was reported that data collection and analysis occurred concurrently, but no evidence was provided to describe this process. Theoretical sampling was not used. | There was no information to describe how initial concepts were developed. It was reported that 'a code was applied to each transcript'. None such codes were described. | The analysis progressed by linearly by grouping similar codes into categories that were examined and compared to identify the links between categories. Then, a coding scheme was developed and applied to subsequent transcripts. | The results were presented under descriptive themes. It was not clear how and why these final themes were selected. Saturation was achieved and it was considered the point at which new participants did not provide new information. |
| Redmond and Parrish (2008) | A suitable purposive sample was identified and continued using theoretical sampling. Recruitment ceased when saturation was achieved; as no new information was identified with the collection of new data. | A manual sorting technique was utilized where similar sections of the transcripts were cut and grouped together. The initial concepts identified were reported. | The themes developed in earlier stages of the analysis were constantly compared to new data to progress the analysis. However, the type coding methods used were not specified. | The findings presented several themes explaining a range of variables which influence adherence to physiotherapy amongst patients with cerebral palsy. It was mentioned that the emerging themes were theoretically sampled until saturation was achieved but no evidence was provided to show how and why the final themes were decided on. |
| Galvin, Cusack and Stokes (2009) | A suitable convenience sample was recruited. Theoretical sampling was not used. | The transcripts were analysed line-by-line to identify patterns in the data. A coding system was developed to group similar patterns in the data into themes. | The suitability of the coding system was checked by identifying inconsistent codes which were discussed between authors until agreement on all codes within the coding system was reached. | Major themes were reported on in a descriptive narrative. Saturation was not reported on. |
| Hannes et al., (2009) | Purposive sampling was applied to recruit an appropriate sample. The sample was justified based on the study objectives, but the sample size was not. It was reported that data collection and analysis occurred simultaneously. Theoretical sampling was not used. | Open coding was used to identify initial information by fragmenting the data. | Axial coding was then used to arrange open codes into a conceptual model. The relationships between codes were explored at this stage. | Three major categories were identified, the final categories were chosen after comparing the study findings to existing literature. The sub-categories and codes that formed these categories were presented. A conceptual diagram was provided to explain the relationship between categories, sub-categories and codes. |
| McGinnis et al., (2009) | Purposive sampling was used to identify a suitable sample. Recruitment and data collection stopped when saturation was achieved. Theoretical sampling was not used. | Each transcript was analysed line-by-line to identify open codes which were refined throughout data collection and analysis. | Axial coding was used to group open codes together into themes. Then, the analysis moved from concrete codes and themes to abstract categories. Open and axial codes were presented in a table under relevant categories. | The findings provided a theory of balance assessment decision making in physiotherapy. |
| Pechak and Thompson (2009) | Purposive and snowball sampling were used, and the sample size was considered sufficient because saturation was reported. Data collection and analysis occurred simultaneously. Theoretical sampling was used until saturation was achieved. | Initial concepts were identified through line-by-line open coding. | Concepts were grouped into sub-categories and categories through axial coding to move the analysis from focusing on participants' words to the researcher's conceptualisation of these words. Sampling focused on satisfying the properties of the categories and seeking negative cases. Examples of these sampling decisions were given to explain how theoretical sampling was used. | Major themes were presented to explain the developed conceptual model which explained the processes involved in establishing an optimal international service-learning program. |
| Rindflesch (2009) | Purposive sampling was used to recruit participants who can answer the research question. However, the sample size was not justified whereas saturation was not discussed. Data collection and analysis occurred simultaneously but there was no discussion to explain how the data analysed in each phase influenced the next phase of data collection. Theoretical sampling was not used. | Initial coding processes were not reported. | Common themes were developed from the data. There was no evidence of theory development except that themes were compared, combined or excluded when necessary. | The final product of this study was a descriptive narrative interpretation of the data. |

## Table 4.3: Continued

| Author(s) & publication year | Did sampling follow the strategies of GTM? | How were initial concepts developed? | How did theoretical development progress after initial concepts were mapped? | What was the outcome of the research & how was it constructed? |
|---|---|---|---|---|
| Slade, Molloy and Keating (2009) | Convenience sampling was used to recruit people with low back pain using an advertisement in a local newspaper. | The coding procedures used were not reported on | Three rounds of coding were used to analyse data however the coding procedures used were not reported on | The findings were presented using two themes, no core category was identified. The final themes were agreed upon between authors |
| Blaney et al., (2010) | Convenience sampling was used to recruit patients who were diagnosed with cancer. The eligibility criteria were made clear and justified. | Transcripts were coded using line by line open coding which allowed the data to be fractured and enabled identifying emerging lower-level concepts. | Axial and selective coding techniques were used to re-assemble open codes into sub-categories. | Main categories were presented but it is not clear how the final categories were decided on. |
| Mok et al., (2010) | Purposive sampling was used to recruit the study participants who can answer the research questions. | Open coding was used to identify preliminary concepts. Preliminary concepts were not presented. | Conceptual development was advanced using axial and selective coding and constant comparisons. | The story-line technique was used to identify the final themes. |
| Olofsson, Fjellman-Wiklund and Soderman (2010) | A maximum variation sample was selected based upon pre-determined criteria; which negates the concept of following an emerging study design. It was stated that data collection and analysis occurred simultaneously. It was reported that the study design emerged during the study period, but it was not made clear how. | Open codes and initial concepts were presented and adequately discussed. | Theory development proceeded using selective coding where similar open codes were collated into categories and finally the core category was developed | The analysis produced 1 core category and 3 categories that formed an informative explanatory model. The results offered adequate depth but theoretical saturation was not referred to. |
| Pechak and Thompson (2010) | An initial appropriate sample was identified and justified through purposive and snowball sampling. It was reported that data collection and analysis occurred simultaneously. Evidence was provided to show that theoretical saturation was achieved. | Open coding was used to identify emerging concepts but these concepts were not presented. Memos were used summarize the transcripts and the definition of concepts. | Theory development progressed using axial coding and constant comparisons to explore the relationships between codes. Diagrams were drawn to represent the emerging themes as a foundation to formulate a conceptual model. | The outcome of the study presented a conceptual model that explains the stages of developing an optimal international service program. It was made clear how the stages were identified to form the model which was validated by participants in the final stages to ensure its meaningfulness. |
| Wainwright, Shepard, Harman and Stephens (2010) | Purposive sampling was used, although an eligible sample was recruited to answer the research question, it is not clear how the sampling size was determined, because theoretical saturation had not been discussed. Data collection and analysis appeared to have taken place separately in a linear fashion. | Initial concepts were generated from the data using open coding but were not presented. | Theoretical development progressed using axial coding, reflective memos writing and diagramming. Thematic analysis was also used to analyse participants' narratives. It was not made clear how thematic analysis fit with the processes of open and axial coding. | A final model was developed to explain the differences in clinical reasoning between expert and novice physiotherapists. This paper discussed one of the categories that formed the model. |
| Buccieri, Pivko and Olzenak (2011) | Sampling was done purposively. There was no evidence to suggest that theoretical sampling was used or concurrent data collection and analysis. | Initial coding was carried out to form a coding scheme but the initial codes were not presented. | Theory development was advanced through various strategies including coding and the constant comparison method to form themes. | It is not clear how the final themes were selected. The study presented a linear theoretical framework. |
| Masley et al., (2011) | The study aimed to describe the role of physiotherapists in acute care settings, thus a purposive sample of 18 physiotherapists who work in acute care was recruited. Although the sample was appropriate, participants' eligibility was not justified whereas no inclusion or exclusion criteria were provided. Theoretical sampling of ideas that emerged from data was used to continue to gather information about these ideas that can satisfy the properties of generate categories. | Initial concepts were generated through coding, comparisons and refinement with subsequent data collection. However, initial concepts were not presented. | Theory development was advanced through various strategies including the constant comparison method, memo-writing, diagramming, revisiting the data and asking increasing focused questions. | The analysis produced an informative explanatory theory of physiotherapists' role in acute care. Theoretical saturation was achieved and adequately supported. |

## Table 4.3: Continued

| Author(s) & publication year | Did sampling follow the strategies of GTM? | How were initial concepts developed? | How did theoretical development progress after initial concepts were mapped? | What was the outcome of the research & how was it constructed? |
|---|---|---|---|---|
| Medina-Mirapeix et al., (2011) | Sampling was done purposively. Recruitment stopped when saturation was achieved. The interview questions were amended after initial interviews, but there is no evidence to suggest that theoretical sampling was used. | Initial coding processes were not reported. | It was reported that some pre-determined themes were used to code the data and also new codes were developed. However, the authors did not report on how new codes were developed from the data. There is no evidence to suggest that a theory was developed, except for stating that the authors agreed that the developed categories were consistent between interviews | It is not clear how the final themes were selected. The study presented descriptive themes and no core or major category was presented. |
| Middle-Brook and Mackenzie (2011) | An appropriate initial sample was identified purposively. Sampling continued as guided by theoretical sampling and stopped when saturation was achieved. | Initial concepts were identified using open line-by-line coding, but the open codes were not presented. | Theory development progressed using axial coding to form categories of similar codes, making constant comparisons between the data and the analysis and memo-writing to identify relations between codes and themes. | Higher order categories were presented based on continued refinement of a conceptual framework with integrating the literature at the final stage. |
| Ohman, Astrom and Malgren-Olsson (2011) | Convenience sampling was used to recruit participants from a previous intervention study. Theoretical sampling was not reported. | Open coding was used initially. Open codes were neither presented nor discussed. | The analysis continued by grouping open codes into higher order codes. This was followed by selective coding to group codes into categories. The constant comparison method was used all throughout the analysis. | One core category and two sub-categories were presented in the form of an explanatory theory. The final categories were selected based on their explanatory power as verified through peer reviews and member checking. |
| Petty, Scholes and Ellis (2011) | Purposive sampling was used to recruit physiotherapists who completed master degrees in the UK. Theoretical sampling was not reported however the iterative process of data collection as informed by previous data analysis was clearly described. | Although the coding procedures used were not referred to and no initial were presented, a discussion was provided to explain how the initial concepts were developed as informed by relevant existing theories and emerging ideas which were further sample. | Theoretical development progressed by constructing a matrix through which the relationship between categories were explored. | There was a clear discussion of how the final categories were selected using comparisons and rendering ideas through writing to stimulate further analysis. The study produced a theory that explained how master of science students develop their learning. |
| Thomson and Hilton (2011) | An initial appropriate sample was identified and justified through purposive and continued through theoretical sampling until saturation was achieved. Adequate evidence was provided to support that theoretical saturation was achieved. | Initial concepts were identified using line-by-line coding. The codes were presented and the processes of constant comparisons made to refine the emerging initial concepts were made clear. | Theory development progressed using axial coding, selective coding and constant comparisons to group codes into abstract categories. Diagrams were drawn to represent the emerging themes as a foundation to formulate a conceptual model. | The study presented a conceptual model that explains students' understanding of the outcome of a college-based physiotherapy program.<br>It was made clear how the stages were identified to form the model |
| Wainwright, Shepard, Harman and Stephens (2011) | Purposive sampling was used to recruit a suitable sample that was justified based on the aims of the study. It was made clear how data collection and analysis occurred simultaneously as informed by one another, but theoretical sampling was not referred to. | Preliminary codes and themes were identified using open coding. The codes were presented and the processes of constant comparisons made to refine the emerging initial concepts were made clear. | Theory development continued using axial coding, memo-writing and peer discussions between the authors to produce an exhaustive coding scheme to be applied to subsequent data. | The outcome of the study was presented in the form of 4 major themes related to one category of the findings that is 'the different use of reflection between expert and novice physiotherapists '. However, the research produced a conceptual framework that was published elsewhere. Saturation was not reported on. |
| Ahlqwist and Sallfors (2012) | Purposive sampling was initially used to recruit participants followed by theoretical sampling as driven by information from the study itself. | Open coding was used to label the data either word-by-word or line-by-line based on the amount of information presented within the data. | Open codes were grouped into higher order codes using selective coding and constant comparisons to build sub-categories and categories. The analysis was facilitated by using NVivo | The core category, categories and sub-categories formed a substantive theory, illuminating how young people with low back pain experienced physiotherapy. |
| Corrigan and McBurney (2012) | The type of initial sampling technique used was not reported, but the inclusion criteria were provided. No evidence to suggest that theoretical sampling was used. It was reported that saturation was achieved | Preliminary codes and themes were identified but were not presented. | Codes were grouped into themes and comparisons were made to link the themes to one another and to previously identified themes presented in existing literature. | The study presented 5 themes that describe the factors that stroke patients need to successfully return to the community. The themes were descriptive. |

## Table 4.3: Continued

| Author(s) & publication year | Did sampling follow the strategies of GTM? | How were initial concepts developed? | How did theoretical development progress after initial concepts were mapped? | What was the outcome of the research & how was it constructed? |
|---|---|---|---|---|
| Dunn, Smith, Whitehead and Keeling (2012) | Early recruitment used purposive sampling followed by theoretical sampling to explore, expand and challenge the developing theory using data generated from the study itself. | The procedures involved in open coding were reported on but the open codes were not presented. NVivo was used to assist in the data analysis | Higher level coding techniques were not reported on. It is not clear if the analysis progressed beyond open coding and continued to identify new codes or construct abstract categories | The findings presented narrative themes describing the factors underpinning participants' choices. No model was presented. |
| Harding, Stewart and Knight (2012) | Convenience sampling was used. The sampling size and frame were not justified. No evidence was provided to show that theoretical sampling was used. | Initial coding processes were not reported. | No evidence to suggest that a theory was developed. | It is not clear how the final themes were selected. The study presented descriptive themes and no core or major category was presented. Saturation was not reported. |
| Schmitt, Akroyd and Bruke (2012) | The type of sampling technique used was not reported, but the inclusion criteria were provided. No evidence to suggest that theoretical sampling was used. | A priori codes were developed from the literature to guide the initial analysis of data. It was not made clear whether new concepts were identified during early stages of the analysis or whether the a priori themes were exhaustively applied to the data. | Content analysis was used to analyse the data. No evidence to suggest that a theory was developed. | It is not clear how the final themes were selected. The study presented descriptive themes and no core or major category was presented. Saturation was not reported. |
| Stenberg, Fjellman-Wiklund and Ahlgren (2012) | Purposive sampling was used. The authors did not report using theoretical sampling. Some evidence was provided to show that data collection and analysis occurred simultaneously until theoretical saturation was achieved. | Preliminary codes and themes were identified using open coding. The codes were presented and the processes of constant comparisons made to refine the emerging initial concepts were made clear. | Theory development continued using axial coding to group the open codes into categories. | The study presented a conceptual model that explains gender in expectations and experiences of healthcare. A core category was identified and the theory presented ideal types of gender expectations of healthcare. |
| Wedge et al., (2012) | Purposive and theoretical sampling was used. An appropriate sample was recruited and justified based on the study objectives and the achievement of saturation. | Initial concepts were generated from the data using line by line coding but were not presented. | The analysis progressed by grouping initial codes into sub-categories and categories. | A conceptual map was presented to illustrate the main categories developed. |
| Eriksson, Arne and Ahlgren (2013) | Purposive sampling was used to recruit participants followed by theoretical sampling to refine and test the developed theory | Data was initially analysed using open coding. The authors used OpenCode in addition to manual coding. | Theoretical development continued using focused and theoretical coding, memo-writing, theoretical sampling and member checking. | The findings were presented in the form of an explanatory theory. A discussion was provided to explain the how the final categories were selected. |
| Lindhal et al., (2013) | It was not made clear how the initial sample was identified, but evidence was provided to show that theoretical sampling was used to focus the inquiry and guide subsequent data collection. | Preliminary codes and themes were identified using open coding, but the codes were presented | Theory development progressed using axial coding, selective coding and constant comparisons to group codes into abstract categories. | The outcome of the study presented a conceptual model. The study explained how the final categories were selected and how the core category was constructed. |
| Medina-Mirapeix et al., (2013) | Purposive sampling was used to recruit patients with varying characteristics. Theoretical sampling was not reported on, although saturation was claimed. | Predetermined codes were developed from exiting literature and used to label the data during early phases of the analysis. The predetermined codes were reported. | The analysis progressed over 3 iterative rounds of coding where new codes were developed from the data and added to pre-determined codes to develop a framework to analyse participants' narratives. MAXqda2 was used to facilitate the analysis. | The final themes were developed by grouping categories with hierarchical conceptual uniformity into themes and subthemes. The themes were descriptive, no core category was identified, theoretical models were not developed |
| Thomson and Love (2013) | An appropriate initial sample was recruited using purposive sampling. It was then reported that theoretical sampling was used but no information was provided to describe how. Theoretical saturation was achieved and understood as the point at which the categories were fully understood. | It was not clear how the initial concepts were identified. | Theory development progressed using axial and selective coding. | It was reported that a conceptual framework was developed but it was not presented in the paper. The papers presented some of the developed categories. |
| Dufour, Lucy and Brown (2014) | An appropriate initial sample was recruited using purposive sampling. Evidence was provided to show that theoretical sampling was then used to focus the inquiry and guide subsequent data collection. | Preliminary codes and themes were identified using open coding, but the codes were not presented. | Theory development progressed using axial coding, selective coding and constant comparisons to group codes into abstract categories. Diagrams were drawn to represent the emerging themes as a foundation to formulate a conceptual model. | It was reported that a conceptual framework was developed and a discussion was provided to show how the final categories were selected after discussions between the authors and revision of memos and revisiting data. Saturation was not reported on. |

## Table 4.3: Continued

| Author(s) & publication year | Did sampling follow the strategies of GTM? | How were initial concepts developed? | How did theoretical development progress after initial concepts were mapped? | What was the outcome of the research & how was it constructed? |
|---|---|---|---|---|
| Ekerholt, Schau, Mathismoen and Bergland (2014) | Purposive sampling was used to strategically select an appropriate sample that was justified based on the study objectives. There is no evidence to suggest that theoretical sampling was used. | The data was broken down into discrete parts using open coding but open codes were not presented. | Theory development progressed using axial coding to put the open codes in new ways that would link together participants' stories. Axial codes were not presented. | 2 main inter-related phenomena where identified as integral to participants' experiences. These phenomena represented the main analytical themes that emerged from data. |
| Lloyd, Roberts and Freeman (2014) | An appropriate initial sample was recruited using purposive sampling. Evidence was provided to show that theoretical sampling was then used to focus the inquiry and guide subsequent data collection. | Open coding was performed at the meaning level of sentences but the open codes were not presented. | Theory development progressed using axial coding to put the open codes in abstract categories. Memos and diagrams were used to aid theory development. | The findings were presented in the form of themes. It was reported that theory development is provisional at this stage because theoretical saturation has not been achieved yet. |
| MacKay et al., (2014) | Convenience sampling was used to recruit younger adults who suffer from knee osteoarthritis. The eligibility criteria were justified which suggests that an appropriate initial sample was identified. Purposive sampling was then used to progress the data collection by seeking participants with different demographics. Theoretical sampling of ideas was then followed and a discussion was provided to describe the processes of simultaneous data collection and analysis. | Open coding was used to generate the initial concepts; however no initial codes or concepts were presented. | Theory was advanced using axial coding and the constant comparison method where data was compared to data, data with categories and categories with categories. A core category was developed based on its ability to explain the central theme of the data. | The findings presented theoretically dense categories and an explanatory model. |
| O'Brien, Clemson and Canning (2015) | An appropriate sample was recruited using purposive sampling. A discussion was provided to show how data collection & analysis occurred simultaneously but theoretical sampling was not reported. | Preliminary codes and themes were identified through a process of coding and sorting of the data. | Theory development advanced by grouping codes into subthemes and more abstract themes. Tables were presented to describe these processes. | A theoretical model was constructed to explain the process of decision making for people with Parkinson's disease. Evidence was provided to show that theoretical saturation has been achieved. |
| Fjellman-Wiklund, Nordin, Skelton and Lundin-Olsson (2016) | Convenience sampling was used to recruit physiotherapists from a previously conducted randomized controlled trail. Theoretical sampling was not reported. | Line-by-line open coding was first used to analyse the data. The developed codes and initial concepts were presented and discussed. | Line-by-line open coding was first used to analyse the data. The developed codes and initial concepts were presented and discussed. | The findings were presented in the form of an explanatory matrix with 1 core category and 2 categories that explained participants' experiences. The relationships between categories were discussed. |
| Gosling and Rushton (2016) | Purposive sampling was utilised to capture a wide range of views and perspectives of participant experience. Theoretical sampling was not reported. | Initial coding, memo writing and discussions between the authors were used to identify preliminary concepts. | The analysis progressed through focused and selective coding. These processes grouped the initial codes into abstract codes based on relationships and patterns within and among the data. | The findings were presented using 4 key categories. The final categories were selected based consensus between the researchers and participant to identify and describe the central themes that captured participants' understandings. |
| Hinman et al., (2016) | A suitable sample was recruited using purposive sampling from a larger pool of participants who took part in a randomized controlled trial. A discussion was provided to show that saturation has been achieved. | Open line-by-line coding was used to identify initial concepts. | Axial coding was used to regroup the data. There is no evidence to show that a theory has been developed. | The findings were put in the form of 4 descriptive themes that represent repeated meanings in the data. |
| Jachyra and Gibson (2016) | The initial sampling technique used to recruit participants was not specified but appeared to be convenience sampling. Theoretical sampling was not referred to, although evidence was provided to describe how subsequent data collection was informed by previous data analysis and emergent from information generated from the study itself. | Initial coding was used to generate preliminary concepts. | Theoretical development progressed through axial and selective coding, constant comparison, writing analytical memos and maintaining a reflexive research diary. | The outcome of the study presented a conceptual model and a theory which explained the factors influencing participants' behaviours. The study explained how the final categories were selected and refined through multiple coding cycles, comparisons and specifying the relationships between concepts. |

## Table 4.3: Continued

| Author(s) & publication year | Did sampling follow the strategies of GTM? | How were initial concepts developed? | How did theoretical development progress after initial concepts were mapped? | What was the outcome of the research & how was it constructed? |
|---|---|---|---|---|
| Timothy, Graham and Levack (2016) | An appropriate initial sample was recruited using purposive sampling. Evidence was provided to show that theoretical sampling was then used to focus the inquiry and guide subsequent data collection. | The process of initial or open coding was not reported on. | The process of theory development continued by grouping open codes into higher order codes, sub-categories and categories. | The developed categories and core category were informative and theoretically dense. |
| Clouder and Adefila (2017) | Purposive sampling was used to recruit participants. Theoretical sampling was not reported. | Initial coding procedures and preliminary concepts were not reported. | The codes were grouped into categories and categories were collapsed into themes. The analysis was facilitated using Excel spreadsheets. There was no discussion of how coding was conducted and the aspects according to which codes were grouped. | The findings presented 3 themes. |
| Giardini et al., (2017) | Convenience sampling was used to recruit patients with Parkinson's disease who participated in an in-patient multi-disciplinary rehabilitation program. The eligibility criteria were described and justified which suggested the recruitment of an appropriate study sample to address the research objectives. Theoretical sampling was not reported. | Line-by-line open coding was first used to analyse the data. Examples of initial codes were not presented. | The analysis progressed using axial and theoretical coding to construct the core categories and sub-categories that can provide abstract explanations of participants' experiences. | The final core category and sub-categories were selected based on the following criteria: data frequency and consistency, link to the other sub-categories and increased explanatory power. The generated theory was presented in the form of an explanatory matrix with explicit relationships between categories. |

GTM: Grounded theory methodology

## Table 4.4: Summary of study methodological quality

| Author(s) & publication year | Synchronous data collection & analysis (n=47, 69%) | Systematic coding procedures (n=50, 74%) | Constant comparative method (n=53, 78%) | Memo-writing (n=29, 43%) | Theoretical sampling (n=16, 24%) | Integration of theoretical framework within relevant literature (n=30, 44%) |
|---|---|---|---|---|---|---|
| Ohman and Hagg (1998) | Yes | Yes | Yes | No | No- Saturation was not reported | Yes |
| Albert (1999) | No | Yes | No | No | No- Saturation was not reported | Yes |
| Ohman, Hagg and Dahlgren (1999) | Yes | No | Yes | Yes | No- Saturation was not reported | Yes |
| Jensen et al., (2000) | Yes | Yes | Yes | No | No- Saturation was reported | Yes |
| Mackey and Sparling (2000) | No | Yes | Yes | No | No- Saturation was not reported | No |
| Stephenson and Wiles (2000) | No | No | No | No | No- Saturation was not reported | No |
| Stiller (2000) | Yes | Yes | Yes | No | No- Saturation was not reported | No |
| Trede (2000) | No | No | No | No | No- Saturation was not reported | No |
| Jette, Grover and Keck (2003) | Yes | Yes | Yes | No | No- saturation was not reported | Yes |
| Milligan (2003) | No | No | No | No | No- Saturation was reported | No |
| Edwards et al., (2004) | No | Yes | Yes | No | No- Saturation was not reported | Yes |
| Ekerholt and Bergland (2004) | Yes | Yes | Yes | No | No- Saturation was not reported on. | Yes |
| Heine, Koch and Goldie (2004) | Yes | Yes | Yes | Yes | No- saturation was reported | No |
| Johansson and Fjellman-Wiklund (2005) | No | No | Yes | No | No- Saturation was not reported | No |
| Miller et al., (2005) | Yes | Yes | Yes | No | No- Saturation was reported | No |
| Piegorsch et al., (2005) | Yes | No | No | No | Yes- Saturation was reported | No |
| Reynolds (2005) | Yes | Yes | Yes | Yes | No- Saturation was reported | Yes |
| Solomon and Miller (2005) | Yes | Yes | Yes | Yes | No- Saturation was reported | Yes |
| Ekerholt and Bergland (2006) | Yes | Yes | Yes | No | No- Saturation was reported | No |
| Slingsby (2006) | No | Yes | Yes | No | No- Saturation was reported | No |
| Booth and Kendall (2007) | Yes | Yes | No | No | Yes- Saturation was not reported | No |
| McGlynn and Cott (2007) | Yes | Yes | Yes | Yes | Yes- Saturation was reported | Yes |
| Ekreholt and Bergland (2008) | Yes | Yes | Yes | No | No- Saturation was reported | No |
| Hall et al., (2008) | No | Yes | Yes | No | No- Saturation was achieved for some categories | Yes |
| Lee et al., (2008) | Yes | Yes | No | No | No- Saturation was reported | No |
| Redmond and Parrish (2008) | Yes | No | Yes | No | Yes- Saturation was reported | No |
| Galvin, Cusack and Stokes (2009) | No | No | Yes | No | No- Saturation was not reported | No- |
| Hannes et al., (2009) | Yes | Yes | Yes | No | No- Saturation was not reported | Yes |
| McGinnis et al., (2009) | No | Yes | Yes | Yes | No- Saturation was reported | Yes |
| Pechak and Thompson (2009) | Yes | Yes | Yes | Yes | No- Saturation was reported | Yes |
| Rindflesch (2009) | Yes | No | Yes | No | No- Saturation was not reported | No |
| Slade, Molloy and Keating (2009) | No | No | No | No | No- Saturation was reported | No |
| Blaney et al., (2010) | No | Yes | Yes | Yes | No- Saturation was reported | No |

## Table 4.4: Continued

| Author(s) & publication year | Synchronous data collection & analysis (n=47, 69%) | Systematic coding procedures (n=50, 74%) | Constant comparative method (n=53, 78%) | Memo-writing (n=29, 43%) | Theoretical sampling (n=16, 24%) | Integration of theoretical framework within relevant literature (n=30, 44%) |
|---|---|---|---|---|---|---|
| Mok et al., (2010) | Yes | Yes | Yes | No | No- Saturation was reported | No |
| Olofsson, Fjellman-Wiklund and Soderman (2010) | Yes | Yes | Yes | No | No- Saturation was not reported | Yes |
| Pechak and Thompson (2010) | Yes | Yes | Yes | Yes | No-Saturation was reported | No |
| Wainwright, Shepard, Harman and Stephens (2010) | No | Yes | No | Yes | No- Saturation was not reported | Yes |
| Buccieri, Pivko and Olzenak (2011) | No | Yes | Yes | No | No- Saturation was not reported | No |
| Masley et al., (2011) | Yes | Yes | Yes | Yes | Yes- Saturation was reported | Yes |
| Medina-Mirapeix et al., (2011) | Yes | No | No | No | No- Saturation was reported | No |
| Middle- Brook and Mackenzie (2011) | Yes | Yes | Yes | Yes | Yes- Saturation was reported | Yes |
| Ohman, Astrom and Malgren-Olsson (2011) | Yes | Yes | Yes | Yes | No- Saturation was not reported | No |
| Petty, Scholes and Ellis (2011) | Yes | No | Yes | Yes | No- saturation was not reported | Yes |
| Thomson and Hilton (2011) | Yes | Yes | Yes | Yes | Yes- Saturation was reported | Yes |
| Wainwright, Shepard, Harman and Stephens (2011) | No | Yes | Yes | Yes | No- Saturation was not reported | Yes |
| Ahlqwist and Sallfors (2012) | Yes | Yes | Yes | Yes | Yes- Saturation was reported | No |
| Corrigan and McBurney (2012) | No | Yes | No | No | No- Saturation was reported | Yes |
| Dunn, Smith, Whitehead and Keeling (2012) | Yes | No | No | Yes | Yes- Saturation was reported | No |
| Harding, Stewart and Knight (2012) | Yes | No | No | No | No- Saturation was not reported | No |
| Schmitt, Akroyd and Bruke (2012) | No | No | No | No | No- Saturation was not reported | No |
| Stenberg, Fjellman-Wiklund and Ahlgren (2012) | Yes | Yes | Yes | No | No- Saturation was reported | Yes |
| Wedge et al., (2012) | Yes | Yes | Yes | No | No- Saturation was reported | Yes |
| Eriksson, Arne and Ahlgren (2013) | Yes | Yes | Yes | Yes | Yes- Saturation was reported | No |
| Lindhal et al., (2013) | Yes | Yes | Yes | No | Yes- Saturation was not reported | No |
| Medina-Mirapeix et al., (2013) | No | No | No | No | No- saturation was reported | No |
| Thomson and Love (2013) | Yes | Yes | Yes | No | Yes- Saturation was reported | Yes |
| Dufour, Lucy and Brown (2014) | Yes | Yes | Yes | Yes | Yes- Saturation was not reported | Yes |
| Ekerholt, Schau, Mathismoen and Bergland (2014) | Yes | Yes | Yes | No | No- Saturation was reported | No |
| Lloyd, Roberts and Freeman (2014) | Yes | Yes | Yes | Yes | Yes- saturation has not been achieved yet. | No |
| MacKay et al., (2014) | Yes | Yes | Yes | Yes | Yes- Saturation was reported | No |

## Table 4.4: Continued

| Author(s) & publication year | Synchronous data collection & analysis (n=47, 69%) | Systematic coding procedures (n=50, 74%) | Constant comparative method (n=53, 78%) | Memo-writing (n=29, 43%) | Theoretical sampling (n=16, 24%) | Integration of theoretical framework within relevant literature (n=30, 44%) |
|---|---|---|---|---|---|---|
| O'Brien, Clemson and Canning (2015) | Yes | No | Yes | Yes | No- Saturation was reported | No |
| Fjellman-Wiklund, Nordin, Skelton and Lundin-Olsson (2016) | Yes | Yes | Yes | Yes | No- The authors were not sure if saturation was reached | No |
| Gosling and Rushton (2016) | Yes | Yes | Yes | Yes | No- Saturation was reported | No |
| Hinman et al., (2016) | No | Yes | Yes | No | No -Saturation was not reported for all categories | No |
| Jachyra and Gibson (2016) | Yes | Yes | Yes | Yes | No- Saturation was reported | Yes |
| Timothy, Graham and Levack (2016) | Yes | No | Yes | Yes | Yes- Saturation was reported | Yes |
| Clouder and Adefila (2017) | Yes | Yes | Yes | No | No- Saturation was reported | Yes |
| Giardini et al., (2017) | No | Yes | Yes | Yes | No- Saturation was not reported | Yes |

## 4.6 Discussion

This systematic review evaluated the methodological quality of GTM research in physiotherapy. The findings showed that GTM is a useful methodology that is often utilized to study a wide range of topics relevant to the education, organization and practice of physiotherapy. The findings of this review suggested that whenever multiple tenets/methods of GTM were not present, the capacity of the inquiry to move from description to abstract theorising was limited. This argument agrees with previous findings by Huchison, Johnston and Breckon (2011) who conducted a critical review of GTM research in exercise psychology. Their findings and ours showed that the iterative collection and systematic coding of data as guided by theoretical sampling were integral to the process of meaningful theorisation and were usually underutilized and/or underreported.

Most GTM research in physiotherapy and exercise psychology reported to have collected and analysed data simultaneously. However, most studies used predetermined purposive or convenience sampling where sources of data, participants' characteristics and interview questions were mostly pre-set. Only sixteen studies (24%) in this review and nine studies (43%) in Huchison, Johnston and Breckon's (2011) review reported using theoretical sampling. Theoretical sampling requires researchers to ask increasingly focused questions about how and why certain actions are taking place and to seek the most appropriate sources and methods of subsequent data collection to answer these questions (Morse et al., 2009). Thus, it is one of the techniques needed to uncover the underlying structural conditions that shape observed actions (Clarke, 2003).

The absence of theoretical sampling weakens the link between data collection and analysis because the inquiry becomes inadequately informed by knowledge generated from data itself (McCann and Clark, 2003). Therefore, data collection and analysis in many GTM research in both reviews were judged as linear and inconsistent with the synchronous and in-depth exploration of unfolding concepts through theoretical sampling (Draucker, Martsolf, Ross and Rusk, 2007). Consequently, many studies could not advance the analysis beyond describing immediate patterns of action and events appearing repetitively in data.

Systematic coding procedures, writing memos, the constant comparative method and diagramming are analytical techniques of GTM used to identify information gaps that can be theoretically sampled (Corbin, 1986). Most studies in this review (n= 62, 91%) reported using at least one of these techniques. Yet, only thirty-five studies (51%) studies presented cyclic analytical processes that continued to identify and include new concepts after open coding.

Conducting an analysis that is open to possibilities is imperative to capture the evolving picture of the phenomena being studied (Birks and Mills, 2015). To achieve this goal, thirty-five studies (51%) described how initial and higher-order coding was used in combination with comparing data to codes and categories, to question the analysis at every stage of development. These studies were able to modify the data collection questions to gather specific information that would satisfy, test and/or refine the properties of emerging categories. A discussion of these methodological procedures was considered evidence of iterative theoretical development that was grounded in empirical data.

To facilitate theoretical development, researchers write memos about the emerging analysis. This review showed that memos were another underutilized tenet of GTM reported by twenty-nine studies (43%). Memos can explore the relationships between different concepts or identify constructs that can be further pursued (Bryant and Charmaz, 2007). Thus, analytical memos are rich in information that can direct theoretical sampling and provide a record of the analysis. Moreover, researchers are advised to write reflective memos on their biases and impact on the analysis (Clarke and Charmaz, 2014). Twelve studies (18%) reported using reflective memos and explained how and why researchers made different analytical decisions; which increased confidence in the credibility of their findings.

Overall, thirty-five studies (51%) demonstrated evidence of progressively refined approaches to theory building with examples of increasingly focused questions that targeted new information to explore different properties of categories. There also was evidence of systematically comparing categories against new data and the generated theories provided sufficient explanatory power. These studies were of good to moderate methodological quality and gave detailed accounts of the research procedures used to develop theoretically-dense conceptual frameworks.

Thirty-three studies (49%) showed limited understanding of GTM given that the synchronous data collection and analysis processes and theoretical sampling were usually overlooked. Additionally, it was not clear if systematic coding and comparisons were performed throughout the analysis and/or how these techniques were applied. These studies demonstrated little or no indication of

theoretical development as evident through their findings which provided descriptive and under-theorised themes.

### 4.7 Limitations

This systematic review adopted citation pearl-growing search strategy to identify studies that stated in the title and/or abstract that GTM or methods were used. The search term 'grounded theory' was not searched for throughout the full-text of studies which may be a limitation of the search strategy and inclusion criteria employed in this review. However, the authors piloted an alternative search where the term 'grounded theory' was applied to full-text, and found that most studies which mentioned GTM outside the abstract reported applying a different methodology, thus were not GTM-based studies. This increased confidence in the adopted search strategy hence the majority of relevant studies were retrieved and included.

Systematic reviews often include good to moderate quality primary studies to base findings of the review on strong evidence (Liberati et al., 2009). However, this review aimed to identify potential differences in how GTM is applied. Therefore, all sixty-eight studies that reported using any aspect of GTM were included, regardless of the studies' methodological quality. Although, this strategy led to the inclusion of poor-quality studies, it fulfilled the research objectives and enabled the identification of several methodological pitfalls that can be considered in future use of GTM.

Another possible limitation of the current review relates to publication bias because grey literature which refers to unpublished studies, dissertations and articles published in non-peer reviewed journals, were beyond the scope of this

review. Dickersin (1990) suggested that studies with inconclusive findings or results that refute what is generally known about a certain topic are less likely to be published. Relying on published articles can be more consequential for reviews that draw clinical implications from existing findings, rather than reviews focusing on methodological quality assessment. Thus, publication bias was considered of limited effect on the quality of this review.

Lastly, the methodological details extracted from the reviewed articles may have been influenced by the word count available for journal articles. This hindered the ability to decide whether methodological steps were being overlooked or underreported. It is advised that journals dedicate adequate space for a transparent and succinct account of GTM research. Moreover, the methodological criteria by Hutchison, Johnston and Breckon (2011) can be used by journals and authors as a guideline for reporting sufficient details.

## 4.8 Conclusion

The findings of this study can offer several implications for GTM research in physiotherapy and other disciplines. GTM is concerned with theory construction, thus it might not be the most suitable methodology for studies which do not aim to develop explanatory models. Whenever the research objective is to provide population representativeness or narrative accounts of phenomena, descriptive qualitative research methods, such as thematic or content analyses, can be more appropriate (Vaismordai, Turunen and Bondas, 2013). Grounded theory is a methodology and methods package, which emphasises the fundamental and non-interchangeable epistemological and ontological premises of different revisions of GTM (Clarke, 2005). This requires researchers to select the most appropriate revision that aligns with the theoretical frameworks of their studies

to meet their research objectives. Once a particular approach of GTM is chosen all research practices (data collection, analysis and theory development) must remain consistent with the revision's particular epistemological and theoretical assumptions. This ensures that outcome of the research is coherently produced and can be meaningfully explained through theories of being and knowledge.

One of the main problems that undermined the rigor of some of the review studies was that more than one revision of GTM was consulted. This problem manifested itself in a state of methodological incoherence whereby methods seemed to be mixed and matched. For example, some studies collected data using more interpretative methods (e.g. individual unstructured interviews) to effectively capture the experience of each participant. However, the analysis was conducted through a positivist lens that normalized participants' experiences by presenting contradictory views as negative cases. Such methodological incoherence might have prevented the analysis from progressing beyond the concrete level of describing information because the abstract level of exploring, explaining and theorising variations within data was not present.

As some studies (e.g. Booth and Kendall, 2007; Stephenson and Wiles, 2000) used multiple revisions of GTM, the role of the researcher was usually overlooked. This could be a factor of swaying between conflicting epistemological positions hence Glaserian GTM requires the researcher to be neutral while Straussian and constructivist GTM demand more visibility to justify how the analysis was subjectively constructed (Hall and Callery, 2001). The tug between these epistemological positions may be difficult to resolve once the researcher is immersed within the data. Thus, it is recommended that researchers plan before

fieldwork by considering their personal frame of reference and position in relation to the study before selecting a particular revision of GTM. That is not to say that the researcher's perceptions and ways through which they negotiate their subjectivity do not or should not change while interacting with participants and data (Piantanida, Tananis and Grubs, 2004). However, reflecting and reporting on the researcher's journey cannot be achieved without a critical realization of their initial stance.

Finally, it is imperative to stress that GTM as is an iterative methodology therefore its tents/methods must be applied during data collection and analysis (Charmaz and Belgrave, 2002). The results of this review showed that applying grounded theory methods only to analyse the data breaks the progressive grounding of theories in data. It is crucial for researchers to understand that the cyclic collection and analysis of data as guided by theoretical sampling are essential for in-depth exploration of emerging concepts and continued theoretical development.

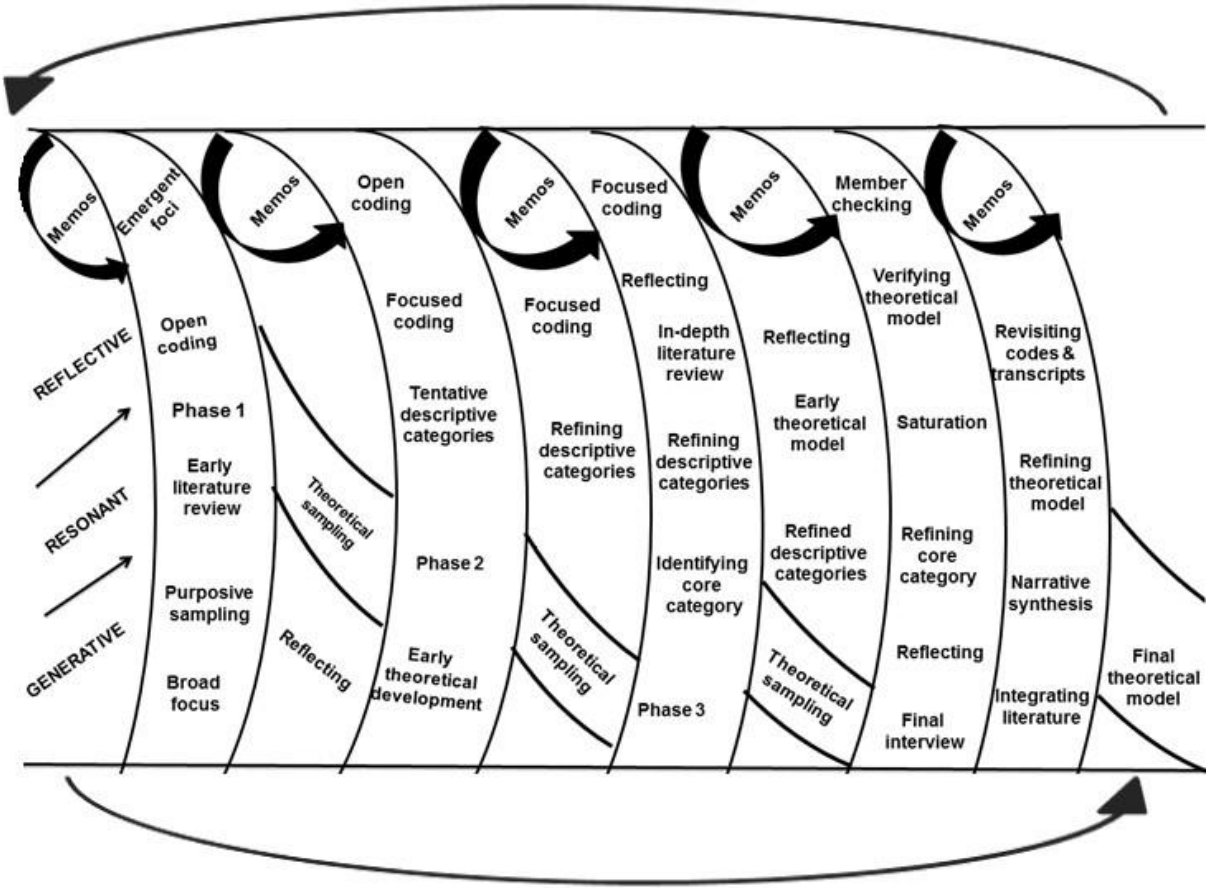
The methodological considerations that have been identified in this chapter were increased the researcher's understanding of GTM and informed the methods of data collection and analysis that have been applied in this study. The next chapter reports on methods and procedures followed in this GTM investigation.

# Chapter 5: Methods and Procedures

## 5.1 Introduction

This research used constructivist GTM to generate a deeper understanding into the identity of the Egyptian physiotherapy. According to the findings of the systematic review investigation that has been presented in Chapter 4 it can be concluded that GTM studies must provide evidence of the researcher's progressive active engagement with the data to offer a transparent account of how the analysis was conducted. Providing a detailed account of the methods and procedures undertaken throughout the study can help to demonstrate rigour in GTM. The aim of this chapter is to provide a thorough audit trail of the methods adopted in this research. This chapter also offers clear justifications for the choice of methods and discusses how each method was utilised to answer the research question whilst remaining consistent with constructivist GTM. Figure 5.1 overleaf summarises the entire iterative GTM process that led to the development of the final grounded theory model, presented in Chapters 6 and 7 of this thesis.

**Figure 5.1: Overview of the Iterative GTM Process for the Present Study (adapted from Johnston et al., 1999, p. 268).**




## 5.2 Research context and procedures:

### 5.2.1 Selecting the recruitment sites:

Six different hospitals based in Cairo were chosen as the sites for this study. These facilities were Ahmed Maher, Al-Agouza, Al-Matarya, Al-Sahel, Al-Hussain and Al-Demerdarsh. Said hospitals were considered appropriate because they are large organisations that employed many physiotherapists and physicians. They are also accessed by large numbers of patients with varying socioeconomic and educational backgrounds, and from different geographic

locations across the nations. Nevertheless, this research is qualitative in nature, and accordingly it did not seek to generalise its findings (Charmaz, 2012). It rather aimed to offer a deep understanding of the phenomenon under study (the identity of Egyptian physiotherapy) to generate implications that could inform physiotherapy practice and education. Therefore, these 6 facilities were considered suitable recruitment sites that can provide access to a diverse sample of information rich participants who might have different backgrounds, views and experiences.

### 5.2.2 Selecting the sample:

A key tenet of GTM is that sampling should be targeted towards theory construction. Clarke and Charmaz (2014) elaborated that the sampling strategy and the decisions made to collect data must be informed by the research aims and directed at theory development. The literature showed that purposive and theoretical sampling procedures were frequently considered to be the same (Coyne, 1997). However, purposive sampling requires the researcher to make informed decisions to select a specific sampling frame based on pre-set criteria, while theoretical sampling lacks a predetermined focus and does not involve preconceived inclusion criteria (Cutcliffe, 2000). Theoretical sampling is defined as pursuing and gathering relevant data to develop the embryonic theory by explaining and satisfying the properties of the constructed categories (Charmaz, 2012). Theoretical sampling is an integral feature of GTM, but to begin the iterative cycle of data-driven theorisation purposive sampling needs to be used to find initial information in order to inform theoretical sampling. Consequently, purposive and theoretical sampling procedures were used in this research. The following sections describe how both sampling procedures were employed.

#### 5.2.2.1 Purposive sampling:

Purposive sampling was initially used to select eligible participants based on a few pre-set criteria. All participants had to be able to give informed consent to be included in the study. During the initial phase of purposive sampling physiotherapists and physicians who had satisfied the following inclusion criteria were selected:

1) Had maintained a minimum of 2 months working experience post-qualification, 2) spoke Arabic and/or English, and 4) did not require financial compensation for their time.

Similarly, patients must have satisfied the criteria below to participate in the study:

1) Were medically stable and did not require urgent care, 2) 19 years of age or older to ensure patients' ability to provide informed consent, 3) have attended at least 1 physiotherapy treatment session, 4) spoke Arabic and/or English, and 5) did not require financial compensation for their time.

A total of 5 physiotherapists, 1 physician and 5 patients had expressed interest in joining the study. Accordingly, the purposive sampling phase involved 1 focus group with 5 physiotherapists, 1 interview with a physician and 1 focus group with 5 patients. These 2 focus groups and 1 interview formed the first phase of data collection and analysis that was conducted between the period of May and June 2016. The broad knowledge generated from this phase informed the beginning of theoretical sampling to explore participants' perceptions in greater depth.

#### 5.2.2.2 Theoretical sampling:

Theoretical sampling was used after the first phase of synchronous data collection and analysis was completed. It involved asking more focused questions that explained previously identified key areas of the data generated and the codes that were developed from initial transcripts. Two consecutive phases of theoretical sampling were undertaken in the period between July 2016 and August 2018. Each phase enabled the generation of pertinent data that illuminated different dimensions of the evolving categories and subcategories around participants' perceptions of the scope of physiotherapy practice, the professional role and status of physiotherapists, autonomy in physiotherapy, and the nature of inter-professional relationships between physiotherapists and physiatrists given its impact on autonomy.

Theoretical sampling created an opportunity to explore specific areas that had been highlighted as significant in previous phases of the research. It refined the researcher's interpretations of participants' views and experiences. Participants were theoretically sampled based on their ability to provide specific information that would satisfy the dimensions of constructed categories. For instance, it was identified that the extent of autonomy that physiotherapists' had depended on the structure of the work environment. Specifically, physiotherapists employed in departments that were led by physiatrists had no autonomy. Therefore, subsequent sampling targeted physiotherapists who were employed in a different work environment to further explore issues of autonomy and its impact on clinical practice. This required moving between recruitment sites to theoretically sample physiotherapists who were employed in physiotherapy departments that were independent in their operations and leadership from

physiatry. This example showed how theoretical sampling progressed as directed by the knowledge generated from the study to advance conceptual development. The final phase of theoretical sampling utilised increasingly focused questions that served to verify and elucidate the core category whilst ensuring the breadth and explanatory power of the developing theory (Charmaz, 2008b).

**5.3 Participant recruitment:**

This research was undertaken over a period of 27 months from the time initial contact was made with potential participants and until the final theoretical model was developed. All participants in this research were recruited on a volunteer basis. Recruitment followed the same procedures in all sites until theoretical saturation was reached, which was the point at which additional data did not reveal new analytical insights, and the properties of categories were made clear and sufficiently explained.

The recruitment procedures included placing posters on the hospital's research bulletin and in physiotherapy and/or physiatry departments. Three different posters were made in Arabic; 1 for each participant group (i.e. physiotherapists, patients and physicians). Yet, the posters covered relatively similar information about the aims of the research, the methods of data collection, eligibility criteria and an assurance of the voluntary and confidential nature of participation. The posters also included the researchers contact details and a polite request to contact the researcher by email or phone call if interested in participation. Additionally, the researcher requested the assistance of professional networks in spreading word about the research amongst potential participants.

Professionals who assisted with recruitment were not interviewed and none of the participants who took part in this study were previously known to the researcher.

When potential participants learned about the study either from reading posters or from professional networks, and determined that they were interested in taking part, they personally contacted the researcher and a face-to-face meeting was arranged at the hospital (i.e. recruitment site). During this meeting potential participants were given information sheets in Arabic containing further details about the study objectives and procedures including data collection, storage, analysis and dissemination of findings. Potential participants were given the choice to participate in a focus group with peers (e.g. a focus group of with other patients only) or undertake an individual interview with the researcher.

The researcher encouraged participants to ask questions about the study and provided additional information whenever needed. Once they were satisfied with the amount of information received, potential participants were asked to confirm if they could and were willing to provide their consent to join the study, and upon confirmation they were asked to sign consent forms that were written in Arabic. The consent forms informed participants that their information would be confidential and they had the right to withdraw from the study at any point and without giving reasons. It also requested their permission to be contacted through their preferred method (phone, email or face-to-face) to agree on a time for interviews or focus groups. The researcher then contacted participants and arranged the discussions at mutually agreed times.

Consideration was given to the participants' personal schedule and work obligations when scheduling discussions. In all instances, physiotherapist and physician participants preferred to have the interviews or focus groups done after the workday when they were not busy. Similarly, patient participants chose to be interviewed after they have attended physiotherapy sessions. A total of 32 physiotherapists, 26 physicians and 16 patients from 6 hospitals participated in the study. Participants' demographics characteristics (e.g. the nature of the patient's health condition) were obtained directly from the participants before interviewing. Table 5.1, 5.2 and 5.3 show participant characteristics and the focus of the discussions conducted with them throughout the 3 phases of the research.

**Table 5.1: Summary of phase 1 using purposive sampling**

| Interview type, date | Participant code | Gender | Age | Years of work experience | Sampling characteristics | Focus of discussion |
|---|---|---|---|---|---|---|
| May 2016<br><br>Pt-FG1 | Pt1 | Female | 23 | Less than 1 year | Novice physiotherapists<br><br>University-qualified<br><br>Recently transitioned to work<br><br>Working in a department led by physiatrists<br><br>Expressed great interest in joining the study<br><br>Approached the researcher collectively and chose to speak in a focus group which reflected enthusiasm to express their views and the shared experiences they seemed to have. | Initial topic guide questions that addressed the research aims and aligned with previous literature:<br><br>1- How did you choose your profession? And why?<br>2- What made you want to be a physiotherapist?<br>3- What does being a physiotherapist mean to you?<br>4- How do you describe your job/role as a physiotherapist to other people?<br>5- What is the most important part of the physiotherapist role for you?<br>6- What is the most challenging part of the physiotherapist role for you?<br>7- What do you believe makes a good physiotherapist?<br>8- I want you to think of a physiotherapist that you look up to; can you tell me why you admire them? |
| | Pt2 | Female | 24 | | | |
| | Pt3 | Female | 23 | | | |
| | Pt4 | Female | 24 | | | |
| | Pt5 | Female | 24 | | | |

Pt: Physiotherapist, FG: Focus group.

**Table 5.1: Continued**

| Interview types, date | Participant code | Gender | Age | Speciality | Sampling characteristics | Focus of discussion |
|---|---|---|---|---|---|---|
| June 2016<br><br>Dr-interview | Dr1 | Male | 49 | Orthopaedist | Speciality involved frequent physiotherapy referrals.<br><br>Past experience in the clinical supervision of physiotherapists at the hospital.<br><br>Past experience as a coordinator of physiotherapy placements.<br><br>Past experience as a clinical educator for physiotherapy students on placements. | Initial topic guide questions that addressed the research aims and aligned with previous literature:<br><br>1- What conditions do you think physiotherapy is helpful for?<br>2- What conditions do you think physiotherapy is NOT helpful for?<br>3- Can you tell me about conditions or situations where physiotherapy may be harmful?<br>4- What do you think are the modalities or types of treatment that physiotherapists use?<br>5- How did you build your knowledge about physiotherapy?<br>6- How would you describe the physiotherapists' role in the medical team? and/or<br>7- What do you think are the activities that physiotherapists perform?<br>8- What do you believe makes a physiotherapist good? |

Dr: Doctor

**Table 5.1: Continued**

| Interview type & date | Participant code | Age | Gender | Health problem | Sampling characteristics | Focus of discussion |
|---|---|---|---|---|---|---|
| June 2016<br><br>Pa-FG1 | Pa1 | 37 | Female | Fibromyalgia | Expert patient<br>Multiple therapeutic encounters with different physiotherapists at recruitment site | Initial topic guide questions that addressed the research aims and aligned with previous literature:<br><br>Before receiving any physiotherapy:<br>1- What did you think physiotherapy could help you achieve?<br>2- What did you think the treatment will consist of?<br>3- Where did you get these ideas from?<br><br>After receiving physiotherapy:<br>4- Did your opinions about physiotherapy change in any way?<br>5- Were your expectations met?<br>6- Do you think the treatment is effective or are you getting better?<br>7- How would you describe what the physiotherapist does to someone else?<br>8- What do you believe makes a physiotherapist good?<br>9- Who would you recommend physiotherapy for? |
| | Pa2 | 28 | Male | Chronic neck pain | Expert patient<br>Multiple therapeutic encounters with different physiotherapists and physiatrists inside and outside recruitment site | |
| | Pa3 | 50 | Female | Chronic non-specific low back pain | Expert patient<br>Multiple therapeutic encounters with different physiotherapists inside and outside the recruitment site | |
| | Pa4 | 21 | Male | Ankylosing spondylitis | Expert patient<br>Belongs to a young patient population<br>Experiences of physiotherapy treatment in Egypt and USA | |
| | Pa5 | 40 | Male | Chronic non-specific low back pain | Expert patient<br>Multiple therapeutic encounters with different physiotherapists and physiatrists inside and outside recruitment site | |

Pa: Patient

**Table 5.2: Summary of phase 2 using theoretical sampling**

| Interview type, date | Participant code | Gender | Age | Years of work experience | Sampling characteristics | Interview aims |
|---|---|---|---|---|---|---|
| July 2016<br><br>Pt-interview | Pt6 | Female | 51 | 29 | Experienced senior physiotherapist<br>Entered 'profession' at a diploma level.<br><br>Actively engaged with CPD<br>Has Master and PhD degrees<br><br>High personal profile in Egypt with frequent media appearances.<br><br>Influential in physiotherapy political circles<br>Key figure in EGPTS | 1- Cover the initial topic guide questions in greater detail and focus on approach to patient management and understanding of evidence-based practice.<br>2- Identify developments in physiotherapy education and clinical governance.<br>3- Explore the reasons, events and outcomes of the macro-political role boundary disputes between physiotherapy and physiatry from the perception of a key figure in physiotherapy authorities<br><br>N. B Throughout phase 2 questions also responded to the issues that emerged |
| **Interview type, date** | **Participant code** | **Gender** | **Age** | **Speciality** | **Sampling characteristics** | **Interview aims** |
| July 2016<br><br>Dr-FG1 | Dr2 | Male | 32 | Orthopaedist | The specialities of this group of participants involved frequent physiotherapy referrals.<br><br>Dr2: Attended CPD workshops on sports tapping at a leading physiotherapy institute in Egypt.<br><br>Dr3: Multiple satisfactory therapeutic encounters with physiotherapists at the recruitment site for the management of chronic non-specific low back pain. | Cover the initial topic guide questions in greater detail and focus on the following areas:<br><br>1- Identify perceived differences between physiotherapists' and physiatrists' role.<br>2- Establish physicians' opinions on first contact practice in physiotherapy.<br>3- Establish sources of information about physiotherapy.<br>4- Explore the nature of inter-professional relationships with physiotherapists.<br>5- Explore physicians' opinions on the debates between physiotherapy and medical authorities around physiotherapists' use of the 'doctor title'<br>6- Perceived professional status of physiotherapy in Egypt |
| | Dr3 | Male | 31 | Neurologist | | |
| | Dr4 | Male | 32 | Neurologist | | |
| | Dr5 | Female | 35 | Neurologist | | |

**Table 5.2: Continued**

| Interview types, date | Participant code | Gender | Age | Health condition | Sampling characteristics | Interview aims |
|---|---|---|---|---|---|---|
| August 2016<br><br>Pa-FG2 | Pa6 | Female | 52 | Multiple sclerosis | Expert patient<br><br>Experiences of physiotherapy treatment in Egypt and Poland | Cover the initial topic guide questions in greater detail and focus on the following areas:<br><br>1- Explore differences in patient perceptions of physiotherapy in relation to the age of the patient<br><br>2- Establish initial patient expectations and perceptions of physiotherapy<br><br>3- Establish initial sources of information about physiotherapy<br><br>4- Establish perceived differences between physiotherapy in Egypt and in western countries<br><br>3- Establish perceived differences between physiotherapists' and physiatrists' role.<br><br>4- Identify if patients perceptions of physiotherapy change<br><br>5- Identify the reasons behind potential changes of patient perceptions of physiotherapy<br><br>6- Perceived professional status of physiotherapy in Egypt |
| | Pa7 | Male | 19 | Tennis elbow | Belongs to a young patient population<br>Second physiotherapy treatment session | |
| | Pa8 | Female | 68 | Rheumatoid arthritis of the hands | Expert patient<br><br>Multiple satisfactory therapeutic encounters with physiotherapists and physiatrists at recruitment site | |
| | Pa9 | Female | 57 | Hemiplegia | Expert patient<br><br>Experiences of physiotherapy treatment in Egypt and Germany<br><br>Multiple therapeutic encounters with physiotherapists and physiatrists at recruitment site | |
| | Pa10 | Male | 18 | Shoulder dislocation | Belongs to a young patient population<br><br>Third physiotherapy treatment session | |
| | | | | | | |

**Table 5.2: Continued**

| Interview type, date | Participant code | Gender | Age | Years of work experience | Sampling characteristics | Interview aims |
|---|---|---|---|---|---|---|
| August 2016<br><br>Pt-interview | Pt7 | Female | 54 | 32 | 1- Experienced senior physiotherapist<br><br>2- Entered 'profession' at a diploma level<br><br>3- Actively engaged with CPD<br>Has 2 Master degrees and a PhD<br><br>4- Clinical experience working in Egypt and Saudi Arabia<br><br>5- Leading position in a recently established physiotherapy department<br><br>6- Influential in Egyptian physiotherapy political circles through previous leadership role in EGPTS<br><br>7- Strong connections with EGPTS<br>Good Egyptian physiotherapy networks | 1- Cover the initial topic guide questions in greater detail and focus on approach to patient management and in-depth exploration of the participants' understanding of evidence-based practice.<br><br>2- Establish recent developments in physiotherapy education and practice.<br><br>3- Further exploration of the perceived differences between physiotherapists' and physiatrists' role.<br><br>4- Further in-depth exploration of physiotherapists' inter-professional relationship with physiatrists in clinical settings and its impact on patient care<br><br>5- Further in-depth exploration of the macro-political debates between physiotherapy and medical authorities.<br><br>6- Identify potential impacts of said macro-political debates on the inter-professional relationships between physiotherapists and physiatrists in clinical settings<br><br>Questions also responded to the issues that emerged |

CPD: Continuous professional development, EGPTS: Egyptian General Physiotherapy Syndicate

**Table 5.2: Continued**

| Interview type, date | Participant code | Gender | Age | Speciality | Sampling characteristics | Interview aims |
|---|---|---|---|---|---|---|
| August 2016<br><br>Dr-FG2 | Dr6 | Female | 57 | Physiatrist | 1- Key figures in Physiatrist Society.<br><br>2- Influential in Egyptian medical political circles through leadership role in Physiatrist Society.<br><br>3- Past experiences in the clinical supervision of physiotherapists at the hospital.<br><br>4- Past experiences as coordinators of physiotherapy placements.<br><br>5- Past experiences as clinical educators for physiotherapy students on placements.<br><br>Dr6: A previous head of physiatry department where physiotherapists used to work.<br><br>Dr7: Past teaching experiences as a guest lecturer at a leading physiotherapy institute in Egypt. | Cover the initial topic guide questions in greater detail and focus on the following areas:<br><br>1- Differences between physiotherapists' and physiatrists' role.<br><br>2- In-depth exploration of physician perceptions of physiotherapy education in relation to the capacity of physiotherapists to work autonomously<br><br>3- Establish the reasons, events and outcomes of the macro-political role boundary disputes between physiotherapy and physiatry from the perception of key figures in medical authorities.<br><br>4- Establish the impacts of said macro-political debates on the inter-professional relationships between physiotherapists and physiatrists in clinical settings<br><br>5- Establish the nature of physiatrists' inter-professional relationship with physiotherapists in clinical settings and its impact on patient care<br><br>6- Perceived professional status of physiotherapy in Egypt |
| | Dr7 | Female | 53 | Physiatrist | | |
| | Dr8 | Female | 50 | Physiatrist | | |

**Table 5.2: Continued**

| Interview date, type | Participant code | Gender | Age | Years of work experience | Sampling characteristics | Interview aims |
|---|---|---|---|---|---|---|
| September 2016<br><br>Pt-FG2 | Pt8 | Male | 28 | 4 | 1- Junior physiotherapists.<br>2-University-qualified.<br>3-Working in a department led by physiotherapists.<br>4- Actively engaged in CPD and currently undertaking master degree.<br>5- Active members of a community of practice that promotes CPD and learning in the workplace.<br>6- Highly visible social media presence and active in blogging about physiotherapy research and practice on social media including Facebook, Twitter and YouTube. | 1- Cover the initial topic guide questions in greater detail and focus on approach to patient management and understanding of evidence-based practice.<br>2- Differences between physiotherapists' and physiatrists' role.<br>3- Establish the nature of physiatrists' inter-professional relationship with physiotherapists in clinical settings and its impact on patient care.<br>4- Establish perceptions of the professional status of physiotherapy in Egypt<br>5- Explore the impact of communities of practice on physiotherapists' personal and professional development.<br>6- Explore perceptions of physiotherapy education in greater depth<br><br>Additionally, questions also responded to the issues that emerged |
| | Pt9 | Male | 28 | 4 | | |
| | Pt10 | Male | 29 | 5 | | |
| | Pt11 | Male | 27 | 3 | | |
| | Pt12 | Female | 29 | 4 | | |
| **Interview date, type** | **Participant code** | **Gender** | **Age** | **Speciality** | **Sampling characteristics** | **Interview aims** |
| September 2016<br><br>Dr-FG3 | Dr9 | Male | 30 | Physiatrist | 1- Collaborative working relationships identified by physiotherapists in Pt-FG2<br><br>2- Recently involved with physiotherapists in Pt-FG2 in the organisation of inter-disciplinary CPD activities at recruitment site.<br><br>Dr10: Conducting research in collaboration with physiotherapists (Pt12, 15, 16 and 20). | 1- Establish differences between physiotherapists' and physiatrists' role.<br><br>2- Identify factors that facilitate collaboration between physiotherapists and physiatrists<br><br>3- Establish the impacts of such collaboration on patient care<br><br>4- Establish perceptions of the professional status of physiotherapy in Egypt<br><br>Questions also responded to the issues that emerged |
| | Dr10 | Male | 28 | Physiatrist | | |
| | Dr11 | Male | 34 | Orthopaedist | | |
| | Dr12 | Male | 30 | Orthopaedist | | |

**Table 5.2: Continued**

| Interview date, type | Participant code | Gender | Age | Years of work experience | Sampling characteristics | Interview aims |
|---|---|---|---|---|---|---|
| November 2016 Pt-interview | Pt13 | Female | 49 | More than 20 years | 1- Senior physiotherapist<br>2- University qualified<br>3- Actively engaged with CPD Has master and PhD degrees<br>4- Clinical experience working in Egypt and Kuwait<br>5- Influential in Egyptian physiotherapy political circles<br>6- Leadership position in physiotherapy department at recruitment site<br>7- Key figure in EGPTS | Ascertain the reasons, events and outcomes of the macro-political role boundary disputes between physiotherapy and physiatry from the perception of key figures in physiotherapy authorities. |
| November 2016 Pt-interview | Pt14 | Male | 43 | 19 years | 1- Senior physiotherapist<br>2- University qualified<br>3- High personal profile in Egypt<br>4- Successful private practice<br>5- Good Egyptian physiotherapy networks | 1- Ascertain the factors that prevented collaboration between physiotherapists and physiatrists from the perceptions of physiotherapists<br>2- Ascertain the impacts that the lack of collaboration between physiotherapists and physiatrists had on patient care. |
| **Interview type, date** | **Participant code** | **Gender** | **Age** | **Speciality** | **Sampling characteristics** | **Interview aims** |
| December 2016 Dr-FG4 | Dr13 | Female | 53 | Physiatrist | Dr13 and 15: Leadership positions in physiatry department at recruitment site<br>Dr14: Wrote several newspaper articles opposing autonomy in physiotherapy<br>Dr16:Renowned Egyptian physician and activist in the medical profession; led petitions for law suits against physiotherapists' using the doctor title | 1- Ascertain perceptions of physiotherapists' role from the viewpoint of physicians.<br>2- Ascertain the factors that prevented collaboration between physiotherapists and physiatrists from the perceptions of physicians<br>3- Ascertain the impacts that the lack of collaboration between physiotherapists and physiatrists had on patient care.<br>4- Ascertain perceptions of the professional status of physiotherapy in Egypt from the perspectives of physicians. |
| | Dr14 | Male | 50 | Orthopaedist | | |
| | Dr15 | Female | 52 | Physiatrist | | |
| | Dr16 | Male | 52 | Orthopaedist | | |

**Table 5.2: Continued**

| Interview type, date | Participant code | Gender | Age | Years of work experience | Sampling characteristics | Interview aims |
|---|---|---|---|---|---|---|
| February 2017 Pt-interview | Pt15 | Male | 33 | 12 | 1- Identified by physiotherapists in Pt-FG2 as a co-founder of and leading figure in a community of practice that promoted CPD amongst physiotherapists at recruitment site.<br>2- Strong clinical research interests.<br>3- Obtained master and PhD degrees from a leading physiotherapy institution in Egypt | 1- Ascertain the aims and objectives of the community of practice.<br><br>2- Ascertain the impacts of the community of practice on physiotherapists' personal and professional growth and patient care. |
| February 2017 Pt-interview | Pt16 | Male | 36 | 16 | 1- Identified by physiotherapists in Pt-FG2 as a co-founder of and leading figure in a community of practice that promoted CPD amongst physiotherapists at recruitment site.<br>2- Leading position in the department of physiotherapy<br>3- Obtained master and PhD degrees from a leading physiotherapy institution in Egypt | Ascertain the position of physiotherapist members of the community of practice regarding the following issues:<br>1- The role overlap between physiotherapists and physiatrists<br>2- The macro-political debates between physiotherapy and physiatry<br>3- Physiotherapists' use of the doctor title |
| **Interview type, date** | **Participant code** | **Gender** | **Age** | **Speciality** | **Sampling characteristics** | **Interview aims** |
| March 17 Dr-interview | Dr17 | Female | 50 | Paediatrician | 1- Key figure in EMS<br>2- Writer and activist in the medical profession<br>3- Influential in medical political circles<br>4- Opposed autonomy in physiotherapy as identified from frequent media appearances and newspaper articles | 1- Ascertain the position of medical authorities regarding autonomy in physiotherapy, the debates between physiotherapy and physiatry and physiotherapists' use of the doctor title.<br><br>2- Ensure that the data round the macro-political disputes between physiotherapy and physiatry has been saturated. |

EMS: Egyptian Medical Syndicate

**Table 5.2: Continued**

| Interview Date & | Participant code | Gender | Age | Years of work experience | Sampling characteristics | Interview aims |
|---|---|---|---|---|---|---|
| March 17<br><br>Pt-FG3 | Pt17 | Male | 26 | Around 2 years | 1- Novice physiotherapists<br>2- University qualified<br>3- Working in a department led by physiatrists | 1- Ascertain the differences between physiotherapists' working conditions.<br><br>2- Ascertain the impacts of different working conditions on physiotherapists' autonomy professional development.<br><br>3- Ascertain perceptions of physiotherapy education in Egypt |
| | Pt18 | Female | 26 | | | |
| | Pt19 | Female | Nearly 26 | | | |

**Table 5.3: Summary of phase 3 using theoretical sampling**

| Interview date & type | Participant code | Gender | Age | Years of work experience | Sampling characteristics | Interview aims |
|---|---|---|---|---|---|---|
| May 2017<br><br>Pt-interview | Pt20 | Female | 31 | 7 | 1-Identified by Pt16 as an influential figure in physiotherapy political circles through active role in offering informal training to new graduates at her private practice.<br>2- Active member in organising CPD activities at recruitment site<br>3- Received overseas master degree<br>4- Currently undertaking PhD at a leading physiotherapy institution in Egypt | Ensure that the data on the areas identified during the previous interview with Pt15 and 16 was saturated. |
| **Interview date & type** | **Participant code** | **Gender** | **Age** | **Specialty** | **Sampling characteristics** | **Interview aims** |
| May 2017<br><br>Dr-FG5 | Dr18 | Male | 37 | Cardio - thoraci | 1- This group of physicians belonged to a younger age group than previous physician participants.<br>2- Dr18 and 22 were selected because previous physicians were not aware of physiotherapists' role in the fields of cardiology and gynaecology. | 1- Identify differences between in physicians' perceptions of physiotherapy based on age.<br>2- Ascertain physicians' awareness about the role of physiotherapy in different specialties |
| | Dr19 | Female | 31 | Physiatrist | | |
| | Dr20 | Female | 26 | Physiatrist | | |
| | Dr21 | Female | 25 | Physiatrist | | |
| | Dr22 | Male | 36 | Gynaecologist | | |
| **Interview date & type** | **Participant code** | **Gender** | **Age** | **Years of work experience** | **Sampling characteristics** | **Interview aims** |
| July 2017<br><br>Pt-FG4 | Pt21 | Male | 27 | 3 | 1- Junior physiotherapists<br>2- University qualified<br>3- Actively involved in CPD and currently undertaking master degree program at a leading physiotherapy institution in Egypt<br>4- Active online in Egyptian physiotherapy circles with frequent posts negating physiatrists legal right to practice physiotherapy | 1- Ascertain why physiotherapists prefer to use the doctor title<br>2- Satisfy the properties of descriptive categories in relation to:<br>2.1 Physiotherapists' attitudes towards the professional role and approaches to patient management.<br>2.2 Physiotherapists' attitudes towards the overlap between their role and that of physiatrists |
| | Pt22 | Male | 27 | 3 | | |
| | Pt23 | Male | 29 | 5 | | |
| | Pt24 | Male | 29 | 5 | | |

**Table 5.3: Continued**

| Interview Date | Participant code | Gender | Age | Health condition | Sampling characteristics | Interview aims |
|---|---|---|---|---|---|---|
| July 2017<br><br>Pa-FG3 | Pa11 | Female | 46 | Ataxia | 1- Expert patient<br>2- Multiple therapeutic encounters with physiotherapists at recruitment site | 1- Ascertain patient perceptions of<br><br>2- Ascertain differences in patient perceptions based on age, satisfaction with treatment outcomes and duration of treatment.<br><br>3- Ascertain patient perceptions of the professional status of physiotherapy.<br><br>4- Ascertain patient preferences regarding self-referral to |
| | Pa12 | Male | 57 | Post-polio<br><br>Syndrome | 1- Expert patient<br>2- Multiple therapeutic encounters with physiotherapists and physiatrists inside and outside recruitment site<br>3- Key figure in the Egyptian Handi- capable Association<br>4- Strong connections with physiotherapists at a leading educational institution in Egypt through the patient's role in the above mentioned association | |
| | Pa13 | Female | 19 | Post-partum rectus diastasis and uterine prolapse | 1- Discontinued physiotherapy treatment several times<br>2- Participant belonged to a younger age group compared to most patient participants | |
| | Pa14 | Male | 23 | Chin splints | 1- Second physiotherapy treatment session<br>2- Participant belonged to a younger age group compared to most patient participants | |
| | Pa15 | Female | 25 | Chronic non-specific low back pain | 1- Fourth physiotherapy treatment session<br>3- Participant belonged to a younger age group compared to most patient participants | |

**Table 5.3: Continued**

| Interview type, date | Participant code | Gender | Age | Years of work experience | Sampling characteristics | Interview aims |
|---|---|---|---|---|---|---|
| September 2017<br><br>Pt-FG5 | Pt25 | Female | 26 | Around 2 years | 1- Novice physiotherapists<br>2- University qualified<br>3- Working in a department led by physiatrists | Ascertain issues around autonomy and respect for Egyptian physiotherapy from the perceptions of physiotherapists |
| | Pt26 | Female | 26 | | | |
| | Pt27 | Female | 25 | | | |
| | Pt28 | Male | 26 | | | |
| | Pt29 | Male | 26 | | | |
| **Interview type, date** | **Participant code** | **Gender** | **Age** | **Speciality** | **Sampling characteristics** | **Interview aims** |
| September 2017<br><br>Dr-FG6 | Dr23 | Male | 56 | Orthopaedist | Renowned physician<br>Medical clinical educator<br>Frequent guest lecturer at a leading physiotherapy institution in Egypt | 1- Ascertain issues around autonomy and respect for Egyptian physiotherapy from physicians perceptions.<br><br>2- Ascertain physician perceptions of physiotherapy education in relation to the capacity of physiotherapists to work autonomously.<br><br>3- Checking descriptive categories for resonance |
| | Dr24 | Female | 55 | Paediatrician | Activist in the Egyptian Handi-capable Association | |
| | Dr25 | Male | 62 | Neurologist | Medical clinical educators<br>Frequent guest lecturers at a leading physiotherapy institution in Egypt | |
| | Dr26 | Male | 60 | Orthopaedist | | |
| **Interview type, date** | **Participant code** | **Gender** | **Age** | **Health condition** | **Sampling characteristics** | **Interview aims** |
| December 2017<br>Pa-interview | Pa16 | Female | 64 | Chronic neck pain, bilateral rheumatoid arthritis and carpal tunnel syndrome | 1- Expert patient<br><br>2- Multiple therapeutic encounters with different physiotherapists and physiatrists inside and outside recruitment site | 1- Ascertain patient perceptions in relation to:<br>1.1 The differences between physiotherapists and physiatrists' role<br>1.2 self-referral to physiotherapy<br>1.3 The professional status of physiotherapy as a profession in Egypt<br><br>2- Checking descriptive categories for resonance |

**Table 5.3: Continued**

| Interview Date & type | Participant code | Gender | Age | Years of work experienc | Sampling characteristics | Interview aims |
|---|---|---|---|---|---|---|
| January 2018 Pt-interview | Pt30 | Female | 35 | 11 | 1- Senior physiotherapist<br>2- University qualified<br>3- Strong physiotherapy connections in Egypt and Gulf area<br>3- High personal profile in Egypt and frequent media appearances | Elaborate on the relationships between categories |
| January 2017 Pt-interview | Pt31 | Male | 34 | 10 | 1- Senior physiotherapist<br>2- University qualified<br>3- Strong connections with physiotherapy educational institutions in Egypt<br>4- Identified by previous participants as a leading figure in organising physiotherapist strikes in the past | Ascertain the relationships between categories |
| August 2018 Pt-interview | Pt32 | Female | 29 | 5 | 1- Junior physiotherapist<br>2- University qualified<br>3- Undertaking master program and actively involved in CPD<br>4- Active member of a community of practice in the workplace<br>5- Identified by previous physiotherapist participants as having close and collaborative working relationships with physiatrists | Verification interview<br><br>Checking categories, core category and theoretical model for resonance |

## 5.4 Data collection:

### 5.4.1 The interviewing method:

Clarke and Charmaz (2014) recommend collecting rich, detailed and elaborate data. They explained that rich data ought to provide an array of information about the study participants including their opinions, emotions, motivations and behaviours. The method of data collection used in this study needed to capture the opinions, beliefs and experiences of physiotherapists, physicians and patients regarding the role and status of physiotherapy. The method of collecting data that was chosen for this research was in-depth interviews. Interviews were considered more suitable than other methods of data collection, such as questionnaires, because interviews provide a flexible tool to obtain details about various and unexpected dimensions of the research as well as capture participants' subjective opinions and feelings (Compton-Lilly et al., 2015).

Interviews can be conducted individually or within a focus group (Morgan, 1996). In this research, participants were given the choice to speak to the researcher individually or as part of a group. Participants who chose individual interviews were self-reflective and shared personal stories which might explain why they preferred one-on-one interviews, while some participants who opted for focus groups expressed their interest in exploring their peers' opinions. Moreover, using both individual interviews and focus groups helped the researcher gather a greater depth of information than what could have been obtained by using either approach (Tong, Sainsbury and Craig, 2007). Morgan (1996) explained that focus groups can capitalise on interaction to generate

deeper insight into collective meanings and shared ideas, the confidentiality of individual interviews can give each participant the chance to reflect on their true opinions at a greater length without the potential of being influenced by the opinions of others.

In this study, the knowledge generated from individual and group interviews fed into one another. Focus groups enabled the identification of a wide range of shared ideas and issues that were significant to a group of participants. These issues were then explored during individual interviews to collect more in-depth information that could elaborate on issues raised during focus groups. Additionally, Focus groups were used to obtain different perspectives on new ideas raised during an interview, while interviews were used to check if a group's shared understandings were resonant to someone else who was not influenced by the group's dynamics. Therefore, the opinions of each participant were constantly compared to those of other participants to explore areas of agreement and contradictions, which created a forwards and backwards feedback loop between data collection, analysis and subsequent sampling decisions to progress the inquiry based on the actual data generated from participants' narratives.

There are different interviewing techniques (i.e. ways to use the interview method to gather information) and according to Kvale (1996) the researcher must choose the most appropriate technique to suit the context of the research and achieve its objectives. Interviewing techniques include narrative, discursive, conceptual and factual approaches. Each interview technique is a tool that enables the collection of different types of data; therefore choosing the most

suitable interviewing technique depends upon the type of data that is sought, the researcher's skills as well as the aim of the research.

Regarding the current research, it was not possible to select a single interviewing technique before entering the field because constructivist GTM adopts an iterative, exploratory and progressive approach. Thus, during fieldwork the researcher found it useful to employ different interviewing techniques to explore various dimensions of the research question and gather rich data. For example, the narrative technique was adopted to obtain a full account of individual physiotherapists' perceptions of their role (e.g. can you describe what your role as a physiotherapist to me). The conceptual interviewing technique was also used to obtain clarifications on important concepts that emerged from previous interviews or during the same interview (e.g. can you explain to me what evidence-based practice means to you). Moreover, the discursive interviewing technique was often employed to encourage participants to reflect on their choice of language in an attempt to explore the factors that influenced their opinions (e.g. why did you describe X (physiotherapist colleague) as a technician).

Although multiple interviewing techniques were used as described above, one critical feature of the researcher's interviewing style remained consistent throughout all of the interviews she conducted. This feature was adopting an open-ended and mostly an unstructured approach which meant that the interviews were non-directive and allowed for each participant's ideas as they emerged to inform the next question during the same interview as well as informing future sampling and analytical decisions. This interviewing style is

usually known as in-depth interviewing hence it is capable of deeply exploring emergent themes (Bowling, 2002). In-depth interviews can be considered highly compatible with GTM hence they provide an opportunity for immediate clarifications and a flexible structure that enables further exploration of new concepts and tentative categories (Arksey and Knight, 1999).

### 5.4.2 The interview procedure

This research used in-depth individual interviews and focus group interviews to collect data. A total of 13 individual interviews and 14 focus groups were conducted with 74 participants, including 32 physiotherapists, 26 physicians and 16 patients. Physiotherapists, physicians and patients were interviewed separately to give each group the opportunity to consider their true opinions without being reserved in apprehension of offending the other. Focus group interviews included 3 to 5 participants; which was recommended as a suitable number of participants to be interviewed at the same time to give each participant enough time to express their views (Creswell, 2012). All interviews were conducted by the researcher and took place face to face which enabled the researcher to capitalise on several key elements of the participant-research relationship such as rapport and non-verbal cues that created a sense of reciprocity between the researcher and participants. Bloor (2002) also stressed the importance of setting interviews in a place that makes the interviewee feel calm and comfortable. Therefore, all discussions were held in confidential meeting rooms at the recruitment sites, but away from the clinical area, to spare participants the need to travel to unfamiliar locations. The meeting rooms provided a quiet atmosphere without interruptions which facilitated information

sharing. The participants and the research were the only parties present during the discussions which occurred without any audience and no interruptions.

Given that in-depth interviews have to be flexible and open-ended, the duration of individual interviews ranged from 30 - 90 minutes, whilst focus group interviews lasted between 60 and 120 minutes. All interviews were conducted in the Egyptian Arabic dialect so that participants could comfortably and accurately express their feelings and opinions in their mother language. Interviews were audio recorded with participants' permission using an Olympus WS-852 digital voice recorder.

Audio recording allowed the interviewer to focus more on what the participants are saying without needing to take notes; it enabled the researcher to engage with the participants, respond to their comments and reflect on their opinions during the interviews. Also, the records provided an actual word for word account of the entire conversation for subsequent analysis, which ensured that the emerging analytical insights and categories remained close to the data. All recordings were transcribed verbatim using Microsoft Word on the same day that the interview was conducted while data analysis occurred within 72 hours. Section below provides details of the transcription and translation processes.

### 5.5 Transcription and translation

The interview discussions were conducted in the Egyptian dialect which is different than the standard Arabic language that is only used in writing but is not a spoken language in Egypt. Although the Egyptian dialect is not used in formal

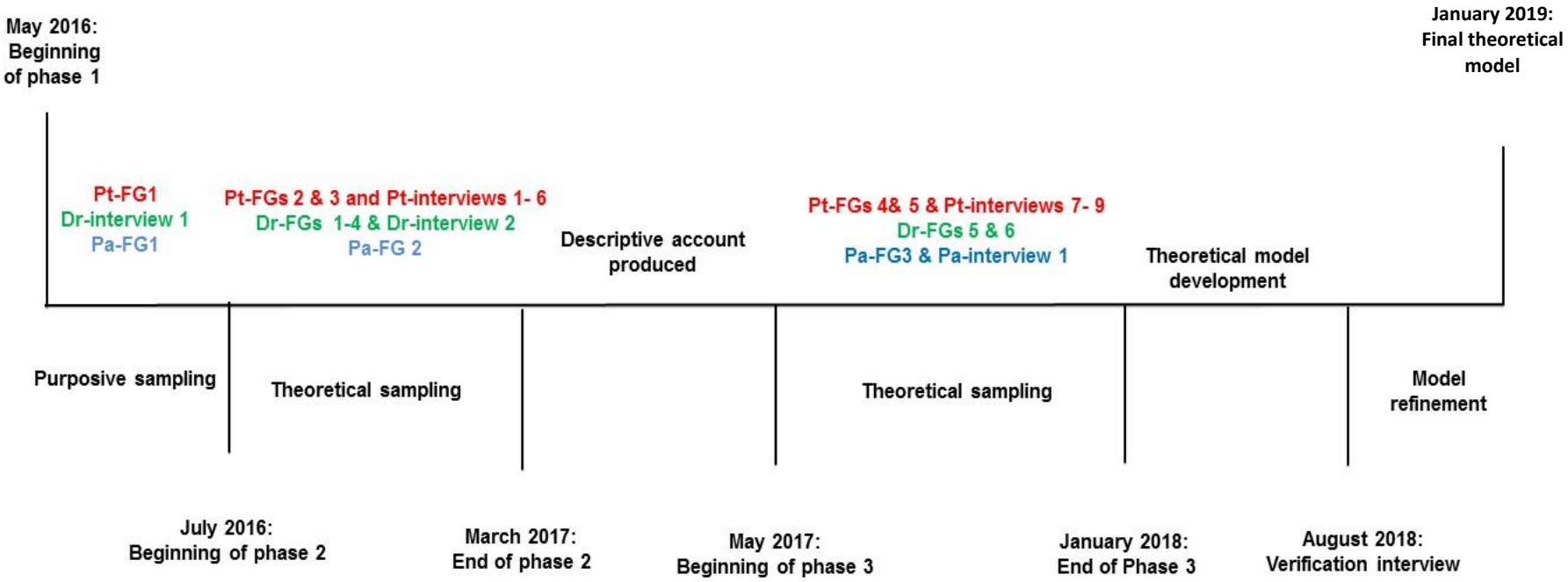
written text, the researcher decided to transcribe the interviews using this slang dialect to maintain the participants' actual words and the informal nature of interviews. All interviews were transcribed by the researcher which allowed for data immersion and prolonged engagement that prompted analytical insights.

After transcription, the Arabic versions of the transcripts were translated to English for the purposes of writing-up the thesis. Two Egyptian professional translators performed a process of independent forwards and backwards translation of the interview transcripts that the researcher made anonymous before-hand. This was followed by a comparison of both English and Arabic versions to validate their equivalence. However, Egyptian Arabic is complex and rich in emotion laden words, idioms and culture specific metaphors. Therefore, after the researcher compared the Arabic and English versions of the transcripts and ensured they were close in meaning, the researcher performed a process of cultural adaptation of the English transcripts to minimise the potential of losing participants voice and emotions. This process involved substituting Egyptian idioms with their English equivalents whenever possible and carefully selecting English words and terms that could best convey participants' feelings. Moreover, Egyptian Arabic tends to be less succinct than English and it often involves complex sentences. The sentence structure of English transcripts was adapted to reflect the verbose nature of participants' responses to ensure that its complexity was not reduced upon translation. Lastly, the culturally adapted English transcripts were sent back to the translators for final amendments. Although these strategies improved the preservation of meanings in the English transcripts, the researcher continuously returned to the Arabic transcripts during data analysis and during the thesis write up to ensure that participants' ideas and feelings were accurately represented.

## 5.6 Data analysis

The data analysis and coding procedures applied in this study followed those recommended by Charmaz (2006); her approach considers grounded theory methods as practices while emphasising the flexibility of said practice which enables for a fluid analytical approach. There were 3 phases of data collection and analysis, and a final verification and refining phase as shown in figure 5.2 overleaf.

**Figure 5.2 Study timeline**



The first phase consisted of 1 focus group with 5 physiotherapists, 1 interview with a physician and 1 focus group with 5 patients. This phase employed purposive sampling. The aims of the first interviews and focus groups was to explore the professional role and status of physiotherapists as perceived by the different participant groups, and to explore patients' and physicians' awareness of physiotherapy with regards to its indications, treatment methods and therapeutic effectiveness. The generated interview transcripts were read multiple times prior to the analysis that began with line by line open coding to identify the main perceptions, feelings and issues that participants articulated. Tables 5.4, 5.5 and 5.6 provide examples of how open coding was performed.

### 5.4 Examples of open line-by-line coding employed during initial physiotherapist interviews

| Quote | Line by line open code |
|---|---|
| *"I do my best to **teach** the patient the exercises that they need to do **at home** to get better and how to do the exercises correctly because I want the patient to feel like they **don't need the sessions** anymore" (Pt1, novice, Pt-FG1)* | • **Patient education**<br>• **Home program**<br>• **Promote independence** |

### 5.5 Examples of open line-by-line coding employed during initial physician interviews

| Quote | Line by line open code |
|---|---|
| *"They [physiotherapists] **didn't learn** how to do **differential diagnosis** and **how to plan the treatment**… they didn't learn **how to think** that's why they **have to be told what to do**… most of them **can't even do the program like I said**" (Dr8, Key figure in Physiatrist Society, Dr-FG2)* | • **Poor educational standards**<br>• **Limited clinical reasoning skills**<br>• **Cannot be autonomous**<br>• **Limited technical expertise** |

### 5.6 Examples of open line-by-line coding employed during initial patient interviews

| Quote | Line by line open code |
|---|---|
| *"I didn't know much about physiotherapy, the doctor referred me… I see physiotherapists **teaching people how to walk** and **climb stairs** like in my case **[hemiplegia]** or if someone **broke their leg**" (Pa9, Pa-FG2)* | • **Limited initial awareness**<br>• **Sources of information about physiotherapy**<br>• **Physiotherapy indications**<br>• **Increased awareness of physiotherapy after treatment** |

Some in-vivo codes were taken from participants' narratives to convey the feelings behind their perceptions; for instance, the code 'false promises' described the shock and disenchantment that physiotherapists experienced post-qualification. The relationships between codes that linked with 'false promises' were explored using extensive memos and diagrams that helped the researcher visualise relationships. These relationships consisted of codes around physiotherapists' initial career aspirations, professional socialisation and the expectations of autonomy and prestige that physiotherapists developed during undergraduate education. Another group of codes were those related to the dominant culture in the work context post-qualification and it related to physiatrists' dominance over physiotherapy practice and physiotherapists' lack of autonomy and compromised professional status.

While coding each interview transcript, existing codes were applied to the data and new codes were developed and compared. Early comparisons identified that there were macro-political power struggles between physiotherapy and medical authorities that were reflected in the physiotherapists' lack of clinical

autonomy. These issues represented the emergent analytical foci that required further exploration and informed theoretical sampling by determining the characteristics of subsequent participants and the focus of interviews during the second phase of data collection and analysis. Accordingly, theoretical sampling in the second phase involved interviews with key figures in the Egyptian Physiotherapy Syndicate, Medical Syndicate and Physiatrist Society.

Another group of codes generated in the first phase were those that connected to patients' and physicians' perceptions of physiotherapists and physiotherapy as a profession. This set of codes related to knowledge, clinical expertise and professionalism, the perceived nature of physiotherapists' role, autonomy and professional status, which all had strong links to other codes that related to the Egyptian social context and the structure of the healthcare system. Identifying those links was a starting point for contextualising participants' narratives and emerging analytical insights. Furthermore, exploring the relationships between codes identified the variations and similarities between patients' and physicians' views, and underlying issues. This analysis highlighted generated additional questions to support the emerging ideas. From these questions the focus of the interviews with patients and physicians in the second phase was determined (see table 5.2).

As new focus groups and interviews were conducted in the second phase the open coding resulted into the generation of additional new codes and was then followed by focused coding that involved taking the most important codes to develop into subcategories and eventually into conceptual categories (Charmaz, 2006).

During the second phase, the codes were formed into groups around the emergent analytical foci and tentative categories were developed. Writing memos and making diagrams enabled the exploration of tentative categories for links within and between categories and ideas. For instance, the relationship between codes that linked physiotherapists' self-feelings and their working conditions were explored. These consisted of codes around the presence and absence of autonomy, role-boundary disputes and workplace conflicts with physiatrists, access to continuous professional development, community of practice and peer learning; which all made for different kinds of working cultures that impacted upon physiotherapists' self-feelings. As a part of this analysis further gaps in the knowledge and properties of tentative categories were observed. The content of interviews in the third phase aimed to satisfy these knowledge gaps. This theoretical sampling guided the direction of the study to collect that data and to refine the developing theory; which all are key tenets of GTM (Charmaz, 2012). Such iterative and cyclical approach of open and focused coding and theoretical sampling to construct and refine categories was continued throughout the 3 phases of data collection and analysis. The categories were gradually developed with each rooted within the data through the inter-connections and relationships with the subcategories and codes.

The interviews conducted in the third phase explored how physiotherapists addressed the challenges they faced in the workplace with relation to autonomy limitations, and established a clear understanding of the complexity of the role-boundary disputes between individual physiotherapists and physiatrists. The interviews resulted in a narrative around a transformation in physiotherapists' attitudes towards the professional role and inter-professional relationships with

physiatrists. This prompted the exploration and theorisation around professional identity development that ultimately formed the nascent core category. The codes, subcategories, categories and memos were continuously compared, the categories were revised several times and refined as ideas and constructs were explored upon revisiting the interview transcripts repeatedly.

The core category and the preliminary theoretical model were outlined before the final interview. This led to the verification and refining phase. In the final interview conducted physiotherapist participant 32 the categories and the constructed model were discussed and the relationships between categories were explored and illuminated. Physiotherapist participant 32 confirmed that the tentative theory was resonant and the perceptions and experiences she expressed indicated that saturation of the theoretical categories had been reached, as when the data was compared with other data and categories, no new analytical insights or characteristics were noted. The conversation with physiotherapist participant 32 helped refine the articulation of the core category and the stages of professional identity development within it. Although the participant indicated that she has not consciously conceptualised the changes in her perceptions and attitudes as presented in the theory, she agreed with the relevance of the categories and was able to relate to and support the proposed theory. After this interview, the theoretical model was continuously refined to improve its clarity and focus through discussions with supervisors and reflective memo writing.

Memos were written throughout the data collection and analysis phases, validation and refining stages. Different memos were written about each of the

codes, subcategories and tentative categories, and the comparisons that were made between participant's narratives and between codes, the similarities and differences were observed and analysed.

Memos were also recoded about each participant, which severed as analytical case studies to analyse their perceptions and thus enable the identification of differences and similarities between participants understanding of physiotherapy and the role of physiotherapists. For instance, it was identified that some physiotherapists addressed the technical dimension of the professional role only, while others were keen on the interpersonal aspect including talking and listening to patients. Yet, the large volume of data and number of open codes developed, coupled with the researcher's limited experience in GTM made it difficult to note variations and similarities in the data. Accordingly, participants' narratives were entered into an Excel Sheet with the participant number running longitudinally down and the characteristics features of their perceptions and expectations along with key aspects that seemed to distinguish their views from other participants. This analytical exercise facilitated the constant comparative method. Specifically, the Excel Sheet helped the researcher compare perceptions amongst and between participant groups. For example, individual physiotherapist understandings of their role were compared to the perceptions of physicians as well as the resultant attitudes, consequences and type of relationships that occurred as a result of having certain perceptions. This large table enabled the researcher to step back and observe what different participants were saying and identify links, contradictions and agreements.

Additionally, memos were utilised to record and reflect on the analytical procedures conducted at different stages of the research to support the development from description to theoretical explanation as recommended by Charmaz (2006). Thus, the content of memos varied based on their purpose. For instance, a memo reflecting upon each of the interviews enabled the identification of how well the interview went in relation to the interview content, dynamics, how successfully the theoretical sampling had been accomplished. This type of memos also captured initial reflections upon how the interview linked to other interview and the codes and categories.

Memos were written to explore developing categories and theoretical constructs included the narratives supporting the analysis behind the construct and aspects of relevant literature. Making diagrams was an essential element of conceptual memos that was used to develop abstract thinking (Hutchison, Johnston and Breckon, 2011), to explore the connections between tentative categories and constructs and to facilitate theoretical sorting. Conceptual memos also elaborated on contradictions and disjunctures and highlighted gaps in the analysis and further data requirements and thus, led to the theoretical sampling previously discussed. Memos continued to be written during the final synthesis of the theoretical model which led to the start of narrative writing.

Previous literature was reviewed around the categories and core category to explore how the findings compared to the work of others and to weave the literature within the study findings presented in Chapters 6 and 7. Most of the category areas and the core category in this study had not been covered in the initial literature review presented in this thesis because they had not been

anticipated at the beginning of the study. Throughout data collection and analysis it became evident that these areas were important to the research and the theoretical model, and thus pertinent literature was reviewed to inform thinking and improve the understanding of constructs. As advised by the researcher's supervisors the writing and rewriting of this thesis was utilised to sharpen thinking, clarify ideas and advance the analysis in order to formulate the theory and underlying concepts in an abstract fashion. These practices were also recommended by Charmaz (2008b) to ensure that theory's grounding was substantial.

Finally, the theory presented as a result of this study is grounded within the data from which it was derived and is considered to be a substantive theory, as it is closely linked with the empirical situation and will link to practise and interaction (Charmaz 2006). The theory is not a formal theory as proposed by Glaser (2007) as application and generalisation beyond Egyptian physiotherapy is not proposed. The constructed theory may however be able to explain similar situations.

### 5.7 Rigor, trustworthiness and credibility:

Grounded theory methodology is considered to be equipped with its own rigor due to its positivist and pragmatic origins, accomplished through the constant comparative method of data analysis where the developing theory is continuously checked against the data; thus refining and verifying it at every stage of its construction (Corbin and Strauss, 2008). This study has applied a transparent epistemological and theoretical approach to grounded theory, and

the methods used consistently align with the constructivist revision that has been selected. In this study, the research undertook all data collection and analysis procedures; Charmaz (2012) highlighted that such focused and engaged approach is optimal for grounded theory studies because it facilitates the process of synchronous data collection and analysis.

Charmaz (2006) suggested credibility, originality, resonance and usefulness as suitable criteria for assessing the trustworthiness of grounded theory studies. This study was constructivist and remained consistent with Charmaz's guidelines; therefore the above mentioned criteria were used to reflect on the trustworthiness of the study. Credibility is related to evidence of systematic comparisons between observations and the constructed categories together with adequacy of data to support theoretical claims. This study included 74 participants, including 32 physiotherapists, 26 physicians and 16 patients, of varying demographic characteristics including age and gender. While several physiotherapists moved to Cairo to work, some patients were temporarily seeking treatment in the capital.

The physiotherapists and physicians engaged in the study had different specialities, were at different stages of their careers and worked in different contexts, while patients had different health conditions and needs. Although sampling did not intend to identify and capture such a diverse spread, the theoretical sampling that pursued the developing analytical insights produced this diversity. Also, professional networks facilitated the process of theoretical sampling by helping the research get in touch with different participants who contributed rich information that elaborated on the dimensions of the emerging categories.

The in-depth interview technique used to collect data meant that focus groups and individual interviews were conducted in an informal manner to try and ensure that participants were encouraged to reflect on their experiences, feelings and opinions, and were comfortable with openly expressing their views. The researcher employed a range of strategies to ensure that participants were comfortable with being honest. These strategies included interviewing physiotherapists, physicians and patients separately, ensuring that the interview location (pre-booked meeting room in recruitment sites) was familiar, quiet and confidential, and that the interviews progressed without audience or any interruptions.

The ethics committees at all recruitment sites allowed the researcher to audio record interviews based on the conditions that audio recording would be deleted after transcription and that participants would be provided with a hard copy of anonymised interview transcripts. The researcher complied with these stipulations which assured participants that their personal information and views were confidential, and that they could verify the transcripts to ensure that their opinions have been accurately represented. This high level of confidentiality helped participants to become comfortable with honestly articulating their perspectives. The generated data showed that participants expressed critical opinions of physiotherapy, despite knowing that the researcher was a physiotherapist. This suggested that participants felt strongly about their opinions, and that the measures taken to ensure confidentiality enabled participants to feel comfortable and confident enough to share their views. Patient participant 11 expressed critical opinions of physiotherapists and added the following qualifier *"frankly I don't think therapists are doctors, but of course I don't say it to their face"*. This example supports that participants felt able to

share perspectives that they would not normally communicate to physiotherapists in clinical settings. It showed that they were able to be open and honest, and that they did not withhold opinions to avoid offending the researcher. It highlighted that participants did not perceive the research as judgemental or sensitive about the image of physiotherapy, and thus they were relaxed and able to articulate criticisms.

Excerpts of participants' narratives were presented throughout the thesis to provide evidence of the interview data that underpinned the theory and to illuminate categories with the participant's voice. Participants' quotes highlighted the richness and complexity of the data and demonstrated the logical links between the data and the analysis to demonstrate how theoretical development progressed based on the knowledge co-constructed between the researcher and the participants. Charmaz (2008b) noted that the audible voice of those who constructed the data is a fundamental feature of constructivist grounded theory. During the analysis, systematic comparisons between the data and categories need to be made in order to identify contradicting opinions. Memo writing and diagramming were key tenets of grounded theory methodology that helped the researcher to capture disjunctures, conflicting perspectives and interrelationships throughout the development of the emerging constructs and categories.

Originality refers to the freshness of categories and the ability to provide new insights and new conceptual rendering of the data. This study and its findings are original; no other published studies explored the identity of Egyptian physiotherapy. The findings identified experiences and perspectives that are specific to the social context and to the context of physiotherapy practice in

Egypt. Although comparisons can be made, the categories and the theory constructed in this study did not mimic those already identified in previous literature around the identity of physiotherapy as perceived by its members, medical professionals and patients. The resultant theory provided a new conceptual explanation of how the individual professional identity of Egyptian physiotherapists was developed throughout their career experiences as influenced by the specific challenges they encountered.

Resonance relates to the ability of the categories and theory to capture the full breadth of the studied experiences in a way that makes sense of the participants and others who have similar circumstances. Richards (2009) elaborated that respondent validation was a useful method of ensuring that the researcher interpreted the meaning of the data in a manner that resonated with the understandings of those from which it was derived. The final interview with physiotherapist participant 32 was undertaken for respondent validation to check if the findings and the proposed theory resonated with her perspectives and experiences. Physiotherapist participant 32 agreed that the analysis made sense to her; she corroborated the significance of categories and added further clarifications on aspects that were particularly important to her. She agreed with the pertinence of the proposed categories and was able to relate to the struggles that physiotherapists faced. She, thus, validated the ability of the core category to explain how she perceived her perceptions and attitudes changed throughout her career experiences together with the factors that stimulated the change.

Respondent validation facilitated the process of refining categories which continued to be enhanced and elucidated during the thesis-write up. As the

researcher rendered the analysis in writing, she was able to increase the clarity of different elements of the theory and represent the interconnectedness between constructs and categories that formed the final theoretical model. However, the researcher struggled for a long time to clearly and concisely articulate the key findings of the research given the diversity of opinions and complexity of participants' experiences. The insights of the supervisory team were invaluable in helping the researcher increase the clarity of the core category and refine the final theoretical model by ensuring that the links made between different constructs were logical and adequately explained.

Moreover, relevant anecdotal sources of information provided additional resonance to the study findings. The publications of the Egyptian General Physiotherapy Syndicate, Medical Syndicate, Physiatrist Society, Ministry of Health and Population and physiotherapy social media sources were regularly accessed to follow policy reforms and the ongoing debates around the role-overlap between physiotherapy and physiatry. The published information aligned with participants' accounts and the interpretations that were derived from their narratives. It was also observed that many participants used similar language and terms to those published by the Egyptian General Physiotherapy Syndicate, Medical Syndicate and Physiatrist Society. This observation added resonance to the research findings and highlighted that the macro-political stance of physiotherapy and medical authorities strongly influenced many of the participants' attitudes towards the role-overlap. The theory developed in this study embraced different opinions and circumstances; it contextualised and linked individual experiences to the position of the 'profession' in Egypt and to the healthcare structure and the wider social context in which the 'profession' operated. Morse et al., (2009) emphasised the importance of situating individual

experiences within larger collectives and institutions in enhancing the resonance of grounded theory methodology studies.

Usefulness relates to the ability of research to provide interpretations that individuals can utilise in their daily lives and to identify further research directions in other substantive domains. The findings of this study offer an interpretation and an understanding of the phenomenon studied. It is suggested that the findings can be useful to a variety of stakeholders including Egyptian physiotherapists who may use it as a framework for self-reflection on their own professional identity or a tool to consider their clinical practice and professional development. The EGPTS and physiotherapy educational institutions may find the resultant analysis useful in understanding the experiences, attitudes and perceptions of some Egyptian physiotherapists. Within the narratives there were disagreements identified, but also consensus on a wide range of challenges that physiotherapists encountered. Therefore, the resultant findings may assist in purposeful socialisation of physiotherapy students to promote the development of an identity that is aware of, and potentially able to face, the current strength and weakness of physiotherapy in Egypt.

The findings also elaborated on physicians and physiotherapists perceptions and attitudes towards inter-professional relationships, and expanded on the views of physiotherapists and physiatrists regarding the perceived overlap between their roles and how they approached this issue in clinical practice. These findings could help these professional groups understand the point of view and experiences of the other. This understanding can become the

beginning of a dialogue that could increase the ability of healthcare providers to work collaboratively for the benefit of patients.

Nevertheless, the knowledge contributed by patients highlighted several clinical implications with regards to interdisciplinary care that could inform the practice of physiotherapists, physicians and physiatrists. Patients also described a range of personal attitudes and professional competencies that they believed characterised good physiotherapists. Physiotherapists could find this aspect of the findings useful to reflect on their professionalism and attitudes towards therapeutic relationships, while educational institutions could use this knowledge to guide students' professional identity development in a manner that enables them to meet patient expectations.

To summarise, Charmaz (2008a) considered that a combination of originality and credibility increased the resonance and usefulness of grounded theory methodology studies and ensured the value of its contribution. Such contribution is also contingent upon a clear positioning and contextualisation of the study findings within pertinent literature. The following chapters in this thesis present the study findings in the context of relevant literature.

## 5.8 Reflexivity

### 5.8.1 Researcher positioning

In recognition of this study's constructivist commitments which advocate that the researcher's voice, decisions and impact on the research should be made

visible; the first person pronoun is used to refer to the researcher throughout this section. As an Egyptian physiotherapist exploring the identity of physiotherapy as a profession in Egypt, it can be argued that I am an insider interacting with and relating to ideas and knowledge within a community that I am a part of. I can be considered an insider through my educational and professional experiences as a physiotherapist in Egypt, yet at the same time I am an outsider to the perceptions and experiences of other individuals whom I have not met prior to data collection. Being a physiotherapist and a researcher further emphasised my dual insider-outsider positionality; which has its pros and cons. Being an insider helped me begin fieldwork with an encouraging level of confidence emanating from having a relatively good idea of how to approach potential participants and being familiar with hospital settings in Egypt.

However, having previous knowledge about the challenges that Egyptian physiotherapy might be facing, challenged me to step outside my prejudices so I could explore what participants were saying without taking their perceptions and experiences at face value. Additionally, being inexperienced in GTM challenged me to look afresh at the data to question its meaning. During the first focus group interview that I conducted with physiotherapists, I sometimes found myself agreeing with participants and taking their views for granted because I presumed that I knew what they meant. I discussed my experience of data collection with my supervisors who advised me 'to make the familiar strange' by asking follow-up questions to give participants the chance to explain their views in greater depth. I then practiced my interviewing skills with fellow researchers at the Faculty of Physiotherapy, Cairo University and acquired critical feedback. This feedback helped me to appreciate the value of asking questions that might

seem obvious, but could help me understand the meanings and implications of what was being said. This improvement in my interviewing skills helped me to utilise my insider stance to my advantage to build rapport with participants, but also to assume more of an outsider role as I inquired about seemingly obvious aspects of the research question. My ability to effectively utilise my dual positionality was further enhanced by keeping a reflexive diary that helped me to question my preconceptions, explore my beliefs and biases in relation to dimensions of the data that I risked taking for granted.

Moreover, conducting the data collection and analysis simultaneously, and using the constant comparison method helped me to interrogate the data and to compare the differences and similarities within participants' stories. These analytical exercises further propelled my purposeful transition from an insider 'Egyptian physiotherapist' to an outsider 'reflexive researcher' and vice versa. I do not claim theoretical innocence or substantive ignorance, yet keeping a reflexive diary gave me a chance to be introspective and critical about my presumptions which enabled me to de-familiarise myself with my preunderstandings and the data. Additionally, my Skype meetings with my supervisors during fieldwork were invaluable in helping me to see the data in a different light and to unpack the developing categories through my supervisors' outsider perspective.

My discussions with my supervisors enhanced my reflexivity and prompted me to explore new lines in the analysis whilst continuing to elicit and pursue what participants meant during data collection. Accordingly, I was able to adopt a constructivist approach through which I conceptualised the data generated

during interviews as a co-constructed account which was both perspectival and contextual; instead of a complete report of the 'truth' that I was able to uncover.

Reflecting on participants' use of language, their words and narrated experiences enabled me to generate a textured and deep understanding of their stories. Gathering and analysing the data in tandem helped me to chase up ideas and constructs that were discussed during previous interviews and generate additional explanations of such constructs from the perspectives of subsequent study participants. Finally, practicing my interviewing skills and interviews guides with peers who had experience in qualitative research enabled me to reflect on my skills so that I could maintain an inquisitive, rather than a confirmatory, approach to interviewing participants.

### 5.8.2 The participant-researcher relationship

Memon and Bull (2000) expounded that the researcher needs to consider approaches that can improve their capacity to build rapport with participants. Amongst these approaches is the ability to be attentive and empathetic. The ability to listen attentively is imperative to a good and engaging interviewing technique and it has to be considered as an active process (Robson and McCartan, 2016). Before the beginning of fieldwork, I was trained in reflective listening skills and in-depth interviewing techniques as a part of the doctoral seminars provided at Sheffield Hallam University. During the interviews, I strived to assume an inquiring approach through which I would be perceived as genuinely interested and non-judgemental. I aimed to achieve a balance being inquiring with expressing empathy whenever needed to convey my respect towards and understanding of participants' views.

The training also taught me that effective interviewing requires the researcher to react responsively to participants' verbal and non-verbal cues. Developing effective verbal and non-verbal communication skills enabled me to be fully present within the interview situation which helped me to gradually establish a relationship built on mutual trust and respect that facilitated disclosure. Building a mutual relationship requires researchers to balance the power asymmetry that is known to exist between participants and researchers (Kvale, 1996). In this study, the risk of such power asymmetry was considered to be of limited influence because, whenever it was relevant, I was able to draw on my knowledge of Egypt's cultural context to create a sense of group membership and rapport with participants. However, to further reduce the risk of being perceived as a form of authority on the topic, I sought to establish the participants as the experts because I have not lived or worked in Egypt for several years. This strategy helped to achieve a somewhat neutral power dynamics between the researcher and the participants.

To further neutralise the power imbalance, the data was collected using open-ended questions that employed broad prompts to start a conversation about the research topic, whilst the participants were given the chance to steer the conversation towards areas that they found relevant. Thus, it can be said that my role was that of a facilitator who introduced the topic, encouraged discussion, and ensued that all the participants in a focus group had the chance to express themselves. I facilitated conversation by asking for clarifications if needed and reiterated what I understood from participants' words. Participants directed the conversation and relevant issues emerged naturally during

discussion which meant that I often did not need to ask all of the questions on the interview guides.

Over the course of subsequent data collection, the interview guides were further developed and focused on the issues that emerged from previous interviews. I occupied a dual position as a researcher and a physiotherapist, which had presented some challenges during interviews as participants inquired about my opinions and I ran the risk of biasing participants. The way through which researchers perceive and present their identities was deemed to have significant impacts on data collection (Reed, 1995). Participants' interest in my views and experiences made me realise that my academic and professional experiences in Egypt could not be overlooked and that it could be utilised to establish a neutral power balance with participants and encourage them to be open and sharing. Nonetheless, the amount and nature of information I shared with participants were bound by my ethical responsibility to be honest, respectful and as neutral as possible.

In acknowledgement of the study's constructivist underpinnings, I contributed my opinions when participants inquired about them, but after ensuring that they expressed their views. I also encouraged the participants to discuss any differences or similarities between their diverse experiences and mine, which further made the interviews akin of a conversation between colleagues. Therefore, my cultural background, tacit knowledge, past experiences and knowledge of the research topic helped me to engage with participants and the data from an informed standpoint.

As I shifted between being a physiotherapist (insider) and a researcher (outsider), I observed the ways through which participants related to me. I noticed that over the duration of an interview, the participants would gradually become more trusting of my expertise and comfortable with my interviewing approach. Participants became more confident in their role as expert informants, which was evident as they were more relaxed and shared detailed information about their experiences. This transition in participants' level of confidence and comfort was considered a positive sign that the researcher-participant relationship was based on trust, which added to the credibility of the data generated from this study.

So far the previous sections in this chapter discussed how the researcher identified the most suitable recruitment sites, sources of data (participants' views), method of data collection (individual and group interviews) and how this method was applied to collect data (interviewing techniques). It also discussed the interview procedures and the dynamics of the participant-researcher relationship. The next section will elaborate on ethical considerations related to the study.

**5.9 Research ethics and governance**

This study took place in Egypt but was under the supervision of Sheffield Hallam University in the UK. It was reviewed and approved by 7 different Research and Ethics Boards in the UK and Egypt. Approval from Sheffield Hallam University Health and Social Care Ethics Committee and all 6 recruitment sites in Cairo were obtained prior to commencing any research

procedures. The next sections discuss the main ethical considerations associated with the study.

### 5.9.1 Consent

Participants' freedom of speech, physical and mental wellbeing was prioritised in line with the Declaration of Helsinki (Brydon-Miller, 2008). Their opinions were respected as per Sheffield Hallam University guidelines on healthcare and social research. Before interviewing, participants were provided with detailed information sheets that thoroughly explained the purpose and procedures of the study. They were encouraged to inquire about the research and the researcher answered questions to participants' satisfaction. Participants' voluntary written consent was obtained before interviewing. They were also made aware of their right to withdraw from the study at any point and that any information they contributed would not be included in the analysis upon request.

### 5.9.2 Confidentiality, anonymity and data management

Participants were reassured that their personal information and contributions to the research would be anonymous and that each participant could ask for certain aspects of their interviews to be confidential. Before interviews, the researcher checked the digital recorder to make sure that it is working properly. The researcher conducted and transcribed all interviews; therefore no one other than the researcher had access to raw data or any of the participant's personal information. The interview audio recordings were transcribed verbatim in Arabic and made anonymous using pseudonyms, thus no one other than the researcher knows participants' original names; hence participants could only be identified from the consent forms that they signed. The Arabic transcripts were

then translated to English to enable the researcher to discuss the analysis with her supervisors and to facilitate writing up this thesis.

The electronic transcripts were securely saved on an encrypted laptop that is the researcher's sole property. After the transcription of each interview the research briefly met with the interviewees to provide them with a hard copy of their interview transcripts so they can verify their statements. In case of focus groups, each participant was made aware of their own pseudonym only, thus could check the accuracy to which their own comments have been transcribed. This process is known as respondent validation. Participants were asked to sign the transcripts as evidence of having reviewed them. After respondent validation, all hard copies of the interview transcripts were collected. The Arabic and English versions of each interview transcript and the corresponding consent form and information sheet were grouped together and kept in a site file. The site file also included field notes containing the researcher's reflections about the interview process and dynamics. The site file is locked at the researcher's desk to provide an audit trial for the study.

## 5.10 Chapter summary

This chapter gave a detailed description of the participant recruitment, sampling, data collection and analysis methods conducting for this research. It showed that constructivist GTM involves cyclic and iterative processes that require the researcher to actively engage with all research practices. This chapter grounded theory methods including coding, memo writing, theoretical sampling and conceptual development. The ethical considerations associated with the research were outlines and methodological rigor of the research was

discussed. The next chapters (Chapter 6 and 7) give an exhaustive description of the constructed theoretical model.

# Chapter 6: Findings

## 6.1 Introduction:

This chapter discusses 4 categories of the study findings. The first category 'The context of physiotherapy practice in Egypt' elaborates on the social and healthcare contexts that influenced physiotherapy practice and participants' perceptions. The second category 'The discursive making of physiotherapy identity' shows that 'danger', 'evidence-based practice' and 'emotions' were 3 key discursive devices involved in the construction of physiotherapy identity throughout the participants narratives.

The category 'The external identity of physiotherapy' presents the social image of Egyptian physiotherapy, which has been reconstructed from the perceptions of patients and physicians on physiotherapists and physiotherapy as a profession. This category shows that there were 2 distinct conceptualisations of the identity of physiotherapy. Some patients and physicians considered Egyptian physiotherapy 'A rising para-profession of movement experts', while some physicians saw it as 'A usurper occupation of glorified technicians'. These contradictory perceptions highlighted the polarised external identity of physiotherapy which influenced its clinical autonomy and professional status.

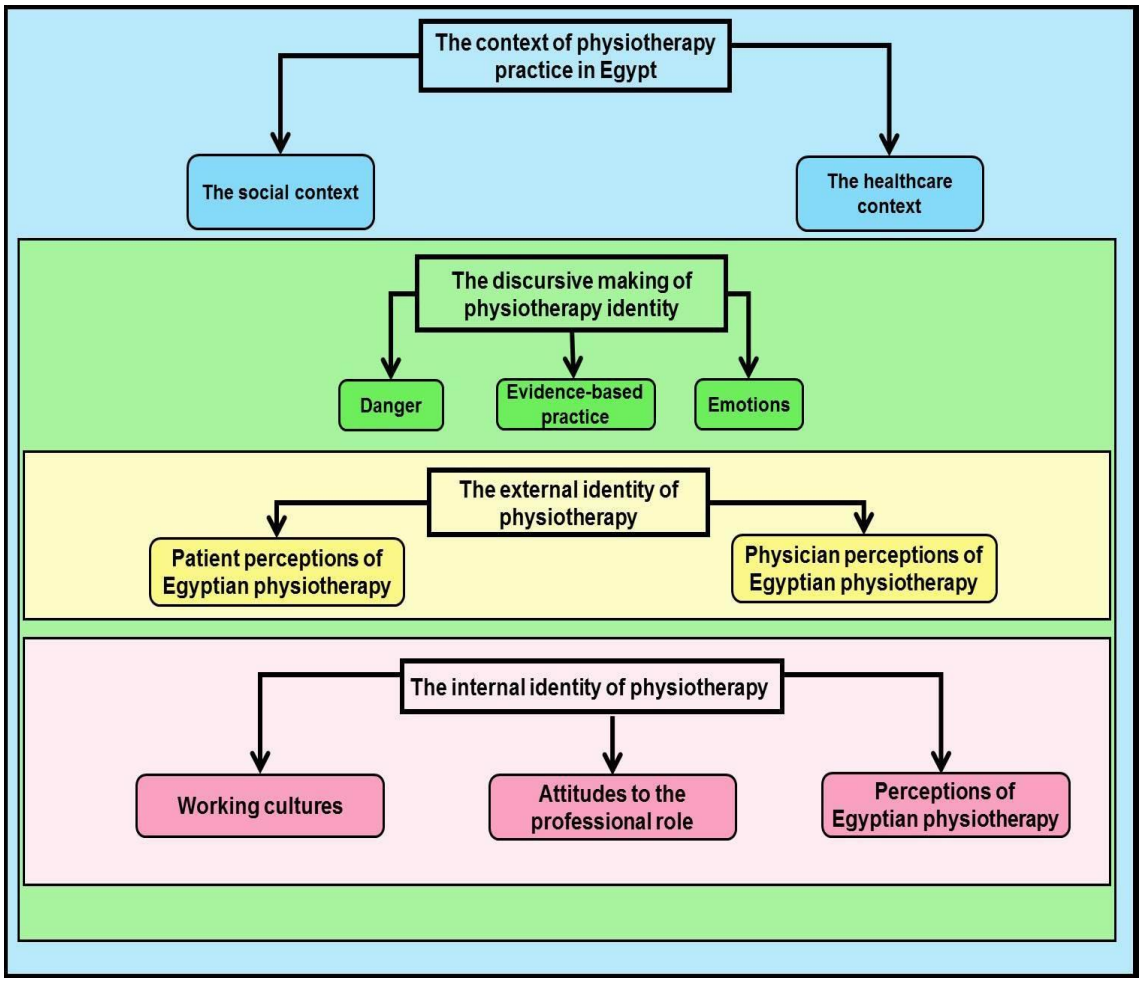
The fourth category 'The internal professional identity of physiotherapy' provides a picture of Egyptian physiotherapy as seen its own members. It reports on the different working cultures in which physiotherapists were employed and how such cultures impacted on physiotherapists' self-feelings. It also describes

physiotherapists' attitudes towards the professional role and perceptions of their own profession.

All 4 categories interweave with each other and borrow narrative from within the subcategories and codes. These categories represent the descriptive dimensions of the theoretical model; they underpin the core category around professional identity development.

Throughout the chapter, each element of the findings is supported by participant quotations from the interview data to provide evidence of the theoretical claims that have been made. Quotations were chosen to present the variation in participants' perceptions and attitudes. In certain incidents, quotes were chosen for their representativeness of a specific theoretical claim. Alternatively, multiple excerpts were sometimes quoted to highlight substantial or minor differences in participants' viewpoints regarding a particular construct. When extreme or less typical quotations were used, this was made clear. Figure 6.1 provides a diagrammatic representation of the 4 categories.

**Figure 6.1: Summary of descriptive categories**




Key to figure 6.1

Category

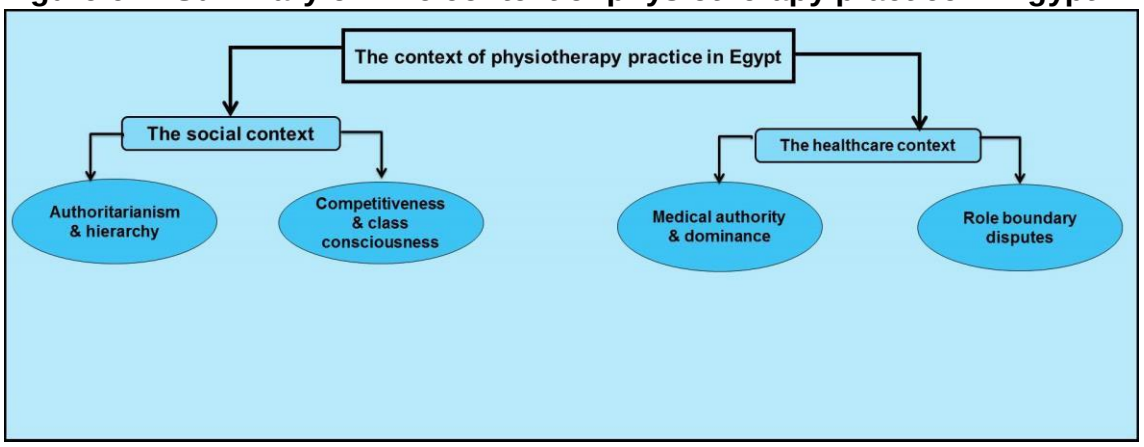
Subcategory

## 6.2 Category 1: The context of physiotherapy practice in Egypt

To understand the identity of Egyptian physiotherapy and how it is perceived by its own members and by outsiders, it is imperative to consider the social and healthcare contexts in which the 'profession' operates. Foucault (1972) explained that the archaeological knowledge of cultural and social aspects is critical to understand and contextualise the discourses generated from

research. The 'Social Context' subcategory sets the scene by elaborating on several norms that characterise the Egyptian society as described by participants. It explores the cultural environment that shaped participants perceptions of physiotherapy, and the social hierarchy that controls the status of physiotherapy. The 'Healthcare Context' subcategory discusses the interview data around medicine's cultural authority and dominance over the healthcare system. It also presents a detailed account of the events involved in the macro-political role boundary disputes between physiotherapy and physiatry authorities, and how these disputes impacted upon the autonomy and identity of physiotherapy. Figure 6.2 summarises the findings related to the category 'The context of physiotherapy practice in Egypt'.

**Figure 6.2: Summary of 'The context of physiotherapy practice in Egypt'**




### 6.2.1 The social context:

The salience of the Egyptian social and cultural context became apparent over the course of interviews as they seemed to elucidate and link different aspects of participants' narratives. The interview transcripts featured frequent references to social hierarchy which explained its significance and how it influenced individual sense of self and behaviours:

*"Everybody is sensitive about their image and prestige; it's an Egyptian thing" (Pt7, senior, interview)*

Cleveland and Bunton (2013) explained that being Egyptian means living in a hierarchical society where people are competitive and class conscious. The hierarchical nature of the society means that there are little opportunities for upward mobility, although great expectations are placed upon individuals to excel educationally and professionally in order to ascend a rather steep social ladder. In Egypt, hierarchical status can be understood as an archaeological fixture that defines and ranks individuals based on their location in the social matrix. It infiltrates all dimensions of life and is deeply-seated hence Egyptians continuously judge and rank others as equal, above or below themselves. This process of hierarchical classification takes place within family, work and social settings, and dictates the nature of interaction between individuals based on their respective ranks.

The data also indicated that gender divides were common in the Egyptian society and that they influenced the issues that emerged during interviews. Different expectations are placed on males compared to females. Postgraduate education was important for both male and female physiotherapists, but for males it was about advancing their careers and obtaining additional economic capital as they were expected to be *"good providers"* for their families. Postgraduate education for female physiotherapists was about professional competence, yet much like many Egyptian women, it was also about societal expectations and prestige as women are expected to be *"cultured"* and

*"sophisticated"*. Consequently, the perceived lower social status of physiotherapy compared to medicine and the inter-professional debate about physiotherapists' use of the doctor title were more concerning and disenchanting for female physiotherapists:

*"Nothing is wrong with a man if his wallet is fat, but for women people will give her more respect and prestige because she is a doctor more than if she was a nurse or a teacher" (Pt4, novice, Pt-FG1)*

*"In our society, it goes without saying that doing medicine means that you are the best that's why everybody wants their children to be doctors" (Pa2, Pa-FG1)*

Since *"being the best"* meant being a doctor, some physiotherapists felt that they have disappointed their parents. The significance of parental approval was evident in some of the participants' responses. Having the blessings of parents is a strong value in Egyptian society as individuals strive to be the best to make their parents proud. Failing to actualise parental wishes of becoming medical doctors was reported as one of the factors that negatively affected some physiotherapists' personal sense of self:

*"I felt like I let him down [the participant's father] and my cousin made her father proud because she got into the faculty of medicine" (Pt5, novice, Pt-FG1)*

The desire to be the best was related to honouring parents and emanated from the competitive culture that permeates the society and represents the underlying motivation for many people. The interviews showed that this competitive mind-set hindered knowledge transfer amongst physiotherapists and between physiotherapists and physicians:

*"They [physiotherapist colleagues] took McKenzie and Maitland courses with instructors from abroad, but they won't teach me anything… it's very competitive here" (Pt3, novice, Pt-FG1)*

*"The problem, not just in healthcare but in all fields, is that people think it's a competition, so your failure is a success for them" (Dr14, orthopaedist, Dr-FG4)*

Competitiveness was described in relation to authoritarianism; an aspect of the Egyptian social context that encourages individuals to adopt a dogmatic approach. The participants used descriptions such as *"everybody wants to be the boss"* and *"Egyptians will always be pharaohs"* which is a vernacular metaphor for being dictatorial. Some physiotherapists attributed the lack of intra and inter-professional collaboration to the authoritarian attitudes that are common in Egypt:

*"Some physiotherapists and physiatrists work well together, but some don't want to cooperate because we don't have a team player mentality in Egypt and people tend to be authoritarian" (Pt15, senior, interview)*

The interview data also showed that many participants perceived western cultures to be more developed and progressive than Eastern societies. Nearly all participants considered physiotherapy education and practice to be better and more developed in western countries than in Egypt:

*"Even you [researcher] decided to study in England; because you know that physiotherapy is better over there" (Pt1, novice, Pt-FG1)*

Hierarchy, class consciousness, competitiveness and authoritarianism were identified as key social factors that negatively affected the external professional

identity and status accorded to physiotherapy. This, in return, influenced many physiotherapists' personal and professional sense of self and their perceptions of their profession:

*"When you introduce yourself as a doctor people give you your prestige, but as soon as they find out you are a doctor of physiotherapy, they will give you such a look that takes away all this prestige… sometimes I wish I was anything else other than a physiotherapist" (Pt2, novice, Pt-FG1)*

The description of the Egyptian social context that has been presented in this subcategory is supported by evidence from previous literature. According to Hofstede's cultural classification model, Egypt had a masculinity-femininity score of 52, which is above average. Thus, the Egyptian society was classified as masculine (Hofstede, 2001). Competition and a drive to be the best are fundamental traits of masculine societies that push people to achieve. People in feminine societies are driven to succeed by a desire to improve their quality of life and they tend to be supportive and less competitive. The responses of participants in this study portrayed an overall masculine image of the society, although some feminine traits in relation to caring for patients were expressed.

The individualism-collectivism dimension in Hofstede's model is also relevant to understanding the findings presented in this subcategory. Egypt scored 38 in this dimension which highlighted the collectivist nature of the society and the importance of family. Collectivist traits were expressed during interviews as some physiotherapists expressed feelings of guilt having not been able to actualise parental wishes of becoming medical doctors.

Moreover, some physiotherapist participants argued that the reduced professional status ascribed to physiotherapy compared to medicine was a

product of the society's dogmatic and hierarchical structure. This perception of the society is supported by Egypt's high score (80) in the power-distance dimension of Hofstede's model. This high score represents a top-bottom social order whereby individuals are ranked and are not equal; an idea that was insightfully captured by physiotherapist participant 12:

*"Egyptians will always be pharaohs; we just have to have it our own way… believe it or not; we are still building pyramids, and as usual we put the best at the top of the pyramid, so the upper-class dominates, and the middle-class squashes the lower-class, doctors are higher and better than physiotherapists so they look down at them and boss them around... See, it's a pyramid, and each stratum is better and more equal than the one below and those at the bottom have no weight despite being the masses. What can I say; welcome to Egypt" (Pt12, junior, Pt-FG2)*

### 6.2.2 The healthcare context:

This subcategory describes the dynamics of the Egyptian healthcare context. It discusses the impact of the Egyptian social context on the rise of medicine as a cultural authority. It explains how the cultural authority of the medical profession helped it dominate and control the healthcare system, including physiotherapy practice, which eventually led to macro-political role-boundary disputes between physiotherapy and physiatry. The nature of such disputes is presented to give a nuanced description of the healthcare context and how it impacted upon autonomy, status, identity and role-exclusivity in physiotherapy.

#### 6.2.2.1 Physiotherapy and the cultural authority of medicine:

This section presents interview data around medicine's cultural authority in Egypt and how it was converted into dominance of the medical profession over healthcare. The cultural authority of medicine represents its capacity to be

unquestionably believed (Starr, 1984). It reflects public trust and compliance, and reinforces medical autonomy and dominance. In this study, analysis of patients' narratives revealed the high level of public support and legitimacy the medical profession has been able to command. Comparisons between patient, physician and physiotherapist transcripts identified that the power of medicine as a cultural authority was enabled by several factors that were strongly influenced by the socio-political nature of the Egyptian context. These factors included patient health beliefs and attitudes, the social identity ascribed to doctors and the role of the state in establishing and maintaining medical sovereignty over the healthcare system and policies.

The current research did not aim to investigate patient attitudes towards health and illness per se. It some physiotherapists argued that the social and cultural context perpetuated a passive illness identity that increased public dependence on the medical profession and enshrined its power. According to some physiotherapist participants, most Egyptians expect to be taken care of when they are ill. They often assume a sick role and are hesitant to take responsibility for managing their health. Such responsibility is delegated to physicians who are trusted for their esoteric knowledge and expertise. The following quote suggested that Egyptian cultural norms promote vulnerability and discourage patients from being proactive:

*"Most patients are very passive because it's our culture… you won't find patients googling things and trying to help themselves, we don't have this attitude because when you are sick all that is required of you is to go to the doctor and people trust the doctor to take care of them" (Pt13, Key figure in EGPTS, interview)*

*"I trust my doctor after god, I know god will help him bring the cure… you don't argue with your doctor you just obey him because he is the doctor and you are the patient, he has the knowledge and you [patient] sure don't" (Pa3, Pa-FG1)*

The above comment showed that many patient participants delegated decision-making to physicians. In this context, power and knowledge were considered the monopoly of medical doctors who *"bring the cure"* and thus *"must be obeyed".* As such, the social identity of the doctor as a conscientious saviour and authority figure who acts in the patient's best interest has been constructed and deeply-seated in many of the patients participants' perceptions. As suggested in the response of patient participant 3 and discussed in section 6.2, the dogmatic nature of the Egyptian society discourages individuals from questioning authority. Accordingly, the cultural authority of medicine remains unchallenged by the public who are rendered dependent on doctors:

*"People shouldn't be left to their own devices because they don't know what's best for them and the patient will never know better than the doctor… You have to be good if you want to get better, you have to obey your doctor" (Pa15, Pa-FG3)*

As evidenced above, the perception of doctors as saviours emerged from an imbalance of power and knowledge between doctors and patients, which required *"the good patient"* to be compliant. Foucault (1988) explained that the cultural authority of medicine derived from this recursive imbalance of knowledge in the favour of physicians which gives them power over patients. In this study, this knowledge and power imbalance was reflected in the saviour identity that most patients accorded to doctors. This imbalance also impacted

upon patients' relationship with doctors hence they trusted them to act on their behalf.

Patient's *"blind trust"* in medical professionals was cited as one of the factors that limited physiotherapists' autonomy. All patients acknowledged that physiotherapists had expertise, yet some believed that the doctor's opinion should override that of the physiotherapist hence the former was more knowledgeable, and thus more trustworthy:

*"My doctor knows everything about my condition and she referred me to you [physiotherapist], so you must follow her prescription; I mean the nurse also listens to the doctor" (Pa6, Pa-FG2)*

The above comment explained how patients' trust in doctors supported medical dominance over the work of allied-health providers, which could explain how the cultural authority of medicine was translated into hegemonic power over healthcare. Moreover, the positive constructs patients associated with the doctor identity and role contributed to medical authority. Terms, such as doctors *"bring the cure"*, *"save lives"* and *"rescue the patient"*, featured repeatedly in patients' narratives, which reflected high social recognition of physicians' role. In comparison, physiotherapists' role seemed to have been belittled by some patients and the external role-identity accorded to them appeared less attractive:

*"It's not that physiotherapists aren't good or that physiotherapy isn't beneficial… but one doctor could save hundreds of lives… wouldn't you agree with me that*

*nobody could measure up to someone who dedicates their life to saving others" (Pa3, Pa-FG1)*

Moreover, physicians' perceptions of and attitudes towards physical activity, exercise and physiotherapy were identified as key factors in shaping public opinions and trust in physiotherapists. The following quote demonstrated the extent to which physicians could influence patient perceptions of physiotherapy which had implications for physiotherapists' clinical autonomy:

*"Many doctors pass their nonchalant attitude towards exercise to patients and the patient absorbs the doctor's mistrust in the physiotherapist's knowledge" (Dr10, physiatrist, Dr-FG3)*

In addition to the trust invested in doctors' knowledge, the construction of doctors as cultural authority figures also related to wisdom and virtue which were sine qua non of the social identity ascribed to doctors. Patients described the doctor as well-read and mannered, cultured and judicious; all of which made for a trusted advisor on health and personal matters. The excerpt below represented most of the patients' conceptualisation of the medical doctor identity. They believed that the majority of Egyptian doctors embodied the following personal qualities, professional knowledge and expertise:

*"You must be an avid reader to be a doctor, so doctors are excellent people because they have this character, this diverse knowledge and wisdom in life… he [family doctor] is a very wise man and I take his advice when I have personal problems" (Pa7, Pa-FG2)*

The caste of the doctor also facilitated their construction as a cultural figure of authority. The interview data revealed that sovereignty of the medical profession in the Egyptian society has historically emanated from the high birth caste of its members; an idea well illustrated in the quote below:

*"The doctor was the high priest pharaoh; he was the pasha and will always be a pasha" (Dr1, orthopaedist, interview)*

'Pasha' was a title awarded to nobles, including doctors, during the period between 1922 and 1953 (Fahmy, 2000). Although the pasha title was abolished, referring to doctors as such reflected their de jure status as social dignitaries. According to most of the study participants, the social identity of medical doctors resonated with an indispensable professional role, vast specialised and general knowledge, wisdom and high birth caste; which gave power to the doctor title. Bourdieu (1985) explained that professional titles are symbolic goods that draw value from their position within a hierarchically arranged system of titles that mirrors the social order. The knowledge gained from the participants showed that the doctor title has long reigned this hierarchy in Egypt because it has been equated with *"being the best"* not only in terms of intellectual abilities and academic achievement, but also with regards to caste. The data showed that the doctor title retained its historical glory; conferring ample symbolic power and cultural authority upon physicians in healthcare and social settings:

*"If someone bumped into your car on the road… he introduced himself as doctor X and you saw the white coat hanging in his car, you would immediately expect him to be decent because we know that doctors come from a sophisticated class… you would let the whole thing slide because you would be too shy to drag a doctor to the police station" (Pa15, Pa-FG5)*

Medicine's cultural authority within the Egyptian society and dominance over the healthcare ecology can be understood using the Foucault's insights. For Foucault (1970) medical dominance, cultural authority and bio-power are

inevitable evil necessities for public health that forces allied-health providers to forgo the quest for equal professional status and submit to medical sovereignty. The medical profession has been accused of reinforcing its powerful professional and social standing detriment of allied-health (Pescosolido and Martin, 2004). However, patient empowerment and the emphasis on multi-disciplinary evidence-based practice caused a steady decline in medical dominance in western countries where the balance of power shifted to a more equal social standing and professional relationship between medicine and allied-health (Wills, 2006).

The interview data generated in this study indicated that this shift had not happened in Egypt or at least did not result into a substantial decline in medical dominance to allow for autonomy and safeguarded professional boundaries and status in physiotherapy. A few physiotherapist participants believed that incipient physiotherapy benefited from medical patronage to train physiotherapists and refer patients given that public awareness of their role was limited. However, most physiotherapists believed that doctors were overrepresented in powerful positions through which they shaped health policies and legislations to hinder the professionalisation of physiotherapy and enable physiatrists to expand their role by encroaching on that of physiotherapists:

*"I think that the main problem is that doctors are involved in making and approving the laws and they can pull strings because the health minister is a doctor and lots of doctors are members of the parliament and hold other important positions in office, so they make sure that the laws stifle our progress and keep us under their tooth… they have been blocking our call to have a law*

*to stop physiatrists from practicing physiotherapy which is our field" (Pt23, junior, Pt-FG4)*

While this quote reflected some physiotherapists' tendency towards role protectionism, it also highlighted the intensity of boundary disputes between physiotherapists and physiatrists. The next section presents the study findings around the events involved in these disputes as it transpired within the context of medical dominance in Egypt.

#### 6.2.2.2 Inter-professional role boundary disputes:

Some of the physiotherapists' narratives suggested that the external identity and status of physiotherapy have become increasingly destabilised as a consequence of the role-boundary disputes between physiotherapy and physiatry. These disputes featured macro-political power struggles between physiotherapy and medical authorities. Physiotherapy authorities were represented by the Egyptian General Physiotherapy Syndicate (EGPTS), while medical authorities included the Egyptian Medical Syndicate (EMS) and the Society of Physiatrists. The interview data showed that both authorities used comparable strategies to delegitimise and exclude the other occupational group from physiotherapy practice. These strategies involved ample legal disputes.

The interview transcripts suggested that medical authorities did not question the technical competence of physiotherapists in administering treatment without direct supervision. Instead, a key figure in the EMS raised concerns about physiotherapists' ability to make autonomous clinical decisions regarding the diagnosis, treatment choice and wider medical issues in patient care. It was argued that physiotherapy assessment and prescription rights should be

delegated to physiatrists, while physiotherapists' role should centre on providing treatments that have been prescribed by physiatrists:

*"I am using the word guide in the sense that physiatrists should sieve through referrals and funnel them as appropriately to physiotherapists because they [physiatrists] are more capable than other physicians of telling if the therapist can handle the case or not and they should advise them [physiotherapists] on the treatment" (Dr17, key figure in EMS, interview)*

As shown above, medical delegation assigned hands-on practice to physiotherapists, while clinical decision-making was reserved for physiatrists. It was also noted in the above quote that physiatrists were meant to be responsible for judging physiotherapists' expertise before assigning patients to them. According to key figures in the EGPTS medical delegation succeeded in limiting physiotherapists' autonomy because physiatrists were able to subordinate physiotherapists given their positions of power as department leaders in public hospitals:

*"The head of department in all hospitals used to be a physiatrist so they were making all the decisions about the management and we were just giving the treatment, so they managed to make us like technical staff" (Pt13, Key figure in EGPTS, interview)*

The EGPTS succeeded in lobbing for a policy reform in 2016 that enshrined the separation between physiotherapy and physiatry departments, which according to many of physiotherapist participants allowed them to gain more autonomy. Physiotherapist participant 6 reported on her role in prompting this policy reform as an active member on the EGPTS. She described the position and strategies used by the physiotherapy syndicate as follows:

*"Over the past 10 years my colleagues in the syndicate and I have been trying to get the government to separate physiotherapy from physiatry… it required a*

*lot of lobbing and convincing and striking and protesting until we managed to get a new policy in 2016 that obligate public hospitals to make departments for physiotherapy that are led by doctors of physiotherapy, but there is a lot of bureaucracy and little funds, so it has been done in a few hospitals" (Pt6, key figure EGPTS, interview)*

As indicated above, the policy reform has not been universally applied across the public sector due to financial constraints and bureaucracy. Physiotherapist participants affirmed that in most hospitals physiotherapists were still working in departments led by physiatrists and they had no autonomy. Yet, the establishment of independent physiotherapy departments in a few hospitals was described by a physiatrist (Dr15) as *"the beginning of the end"*; a statement which signalled the gradual failure of medical delegation in subordinating physiotherapists. Most physiatrists shared similar sentiment as shown below:

*"They [physiotherapists] have their own department now and they undertake the whole management process and they don't want us to recommend the treatment" (Dr13, Physiatrist, Dr-FG3)*

Interviews with key figures in the EMS and Physiatrist Society showed that vertical role substitution was the another strategy adopted by medical authorities to maintain the existence of physiatrists within the domain of physiotherapy. This type of role substitution is a boundary expansion mechanism whereby tasks are acquired across professional boundaries by a profession that is higher on the hierarchy (King et al., 2015). The extent to which vertical substitution enables for boundary expansion is largely dependent upon the power of the profession considered to be superior. The data suggested that, the medical profession succeeded in expanding the professional boundaries of physiatry and the role of physiatrists changed from the supervision of physiotherapists to the provision of physiotherapy services.

Physiatrists' legal right to practice physiotherapy was defended based on the medical Act of 1948 which entitles physicians to provide nearly all healthcare services:

*"It is simply the law; any healthcare intervention can be provided by a licenced doctor given that he has received appropriate education, and therefore physiatrists are legally allowed to practice physiotherapy including any aspect of the role… I understand that this changed the situation and introduced competition, but it is the position of the syndicate and we support physiatrists" (Dr17, key figure in EMS, interview)*

The EGPTS has been urging the Ministry of Health and Population to invoke previous state legislatures that support physiotherapists' role exclusivity by identifying them as the only lawful providers of physiotherapy services. According to the quote below, the EGPTS seemed to have directed its efforts towards external occupational closure. This signalled an unprecedented shift in the macro-political strategies used by physiotherapy authorities, which changed from defensive to exclusionary strategies:

*"The tables have turned because the [physiotherapy] syndicate is working to expel physiatrists from our field because nobody can practice physiotherapy unless they have an accredited bachelor degree of physiotherapy and are registered with us [EGPTS]" (Pt13, key figure in EGPTS, interview)*

The data suggested that medical authorities have been deploying three strategies in response to physiotherapy's exclusionary approach. The first strategy represented an effort to involve physiatrists in the clinical governance of physiotherapy practice to promote high standards of patient care:

*"We [Physiatrist Society] wanted to ensure good practice, so we approached the Ministry of Health to suggest that we set some protocols to ensure that the high standards of the Physiatrist Society are being applied in physiotherapy*

*departments, but their [physiotherapy] syndicate stopped the process" (Dr6, Key figure in Physiatrist Society, Dr-FG2)*

The comments provided by distinguished leaders in the EGPTS emphasised that the syndicate has been asserting its legal right to act independently in controlling the standards of physiotherapy practice. Also, the interviews with physiotherapist suggested that medical authorities have been using a second parallel strategy that drew on the efforts of the wider medical community to minimise physiotherapists' access to continuous professional development:

*"The medical syndicate stopped us [physiotherapists] from being able to study a postgraduate diploma in sports nutrition, which was really easy for them to do because the higher institute of nutrition is run by doctors" (Pt14, senior, interview)*

An interview with a leading figure in the EMS indicated that legal complaints have been filled to challenge physiotherapists' use of titles legally restricted to medical professionals. It was reported that the EMS stated that physiotherapists were breaching the law because they used the doctor title, which was considered misleading to the public and a potential threat to their safety. The use of the title consultant was also objected claiming only medical personnel were allowed this demarcation. The EGPTS, forewarned, argued that if the titles (doctor and consultant) were appropriately post-fixed, they could be legally defendable:

*"We [EGPTS] informed our members that they should be able to say they were a doctor or a consultant as long as they specified that they were a doctor of physiotherapy or a consultant of physiotherapy" (Pt6, key figure in EGPTS, interview)*

On a macro-level, the data suggested that the role-boundary disputes between physiotherapy and medical authorities have not progressed further. This is significant because it could be suggested that the medical authorities might be willing to accept the status quo. Alternatively, it might indicate that the EGPTS was trying not to stir further resistance from medical authorities. This implied a realisation that it would only be with medical approval that legal recognition of physiotherapists as doctors could be achieved. Most physiotherapist participants (n=23) were frustrated with the delay in such recognition as they felt it eroded the public image and professional status of physiotherapy:

*"It's infuriating that we are still not recognised as doctors… I am not saying that the syndicate has not done anything, but they have not yet done enough because this title will help with our position in the society" (Pt5, novice, Pt-FG1)*

Most physiotherapist participants (n= 23) believed that medical sovereignty was the primary factor that restricted physiotherapy autonomy and disabled the exclusion of physiatrists to allow for role exclusivity:

*"Physiatrists are still able to practice physiotherapy and in some hospitals they make the doctors of physiotherapy work under them… they [physiatrists] are too powerful because they are doctors and the medical syndicate and the Ministry of health are behind them" (Pt30, senior, interview)*

Most physiotherapist and physiatrist participants indicated that the resultant status quo gave rise to workplace conflicts because individual practitioners were left to negotiate professional boundaries in daily practice. Some physiotherapists believed that the current situation was more damaging to the

public image of physiotherapists than to physiatrists whose identity as medical doctors was safeguarded:

*"The commotion around physiotherapists and the title, you know, the whole fight with physiatrists makes us look bad, but it doesn't affect physiatrists because at the end of the day they are medics" (Pt4, novice, Pt-FG1)*

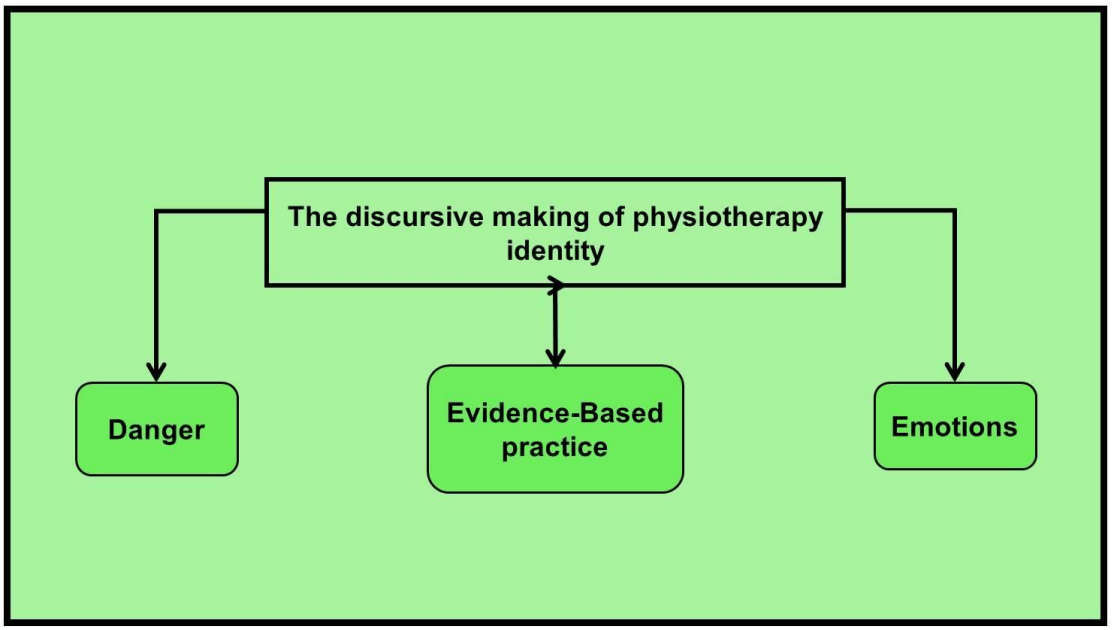
So far, the findings presented in the category *"The context of physiotherapy practice in Egypt"* described the social and healthcare settings in which physiotherapists worked, and how contextual factors influenced physiotherapy practice. The data highlighted the contention surrounding the identity, autonomy, role and status of physiotherapy. Individual patients and physicians had different conceptualisations of the identity of physiotherapy. Similarly, physiotherapists conceived of the identity of the physiotherapy profession in considerably variable ways. The next category explains how multiple contradictory productions of physiotherapy identity were discursively constructed and actively debated inside and outside physiotherapy.

### 6.3 Category 2: The discursive making of physiotherapy identity

Discourse refers to written and spoken communications and comprises of a collection of representations, symbols, metaphors, stories and statements. These statements are more than semiotic signs, they are abstract constructs that ascribe meanings, and in doing so construct and construe a specific picture of individuals, groups, objects and events (Burr, 1995). Discursive devices are rhetorical resources hidden beneath ascribed meanings and portrayed pictures. They are flexible tools used to achieve the purpose of communication including constructing identities.

In this research, participants' narratives provided a complex discourse around physiotherapy identity. The discourse was understood from a constructivist epistemological standpoint. This meant that contradictory perceptions of physiotherapy identity were accepted as equally valid for they represented participants' views. Despite having different views, participants used the same 3 discursive devices to construct physiotherapy identity. These devices were danger, evidence-based practice and emotions (Figure 6.3). The following sections discuss how each discursive device was deployed to highlight areas of controversy and produced identity within and outside the physiotherapy profession.

**Figure 6.3: Summary of 'The discursive making of physiotherapy identity'**



### 6.3.1 Danger:

Many of the physician's narratives (n= 15) proclaimed a sense of danger and a need for an intervention to regain tutelage over physiotherapy practice. Autonomy in physiotherapy was seen as a threat to patient safety. The call for policy reform to bring physiotherapists' role under the supervision of physiatrists was augmented with stories featuring incompetent and negligent physiotherapists to support real or apparent fears for patient wellbeing:

*"Physiotherapists have caused burns, bedsores, stiffness and fractures because they don't know any better, so they must remain under our [physiatrists'] eye to protect patients because patients don't know anything too and we have to do what's right for them" (Dr19, Physiatrist, Dr-FG5)*

Physiotherapists felt that their autonomy and role exclusivity were continuously in danger because it was believed that physiatrists were expanding their role by taking-over that of physiotherapists. There was a danger that physiotherapists might not realise their full clinical autonomy. Thus, most physiotherapists believed that the threat came from outside the 'profession' as shown below:

*"Physiotherapy has always been under attack and it is more serious now than ever… physiatrists do not want to let go, we must do something about it quickly" (Pt21, junior, Pt-FG4)*

Seven patient participants feared that physiotherapists were not qualified and knowledgeable enough to manage patients independently without being supervised or guided by medical doctors. Physiotherapy autonomy was dangerous for they worried about receiving contra-indicated, harmful or ineffective treatment:

*"I think it is better for me if the doctor chooses [the treatment] because he is more qualified, I don't want to offend my physiotherapist, but I think the physiotherapist might give me the wrong treatment and it could be really dangerous for me" (Pa6, Pa-FG2)*

For some patients, the danger related to a potential decline in the quality care because patients believed that some physiotherapists and physiatrists were competing rather than cooperating to meet patient needs. Those patients felt that their needs were sometimes overlooked because both occupational groups were being self rather than patient centred:

*"The disaster is that some of them [physiotherapists and physiatrists] don't appreciate the extent of poverty in this country and the masses of disabled and sick people who aren't getting good medical care… both of them should work together to help as many people as possible" (Pa2, Pa-FG1)*

### 6.3.2 Evidence-based practice:

Evidence-based practice (EBP) was a commonly used discursive strategy around which issues of autonomy, exclusivity and identity in physiotherapy were debated. The interview data presented in this section explains how control over what counts as EBP was argued for and used as a rhetoric technique to construct identities and establish superiority.

Many physicians (n= 15) differentiated themselves from physiotherapists on basis of their superior evidence-based practice which relied on objective scientific research. This served to construct physiotherapists as glorified technicians by discrediting their knowledge and delegitimizing their claims for autonomy. Accordingly, it was argued that physiotherapists' role should be restricted to applying the management program as prescribed by physiatrists:

*"They are technicians although they think more of themselves but their work is not based on scientific and objective research evidence, it is based on anecdotal practices so they can't be trusted to manage the patient from A to Z" (Dr20, physiatrist, Dr-FG5)*

Physiotherapists also instrumentally employed EBP in their narratives. They can, however, be split into 2 distinct groups based on their understanding of EBP, how and why they deployed it as a rhetoric technique. Table 6.1 shows the distribution of physiotherapist participants in relation to how they used EBP as a discursive strategy.

**Table 6.1: Distribution of physiotherapists in relation to the discursive use of EBP**

| | **Group 1- EBP: Means to an end** | **Group 2- EBP: A method of empowerment** |
|---|---|---|
| **Physiotherapist participants** | Pt1, 2, 3, 4, 5, 6, 7, 13, 14, 16, 18, 21, 22, 23, 24, 25, 26, 27, 29, 30, 31 | Pt8, 9, 10, 11, 12, 15, 16, 20, 32 |

As shown above, group 1 included 23 physiotherapist participants; 2 of which entered the field at a diploma-level (Pt6 and 7) and 21 joined at a university bachelor degree level. They advocated a biomedical approach of EBP that gave supremacy to scientific empirical evidence only. Patient preferences and agency were absent from their definition of EBP. They argued that patient opinions were subjective and uninformed; thereby irrelevant to the application of EBP:

*"Patients don't know the facts… I hear them out, but above all I listen to the research facts, I don't just give the patient the treatment they want" (Pt13, Key figure in EGPTS, interview).*

Clinical experience was considered secondary to effective decision-making which, to them, was strictly based on scientific research. To support this argument, group 1 explained that long years of experience did not add to the expertise of most diploma-level physiotherapists:

*"I am from the old generation too [diploma-level physiotherapist], but frankly she [another diploma-level physiotherapist] is no better than a masseuse because she can't diagnose and she does very simple things like effleurage [massage] and hot packs… how could you call yourself a doctor of physiotherapy if you don't engage with evidence-based practice" (Pt7, senior, interview)*

The above comment explained how group 1 employed EBP to provide a handle on controlling physiotherapy knowledge. It is through the EBP rhetoric that they declared themselves as more proficient on what is scientific knowledge and practice more than other segments of the physiotherapy workforce. Based on this premise, they considered themselves the judges of who should be able to practice and how. They argued that most diploma-level physiotherapists were not committed to EBP and therefore were professionally incompetent. They labelled diploma physiotherapists as *"bonesetters"* to imply that their practice was pseudoscientific, *"masseuses"* to indicate that their skills were limited, and *"technicians"* to suggest that their clinical approach did not involve sophisticated reasoning. Accordingly, group 1 believed that diploma-level physiotherapists were dragging the status of physiotherapy down, damaging its social identity and hindering its professional project:

*"The ones with diploma should just go ahead and retire because most of them have no idea what scientific evidence means. They have been doing the same old standard treatment of ultrasound and massage for all patients, so they give*

*the impression that physiotherapy is easy and make people say that physiotherapists can't be doctors" (Pt23, junior, Pt-FG4)*

For group 1, the discursive use of EBP focused on defining what scientific knowledge and practice are to safeguard their professional identity by aligning themselves with doctors; while simultaneously distancing themselves from diploma-level physiotherapists. It became evident that EBP was a discursive device they used to construct, perform and protect their preferred professional identity which was modelled based on their perception of doctors. To them, EBP was *the* means to an end of the rejection of physiotherapists by doctors:

*"Doctors will never respect us if we cannot justify everything we do based on research and science and knowledge because this is the language that the medical community speaks, and we must speak it to be a strong voice in this community" (Pt31, junior, interview)*

Using the rhetoric of biomedical EBP might have enabled group 1 to argue against diploma-level physiotherapists, but not against physiatrists. As medical doctors, it was difficult to argue that physiatrists were lacking scientific knowledge or had a pseudoscientific approach to practice. The way group 1 employed EBP seemed to have inadvertently affirmed rather than delegitimised or excluded physiatrists. The excerpt below demonstrates how their approach was ineffective in using EBP as discursive device to monopolise physiotherapy practice:

*"I do not think their [physiatrists'] approach is wrong, I think they can manage cases, but we [physiotherapists] are better; a good physiotherapist should be able to do a better job if they are dedicated and knowledgeable and rely on scientific evidence in their practice" (Pt21, junior, Pt-FG4).*

Contrary to group 1, the second group of physiotherapists used the discursive device of EBP in a considerably different way which related to how they understood and applied EBP. Group 2 comprised of 9 physiotherapist participants; all of which had university-level qualifications. They described their approach to EBP as holistic for it was biopsychosocial, collaborative and patient-centred. They explained that EBP was a process whereby clinical decisions are made by patients as guided by the scientific and tacit knowledge of a multidisciplinary team of professionals including physiotherapists. Within this process, using research was equally important to understanding, informing and meeting patient expectations. The patient's voice was considered the main source of insider knowledge for the physiotherapist:

*"If the therapist has the science and experience, then the patient has their own personal experience that is only accessible to their therapist if he involves the patient in all decisions" (Pt8, junior, Pt-FG2)*

For group 2, EBP was a method of empowerment for patients, physiotherapists and other healthcare professionals to facilitate the exchange of knowledge and joint autonomy:

*"If you [physiotherapist] want to have the best results then you have to look at the research and consult with the patient, you teach them and learn from them and discuss with other professionals from other disciplines too, this way you will include the best thing" (Pt15, senior, interview)*

Embracing EBP was a method for individual physiotherapists to develop and demonstrate their knowledge, protect their clinical autonomy and improve

patient outcomes. This would empower physiotherapists by focusing their efforts on their own professional development and patient welfare:

*"I am different, I am not like them [other physiotherapists]; I am all about working on myself rather than wishing I was a doctor… I'm focused on developing myself and my practice through by being research oriented and following research recommendations" (Pt16, senior, interview)*

As demonstrated above, proclaiming *"I am different, I am not like them"* showed how some physiotherapists employed EBP to emphasise their unique identity by distancing themselves from other physiotherapists who aspired to be considered medical doctors.

### 6.3.3 Emotions:

The disagreement regarding the identity of Egyptian physiotherapy was evident throughout the interview transcripts. Such disagreement was sometimes expressed in an emotional fashion, rather than being discussed in a rational manner. Many patients (n= 9) and some physicians (n= 4) empathised with them for their relatively compromised status in comparison to medical doctors:

*"I don't consider physiotherapists like [medical] doctors, but it's okay to call them doctors because they get upset and I feel bad for them" (Pa8, Pa-FG2)*

On the other hand, some physicians and physiotherapists conveyed feelings of animosity towards one another through acrimonious speech. Their transcripts involved some comments aiming to aggravate and offended or self-congratulate rather than actually communicate. Five physicians used this emotional rhetoric

strategy to indicate that physiotherapists were unqualified and that their claim for autonomy was unfounded:

*"They [physiotherapists] belong with alternative medicine quacks... For god's sake they are still practicing bloodletting, what do you make of this ignorance" (Dr1, orthopaedist, interview).*

Ten physiotherapists felt that their role, autonomy and status were under attack and they expressed some animosity and anger towards medical doctors specially physiatrists. These emotions were used to argue that physiatrists were *"invaders"* hijacking physiotherapists' role:

*"They [doctors] think they are so impressive, but all they do is just attack us in newspapers and online and on TV because they want to tarnish our image so they can continue to dominate our field" (Pt30, senior, interview)*

A few physiotherapists articulated feelings of resentment towards colleagues. Physiotherapist participant 13 attested that she was embarrassed by physiotherapists who did no *"stand-up to doctors"* and *"defend the field from* physiatrists". Physiotherapists who couldn't resist and work to change the status quo were denigrated as incompetent. This attitude highlighted the extent of intra-professional divisiveness whereby emotions were used to demarcate and establish the superiority of certain segments of the workforce over another:

*"She [fellow physiotherapist] obviously has no idea what she is doing, so naturally she couldn't argue with the doctor, she looked scared when he questioned her; my god she is a bit of a coward" (Pt23, junior, Pt-FG4)*

Finally, 9 physiotherapists expressed feelings of hope for a change in physiotherapists' attitude; they hoped that peers would *"wear the*

*physiotherapist title with pride"* and find satisfaction in their professional role. They urged physiotherapists to break-away from the shattered dream of becoming doctors and realise a unique identity by focusing on professional development rather than being preoccupied with titles and role-boundary disputes. Physiotherapist participant 8 shared the following inspirational message which captured these hopes:

*"I know that most of us wanted to be physicians, I did, but I realised that it is great to be a physiotherapist; we can really help people and that's what matters… I wish that some of my colleagues would take a moment to think about who we are and what we stand for because I am sure they would realise that we play a great role" (Pt8, novice, Pt-FG2)*

### 6.4 Category 3: The external identity of physiotherapy

The third category of the study findings "The external identity of physiotherapy" reflects its public or social image. This image was reconstructed from patient and physician perceptions of physiotherapists and of physiotherapy as a profession. According to social identity theory, the perspectives of physicians and patients on physiotherapy would determine the attractiveness of the identity they ascribe to physiotherapists (Tajfel and Turner, 2001). The constructivist epistemological stance adopted in this study suggests that patient and physician perspectives would reflect their individual understandings of the purpose of physiotherapy and the nature of physiotherapists' role that could be influenced by their personal characteristics and values. The symbolic interactionist theoretical framework of this study indicates that the individual formulates meanings through interactions with others. Patient and physician

views would also be shaped by their life experiences and their interactions with physiotherapists.

Nevertheless, the patient's and physician's views would be informed by social and cultural norms that define the concept of professions and professional status. Their opinions would also be impacted by the researcher's involvement with participants during interview which shapes the process of knowledge co-construction in qualitative research (Charmaz, 2012). Thus, the external professional identity that has been identified from patient and physician narratives represents their subjective conceptualisations of physiotherapy together with the researcher's interpretations. The following sections elaborate on the different identity constructions that have been formulated from patient and physician perceptions of Egyptian physiotherapy.

### 6.4.1 Patient perceptions of physiotherapy:

Sixteen patients were interviewed in this study. This subcategory describes patient expectations and perceptions of physiotherapy. It elaborates on the level of initial awareness that patients had about physiotherapy with regards to its indications, role and treatment method. It shows that patients' understandings of physiotherapists' role increased after therapeutic encounters as they became aware of different treatment modalities and felt informed on the effectiveness and limitations of physiotherapy. Patients were divided in their opinions regarding the ability of physiotherapists to perform their role without medical input and direction. Yet, all patients accorded physiotherapy less professional status than medicine, dentistry and pharmacy as it was believed that although physiotherapy was developing in Egypt, physiotherapists had the least

knowledge compared to the former 3 occupational groups. The following section discusses patient perceptions of physiotherapy in detail.

#### 6.4.1.2 A rising para-profession of movement experts:

Patient who participated in this study explained that the purpose of physiotherapy as a 'profession' was not known to the general public. Most patients attributed this lack of awareness to intrinsic factors that lied within the physiotherapy 'profession', and while some patients also elaborated on extrinsic factors that related to public health attitudes. Intrinsically, it was believed that physiotherapy has not raised sufficient public awareness about its indications and role. They suggested that most Egyptians who did not have a personal or a family member encounter with physiotherapists did not have sufficient information about the indications of physiotherapy. In their experience, lay opinions usually equated physiotherapy practice with massage and associated physiotherapists' role with professional athletes and the elderly:

*"People usually see the physiotherapist rubbing a footballer's leg on TV or helping an old person walk with a stick; you usually see that in foreign films" (Pa10, Pa-FG2)*

Patients recommended for physiotherapy to raise awareness about its purpose and role in schools and through the media to help the public identify physiotherapy indications in order to seek its services when needed. Nine patients considered this particularly important because most people saw exercise as *"leisure not treatment"* and they were more familiar with and confident in the effectiveness of medical interventions. They believed that this attitude to health was predominant in Egypt; especially that *"taking drugs is*

*easy"* and that most people had exclusive trust in the expertise of medical doctors, and thus they were less likely to seek alternative treatments offered by allied-health providers:

*"We [Egyptians] tend to believe in the doctor, not the treatment, the doctor himself so people are not going to look for something else" (Pa8, Pa-FG2)*

The majority of patients reported that they had limited initial awareness of physiotherapy. The most commonly cited source of information about physiotherapy was physicians' recommendations followed by the experiences of acquaintances. They felt that having limited knowledge hindered their ability to self-identify the need for physiotherapy treatment; as a result all patients were in favour of maintaining the current physician referral system:

*"Most patients go to physiotherapy because the doctor sent them but they wouldn't know if they needed physiotherapy" (Pa4, Pa-FG1)*

Initial information about physiotherapy indications included weight loss, stroke and sports injuries. Patient expectations of physiotherapists' role involved giving dietary programs, stroke rehabilitation and improving physical fitness:

*"All I knew about physiotherapists is the diets they give you for when you want to lose weight or if god forbid someone gets a stroke the physiotherapist can help them to use a wheelchair or a crutch" (Pa9, Pa-FG2)*

One patient acknowledged that she had a few ill-informed expectations of physiotherapists' role; given that she believed that physiotherapists also assisted physicians during surgeries and took X-rays:

*"I knew from my cousin that they [physiotherapists] usually use machines, but I thought they were like nurses too, you know, they hand the doctor the scalpel… I thought they did X-rays" (Pa8, Pa-FG2)*

Several patients indicated that their knowledge of physiotherapy has increased as a result of physiotherapeutic experiences. Two patients mentioned that the scope of physiotherapy practice was wider than expected. They became aware of physiotherapy interventions in paediatrics and gynaecology by interacting with other patients:

*"The physiotherapist was teaching her baby how to hold his head… I didn't know that physiotherapy was for babies too" (Pa14, Pa-FG3)*

As a result of their experiences and increased knowledge of physiotherapy, 1 patient summarised the indications and scope of physiotherapy and the role of physiotherapists as follows:

*"I'd say go to the physiotherapist if you can't do things and be active and live your life to the fullest" (Pa12, Pa-FG3)*

After receiving treatment and interacting with physiotherapists, patients considered physiotherapists as movement experts who address functional problems and help the patient improve their overall quality of life. They expressed trust in physiotherapists' clinical expertise. However, all patients believed that physicians were more knowledgeable, and thus they invested more trust in them. Consequently, not all patients saw physiotherapists as fully qualified to perform the professional role in an autonomous manner. Seven

patients (Pa1, 3, 5, 6, 7, 11 and 15) expected physiotherapists to offer the treatment as dictated by the referring physician:

*"My doctor knows everything about my condition and she referred me to you [physiotherapist], so you must follow her prescription; I mean the nurse also listens to the doctor" (Pa6, Pa-FG2)*

On the other hand, 9 patients were open to physiotherapists' suggestions regarding the treatment choice, frequency and duration. This group of patient were younger, which might suggest that there is a growing recognition of physiotherapists' expertise amongst younger patient populations. However, in some reported situations the physiotherapists' suggestions were criticised by the physician and patients felt that the opinions of physicians should override that of physiotherapists:

*"The doctor told me that exertion was bad for me and that the physiotherapist was wrong, so I told her [physiotherapist] the doctor said you can't give me exercises" (Pa13, Pa-FG3)*

Whenever patients were open to the physiotherapists' choice of treatment, they wanted to share autonomy and decision-making with the therapist. A few patients sought a different physiotherapist when the preferred treatment was not provided:

*"She was good but I wanted her to do the techniques for my neck because they helped but she wanted me to do more exercises and I said okay but do the techniques for me, but she wouldn't, she kept saying the exercises are enough so I asked the doctor to refer me to another physiotherapist" (Pa16, interview)*

Patients mentioned different treatment methods that they that believed physiotherapists used such as exercises, electrical equipment, massage and manipulation or *"applying pressure on the spine to make it pop"*. Exercises were the most preferred treatment modality, followed by manipulation because these treatments were considered most effective and the speciality of physiotherapists:

*"I think the exercises and the hands-on work make for the perfect session… I think they are very good at it [exercise and manual therapy] but sometimes I see another therapist but he can't do the same techniques, he is not very good" (Pa3, Pa-FG1)*

The identity of the movement expert ascribed to physiotherapists was associated with a range of professional competencies and values that were important in order for patients to feel satisfied with the therapeutic encounter. From the perspective of patients, a satisfactory physiotherapy encounter required the physiotherapist to be knowledgeable and to have advanced manual skills in order to facilitate good therapy outcomes. Yet, physical improvements were not sine qua non of clinical competence. Patients wanted to receive sufficient information about their condition and they wanted to understand the physiological effect of the treatment on the body. They were critical in their assessment of physiotherapists. If the physiotherapist did not provide sufficient information and convincing answers to the patient's questions, the therapists' knowledge was judged as lacking. The following comment highlighted that the movement expert identity was not accorded to all physiotherapists; instead it was assigned to those who demonstrated knowledge:

*"He [physiotherapist] couldn't explain to me how exercises were decreasing my elbow pain, I was getting better, but I felt that he didn't understand what he was doing, he wasn't knowledgeable, but his colleague gave me a satisfactory explanation; she was indeed an expert" (Pa14, Pa-FG3)*

With regards to professional values, the expert physiotherapist was expected to hold themselves accountable for helping patients achieve their goals. They were expected to a personal manner that is characterised by being empathetic, caring and keen on listening to patients. The expert physiotherapist was required to support and comfort, and provide advice on good postural habits:

*"The good physiotherapist should tell the patient how to sit and how to sleep so they don't throw their backs" (Pa15, Pa-FG3)*

Physiotherapy was considered effective in relieving pain and increasing functional mobility, but some patients felt that the effect of treatment was transient as compared to medications which have longer analgesic effect. A few patients added that they did not expect the physiotherapist to restore spinal alignment; they rather expected manual therapy to decrease pain and improve movement:

*"The pop doesn't mean that he pushed the disc back in but the pressure [mobilisation] makes the spine crack which lessens your back and makes you move better" (Pa5, Pa-FG1)*

Patients (Pa1, 5, 8, 9, 12 and 16) who had experiences with both physiotherapists and physiatrists could not differentiate between their roles. It was believed that both healthcare providers offered similar services and used comparable physiotherapeutic methods; although it was acknowledged that

physiatrists were also able to prescribe medications. Those patients were aware that a physiatrist was a medical doctor, while the physiotherapist was not. Four of them felt that physiatrists were more proficient and knowledgeable, while 2 patients believed that physiatrists and physiotherapists were equally qualified (Pa8 and 9). Nonetheless, all 6 patients emphasised that they were after a holistic treatment that combined the expertise of both physiotherapists and physiatrists. However, 5 such patients reported that the collaboration between physiotherapists and physiatrists was lacking:

*"The physiatrist was giving me medications and like electrical impulses for the nerves and the physiotherapist was giving me exercises, but both of them were telling me different things about my condition because the physiatrist said the nerve was responding but the physiotherapist said the electrical stimulation was useless and I was confused… they should discuss my case together and give me one answer" (Pa1, Pa-FG1)*

All patients accorded physiotherapy a lower professional status than medicine, dentistry and pharmacy, but one that was higher than nursing. This is because it was believed that physiotherapists had less knowledge and expertise than medical doctors, and because the nature and purpose of physiotherapy as a 'profession' was not well-known to the public. Patients did not consider physiotherapists to be doctors but they were willing to address physiotherapists as such to show them respect:

*"I call her [physiotherapist] doctor out of respect because Miss is not a professional title, but I know she is not a doctor, I know she didn't go to medicine school, but anyway I think that physiotherapists are good at their job" (Pa8, Pa-FG2)*

All patients felt that physiotherapy education and practice in Egypt was developing, regardless of whether they believed that physiotherapists had sufficient knowledge and competencies to work without being directed by a medical professional. However, most patients believed that physiotherapy was less advanced in Egypt compared to western countries as they felt that many Egyptian physiotherapists were not knowledgeable. Two patients had treatment experiences in Egypt and in western countries; they believed that many Egyptian physiotherapists used outdated and less effective treatment methods than their western peers:

*"Of course I had better treatment in Germany because most therapists use primitive and old treatments like hot packs" (Pa9, Pa-FG3)*

Therefore, the narratives provided by patients suggested that they saw physiotherapy as a para-profession that did not have a clear public profile but was developing. They believed that physiotherapists were experts specialised in movement and functional problems. However, some patients doubted the ability of physiotherapists to practice in an informed and autonomous fashion.

### 6.4.2 Physician perceptions of physiotherapy:

This subcategory presents physicians' perceptions of physiotherapy as a profession with regards to its body of knowledge, educational standards, and scope of practice, professional boundaries, treatment methods, effectiveness and limitations. It also reports on the level of autonomy, clinical expertise and professional status of physiotherapists as perceived by physicians. Twenty-six

physicians participated in this study. They were, however, split in their perceptions of physiotherapy. Physicians who conveyed extensive knowledge of physiotherapy tended to have positive perceptions of the 'profession' and vice versa. Several physicians indicated that their knowledge of physiotherapy emanated from their close inter-professional relationships with physiotherapists. They emphasised that medical education did not promote sufficient awareness of the scope of physiotherapy and the role of physiotherapists in different fields. Eleven physicians demonstrated wide knowledge of physiotherapy and an overall positive perspective of it.

On the contrary, 15 physicians had limited awareness of the role and purpose of physiotherapy and expressed negatives views regarding different aspects of its education, practice and social status. Table 6.2 shows the distribution of physicians with regards to their perceptions of physiotherapy.

**Table 6.2: The distribution of physician participants based on their perceptions of physiotherapy**

| **Perceptions of physiotherapy** | **A rising para-profession of movement experts** | **A usurper occupation of glorified technicians** |
|---|---|---|
| **Physician participants** | Dr2, 3, 4, 5, 9, 10, 11, 12, 14, 16 and 24 | Dr1, 6, 7, 8, 13, 15, 17, 18, 19, 20, 21, 22, 23, 25 and 26 |

### 6.4.2.1 A rising para-profession of movement experts:

As shown in table 6.2, 11 physicians considered physiotherapy a para-profession. They agreed that physiotherapy practice and education have been continuously developing in Egypt, but they believed that its professional

standing in the healthcare hierarchy and the society did not reflect the status of an established profession because physiotherapy was not a preferred career for upper and middle class students. This perspective within the data was articulated by 2 physiatrists (Dr9 and 10) and 9 physicians from various specialities (Dr2, 3, 4, 5, 11, 12, 14, 16 and 24).

This group of physicians considered the body of physiotherapy knowledge to be large and diverse as it comprised of core and specialised sciences. Core sciences included anatomy, physiology, biochemistry, histology and pathology. These sciences were considered the foundations of all healthcare vocations including physiotherapy, medicine, pharmacy and dentistry.

Specialised sciences were specific to the clinical practice and professional role of physiotherapy. Several examples of specialised sciences were given including biomechanics, muscle, neurological and exercise physiology, electrotherapy and manual therapy. This group of physicians believed they had more knowledge of core sciences than physiotherapists; with the exception of anatomy. Physiotherapy education was considered to have given physiotherapists profound understanding of anatomy which underpinned physiotherapeutic assessment and treatment:

*"I give it to them [physiotherapists]; nobody knows human anatomy better than them" (Dr5, neurologist, Dr-FG1)*

This group of physicians believed that specialised physiotherapy sciences or the global physiotherapy knowledge was complex and constantly developing, and thus involved highly technical and advanced information that were not included or were inadequately covered in medical education. They believed that

physiotherapists worldwide had more knowledge of the specialised sciences that characterised their body of knowledge than physicians. Specialised physiotherapy knowledge was seen as credible and sound for it was developed through research.

However, it was argued that the body of physiotherapy knowledge was mostly developed in the west. Those physicians believed that some Egyptian physiotherapists were research users, but not research or knowledge producers. They argued that Egyptian therapists made limited published contributions to the body of global physiotherapy knowledge. They suggested that physiotherapy education did not promote research activities which they believed was a common pitfall of allied-health education in Egypt:

*"We don't see many physiotherapists and nurses doing research; I think because these fields are new in Egypt and their education is still developing" (Dr12, Orthopaedist, Dr-FG3)*

This group of physicians believed that some physiotherapists followed an evidence-based practice approach to patient management, and thus provided good therapy outcomes particularly for patients with neuro-musculo-skeletal conditions:

*"I think some physiotherapists are aware of the literature and use new techniques so yeah patients get better with physiotherapy and they need it specially in sport injuries and fractures and stroke" (Dr2, orthopaedist, Dr-FG1)*

Limitations of physiotherapy were understood in relation to the nature of diseases, the patients' overall health condition as well as the effectiveness of

medical treatment and the timing of physiotherapy referral. For incurable conditions, physiotherapy was required for maintenance and the prevention of deterioration. In the absence of symptoms, physiotherapy was considered prophylactic to prevent the future development of postural problems. As such, good awareness of the scope of physiotherapy in prevention, rehabilitation and prophylaxis was demonstrated:

*"He [physiotherapist] is not going to cure ataxia or Parkinson's or MS [multiple sclerosis] but I refer these patients to the therapist because they will get worse without him… they do get better with physiotherapy both physically and mentally" (Dr4, neurologist, Dr-FG1)*

The indirect positive effects of physiotherapy on mental health were acknowledged, but its scope of practice in psychiatry was considered minor. However, 1 neurologist (Dr3) was well-informed about the role of physiotherapy in psychiatry; especially in the management of psychosomatic pain. Physiotherapy applications in genecology, oncology and plastic surgery were considered minor and focused on prevention and/or maintaining the patient's general mobility. It was believed that physiotherapy had no role in some fields, namely ophthalmology, emergency medicine and urology. On the contrary, the scope of physiotherapy in the fields of paediatrics, orthopaedics, neurology, cardio-pulmonology, burns, general surgery and intensive care was considered large and the role of physiotherapists was described as critical.

With the exception of 1 paediatrician (Dr24), this group of physicians were also familiar with various treatment methods that physiotherapists used and they cited several of them with some explanation of the purpose. This knowledge

was obtained through close and collaborative working relationships with physiotherapists. Physicians appreciated having such knowledge hence it enabled them to make appropriate referrals and inform patients' perceptions of physiotherapy:

*"I like to attend the sessions especially when she [physiotherapist] is doing orofacial rehabilitation because it adds to my knowledge and I then can explain how physiotherapy works to my patients" (Dr5, neurologist, Dr-FG1)*

Physiotherapists' expertise and clinical skills were seen as diverse, and their different specialities were recognised and appropriately consulted. However, there was a perceived generation divide within the physiotherapy workforce whereby physiotherapists were classified into two tiers. Good physiotherapists were young and had good quality university education; they were considered highly skilled and engaged with evidence-based practice. The opposite was true for older generations of physiotherapists who had diploma-level qualifications:

*"I would say the old physiotherapists are technicians, the new generations are not, they really are experts" (Dr12, orthopaedist, Dr-FG3)*

While diploma holders were considered technicians, the young physiotherapist was the movement expert whose role was understood as follows:

*"Their work is what gets the patient to be move again and get back to their job… its everything from breathing exercises and bed mobility to range of motion and muscle strength and coordination" (Dr10, physiatrist, Dr-FG3)*

Physiotherapists' role was valued and it was considered indispensable to patients:

*"Physiotherapists do what medications and surgery cannot do; frankly what nobody else can do for the patient" (Dr3, neurologist, Dr-FG2)*

The identity of the movement expert as accorded to young physiotherapists was characterised by several clinical skills and a personal manner that was described as professional. Expertise in the field of physiotherapy included specialised knowledge that underpins physiotherapy diagnosis, clinical reasoning and evidence-based practice, as well as a wide exercise database and good hands-on skills for effective management. Professionalism in physiotherapy involved respecting and collaborating with patients and colleagues within the medical team to ensure optimal therapy outcomes. Professional physiotherapists were expected to keep and circulate accurate patient records, communicate effectively and share decisions with their medical colleagues. Professionalism also included commitment to continuous professional development through self-directed learning and postgraduate studies, as well as an eagerness to exchange knowledge with colleagues both intra and inter-professionally. Some physicians emphasised that professional physiotherapists should espouse passion for and pride in their work:

*"You have to have passion for it [physiotherapy] because it's such a brilliant field otherwise you should find yourself something else to do and leave physiotherapy for the good ones who are proud of their job" (Dr9, physiatrist, Dr-FG3)*

For these physicians, many young physiotherapists embodied all of the above expertise and professional values which enabled them to perform the movement expert role with high levels of autonomy. They understood autonomy

in physiotherapy as informed, self-directed practice in relation to patient evaluation, identification of problems amenable to physiotherapy, and choosing and providing appropriate treatment modalities. Autonomy also included setting the treatment goals and informing patient and physician expectations of therapy outcomes together with the duration of physiotherapy needed to actualise the desired outcomes. Accordingly, the type of reference used by this group of physicians did not dictate any aspect of the therapist's work. On the contrary, the reference served to facilitate the physiotherapist's ability to work autonomously by enclosing the patient's full medical record:

*"I expect a good therapist to know their work more than me, so I just share my notes and all the reports with them and a nice, professional note that says a case of so and so for your kind care, and they take it from there and we stay in touch" (Dr24, paediatrician, Dr-FG6)*

All physician participants in this study objected patient self-referral and first contact practice in physiotherapy. For this group of physicians their objection was contingent upon limited public awareness of physiotherapy and the subsequent inability to identify the need for its services; making it challenging for patients. Self-referral was also thought to be unpopular because patients prefer to seek medical consultation for they trust physicians' ability to signpost them to other healthcare services. It was believed that self-referral would eventually increase physician visits as patients require their input and reassurance, and thus it would increase healthcare costs.

Moreover, there was a concern for patient safety hence the physiotherapy workforce was not universally competent. Thought to be technicians, diploma-

qualified physiotherapists were considered incapable of practicing autonomously due to out-of-date and limited knowledge and diagnostic skills. Accordingly, they would fail to identify red flags and contraindications, plan and execute effective and safe treatment, and thus would endanger patients and jeopardise their recovery.

These concerns did not apply to university educated physiotherapists. However, it was argued that physicians are the only healthcare professionals capable of conducting full and systematic medical assessment and diagnosis as well as organising interdisciplinary patient care. This was based on physicians' long education in pathology, experience in diagnosis and good awareness of the role of other healthcare providers. While their specialist expertise was not doubted, physiotherapists were expected to be semi-autonomous in that they cannot be the first point of contact because their ability to identify and manage the patients' overall medical condition was questioned. Also, direct access to physiotherapy was opposed for it would be an illegal encroachment on the boundaries of the medical profession. Physicians were protective of their role as gate keepers to other healthcare services; because they believed that this role was underpinned by knowledge:

*"Many therapists are very good, but this doesn't mean that they should take over a part of my role because all referrals should go through doctors… they [physiotherapists] can't have the same level of autonomy we have, in the same way that nurses can't have equal autonomy to physiotherapists, the physiotherapist has enough knowledge to be in charge of what they do, but I need to tell the nurse what to do" (Dr16, orthopaedist, Dr-FG4)*

Despite their good awareness of and positive perspectives on physiotherapy, all 11 physicians shared similar sentiments to those articulated in the former quote. Based on the perceived hierarchy of knowledge described above, medicine was an autonomous profession, and physiotherapy was a semi-autonomous para-profession, while nursing was a non-autonomous occupation. Though less prestigious than medicine, dentistry and pharmacy; physiotherapy was accorded higher professional status than nursing and occupational therapy, and it was perceived to be the most esteemed allied-health vocation in Egypt. It was believed that the nursing and occupational therapy workforce were still predominantly working-class which reduced their status, while the physiotherapy workforce was becoming *"more middle-class"* or *"gentrified"*:

*"Physiotherapy as a career has been moving up in the society, you can say that it has become more middle-class; it's kind of more gentrified now, but not fully middle-class yet" (Dr9, Physiatrist, Dr-FG3)*

Some physicians noted that the number of recently qualified physiotherapists who appeared to belong to the working-class has been declining since the early 2000s. They attributed this phenomenon to the increase in the entry criteria and study duration of the bachelor of physiotherapy. This made physiotherapy less attractive to working-class students who preferred short degrees that would provide speedy employability; such as nursing diplomas. They believed that the developments in physiotherapy education have made physiotherapy a more appealing fall-back from medicine, dentistry and pharmacy for middle-class students. Physicians were, however, ambivalent about the attractiveness of physiotherapy as a first choice of career for the middle-class because its status was still less than that of medicine. Nonetheless, it was believed that the

professional status of physiotherapy has improved following a perceived decline in the number of working-class physiotherapists and an increase in the representation of the middle-class within the physiotherapy workforce.

Nicholls (2012) presented a Foucauldian analysis of the history of physiotherapy in the United Kingdom. He argued that the entrance of white, middle-class men helped physiotherapy achieve higher professional autonomy and status because this group had high rank and power within the social order. In this study, some physicians (Dr11, 12, 14, 16 and 24) emphasised that it was the entry of middle-class women that improved the professional status of physiotherapy because it served to distance its external professional identity away from nursing, and closer to medicine where the representation of working-class women was minor:

*"Nowadays physiotherapy isn't a bad option if you have missed out on the top three [in order: medicine, dentistry and pharmacy], so we have been seeing more girls [female physiotherapists] who are quite middle-class; they dress and talk very much different than your typical nurse, just like female doctors, they do make physiotherapy look a lot better because they brought a lot of class with them" (Dr11, orthopaedist, Dr-FG3)*

The idea that middle-class women raised the social profile of physiotherapy can be explained in relation to the positionality of women in the Egyptian society (Al-Saadawi, 2007). On one side, women are denied power and autonomy, but on the other side they are admired for being refined and cultured which reflect high birth caste (Al-Saadawi, 2007). In this masculine and hierarchical society middle-class women enjoy an esteemed social status, which according to

physicians' narratives was improving the professional standing of physiotherapy. It was forecasted that the status of physiotherapy would continue to increase and could become equal to pharmacy, but not medicine which was considered the most prestigious career in Egypt. This is because the young generation of physiotherapists were keen on using and obtaining PhDs, which would eventually increase their collective cultural capital and status in addition to advancing physiotherapy education and practice.

In conclusion, for those 11 physicians the professional identity of physiotherapy was that of a para-profession on the rise; continuously developing and producing physiotherapists so highly qualified they were considered movement experts. It was the knowledge, competencies and professionalism of those physiotherapists that has been gradually improving the external image and status of physiotherapy.

#### 6.4.2.2 A usurper occupation of glorified technicians:

This position within the data was represented by a total of 15 physician participants; 8 of which were physiatrists (Dr6, 7, 8, 13, 15, 19, 20, 21) and 6 were physicians from different specialities (Dr1, 17, 18, 22, 23, 25 and 26). All 15 physicians believed that allied-health vocations were complementary and subordinate to medicine. It was considered important to direct the work of allied-healthcare providers to ensure patient safety. Similarly, physiotherapy was considered an occupation ancillary to medicine, and thus its practice must be dictated by medical doctors. It was argued that physiatrists (i.e. doctors of

physical medicine) had a historical claim to overseeing the work of physiotherapists whom they have trained and supervised for decades. Based on this claim, physiotherapists were regarded as technical staff operating directly under physiatrists' supervision:

*"We used to teach them and train them… we wrote the program for them and they used to do it and now they don't want us to do the assessment and write the [physiotherapy] program anymore, but this is a part of our job and we are not going to give it up" (Dr8, key figure in Physiatrist Society, Dr-FG2)*

From this perspective, the professional boundaries of physiatry extended over all clinical decisions in physiotherapy regarding assessment, diagnosis, treatment goals and choice, evaluation of progress and patient discharge. On the other hand, the professional boundaries of physiotherapy were involved treatment provision only hence physiotherapists' role was to *"give the treatment we [physiatrists] write"* and *"follow orders".* This position was, therefore, strongly tied to the role-boundary disputes between physiotherapy and physiatry.

Physiotherapy was perceived as a usurper occupation seeking to expand its boundaries by encroaching on and eventually excluding physiatry. The usurpation of physiotherapy was considered threatened physiatrists' existence within the field of physiotherapy practice, and challenging to the overall dominion of the medical profession over allied-healthcare. While physiatrists wanted to protect their role as physiotherapists' *"supervisors"* and *"direct managers"*, other physicians from different specialities objected autonomy and role exclusivity in physiotherapy out of fear that the professionalisation of physiotherapy would motivate other allied-healthcare occupations to expand their role and increase their autonomy at the expense of medical authority. Such

perceived threats to medical dominance were clearly expressed in the narratives provided by this group of physicians. They used phrases such as *"we [physicians] gave them an inch, but they took a mile"* which reflected their frustration with the professionalisation of physiotherapy, and *"we are just trying to contain physiotherapists"* which represented their opposition to autonomy and role exclusivity in physiotherapy practice:

*"They [physiotherapists] don't want physiatrists to practice [physiotherapy] and they don't want any doctor to tell them what to do and the next thing you know that nurses might say we don't want to listen to the doctor either" (Dr22, gynaecologist, Dr-FG5)*

Physiotherapy was considered to be deceiving the state and public by masquerading as a profession. The central argument supporting this viewpoint was that physiotherapy in Egypt did not have its own body of knowledge and its practice was none evidence-based, and thus often ineffective and unsafe unless dictated and supervised by a medical professional. Therefore, physicians who articulated these perspectives believed that physiotherapists were supposed to be non-autonomous.

For this group of physicians, the perceived failure to produce a distinctive knowledge base was due to the inability and reluctance of Egyptian physiotherapists to conduct rigorous research, which was inadequately taught at a bachelor level and not promoted post-qualification. It was argued that physiotherapists were not research producers; hence their published contributions comprised of a small number of predominantly unoriginal confirmation studies. The same criticism applied to physiotherapists' unpublished dissertations, which were also considered of poor methodological

and written quality, plagiarised from western studies and largely unscientific because they relied on non-academic online resources. Therefore, it was judged that Egyptian physiotherapy has neither built a distinctive knowledge base to characterise its clinical philosophy, nor contributed to the development of physiotherapy knowledge, practice and research on the international level. Accordingly, Egyptian physiotherapy was considered an occupation as opposed to the Egyptian medical profession which has been making globally recognised contributions:

*"What has [Egyptian] physiotherapy done? Where is the knowledge it produced to share with the world and benefit humanity? The answer is none; it has zero scientific contributions, even their master dissertations are copied from abroad" (Dr1, orthopaedist, interview)*

It was believed that Egyptian physiotherapy has built its education and practice on knowledge that was inadequately and uncritically *"copied and pasted"* from medicine and western physiotherapy. This group of physicians argued that Egyptian physiotherapy did not have its own core sciences; instead it had copied knowledge from foundational medical sciences, such as anatomy and physiology, to form the basis of its education. They added that said medical sciences were insufficiently covered in the bachelor of physiotherapy resulting in a parochial understanding that did not enable for independent practice; particularly diagnosis. Similarly, they explained that specialised sciences as developed by western physiotherapists, including electrotherapy, massage and exercises, were randomly *"mixed and matched"* to form the course content of the Egyptian bachelor of physiotherapy:

*"They [physiotherapists] just took bits and bobs of anatomy and physiology with some chucks of pathology, without even thinking how to apply this knowledge in physiotherapy that's why they can't be trusted to work alone with patients… they just mixed and matched some [physiotherapy] techniques from abroad haphazardly just to make the stuffing of the course to teach their kids something; et voilà suddenly they have a faculty and a bachelor degree" (Dr26, orthopaedist, Dr-FG6)*

Physiotherapy education was deemed inadequate in both the quantity and quality of knowledge it delivered. It was considered primitive and focused on repetitive manual training that taught physiotherapists hands-on skills without teaching assessment and clinical reasoning skills:

*"They [physiotherapists] didn't learn how to do differential diagnosis and how to plan the treatment… they didn't learn how to think that's why they have to be told what to do… most of them can't even do the program like I said" (Dr7, Key figure in Physiatrist Society, Dr-FG2)*

This group of physicians discredited the knowledge, clinical reasoning and technical skills of physiotherapists. Accordingly, physiotherapists were considered unqualified for autonomous practice and unworthy of state and public trust. Therefore, the external professional identity that this group of physicians accorded to physiotherapists was that of the glorified technician whose clinical expertise were limited and professional status was less than physicians, dentists, pharmacists and veterinarians, and equal to nurses. The glorified technician identity was linked to massage, electrotherapy and the historical origins of physiotherapy in physical education.

Physiatrists who adopted this standpoint had good awareness of the role, therapeutic methods and effectiveness of physiotherapy hence they performed

a similar role. However, they questioned ability physiotherapists to perform this role independently. On the other hand, other physicians who represented this position had limited awareness of its scope of practice, treatment methods and effectiveness. Physician participants 1, 18, 22, 23, 25 and 26 thought that the scope of physiotherapy included physiotherapeutic treatments for paediatrics, orthopaedics and neurology only. Physiotherapists were not expected to conduct any form of assessment including history taking, physical tests and requesting investigations such as X-rays, and thus the diagnostic aspect of their role was not recognised. Physiotherapists' role was summarised in the following clinical activities and treatment methods: applying electrotherapy modalities including TENS, Ultrasound, infrared and shortwave, giving massage, doing passive movement, helping adults and children during walking and other activities of daily living, and assisting physiatrists and physicians:

*"I send patients to the physiatrist and he tells the therapist what to do or I write it [physiotherapy treatment] for the therapist in my [referral] letter" (Dr23, orthopaedist, Dr-FG6)*

Physiotherapy was considered effective in providing symptomatic pain relief, maintaining joint mobility and muscle tone. Some physicians (Dr18, 22, 23, 25 and 26) did not consider physiotherapy capable of producing long-term improvements in pain and functional status, which were attributed to the natural progression of curable conditions and/or the success of medical management. These perceptions could result into late physiotherapy referrals hence this group of physician did not realise physiotherapists' role during the pro-operative or intensive care stages. It also meant that chronic, incurable conditions, such

as ankylosing spondylitis or chronic obstructive lung diseases, were not referred to physiotherapy. Patients were also not referred after complex surgical procedures, such as aortic surgery, out of fear that physiotherapists' perceived incompetence would jeopardise the patient's livelihood and surgical outcomes:

*"Physiotherapists do not have a place on the cardiothoracic surgery ward or the ICU; they could hurt someone" (Dr18, cardiothoracic surgeon, Dr-FG5)*

Much like nursing, physiotherapy was deemed a working-class occupation because its educational standards were low and its work was repetitive and manual. Therefore, physiotherapy practice considered was not prestigious enough to attract middle and upper-class students. The financial remuneration of physiotherapy was seen as too high for the nature of its role. Physiotherapists were criticised for overcharging for their services which was regarded as unprofessional behaviour:

*"I think they [physiotherapists] overcharge patients especially in private clinics because their work is pretty simple so they shouldn't charge as much" (Dr1, orthopaedist, interview)*

In summary, for 15 physicians the professional identity of Egyptian physiotherapy was that of a usurper occupation that lacked its own body of knowledge and was seeking professionalisation by borrowing from medicine and western physiotherapy. The external professional identity they ascribed to physiotherapists was that of technicians whose claims for autonomy and professional status were unfounded due to their lack of scientific knowledge and clinical competencies.

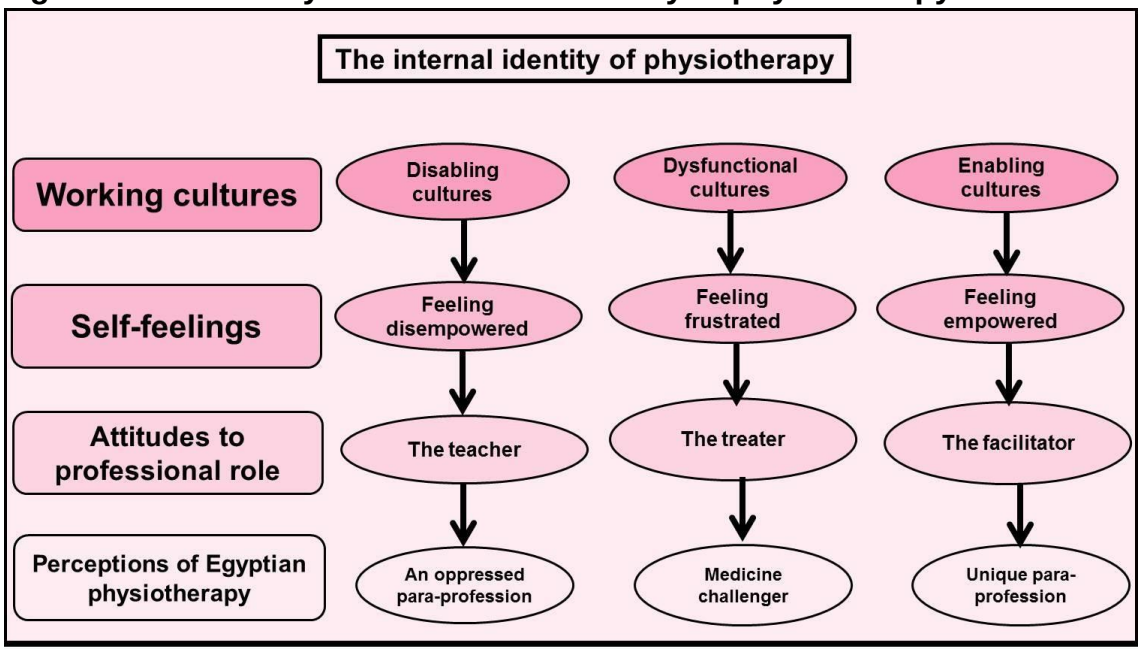
## 6.5 Category 4: The internal professional identity of physiotherapy

The following section discusses the fourth category of the study findings around the "The internal professional identity of physiotherapy" which provides a picture of Egyptian physiotherapy as seen its own members. The internal identity of physiotherapy encompasses the individual professional identity of physiotherapists and their perceptions of their own 'profession'. The former describes the identity of physiotherapy at the micro-level, while the latter relates to the macro-level or organisational identity of physiotherapy (Kenny, Whittle and Willmott, 2011). The micro and macro levels of professional identity are interconnected and co-dependent given the collective meanings and sense of similarities that are shared by members of the same professional group that tend to distinguish them from outsiders (Wackerhausen, 2009). Both are also influenced by the external professional identity of physiotherapy which represents how key stakeholders perceived the identity of physiotherapy and physiotherapists (See section 6.4). The influence of patient and physician perceptions on physiotherapists' individual identity and how they viewed their 'profession' will be discussed throughout this category.

The category 'The internal professional identity of physiotherapy' is formed of 3 subcategories; namely 'Working cultures', 'Attitudes towards the professional role' and 'Perceptions of Egyptian physiotherapy'. The 'working cultures' subcategory describes the structure and dynamics of the environment in which physiotherapists were employed. The nature of the work scenario determined the degree of autonomy that physiotherapists had and their access to continuous professional development which influenced how they practiced and

impacted upon their self-feelings or personal sense of self. Physiotherapists' feelings extended along a continuum between negative feelings of disempowerment to positive feelings of empowerment as influenced by different aspects of the working culture that they operated within. The second subcategory ''Attitudes towards the professional role' explains how physiotherapists defined and performed their professional role and responsibilities in relation to patient care. Three different attitudes to the professional role were reconstructed from physiotherapists' comments including 'The teacher', 'The treater' and 'The facilitator'. A range of different factors that shaped the manner in which physiotherapists perceived and performed their role are discussed. These factors included the professional values they considered important, their understanding of evidence-based practice and how they conceptualised the role that patients play in therapeutic encounters; all of which were also affected by the culture of the work environment together with its impacts on physiotherapists' individual self-feelings. Finally, the third subcategory 'Perceptions of Egyptian physiotherapy' describes how physiotherapists perceived their profession. The relationships between physiotherapists' self-feelings, attitudes towards the professional role and perceptions of physiotherapy as a profession are discussed and contextualised within the structure and culture of the work environment. Figure 6.4 below summarises the fourth category.

**Figure 6.4: Summary of 'The internal identity of physiotherapy'**




### 6.5.1 Working cultures:

Thirty-two physiotherapists participated in this research, of which 24 worked in both public hospitals and private clinics to supplement their income. Eight female physiotherapists (Pt1, 2, 3, 4, 5, 19, 27, and 29) were only employed in public hospitals to save time for their family responsibilities. All physiotherapists agreed that employment in the public sector provided job stability, but the caseload was large and pay was low for most healthcare providers including physiotherapists. They attributed this to limited funds which meant that governmental organisations were understaffed and didn't offer satisfactory remuneration:

*"Public hospitals have a limited budget, and therefore salaries aren't good especially that everyone in the hospital is overworked because there isn't enough manpower" (Pt17, novice, Pt-FG3)*

Physiotherapists explained that they developed expectations of autonomous practice during undergraduate education. They expected that they would be able work in a self-directed manner and perform different aspects of their professional role and responsibilities based on their own clinical reasoning as informed by research evidence. They expected to have an esteemed professional status that was equal to that of medicine, pharmacy, dentistry and veterinarian medicine; which were considered established and prestigious healthcare professions in Egypt. However, upon graduation, physiotherapists transitioned into an employment scenario that was dominated by physiatrists:

*"In university we learned evidence-based practice and research, but when we graduated we found ourselves working under physiatrists; no autonomy, no respect, we are like technicians not like doctors of physiotherapy" (Pt18, novice, Pt-FG3)*

The interview data suggested that, unless Egyptian physiotherapists were able to change their working conditions, the 'default' or most prevailing culture in the work scene was one where physiotherapists had no autonomy and their professional status was compromised as they worked in departments controlled by physiatrists. The participants suggested that some physiotherapists adapted to this employment scenario because they received poor quality education and did not have the fundamental skills that would allow for autonomous practice. However, the physiotherapists interviewed in this study could not adapt to such working culture because their undergraduate education prepared them for an autonomous role that would confer upon them the same level of respect bestowed upon medical doctors:

*"Some physiotherapists aren't qualified because they went to terrible private institutions so they get used to working under physiatrists; like most of the old generation [of physiotherapists] because they were trained to be technicians*

*anyways, but we weren't, we couldn't accept it and we changed the situation here, but it's not the same in all hospitals" (Pt23, junior, Pt-FG2)*

Participants' narratives identified 3 different working cultures in public hospitals. These cultures could be conceptually separated based on the degree of clinical autonomy that physiotherapists were able to achieve and the nature of their inter-professional relationships with physiatrists. Table 6.3 shows the distribution of physiotherapists according to the culture in their work environment.

**Table 6.3 Distribution of physiotherapists based on working culture**

| | **Disabling working cultures** | **Dysfunctional working cultures** | **Enabling working culture** |
|---|---|---|---|
| **Physiotherapist participants** | Pt1, 2, 3, 4, 5, 17, 18, 19, 26, 27, 28 and 29 | Pt6, 7, 13, 14, 21, 23, 24, 25, 30 and 31 | Pt8, 9, 10, 11, 12, 15, 16, 20 and 32 |

The following sections discuss the nature of the three working cultures in detail.

#### 6.5.1.1 Disabling working cultures:

Thirteen novice physiotherapists participated in this study; 5 of which were in the first year of practice post-qualification and 8 had nearly 2 years of work experience, and they all worked in departments led by physiatrists. They described the culture in these departments as disabling because they had no clinical autonomy and there was no evidence of respect for physiotherapist professionals. Novices explained that they could not practice in the way they were taught and could not apply the knowledge 'owned by the physiotherapy profession'. They attributed their lack of autonomy to physiatrists' hegemonic attitude towards inter-professional relationships hence they did not involve

physiotherapists in decision-making. They explained that physiatrists limited the role of physiotherapists and the scope of their practice. Specifically, physiatrists were in charge of initial patient evaluation, planning the physiotherapy management program, patient revaluation and discharge, and they restricted the role of physiotherapists to *"giving the treatment modality that the physiatrists chose"*.

Physiotherapists described the type of treatment modalities that physiatrists prescribed as *"conventional", "one size fits all"* and *"parochial"* because the treatment often consisted of *"simple and basic exercises, massage and electrotherapy" (Pt5, novice, Pt-FG1).* They argued that the prescription of such conventional treatments narrowed their scope of practice as they were not able to apply the diverse and contemporary modalities they learned during undergraduate studies. They believed that the treatment methods that physiatrists prescribed reflected both their limited awareness of contemporary physiotherapy approaches and an underestimation of physiotherapists' clinical expertise:

*"It feels like I give the same session to all patients because they [physiatrists] always write the same thing… they don't think we have skills because they actually don't know about new techniques" (Pt2, novice, Pt-FG1)*

Novice physiotherapists noted that they did not have opportunities for continuous professional development (CPD) which prevented them from acquiring new knowledge and skills to advance their practice. They indicated that the hospitals did not fund formal professional development activities, such as seminars, because physiotherapists were not expected to change practice. They also reported that they did not have learning opportunities in the

workplace because senior physiotherapists did not have access to modern and high standard physiotherapy education, and therefore they did not have enough knowledge to provide effective mentorship and training. They felt that most physiotherapists did not upgrade their knowledge and practice, and added that CPD was discouraged because *"paying out of pocket for training is like a waste of money because we [physiotherapists] will just follow the physiatrists' orders regardless"*. The comment below summarised the lack of autonomy and learning opportunities that characterised disabling working cultures, and in return stifled the professional development of novice physiotherapists:

*"Physiatrists don't let us do the evaluation and take the history and plan the treatment like we are supposed to… I'm not learning new things because the hospital doesn't send us to conferences or give us any training because we are like technicians no there is no need to invest in us… our seniors don't really have knowledge to pass because back in their days the standards of [physiotherapy] were low" (Pt4, novice, Pt-FG1)*

Therefore, the novice physiotherapists in hegemonic, disabling working cultures were unable to achieve autonomy and professional growth, which made them feel oppressed and disempowered. Disempowerment was a complex emotional state that was strongly linked to absence of clinical autonomy and professional status. It involved negative self-feelings of depression, low self-esteem and a lack of agency to change the status quo:

*"It's depressing because nothing changes, the situation will never change and physiatrists totally dominate our work… I do feel depressed because I was cheated out of my career" (Pt4, novice, Pt-FG1)*

These adverse feelings emanated from the role conflict that the novice physiotherapist experienced hence they could not practice in the autonomous

manner they were taught. Previous studies also highlighted the negative impacts of role conflict in the workplace on the individual's self-feelings (Grafton, 2013; Haines and Saba, 2012). In this study, role conflict resulted into distress, a loss of sense of self and confusion in professional identity:

*"They [physiatrists] say that we aren't good enough, we aren't doctors, but we are, we should be, right? I don't even know anymore because I'm not working like a doctor, I'm working like a subordinate" (Pt19, novice, Pt-FG3)*

#### 6.5.1.2 Dysfunctional working cultures:

Some physiotherapists, including 5 seniors and 5 juniors, said that in the past they used to work directly under physiatrists and had no autonomy. They described their previous work environment in a similar way to the scenario that has been presented in the section above. However, this group of physiotherapists reported that they had gone on several strikes over a number of years to protest against physiatrists' dominion. They demanded the establishment of physiotherapy departments that were independent from physiatry units; in order to give physiotherapists more autonomy. Those physiotherapists worked in 3 different hospitals that fulfilled their demands and established physiotherapy departments:

*"We [physiotherapists] rallied-up and we went on strikes until we got our own department and now we are independent" (Pt14, senior, interview)*

Physiotherapists explained that their autonomy had increased hence they led and managed their own departments. They were able to work in a semi-

autonomous fashion given that physiotherapy referral was still managed by physiatrists or in other words patients could not directly access the services provided by physiotherapy departments. Physiotherapists were able to perform different aspects of the professional role in a self-directed manner, including assessment and determining the treatment choice. They were satisfied with this level of autonomy, but they were frustrated because they felt that physiatrists encroached on their professional role hence physiatrists offered physiotherapy services in their departments:

*"First we had to fight to get out of their departments and now we have to fight to get them out of our field" (Pt13, Key figure in EGPTS, interview)*

*"Physiatrists hijacked our role; they have been giving physiotherapy sessions like it's nobody's business" (Pt24, Junior, Pt-FG2)*

Many physiotherapist and physiatrist participants were competing over a similar role in the same hospital and both aspired for role exclusivity. Participants who adopted this competitive attitude towards inter-professional relationships were often involved in workplace conflicts and role boundary disputes. Physiotherapists believed that engaging in conflicts created a dysfunctional working culture that left them feeling frustrated and burned out. They also attested that these conflicts impacted negatively on patient care. Yet, they felt that engaging in conflicts was the most effective strategy to protect their role and autonomy. They were reluctant to collaborate with physiatrists as they believed that their knowledge and expertise were sufficient to ensure positive therapy outcomes:

*"It is our field and we are capable of doing our job to the fullest; they [physiatrists] are encroaching on our field" (Pt30, senior, interview)*

*"The whole environment is dysfunctional because it's stressful and it's not ideal for patients because there is no organisation… I don't want to have problems with physiatrists, but I'm protecting my work" (Pt22, junior, Pt-FG5)*

According to physiotherapists, physiatrists sought to justify their practice by discrediting physiotherapists' claims of knowledge and autonomy. They argued that physiotherapists were not competent enough to provide safe and effective treatments. Physiatrists also tried to delegitimise physiotherapists' claims to the doctor title, which had negative impacts on physiotherapists' self-feelings as it disconfirmed their individual professional identities:

*"When they [physiatrists] say I can't use the [doctor] title, they mean that I'm not a real doctor, well then who am I? A fraud… the syndicate should protect us and make it legit for us to use the title by the law; I can't believe that after all these years, I still have to fight to prove that I'm a doctor" (Pt24, junior, Pt-FG4).*

As shown above, physiotherapists in dysfunctional working cultures experienced identity disjuncture that resulted into negative self-feelings of insecurity, frustration and lack of self-fulfilment. They felt attacked, disrespected and unvalued, which all caused physiotherapists to protective of their role and resistant to collaborating with physiatrists.

**6.5.1.3 Enabling working cultures:**

Nine physiotherapists who worked in the same hospital reflected on the changes in their employment scenario. This group included 3 seniors and 6 juniors; they indicated that they attained more autonomy after their strike actions succeeded in putting pressure on hospital management to found an

independent physiotherapy department that was not under the control or supervision of physiatrists. Accordingly, both physiotherapists and physiatrists were able to practice physiotherapy in separate departments:

*"Physiotherapists went on many strikes in different hospitals and we did too and the hospital caved in and gave us a department away from physiatrists; they had their own department and gave physiotherapy sessions there and we practice in our department so once they refer cases to us, we have the autonomy to treat" (Pt15, senior, interview).*

This group of physiotherapists described their current inter-professional relationships with physiatrists as friendly and collaborative, but they noted that their relationship was not always collegial. They indicated that both occupational groups were initially competitive, and thus there were conflicts and role-boundary disputes between both groups in the workplace:

*"There were problems and like fights every other day at work; people [physiatrists and physiotherapists] didn't want to work together because physiatrists weren't used to us being autonomous and they were attacking us pretty hard and making the hospital and the patients doubt us and we were angry; we were like it's our field by the law, but eventually we had to share the work with physiatrists because it was the best thing for patients" (Pt32, junior, verification interview)*

As evidenced above, physiotherapists realised the importance of cooperating with physiatrists to ensure the continuity of patient care and improve the quality of physiotherapy services. They also explained that engaging in disputes at work created a stressful environment that detracted from their ability to focus on developing their knowledge and skills. As an outcome of this realisation, this group of physiotherapists formed a community of practice to facilitate their professional development. Wenger (1999) defined community of practice as a group of individuals in the same field or profession who participate in a process

of collective learning. The literature documented the positive effects of learning in a community of practice on healthcare providers' ability to acquire new knowledge, technical and clinical reasoning skills; which all promote development (Li et al., 2009; Ranmuthugala et al., 2011; Rowe 2012).

Physiotherapists in this study explained that being proactive members of a community of practice created an enabling working culture that supported growth. They engaged with different learning activities which increased their expertise and self-confidence. Accordingly, they were able to demonstrate knowledge and encourage physiatrists to cooperate with them based on an equal standing; which all gave rise to positive self-feelings of empowerment. Feeling empowered involved feeling competent and fulfilled on the professional level, and secure, valued and supported to the personal level:

*"We formed a study group to help each other develop and learn new things to improve our practice and eventually physiatrists saw that we were knowledgeable professionals and they responded well when we reached out to cooperate with them" (Pt9, junior, Pt-FG2)*

Physiotherapists emphasised that the increased collaboration with physiatrists had positive impacts on patient care due to enhanced decision-making and effective use of scarce resources:

*"We [physiotherapists and physiatrists] have so many patients and such limited resources so sharing equipment and indeed sharing opinions is crucial because we can come up with the best thing for the patient" (Pt11, junior, Pt-FG2)*

To conclude, the findings presented in the 'Working cultures' subcategory showed that physiatrists often adopted a hegemonic attitude towards their inter-professional relationship with physiotherapists. Physiatrists' hegemony created a disabling work environment where physiotherapists had no autonomy, which resulted into negative feelings of disempowerment. Egyptian physiotherapists could obtain more autonomy through strike actions. However, if physiotherapists were protective of their role and engaged with role-boundary disputes with physiatrists, they would create a dysfunctional working culture that impacts negatively on patient care and on physiotherapists self-feelings as they felt frustrated. Yet, if physiotherapists put the patient's best interest first, they would realise the critical need to cooperate with and share the domain of physiotherapy with physiatrists. Forming a community of practice is a key factor that helps physiotherapists to create an enabling working culture that fosters professional development and positive feelings of empowerment. Physiotherapists can increase their collective expertise and demonstrate knowledge which helps them forge collaborative inter-professional relationships that enhanced the quality of patient care. Therefore, physiotherapists could transform the culture in which they work and their relationships with physiatrists along with their level of autonomy.

### 6.6 Attitudes towards the professional role:

Three different attitudes to the professional role were reconstructed from physiotherapists' narratives around their approaches to patient management and therapeutic relationships. These roles were not fixed, but rather fluid in nature as physiotherapists reported a range of values and perceptions that characterised their approaches and defined their role-based professional

responsibilities. Moreover, some physiotherapists indicated that their management approach has changed as they engaged in a process of collective learning which provided further evidence that attitudes to the professional roles are indeed dynamic. The professional roles that were identified from physiotherapists' approaches to patient care were the teacher, the treater and the facilitator. Physiotherapists have been identified based on the professional role that was most prominent in their narratives to enable theoretical comparisons (Table 6.4).

**Table 6.4: The distribution of physiotherapists based on their attitude towards the professional role**

| **Therapeutic professional roles** | **The teacher** | **The treater** | **The facilitator** |
|---|---|---|---|
| **Physiotherapist participants** | Pt1, 2, 3, 4, 5, 17, 18, 19, 25, 26, 27, 28 and 29 | Pt6, 7, 13, 14, 21, 22, 23, 24, 30 and 31 | Pt8, 9, 10, 11, 12, 15, 16, 20 and 32 |

The following sections elaborate on each of the 3 attitudes to the professional role.

### 6.6.1 The teacher:

The role of the teacher was represented by the approach of 13 novice physiotherapists, which included 11 females (Pt1, 2, 3, 4, 5, 18, 19, 25, 26, 27 and 29) and 2 males (17 and 28). It was the most commonly adopted role by female physiotherapists in this study.

Novice physiotherapists who demonstrated this attitude towards the professional role worked in disabling working cultures characterised by dominance of physiatry over physiotherapy practice. Consequently, novices' clinical autonomy and scope of practice was limited. Specifically, they were

unable to conduct assessments and plan the management program. The novice physiotherapist's role was restricted to providing the treatment as prescribed by physiatrists.

Despite not being able to perform their role to full capacity, this group of physiotherapists sought to educate patients and provide them with a wide range of information. They believed that the main role of physiotherapists was to teach patients about the nature of their conditions to enable for long-term self-management. They aimed to educate and encourage patients to help them manage their own symptoms as directed by the physiotherapists' knowledge. The teacher physiotherapist instructed patients on how to perform exercises in a safe and effective manner to avoid potential injury and to restore normal movement and function:

*"I do my best to teach the patient the exercises that they need to do at home to get better and how to do the exercises correctly because I want the patient to feel like they don't need the sessions anymore" (Pt1, novice, Pt-FG1)*

They explained that patients wanted their questions answered thoroughly and wanted to learn about their physical problems. They believed that patients needed sufficient information, regular advice and encouragement. The teacher role was described as follows:

*"I try to encourage the patient to ask me anything and I try to teach them about their body and the exercises they have to do. I try to reassure them that they will get better and I give them positive feedback to motivate them" (Pt28, novice, Pt-FG5)*

Patient education was considered important to help them develop realistic expectations of therapy outcomes. Although they were keen on encouraging

and answering patients' questions; the teaching approach of novice physiotherapists appeared to be authoritarian and didactic. They described patient education as a one-way process whereby the physiotherapist imparted knowledge on patients by delivering facts. Patients' perceptions and experiences were respected, but were not considered a credible source of information that physiotherapists could learn from. This is because it was believed that patients often had little or skewed understandings of their conditions. The teaching method of novice physiotherapists was grounded in their understanding of evidence-based practice (EBP) which was interpreted as a practice that was strictly guided by scientific knowledge. This understanding of EBP overlooked the patient's lived experiences and perceptions of their conditions that are key aspects of EBP that enable tailoring the therapeutic encounter to meet individual patient needs (Schreiber and Stern, 2005). The following comment shows how teacher physiotherapists' understanding of EBP underscored their clinical philosophy:

*"Patients usually don't know about the disease and they have wrong ideas from TV so it is my job to sit them down and teach them… I teach patients by giving them the scientific information based on the research which proves that what I'm saying is right; I don't just give a layman's opinion because they might as well just chat to a friend" (Pt17, novice, Pt-FG3).*

This group of participants reported job dissatisfaction due to being employed in an environment where they had no autonomy. However, they found some satisfaction in teaching patients, which appeared to be linked to the caring values that underpinned their attitude to the professional role:

*"Engaging with the patient during the session is probably the only satisfying part for me because I get to do an aspect of my role and I enjoy it because I feel like I'm helping the patient when I give him useful information" (Pt5, novice, Pt-FG1)*

Being caring, helpful and encouraging were the primary professional values that informed the teacher role. Novices wanted to build stronger therapeutic relationship with patients, but they were unable to do so because they were not involved in other key aspects of patient care; namely assessment and diagnosis. Consequently, they felt that patients attributed improvements to physiatrists, which compromised physiotherapists' self-esteem:

*"As far as the patient is concerned the physiatrist is the one who diagnosed their problem, yes they thank me for the session, but they don't think I did the hard part like a doctor is supposed to; because I only did the manual labour" (Pt29, novice, Pt-FG5)*

Moreover, engaging with patient education gave novice physiotherapists the opportunity to demonstrate their knowledge to patients. Some novices (Pt17, 18, 19, 25, 26, 27, 28 and 29) strategically used education as a method to gain the patients' trust in order to encourage them to consider different treatment modalities than those prescribed by physiatrists. Therefore, patient education was not only a tool to inform patient expectations and promote active self-management strategies; it was also a method for novice physiotherapists to navigate around physiatrists' hegemony and obtain more clinical autonomy by negotiating the treatment choice with patients. It was, however, noted that not all patients were open to alternative treatments than those prescribed by physiatrists:

*"I try to show patients that I know what I'm talking about and some patients listen to me and I can change the treatment and give exercises instead of doing*

*massage all day as if I work in a spa… I kind of I sneak behind the physiatrist's back" (Pt29, novice, Pt-FG5)*

To summarise, the findings showed that physiotherapists who approached the professional role from the teacher perspective believed that patients needed to learn about the nature of their conditions and the treatment outcomes that could be achieved through physiotherapy. They also believed that patient education is imperative to promote self-efficacy through active management. Successful patient education required knowledge and conviction in the part of physiotherapists to gain patient trust, which was utilised to negotiate different treatments than those dictated by physiatrists. However, the teaching method used by physiotherapists was didactic as they did not seek to learn from the patient's perspectives of their health problems and lived experiences.

### 6.6.2 The treater:

The treater role was observed in the approach of 10 physiotherapists, including 5 juniors (Pt21, 22, 23, 24 and 31) and 5 seniors (Pt6, 7, 13, 14 and 30). This group of physiotherapists worked in hospitals where they had clinical autonomy, but they were competing with physiatrists over the provision of physiotherapy services which created a dysfunctional work environment characterised by frequent role-boundary disputes and a lack of collaboration. They experienced identity disjuncture due to a lack of recognition of physiotherapists as doctors in their work environment. This experience resulted into negative self-feelings of insecurity, frustration and lack of self-fulfilment as they felt disrespected. Accordingly, they worked to safeguard their individual professional identity as doctors of physiotherapy and assert their expertise. Accordingly, they worked to safeguard professional identity and assert their expertise by creating distance

between them and patients. This was achieved by establishing an authoritarian therapeutic relationship where the patient and the physiotherapist had defined and mutually exclusive roles. The patient's role in the relationship was restricted to a passive recipient of treatment, while the physiotherapist was the doctor in charge of making decisions that aim to "fix" the patient's problems:

*"Some patients still think that we [physiotherapists] are a bunch of masseuses; they don't think we are doctors because physiatrists are damaging our image. You [researcher] can imagine that it is impossible to work like this because some patients will not obey you. Therefore, you have to let them know from the first session that you are the doctor and they are the patient, you can fix their problems, but they have to do what you tell them to do" (Pt7, senior, interview).*

From the treater perspective, the physiotherapist's role was similar to that of medical doctors because both involved the identification and treatment of physical ailments through accurate assessment and evidence-based interventions. They articulated an understanding of EBP that was similar to that of teacher physiotherapists. Both groups believed that effective EBP was restricted to the application of knowledge generated from research only. The treater physiotherapist stressed on the importance of their esoteric knowledge and specialised expertise in deriving information from the patient's body through skilful assessment techniques:

*"The [medical] doctor gives the patient medications based on his knowledge of the disease and the treatment and so do I… as a doctor of physiotherapy, I use a comprehensive battery of general and joint specific tests to determine the source of the problem and then I provide a treatment based on my knowledge and I always look at the most recent research" (Pt30, senior, interview)*

Treater physiotherapists were confident in their skills and in applying a rational body-focused approach which meant that they often did not actively seek the patient's input into the management and they did not involve patients in clinical decisions. This attitude to the professional role seemed to contradict notions of patient-centred care and empowerment that underpin the clinical philosophy of physiotherapy. Such philosophy prioritises the patient's needs and treatment goals, and acknowledges that the patient's input should guide the physiotherapist's reasoning to facilitate joint decision-making which improves therapy outcomes (Kidd, Bond and Bill, 2011; Sander et al., 2013). The next quote highlighted the departure between the literature around patient-centred care as discussed above and the management approach of treater physiotherapists:

*"Patients don't know the facts… I hear them out, but above all I listen to the research facts, I don't just give the patient the treatment they want" (Pt13, Key figure in EGPTS, interview).*

The physical response of the body was essential for treater physiotherapists. They tried to gain a *"scientific and objective"* understanding of the patient's condition to inform the management. This clinical philosophy was underpinned by the biomedical model that focuses on rational diagnosis and treatment of physical problems. The psychological aspects of patients' health problems were acknowledged, but the main aim of the treater physiotherapist was to restore normal movement and optimise functional independence. This approach to patient care deviated from the biopsychosocial model that has been emphasised in physiotherapy literature which highlighted the importance of addressing the emotional and social participation issues that patients experience in order to provide holistic treatment (Jones, Jensen and Edwards,

2005; Sander et al., 2013). The excerpt below described the biomedical model which informed the clinical philosophy behind the treater role:

*"I respect their [patients'] feelings and everything, but my main aim is to fix the limitations and regain range of motion to get them back to normal because I they'll feel better then" (Pt14, senior, interview)*

This group of physiotherapists aimed to treat physical symptoms, and thus they examined the patient's body for clues. They believed the body was the main source of facts about the problem, choice of treatment and prognosis. They underlined the centrality of their clinical skills in discovering information about the patient's physical status. Therefore, it can be said that treater physiotherapists did not communicate with the patient per se, rather they communicated with the patient's body. They obtained information from the body using physical tests and measurements, and forwarded information to it using manual techniques and carefully selected exercises:

*"My goal is to treat the patient… it requires me to examine them [patients] closely and do different types of assessments, palpation and tests and observations to determine which part of the body mechanics is pathological and how to correct it and to begin the treatment based on what I have learned from the examination using both manual therapy and active exercises for the patient to do" (Pt23, junior, Pt-FG2).*

This group of physiotherapists articulated relatively similar professional values; the most important of which was commitment to evidence-based practice and self-directed learning. They believed that the professional 'doctor of physiotherapy' should always upgrade their knowledge and practice by consulting the best and most recent research evidence and actively engaging

with continuous professional development. They argued that some physiotherapists did not uphold these values and thus their attitudes affected the image and status of the 'profession' and prevented it from protecting its role, and from attaining legal and social recognition of physiotherapists as equivalent to medical doctors:

*"We have to increase our knowledge and do masters and PhD and study all the time because it is important to prove our expertise and show the patient that we are better than physiatrists, but some of us don't do this and they stick to shortwave and that's it so we can't protect our field because of them because they are not doing what a professional doctor of physiotherapy should do" (Pt21, junior, Pt-FG4)*

In conclusion, this group of physiotherapists modelled their attitude towards the professional role based on their perceptions of physicians' approach. They applied a biomedical model to evidence-based practice and aimed at addressing physical symptoms and functional limitations. As a consequence of adopting this approach, treater physiotherapists were body-focused. They were confident in using their skills and did not seek patient input to guide the treatment process; thereby creating an authoritarian therapeutic relationship.

**6.6.3 The facilitator:**

The role of the facilitator was demonstrated in the opinions and attitudes of 9 physiotherapists including 6 juniors and 3 seniors. This group of physiotherapists were a part of a community of practice that supported their professional growth and enabled them to attain autonomy as well as build collaborative relationships with physiatrists. All such factors created an enabling working culture that reflected positively on their self-feelings as they felt

empowered. Moreover, they described a transformation in their clinical philosophy as a result of engaging in peer education. They explained that their approach to patient care has changed from a didactic, body-focused approach to a patient-centred biopsychosocial approach:

*"I think the [bachelor of physiotherapy] course focused on fixing things; fixing posture, fixing gait, fixing range of motion, you know, fixing the patient, I think this is very limited because people are more complex… we [the participants as students] didn't learn how to involve the patient because the course emphasised evidence, evidence, evidence and it didn't really teach us how to make the evidence work for the patient and I think this is what we [community of practice] discovered and what we have been trying do as a group" (Pt12, junior, Pt-FG2)*

Facilitator physiotherapists explained that the patient's insider knowledge was a fundamental source of information that enabled effective decision-making and positive therapy outcomes. They promoted high levels of active patient participation in the management and worked to create therapeutic relationships based on joint autonomy:

*"My job as a physiotherapist is to empower the patient by all possible means because the patient and I are in this together. I as the physiotherapist bring scientific knowledge, and the patient brings her own experiences and ideas, and we combine our knowledge and make decisions together" (Pt20, senior, interview)*

Patient empowerment emerged as a key professional value that helped therapists to deal with the patient as a person, and avoid reducing the complexity of their experiences by looking at it through a clinical lens. Participants acknowledged the significant impact of emotional and social factors

in relation to health problems, and their clinical philosophy reflected a biopsychosocial approach. The biopsychosocial model considers the interaction between biological (e.g. genetic), psychological (e.g. fear avoidance beliefs) and social factors (e.g. socioeconomic) in the development of illness (Hiller, Guillemin and Delany, 2015; Sanders et al., 2013).There is a large body of evidence that support using this model to enable the provision of holistic management that meets the patient's psychological and social participation needs (Nielsen et al., 2015; Singla et al., 2015). Facilitator physiotherapists aimed to understand and address the patient's physical, emotional and social problems. To achieve this aim they worked to know and engage with the individual person underneath the physical symptoms. They endeavoured to establish personal therapeutic relationships with patients by being open and responsive; in order to explore common interests and facilitate the disclosure of information and difficult emotions. Such personal relationship fostered patient-physiotherapist collaboration and the provision of individualised support:

*"I tell them [patients] a bit about myself and I enjoy learning about their interests and I am not afraid of showing my emotions because it makes it okay for them as well… people need this personal relationship… this way I can encourage them to work with me" (Pt32, junior, verification interview).*

They used different strategies to help patients overcome negative emotions and cope with their conditions. These strategies included empathising, providing reassurance, engaging patients in an open dialogue, promoting self-management through patient education and liaising support from the patient's family:

*"She felt isolated from her family and we agreed that I should speak to them and try to get her more support… I know I am not a psychiatrist but as*

*physiotherapists we don't treat the outside and ignore people's suffering on the inside" (Pt16, senior, interview).*

Encouraging self-management was facilitated by teaching patients active exercises, providing them with a wide range of information on their conditions and advice on good postural habits. The facilitator physiotherapist believed in the importance of self-management in empowering patients through independence and self-efficacy:

*"I try to help the patient help themselves, do you know what I mean, I try to give them the tools that will make them stay on top of their problems and make them feel confident… I always teach them active exercises as I'm teaching the patient I try to learn about their life so I can visualise what they do and then the patient and I can make a good home program" (Pt15, senior, interview)*

Therefore, the facilitator physiotherapist also adopted a teacher role but their teaching approach was democratic as they listened to patients and learned from them:

*"I learn a lot from patients; every day my patients teach me something new and they help me become better" (Pt11, junior, Pt-FG2)*

To conclude, physiotherapists who expressed the role of the facilitator had a patient-centred philosophy that sought to empower patients by promoting their participation in clinical decision-making and teaching self-management. They had a biopsychosocial approach and aimed to address the emotional as well as physical aspects of illness. Thus, they tried to create a personal and collaborative therapeutic relationship with patients through dialogue and shared autonomy.

### 6.7 Perceptions of physiotherapy profession:

This subcategory describes how physiotherapists saw their 'profession' with regards to its status in the healthcare hierarchy that most participants judged based on the degree of autonomy and role exclusivity it has been able to achieve and the respect it received from outsiders which ultimately influenced the extent to which physiotherapists felt fulfilled and satisfied with their career. Some physiotherapists also conceptualised the identity of the 'profession' in relation to its purpose and role in patient care; rather than its professional standing alone.

It is important to note that none of the physiotherapist participants had contemplated physiotherapy as a career before they began their undergraduate education; instead they wanted to be physicians. They described physiotherapy as a fall-back from medicine. Still, physiotherapy was not their second career choice, the dentistry or pharmacy professions were favoured. It appeared that some physiotherapists have changed their perceptions about the attractiveness of physiotherapy as choice of career, while the majority have not. There were other differences between physiotherapists' views about the situation of the 'profession'. Accordingly, 3 conceptualisations of the internal macro-level identity of Egyptian physiotherapy have been reconstructed based on participants' perceptions. These 3 faces of physiotherapy were: 'An oppressed para-profession', 'Medicine challenger' and 'A unique para-profession'. Nevertheless, these perceptions were not static; they were developed and have changed over time as influenced by the employment context of individual therapists and their self-feelings. The data suggested that all physiotherapists at the beginning of their careers felt that the 'profession' was oppressed by

physiatry and that their perceptions have changed as they began to challenge physiatrists' control. Some physiotherapists' perspectives of the 'profession' continued to change with the transformation that occurred in their approach to patient care. For them, physiotherapy had a unique identity as a para-profession owing to its leading role in rehabilitating and improving the lives of people with physical disabilities. Table 6.5 summarises the distribution of physiotherapists according to their perceptions of the 'profession'.

**Table 6.5: The distribution of physiotherapists based on their perceptions of their own profession**

| Therapeutic professional roles | An oppressed para-profession | Medicine challenger | A unique para-profession |
|---|---|---|---|
| **Physiotherapist participants** | Pt1, 2, 3, 4, 5, 17, 18, 19, 25, 26, 27, 28 and 29 | Pt6, 7, 13, 14, 21, 22, 23, 24, 30 and 31 | Pt8, 9, 10, 11, 12, 15, 16, 20 and 32 |

### 6.7.1 An oppressed para-profession:

This position in the data was represented by 13 novice physiotherapists who were within the first and second year of practice post-qualification. They were employed in departments that were led by physiatrists who dictated and supervised physiotherapists work. Therefore, they had no autonomy and experienced negative self-feelings of disempowerment due to the role conflict in the workplace. They felt that the standards of physiotherapy education were as high as those of medicine and that the duration of study was equivalent to other recognised healthcare professions such as dentistry. They believed that Egyptian physiotherapy founded its practice upon scientific research evidence and was committed to improving the quality of patient care. Yet, they emphasised that physiotherapy was unable to achieve autonomy because its

practice was controlled and dominated by physiatry, and its role and expertise were not well recognised by the public in comparison to medicine and dentistry. Consequently, they saw physiotherapy as an oppressed para-profession that has not realised a full state of professional legitimacy, autonomy and a high public profile. They believed that physiotherapy had a highest standing amongst allied-health vocations due to its better pay and education, but they awarded physiotherapy a lower status than medicine, dentistry and pharmacy. For all such reasons novice physiotherapists did not consider physiotherapy an attractive career because it did not confer high levels of autonomy, public respect and prestige upon its members. They were dissatisfied with the status of physiotherapy in Egypt:

*"I think physiotherapy is not quite there yet, maybe we are half way through, but we are not standing on solid ground because we are suppressed by physiatrists and most people don't know what we do. I think physiotherapy abroad is more like a profession, I think they have autonomy and I think it is a great career abroad, but not in Egypt we don't get prestige like medicine" (Pt17, novice, Pt-FG3)*

### 6.7.2 Medicine challenger:

For 10 physiotherapists, including 5 seniors and 5 juniors, the identity of Egyptian physiotherapy as a profession centred on challenging the sovereignty of medicine; especially physiatrists hegemony over physiotherapy practice and encroachment on its role. Unlike novices who perceived physiotherapy as an oppressed para-profession, this group of 10 physiotherapists saw it as a para-profession that was challenging the status quo; it was working to realise a full professional state through legislative protection of its autonomy and scope of

practice along with legal recognition of the 'doctor of physiotherapy' title. They argued that once physiotherapy is able to guarantee the autonomy and role exclusivity of all of its members, it would be established as a profession and it would be able to attain the same level of authority and professional status enjoyed by the medicine. They believed that physiotherapy occupied the fourth position on the hierarchy which was ranked as follows: medicine, dentistry, pharmacy, physiotherapy and finally veterinary medicine. They were disenchanted with this status, which they believed would make it difficult for physiotherapy to attract large numbers of middle and upper class students. However, according to these physiotherapists, Egyptian physiotherapy was continuously developing, but it was facing great obstacles due to the resistance encountered from the medical profession. They believed that the development of physiotherapy was threatening the dominance of medicine over allied-health vocations and its sovereignty over the healthcare ecology. This is because physiotherapy was trying to prevent a group of physicians (i.e. physiatrists) from practicing physiotherapy which would a limitation to the scope of the medical profession and to its professional boundaries:

*"I think they are fighting us because they [physicians] are worried because if we have complete independence and we prevent physiatrists from doing our work, then we would be the only allied-health group to break the glass ceiling and to narrow the scope of medicine" (Pt6, key figure in EGPTS, interview)*

This group of physiotherapists identified their role in facilitating the professionalisation of physiotherapy and supporting its professional project as they perceived it. This role involved two dimensions; one of which was to demonstrate professionalism by engaging with evidence-based practice and

continuous professional development to advance the practice of physiotherapy in Egypt and elevate its stature. The second dimension of this role was to resist physiatrists' dominion in clinical settings and try to prevent them from performing activities that typically fall within the scope of physiotherapy such as applying physiotherapeutic treatment modalities:

*"Physiotherapists should not let physiatrists oppress them, in fact they should try to kick them out of our field like we are doing here" (Pt24, junior, Pt-FG2)*

### 6.7.3 A unique profession:

Nine physiotherapists formed a community of practice in the hospital where they worked which enabled them to develop professionally and to increase their self-confidence. They were able to demonstrate knowledge, professionalism and positive attitudes towards collaboration with physiatrists. These changes helped physiotherapists acquire autonomy. It also helped them transform the working culture in this hospital from being a dysfunctional culture characterised by inter-professional rivalry, to being an enabling culture where physiotherapists and physiatrists exchanged expertise and collaborated to meet patient demands. This group of 9 physiotherapists included 6 juniors (Pt8, 9, 10, 11, 12 and 32) and 3 seniors (Pt15, 16 and 20). They expressed a distinctive interpretation of the professional status of Egyptian physiotherapy. They believed that physiotherapy was a para-profession because it has not engaged with developing physiotherapy knowledge through research that would be applicable to the Egyptian context:

*"I think the whole physiotherapy community needs to stop being complacent with absorbing the science of physiotherapy from overseas because most*

*interventions can't be used because we are a poor country and therefore we [Egyptian physiotherapists] need to be researchers to put ourselves on the international map and then our position locally will improve" (Pt16, senior, interview)*

The above comment suggested that Egyptian physiotherapy has relied on the body of physiotherapy knowledge that is available globally, but did not contribute to it. Yet, several barriers were identified that limited the research capacity of physiotherapists in Egypt. Physiotherapist participant 8 identified that Egyptian physiotherapists had limited access to published journal articles which was often restricted to a few online databases.

Physiotherapist participant 20 added that there were limited funds available to support research activities, while other participants (Pt8, 9, 10, 11 and 12) indicated that physiotherapy education did not facilitate the development of skills in relation to innovation, creativity, reflection and critical thinking; thus limiting the ability of physiotherapists to undertake research that would develop every day practice:

*"We [physiotherapists] did study research but we didn't learn how to be creative and find innovative solutions to the huge problems we would face such as having limited equipment and also the fact that some patients think that exercise will make them worse… we didn't learn how to be reflective and critical so we can understand these issues and we didn't learn how to do innovative research that would directly improve our practice" (Pt9, junior, Pt-FG2)*

Therefore, this group of participants identified reasons why physiotherapy was *"behind in Egypt and struggling to catch up with developed countries" (Pt10),* and accordingly they considered Egyptian physiotherapy a para-profession. However, they believed that physiotherapy in Egypt was a unique para-

profession because the expertise of its members was sought by medical tourists throughout the Middle East and Africa, which made Egyptian physiotherapy distinctive in the region:

*"Our [Egyptian physiotherapists] place is not that bad, in fact we are distinguished because patients come to us from all around the Arab world and from Africa too, so this tells me that we are the best physiotherapists in the area" (Pt15, senior, interview)*

Physiotherapist participants 12 and 8 argued that Egyptian physiotherapy was unique because it played a leading and indispensable role in the rehabilitation of people with physical disabilities who have long been marginalised. It seemed that this perception of Egyptian physiotherapy was strongly connected to the participants' patient-centred clinical philosophy:

*"I think we are unique because we are almost the only healthcare field that is largely focused on the needs of disabled people and god knows they are overlooked in this country… I find satisfaction in the fact that my role is important for those who need it the most and I don't care that a few medics belittle our work" (Pt12, junior, Pt-FG2)*

This group of physiotherapists found satisfaction and self-fulfilment in performing the professional role and helping people with disabilities. Therefore, they considered physiotherapy an attractive career. This perception was reiterated by physiotherapist participant 32 during the final verification interview:

*"I think it [physiotherapy] is a great career if you want to really have an impact and improve the lives of disabled people in Egypt…. although I didn't pick it, but if I would go back in time I would choose physiotherapy with absolute conviction" (Pt32, junior, verification interview)*

## 6.8 What is the identity of Egyptian physiotherapy?

The findings suggested that Egyptian physiotherapy was a para-profession undertaking a process of professionalisation, yet its identity was perceived in different ways. Most of the physiotherapists, patients and physicians saw it as a rising para-profession that was continuously developing its education, practice and professional status. However, some physicians (n= 15) perceived physiotherapy as a usurper occupation as they believed it did not develop its own body of knowledge to warrant autonomy. All 13 novice physiotherapists felt that Egyptian physiotherapists were an oppressed para-professional group owing to their limited autonomy and lower professional status compared to medicine. Five junior and 5 senior physiotherapists believed that the para-professional status of physiotherapy in Egypt could be improved through the legal recognition of therapists' right to use the doctor title as well as the exclusion of physiatrists from the domain of physiotherapy. Some physiotherapists (6 juniors and 3 seniors) offered a different perspective; they believed that Egyptian physiotherapy had a unique identity as it served a marginalised patient population and aimed to improve the quality of life that disabled people have in Egypt. Nonetheless, those physiotherapists believed that Egyptian physiotherapy did not engage with the process of producing knowledge through research, and thus they felt it was not fully professionalised.

The different perceptions of Egyptian physiotherapy that the study participants articulated were reflected in the varying levels of clinical autonomy and respect that physiotherapists had in different work environments. The findings suggested that physiotherapy in Egypt did not have a universally recognised identity as a profession. The concept of a profession is a socially constructed

concept, and thus may be perceived in various ways within different cultural contexts. A profession has been defined as an occupation with distinct power and prestige; it processes unique competencies and an exclusive body of knowledge and it is respected within the society (Abbott, 1998). There is a mutual symbiotic relationship between a profession and society. The society requires a service and the profession provides it in exchange for an esteemed position in the social hierarchy.

Professions are usually self-regulated, knowledge-based vocations and some years of higher education are required to join them (Freidson, 1994). The interview data highlighted variable perceptions concerning autonomy and respect for Egyptian physiotherapy. This reflected the lack of a coherence regarding Egyptian physiotherapy's identity as viewed by its members and by outsiders, which questions its status as a profession. The characteristics of professions that tend to characterise their identity have been summarised as: an exclusive body of knowledge, autonomy of practice, occupational control of practice standards and rewards and an ethos of services to the public. If an occupation does not fully meet these characteristics it may be considered a para-profession that could undergo a process of professionalisation to acquire all such attributes (Bithell, 1999).

The professional status of physiotherapy is fundamental to its identity and has not been in accepted as a given by western physiotherapists who have been scrutinising the extent to which physiotherapy met the attributed of a profession. It has, however, been agreed that physiotherapy in different western countries met the attributed of profession, although areas of development are continuously being identified (Turner, 2001; Scarpaci, 2007). On the other hand,

the study participants believed that physiotherapy in Egypt was lagging behind western countries. It is, thus, questioned whether Egyptian physiotherapy met the characteristics of a profession. The inability to demonstrate those characteristics may explain the variable conceptualisation of physiotherapy identity that would impact on physiotherapists' autonomy and individual professional identity. To further explore this argument, Bithell's (1999) criteria are used to assess how Egyptian physiotherapy compares against the criteria of a profession.

### 6.8.1 An exclusive body of knowledge:

The development of physiotherapy in western countries indicates that there has been an increasing amount of research that investigates different aspects of clinical practice. It has been argued that the rise in research activities created a physiotherapy episteme that is grounded within a distinctive philosophy of physiotherapy (Trede et al., 2003). Western physiotherapists have become increasingly reflective which enabled learning from practice and recent literature identified an extensive physiotherapy knowledge base in such countries (Shaw and DeForge, 2012). Yet, several gaps in the body of physiotherapy knowledge have been highlighted and there are calls for more qualitative research and for exploring the philosophical underpinnings of physiotherapy knowledge (Nichollas and Gibson, 2012).

The production and application of physiotherapy knowledge tends to vary between countries according to the local context of physiotherapy education and practice. The interview data suggested that Egyptian physiotherapy did not effectively engage with producing 'exclusive' knowledge and it relied on western or global physiotherapy knowledge that seemed to have varying levels of

applicability to the local context. Several participants indicated that there have been significant recent developments in physiotherapy education and most of physiotherapist participants were engaged with postgraduate studies including master and PhD degrees. Therefore, Egyptian physiotherapy seemed to have the academic capacities to develop an 'exclusive' body of knowledge that could be more relevant to its practice. Yet, most participants felt that physiotherapy in Egypt was lagging behind western countries. Several physiotherapists and physicians identified that older generations of physiotherapists who entered the 'profession' at a diploma-level did not up-grade their knowledge although they held senior positions in many hospitals. Many physiotherapists also reported that the quality of physiotherapy education was not the same across institutions, and thus some therapists were not engaged with evidence-based practice. Thus, it was believed that research use and production was not prioritised by many physiotherapists in Egypt, however it should be noted that several physiotherapist participants indicated that physiatrists prescribed simple and outdated treatments which constrained their ability to apply contemporary evidence-based interventions. Some physiotherapists emphasised that innovative research skills were not taught during undergraduate education, and they felt that this was a primary factor in the lack of research activities in Egypt.

Moreover, the analysis identified that the majority of physiotherapist participants (n= 23) interpreted physiotherapy knowledge and evidence-based practice from a biomedical perspective which suggested that Egyptian physiotherapy may have extrapolated its clinical philosophy from medicine. Also, several physicians (n= 15) felt that physiotherapy in Egypt built the foundation of its education on medical knowledge without sufficient critical consideration of how this knowledge could be applied in physiotherapy practice. Thus, to conclude, it

could be suggested that Egyptian physiotherapy depended on the physiotherapy knowledge that has been produced by western practitioners which seemed to have questionable applicability in the local context. It also appeared that physiotherapy in Egypt relied on physicians' knowledge base and biomedical paradigm of practice.

### 6.8.2 Autonomy of practice:

Physiotherapists in different countries tend to have varying levels of autonomy (Chanou and Sellars, 2010). The data indicated that the most dominant culture in the work scene was one where physiotherapists had no autonomy which they considered a key factor that influenced their practice, job satisfaction and the identity of the 'profession'. The macro-political power struggles between physiotherapy and medical authorities, and the decades of legislatures that aim to regulate physiotherapy practice did not seem to have succeeded in securing autonomy in physiotherapy. For novice physiotherapists, this situation gave rise to feelings of disempowerment as they were unable to practice in the manner they have been taught. They felt pessimistic as they worried that the status quo might not change. Nonetheless, more experienced junior and senior physiotherapists were able to obtain autonomy. However, this process was long and arduous as it involved strike actions and workplace conflicts with physiatrists. This is further evidence that Egyptian physiotherapy has not yet been able to protect the autonomy of its members.

### 6.8.3 Self-regulation of practice standards:

The data indicated that the EGPTS was recognised by physiotherapists and physicians as the official professional body of Egyptian physiotherapy. The

EGPTS restricted entry to the 'profession' to university qualified physiotherapists who had accredited a bachelor degree. It also specified a grading system for the different bands of physiotherapists and required the acquisition of master and PhD in order to for therapists to move to higher bands. Specifically, physiotherapists are registered as novice if they have less than 2 years of experience and juniors must have a master degree and 5 years of clinical experience. To attain the senior band physiotherapists must have more a PhD and more than 5 years of experience. However, physiotherapists indicated that these regulations applied only to those who graduated after university education was introduced in 1992. They indicated that the membership sanction that the EGPTS specified did not encourage diploma-qualified therapists to develop their professional knowledge and practice. Moreover, several physiotherapists reported differences in the quality of education between public and private institutions. They felt that the EGPTS did not place strict requirements for membership other than a university qualification. Participants felt that the EGPTS did not exercise effective control over the standards of practice. Some such participants recommended introducing a comprehensive theory and practice exam as a pre-requisite for membership, in addition regular exams for membership renewal:

*"The syndicate [EGPTS] should make all physiotherapists take a test before they can be issued a licence because private faculties just teach the basics and their graduates can't follow high standards of practice" (Pt17, novice, Pt-FG3)*

### 6.8.4 Occupational control of rewards:

The control of physiotherapy rewards varies between countries based on the overall economic status and the structure of the healthcare system as well as

the sources of healthcare funding. Physiotherapists in this study reported low pay in the public sector for all healthcare providers. Consequently, most physiotherapists worked in both public hospitals and private clinics. However, it was reported that there was a lack of regulation for pay in the private sector; as some novice and junior therapists felt that they were being exploited by senior therapists:

*"The seniors use us as cheap labour because the syndicate doesn't have any laws about how much physiotherapists should be paid" (Pt28, novice, Pt-FG5)*

The above comment suggested that Egyptian physiotherapy did not achieve effective and equitable control of rewards for all of its members.

**6.8.5 Ethos of public service:**

Scarpaci (2007) explained that an ethos of public service represents professional behaviours and values such as commitment to clinical responsibilities and excellence, altruism and accountability. Physiotherapist participants expressed a wide range of professional values that informed their practice. There was a strong emphasis on helping and caring for patients as well as improving the image of Egyptian physiotherapy by demonstrating knowledge. Nearly all participants were keen on life-long learning. However, novice physiotherapists did not have access to CPD opportunities, and they were often discouraged from investing in training. Thus, it appeared that physiotherapist participants espoused a sense of professionalism to improving the quality of services they provided, but this attitude did not seem to be dominant within the professional culture in Egypt.

## 6.9 Conclusion:

The synthesis presented in the above sections suggested that Egyptian physiotherapy only partially met the criteria of a profession. The data suggested that physiotherapy in Egypt was a para-profession going through a process of professionalisation and that further development is needed. Yet, in contrast, during undergraduate education physiotherapist participants developed expectations of autonomous practice in a work culture where physiotherapy would be fully professionalised and enjoying an esteemed status equal to medicine. The most prevailing culture in the work scene was one where physiotherapists had no autonomy and were expected to provide treatment as dictated by physiatrists. This culture jarred with the individual identity of physiotherapist participants causing them to struggle with role conflict and identity disjuncture. The core category posits that the Egyptian physiotherapists' professional identity underwent a process of development and transformation throughout their academic and career experiences. The process of identity development consists of 3 stages, namely 'constructing', 'struggling' and'emancipating'. The next chapter presents the core category and discusses these stages in detail.

## Chapter 7. Core category: The Egyptian physiotherapist journey to emancipation

The data indicated that the development of Egyptian physiotherapists' individual professional identity is a dynamic and multidimensional process. Their identities were influenced by Egyptian societal norms that subscribe to the cultural authority of medicine; it was affected by dominance of the medical profession over the healthcare system and the external identity of physiotherapy as a profession. It was shaped by professional socialisation during undergraduate education and work. Therefore, professional identities are not fixed, but rather continuously evaluated and reconstructed according to external contextual factors and internal self-feelings (Giddens, 2001; Haines and Saba, 2012). Based upon the perception of identity as a fluid construct, it has been hypothesised that Egyptian physiotherapists' individual professional identity undergoes a process of 'constructing', 'struggling' and 'emancipating' as a result of interacting with educators, peers, seniors, patients and medical professionals.

### 7.1 Constructing:

#### 7.1.1 Shattered dreams:

All physiotherapist participants attested that they did not contemplate physiotherapy as a first career choice. Instead, it was their strong personal aspiration to become medical doctors. "Shattered dreams" is an in-vivo code taken from physiotherapists' narratives. It captured their sense of loss and disappointment for not being able to achieve the grades required to study medicine:

*"When I opened the [university admission] letter I knew the dream was gone; I wasn't going to medicine [school]" (Pt15, senior, interview)*

Participants felt they have disappointed their parents and that they have failed in comparison to peers who were accepted into medical school:

*"I felt like I let him down [the participant's father] and my cousin made her father proud because she got into the faculty of medicine" (Pt5, novice, Pt-FG1)*

Prior to admission, all physiotherapist participants had little or wrong information about physiotherapy with regards to the purpose of the 'profession', its clinical role, methods and university course structure. Therefore, they did not begin undergraduate studies with a conception of physiotherapy and its status within the hierarchical structure of the healthcare system. They, rather, began with a negative emotional state:

*"I had no idea what it [physiotherapy] was, I thought it was herbal medicine or something and I didn't even bother to find out, I just cried and cried" (Pt19, novice, Pt-FG3)*

On the other hand, western literature demonstrated that pre-admission students had good understanding of and motivation for physiotherapy (Adams et al., 2006). Ohman, Solomon and Finch (2002) explained that students often had a conceptualisation of what being a physiotherapist meant, a strong sense of attraction to the profession. These findings reflected the profession's high public profile and attractiveness in the UK.

In this study, physiotherapists described how they struggled to abandon the aspiration of becoming doctors for it was the identity that they aspired towards. They found it difficult to reconcile with idea of becoming physiotherapists because it did not resonate with their ambitions:

*"I always saw myself as a cardiothoracic surgeon, doing open heart surgeries and saving lives, but no, physiotherapy, it didn't feel like me at all; I was never interested in sports and I hated exercising" (Pt12, junior, Pt-FG2)*

The above quote showed how, as pre-admission students, the participants did not identify physiotherapy as an attractive career that suited their interests. The Egyptian physiotherapist began undergraduate education and embarked on the journey of professional identity development in an adverse emotional state and with negative perceptions of their future career. Physiotherapy was considered a non-intellectual field that was more suited for the working class:

*"I'm embarrassed to admit it, but I thought that physiotherapy wasn't good enough for my abilities… I thought it was like, not for girls in my circles [birth caste]" (Pt2, novice, Pt-FG1)*

### 7.1.2 Reconciling:

Educational organisations are amongst the most influential authorities in Egyptian physiotherapy because they affect the standards of practice and have a main role in professional socialisation. The term professional socialisation refers to the process by which students formulate a range of perspectives on physiotherapy, understand its scope of practice, and learn how to interact with patients and other healthcare professionals (Joyness, 2018). Bartlett et al. (2009) explained that socialisation helps students develop their individual professional identity in conformity with the profession's identity standard. This standard represents collective meanings, normative behaviours and values that are shared between members of the same occupational group (Ajjawi and Higgs, 2008).

The interview data suggested that during undergraduate education the doctor of physiotherapy identity was introduced to students as the identity standard of the Egyptian physiotherapy 'profession'. Physiotherapist participants constructed their individual professional identity based on this identity standard. It depicted a blueprint of the medical doctor identity in Egypt:

*"In the university we were told that we were going to be doctors and in fact we have similar education and our work is very scientific just like physicians, so it is only fair that we [physicians and physiotherapists] are all doctors… our role is also very complex and requires a lot of specialised knowledge and refined clinical reasoning exactly like physicians" (Pt27, novice, Pt-FG5)*

The external professional identity of medical doctors tends to be equated with vast esoteric knowledge; an invaluable professional role and esteemed status (see section 6.2.2.1). The above comment suggested that the doctor of physiotherapy identity represented similar meanings to physiotherapist participants, and they expected to command the same authority and respect as medical doctors. During undergraduate education, physiotherapist participants began to form their nascent professional identity as *"medical doctors who treat with exercises" (Pt4).* Being a doctor of physiotherapy meant being on par with medical doctors in many aspects. These aspects included the same high standards of education, scientific rigor of the body of knowledge, the difficulty and value of the professional role, along with the same level of clinical autonomy, professionalism and privileged status. Wearing the white coat and using the doctor title were presented to the student physiotherapist as inherent rights:

*"The professors called us [physiotherapy students] 'doctors' from day 1 on the course and we all had to put on our white coats on for manual sessions" (Pt18, novice, Pt-FG3)*

The doctor of physiotherapy identity and the meanings associated with it were highly attractive to physiotherapist participants as it enabled them to reconcile their initial personal aspirations with their future professional role. Reconciling had positive emotional impacts and helped participants become interested in and engaged with their studies:

*"Everyone was much happier and motivated after the pep talks because they [university educators] reassured us that we were actually medical doctors, but we use different kinds of treatment" (Pt8, junior, Pt-FG2)*

### 7.1.3 Becoming a doctor of physiotherapy:

This section explains how professional socialisation during physiotherapy education in Egypt shaped the ways in which participants constructed their individual professional identity. Professional socialisation is not just concerned with developing knowledge and skills in preparation for practice; it is also a process whereby students develop their professional identity in alignment with the identity standard of the profession (Adams et al., 2006). Students assimilate an array of taken-for-granted values that become embedded within their individual professional identity (Clouder, 2008).

Thus, the culture of physiotherapy in educational organisations influences identity development through the tacit learning of behaviours and ways of perceiving one's self and others. Tacit learning takes place at a sub-conscious

level and is gradually consolidated to allow for organised practice. Students interact with educators and learn from their clinical philosophy, attitudes and behaviours. Some educators would be considered role models, and thus their feedback would have significant impacts on students' understandings and the nascent professional identity they are constructing (Deaux and Bruke, 2010). However, Students do not passively acquire a pre-established identity. Instead, they interpret the culture of the profession and the behaviours of role models according to their own personal perspectives and experiences, which ultimately inform individual professional identity (Richardson et al., 2009). They ascribe their own meanings to the professional role and form aspects of their individual professional identity based on their subjective interpretations of learning experiences and of their interactions with peers and educators at the university, and later on with patients, seniors and colleagues in the workplace. Therefore, the professional culture of physiotherapy during education, the attitudes of educators and students' personal beliefs and experiences are essential components of professional socialisation that support individual identity development (Miller et al., 2005).

The interview data indicated that the doctor of physiotherapy identity represented the standard according to which participants fashioned their nascent professional identity during undergraduate education. This identity standard was underpinned by good quality education and scientific knowledge that enabled for autonomous practice; it meant that physiotherapists were medical doctors who use exercises as a primary treatment method. Therefore, 'doctors of physiotherapy' were entitled to the same demarcations that distinguished physicians including public respect and the doctor title and attire. The following comment explained the significance of the 'Dr' prefix and the

white coat for participants as influenced by the culture of physiotherapy during undergraduate education:

*"It isn't about wearing the [white] coat or saying I'm a doctor for the sake of it, it's about my image and who I am and what my education and my profession stand for; it is about how I present myself as a doctor and not just a technician or some sort of assistant" (Pt31, junior, interview)*

As identified above, professional socialisation shaped the emerging professional identity and self-perceptions that participants developed throughout their studies. Presenting as a doctor (by using the white coat and title) was more than a measure of gaining prestige. The doctor attire and prefix were symbols of professional legitimacy that asserted physiotherapists' claims of knowledge and autonomy by aligning them with medical doctors, while simultaneously separating them from non-autonomous assistants.

More importantly, these legitimacy symbols defined and distanced 'the doctor of physiotherapy identity' from the 'technician physiotherapist identity'. The technician identity was reserved for diploma-qualified physiotherapists who did not receive contemporary and quality education, and did not upgrade their practice post-qualification. Several of the physiotherapists' responses indicated that being a technician implied low standards of education and inadequate knowledge; therefore an inability to work in a self-directed manner. Being a technician physiotherapist also represented low status due to the technician's taken-for-granted subservience to physicians.

Several physiotherapists highlighted that the distinction between the technician physiotherapist and the doctor of physiotherapy was made clear during undergraduate education. Specifically, the technician physiotherapist relied on

massage as the main treatment modality, and used what have been described as pseudoscientific treatments such as bone-setting, cupping and blood-letting and herbal remedies. Also, the scope of the technician's role involved *"simple things like helping with ADL [activities of daily living]" (Pt22).* On the contrary, the doctor of physiotherapy used a wide range of evidence-based interventions and delegated massage, ADL training and care work to rehabilitation assistants. As the new face of the 'profession', undergraduate education ensured that physiotherapist participants embodied the doctor of physiotherapy identity:

*"None of the academics approved of things like blood-letting; it's something that diploma physiotherapists used to do, but as doctors of physiotherapy we were taught evidence-based physiotherapy… we were highly educated; the course wasn't like before just massage and ADL, that's the role of rehabilitation assistants now, but doctors of physiotherapy do advanced things like mobilisation and manipulation" (Pt22, junior, Pt-FG4)*

The data highlighted the critical role that physiotherapy educators played in helping participants define and build dimensions of their professional identity in conformity with the doctor of physiotherapy identity standard:

*"When you look at doctor A [physiotherapy educator] and how he approaches and interacts with patients, you would see he is no less than B [renowned Egyptian physician]… doctor A is truly a doctor of physiotherapy; he is knowledgeable and classy… doctor A made me fall in love with physiotherapy" (Pt17, novice, Pt-FG3)*

Many physiotherapist participants praised their educators and considered them role models. The above comment showed that academic role models changed the participants' negative pre-admission perceptions of physiotherapy by demonstrating knowledge and professional behaviours that resembled the

demeanour of physicians. Adams et al., (2006) suggested that academic role models often represent identities and career goals that students aspire to attain. Bartlet et al., (2009) added that students tend to align their behaviours and aspects of individual professional identity to that of role models, which agreed with the narratives provided by Egyptian physiotherapists in this study.

Several of the physiotherapists' narratives indicated that they have internalised a range of behavioural expectations that defined the doctor of physiotherapy identity by observing and emulating academic role models:

*"For me to be a professional doctor of physiotherapy is to be like doctor X [physiotherapy educator]; she is always decent and her voice is clear but not loud and her coat is always clean and ironed and buttoned all the way down and she never rolls her sleeves; she doesn't chew gum or eat at work and she sits up-right when she talks to patients… X is very knowledgeable and has a PhD so she is very confident and assertive when with physicians… X is very presentable unlike Y [senior and diploma-qualified physiotherapist]; the way Y behaves with patients and physicians says she is a technician because she acts humble" (Pt5, novice, Pt-FG1)*

The above quote captured the personal manner and professional behaviours linked to the doctor of physiotherapy identity. It highlighted how different those norms and expectations from the attributes associated with the technician physiotherapist identity that was assigned to most diploma-qualified physiotherapists. The quote illuminated the impact of academic role models in shaping the individual identity of physiotherapist participants. It summarised what being a doctor of physiotherapy meant to most physiotherapists (n=23) in this study.

In conclusion, the professional culture and attitude of academic role models during Egyptian physiotherapy education influenced the nascent professional identity that participants constructed. The nascent professional identity was modelled based on the doctor of physiotherapy standard. This identity standard was defined by the attributes it embraced as much as those it denounced. The doctor of physiotherapy identity stood for good quality education, scientific knowledge and EBP which enabled for and justified self-directed practice. It was demarcated by a personal and professional manner that resembled the demeanour of physicians.

Yet, the doctor of physiotherapy identity was equally defined by the unscientific procedures it denounced as well as treatment methods and aspects of the professional role that were left behind (i.e. massage and ADL training respectively). Accordingly, professional socialisation facilitated the development of certain self-perceptions (e.g. being autonomous), while inhibiting others (e.g. being subordinate to physicians). It also encouraged certain attitudes towards the professional role (e.g. EBP) and actively discouraging others (e.g. ADL training). It could be argued that the careful inclusion and exclusion of attributes enabled the construction of the identity standard of contemporary Egyptian physiotherapy by aligning the doctor of physiotherapy identity with that of medical doctors, while distancing it from the less favourable 'antecedent' technician identity.

### 7.1.4 Developing expectations:

As students, the vast majority of the physiotherapist participants' training on placements and internships occurred at hospitals and outpatient clinics that

were owned and managed by physiotherapy educational organisations. These settings provided controlled clinical environments where physiotherapists developed expectations of autonomous practice as shown below:

*"We were trained on placements to do the assessment and plan the management program and we learned how to use research in management process, like how to apply research in practice, so there is a lot of thinking that the doctor of physiotherapy has to do, it is not simply flexion and extension, this makes you a technician and you can't be trusted to work independently" (Pt14, senior, interview)*

Healey (2009) argued that the discourses and practices forming the foundation of undergraduate education not only shape professional identity and future role expectations, but also impact upon the individual's personal sense of self. The following comment suggested that the identity of recent generations of Egyptian physiotherapists might differ from older generations who did not receive the same high standards of contemporary university-level education. Most of the study participants (n= 30) entered the field at a university-bachelor level. They developed expectations of an autonomous future role and constructed their individual professional identity and self-perceptions based on such expectations:

*"I had every right to expect that I was going to be a respected, autonomous doctor after graduation… the old generation doesn't mind working like technicians because they were trained to be technicians, but I was educated to become a doctor of physiotherapy" (Pt26, novice, Pt-FG5)*

The next section discusses how the work culture post-qualification compared to physiotherapist participants' expectations.

### 7.2 Struggling:

#### 7.2.1 False promises:

Physiotherapist participants identified variations between the culture in the work environment and that in which they have been trained. The working culture in most public hospitals did not allow for autonomous practice hence physiotherapists worked in departments led by physiatrists and they were expected to provide treatment as dictated by physiatrists. "False promises" is another in-vivo code adopted from physiotherapists' responses as they felt that the promises of autonomy and professional status made to them during undergraduate education were untrue:

*"They [educators] promise students that they would be doctors, but when they graduate they discover the harsh reality… in most places therapists work like technicians" (Pt16, senior, interview)*

As evidenced above, the identity standard in most workplaces was structured around a technician role. Being a technician was associated with meanings, behaviours and expectations that differed significantly from physiotherapist participants' individual professional identity and self-perceptions. The technician role-identity was related to low standards of education and inadequate knowledge; and thereby an inability to practice in a self-directed manner. Therefore, the culture in the work scene meant that physiotherapists were expected to follow instructions and have no autonomy as they were considered technical staff.

Physiotherapists' scope of practice was pre-determined by physiatrists and restricted to conventional treatments that were judged as suitable for therapists'

limited expertise. This scope of practice was described as *"basic exercises or massage and electrotherapy".* Physiotherapists were not involved in clinical decision-making and were required to practice under the supervision of physiatrists. Their subordinate position relative to medical doctors was taken-for-granted, which reflected low professional status. Physiotherapist participants felt that their dreams of being doctors were shattered once more:

*"I was prepared for a different work life, but in reality my career ambitions were being destroyed all over again" (Pt10, junior, Pt-FG2)*

Previous studies emphasised the importance of communities of practice that foster ongoing learning in the workplace through clinical mentorship, peer education and CPD; all such elements are essential to sustain professional socialisation, growth and identity development (Pettersson, Bolander Laksov and Fjllstrom, 2015; Yoon et al., 2017). In this study, the physiotherapists did not have access to such opportunities when they moved to employment. They explained that in most hospitals physiotherapists did not exchange knowledge and expertise with peers, and that the support and mentorship of clinical role models was lacking. Many participants attributed the lack of peer education to competitiveness, while the lack of mentorship was related to the inability of diploma-qualified senior therapists to train new graduates due to their limited knowledge. Moreover, CPD activities were not promoted, but rather working conditions placed obstacles against participation in such activities given that therapists were not expected to change practice. Participants reported feeling isolated from peers and from the wider professional community as discussed in the "disabling working cultures" section. It was identified that working in this environment stifled physiotherapists' professional development, resulted into

negative self-feelings and prevented participants from achieving autonomy. These issues also influenced physiotherapists' perceptions of the 'profession' as shown in section 6.7.1.

### 7.2.2 Submitting:

The literature indicated that professional identity development is a continuous process influenced by the changes in the culture of the socialising environment and the role-expectations placed on individuals in the workplace (Kell and Owen, 2008). As professional identity changes in response to the work environment, the individual's self-perceptions and feelings also change (Le Maistre and Pare, 2008). Hayward et al. (2012) studied the experiences of novice physiotherapists during the first 2 years of practice. Their findings signalled the positive impacts of affirmative feedback on novices' personal and professional sense of self and their ability to continue learning and developing. Furthermore, transitioning into employment presented novices with the challenge of adapting to new roles that come with certain expectations, behaviours and identity standards (Mathew, Taylor and Ellis, 2012).

The nascent professional identity and self-perceptions that have been constructed during undergraduate education are brought to the work environment whereby novices work to verify said identities against the new role-identity (Deppoliti, 2008). It has been noted that when the socialising culture in the workplace resembles that of undergraduate education, novice practitioners would only need to make slight behavioural adjustments to align their individual identity with the norms that define the new role-identity (Hayward et al., 2012). The ability to embody the new role-identity creates a state of congruency

whereby affirmative feedback from seniors and peers verifies novices' identity; resulting into feelings of security and confidence (Serpe and Stryker, 2011).

Conversely, working in a culture where meanings and expectations of behaviour for a person contradict their understandings; requires the individual to make major adjustments to conform their professional identity to the role-identity standard. If both identities are incompatible and irreconcilable, the individual might not be able to, or might choose not to, adjust behaviours to align with the norms and expectations in the workplace; which results into role conflict. Sarangi (2010) explained that role conflict occurs when the discrepancy between the role-identity standard and the individual's perceptions of their own professional identity is substantial. To resolve the conflict recent graduates could either seek employment in a different working culture or undertake major perceptual and behavioural adaptations to align their professional identity with the identity standard in the workplace (Ashforth, 2000).

Working in the same environment for a prolonged period of time would then change the individual's professional identity as they conform to the new identity standard (Hall, 1972). Subsequently, the individual's self-feelings or personal sense of self would also change. Adaptation enables recent graduates to fit in working cultures where meanings and expectations are different (Wackerhausen, 2009). Adaptation means that they would have been successfully socialised into the culture of the work environment; internalised and embodied its rules, beliefs and the working methods of its employees (Cohen, 2003).

In this study, participants modelled themselves based on the doctor of physiotherapy identity which was associated with the same degree of autonomy and prestige conferred upon medical doctors. This identity represented the norms with which participants' self-perceived professional identities were congruent. Moving to a work environment where the technician physiotherapist identity was the standard required participants to make major behavioural and perceptual adjustments to fit with the new standard. These adjustments meant assuming a subservient position and relinquishing autonomy to physiatrists, and thereby compromising own prestige. Accordingly, the novice therapist could not make adjustments quickly to adapt to the role-expectations of a technician therapist. This created role conflict:

*"I was like what the hell, I didn't go to university for 5 years to be a technician… it was outrageous; makes my blood boil till this day" (Pt17, novice, Pt-FG3)*

As suggested above, novices experienced acute reality shock due to the differences between the culture during undergraduate education and the work context. As a result, recurrent feedback from senior physiotherapists and physiatrists in the workplace continued to disconfirm the novice physiotherapist's individual identity against the technician identity standard, leading to a lack of congruence. This, in return, triggered negative self-feelings including depression, loss of self-esteem. At this stage of the journey, the novice therapist felt disempowered and incapable of changing the status quo, and thus submitted to performing the technician role. Submission amplified the conflict as the new graduate could not truly and fully conform to the meanings associated with being a technician. Stangor (2015) elucidated that conforming

to a substantially different identity requires a radical change in the individual's personal beliefs and perceptions, and not just behaviours.

The dissonance between the novice therapist's personal and professional sense of self, and technician identity was sizable. If they were to reconfigure their professional sense of self to conform to the technician identity, the resultant individual professional identity would be incompatible with their personal sense of self and pre-existing social identities. The limited prestige associated with non-autonomous technical work was discordant with personal, family and social expectations put on individuals with university qualifications. Professional status and success are pre-requisites for attaining prestige which is a strong determinant of an individual's self-perceived and ascribed worth in Egyptian society. This issue intensified the identity dissonance experienced by therapists; particularly females whose need for prestige was twofold given the gender and birth caste expectations placed on them as discussed in Chapter 6 Section 6.2.1. Consequently, participants prioritised their pre-existing personal and social identities over conforming to the technician identity standard which would have solved role conflict.

Therefore, submitting cannot be equated with true conformity because, while it involved behavioural modifications, participants' self-perceptions were not changed to align with the technician identity. Submission was, rather, a temporary phase for newly graduated therapists at the beginning of working life, and was associated with salience of the confined identity. This identity was an ascribed one; imposed on novice therapists in disabling working cultures that were dominated by physiatrists. It was constructed though and constituted of an ongoing state of crisis characterised by confusion and loss of individual

professional identity as the new graduate struggled to conceive of the identity of the 'profession'. With time, the unresolved role conflict pushed most physiotherapists (n= 27) to progress past the submission stage and seek alternate pathways along their journey to gain more autonomy and achieve identity salience.

### 7.2.3 Covert resistance:

The literature indicated that new graduates, including physiotherapists, nurses and midwives, experienced acute reality shock upon transition from university to employment (Barkley, 2011; Blackford, McAllister and Alison, 2015; Castledine, 2002; Roe-Shaw, 2006). The issues highlighted in the UK, Australia and New Zealand were concerned with having sufficient clinical skills to enable smooth transition to employment, and to offer holistic patient-centred care while coping with time constraints and staff shortage (DiGiacomo and Adamson, 2001). On the other hand, the problems documented in other countries, such as India, Greece, Nigeria and Italy, related to autonomy limitations and thus were relatively similar to the Egyptian context (Balgun, 2015; Chanou and Sellars, 2001; Gotlib et al., 2012; Grafton, 2013; Sena, 2017; Tousijin, 2002).

The shock that recently qualified physiotherapists experienced in Egypt was attributed to hierarchical structures, medical dominance and authoritarian attitudes. They had no autonomy and were unable to apply the body of knowledge owned by their own vocational group; which hindered their ability to provide optimal care. They were subordinated by physiatrists and had to comply with their instructions. There was no evidence to suggest that physiatrists attempted to have working relationships with novice physiotherapists based on equal standing and mutual respect. Novice therapists during the first 2 years of

practice could not influence physiatrists' hegemonic attitudes towards inter-professional relationships and their efforts to negotiate their role were shut down.

Moreover, overt defiance of responsibilities and behaviours that defined the technician role brought about negative consequences. These consequences included being reprimanded by physiatrists or senior therapists which often occurred in the presence of patients and colleagues, and thus was detrimental to novice's self-esteem. Other consequences had impacts on job retention and income such as disciplinary meetings and salary cuts due to real or apparent claims of disruptive work behaviours on the part of therapists:

*"She [physiatrist and head of department] had a beef with him [physiotherapist colleague] and made his life difficult… he found himself questioned by HR if he was late or if he took an emergency leave without the so-called sufficient notice, but this was just payback for being too vocal and demanding autonomy" (Pt28, novice, Pt-FG5)*

Foucault (1988) defined disciplinary power as one which subtly induces self-compliance to deter the negative outcomes of deviance. It operates by organizing individuals based on function and fixed ranks. Those at the bottom of the hierarchy are aware of being monitored from above; therefore they shape their own behaviours according to the expectations placed on them. The above comment suggested that physiatrists employed an oppressive approach to disciplinary power to confine therapists to the technician role-identity. When needed, they 'tightened the iron cage' or employed more deterrent disciplinary techniques to curb resistance (Barker, 2005). However, power is not owned; it is exercised through in a dynamic relational fashion, and it triggers resistance (Foucault, 1979). Novice therapists during the first 2 years of practice adopted

strategic behaviours to resist physiatrists' dominion, obtain more autonomy and reduce role conflict. These behaviours were covert in nature as participants learned from colleagues' and own experiences to avoid confrontations. Specifically, they showed compliance with the technician role, while navigating through an alternative pathway to semi-autonomous practice. This pathway involved negotiating the treatment choice with patients. Thus, therapists tried to *"sneak behind the physiatrist's back" (Pt29)* and *"work under the table" (Pt4)* to acquire more autonomy. Success depended on the ability of individual therapists to select eligible patients who would be open to deviating from physiatrists' instructions, along with their ability to convince those patients:

*"I used to work behind the curtains literally and figuratively; when I was alone with the patient behind the curtain I tested the water to see if she would listen to me and when I had her trust I'd offer my suggestions about the treatment" (Pt20, senior, interview)*

Bypassing physiatrists and negotiating autonomy with patients marked salience of the navigator identity that was developed over the course of the first 2 years of practice. During this time, the confined identity was shed as feelings of disempowerment evolved into feelings of anger and lack of self-fulfilment which pushed participants to covertly seek autonomy. Their behaviour was purposeful and tactical; it involved selective interactions whereby the therapist chose which patients to approach and how; in order to increase autonomy and obtain positive feedback that would affirm their self-perceived professional identity (Bruke, 2006).

The literature referred to covert forms of resistance as "routine resistance" which was defined as informal and unorganised opposition of power in the workplace (Mumby, 2005). Prasad and Prasad (2000) identified different routine resistance behaviours in various work settings across different industries including healthcare. Said behaviours symbolised subtle subversions of authority, and included gossip, employee disengagement, minor deviations from standard procedures or dress code and reluctance to accommodate managerial demands. These actions were not always defined and owned by doers as resistance. Many novice therapists behaved in a self-described unfriendly manner towards physiatrists. Being unfriendly was disguised as a legitimate action in daily practice, but acknowledged as deliberate resistance during interviews with the researcher. This attitude might not have helped participants gain equal autonomy and status, yet it gave them an outlet for frustration:

*"I don't smile, I don't chat, I want them [physiatrists] to know I don't like them… but they can't complain because I'm not doing anything wrong, I'm just too busy" (Pt1, novice, Pt-FG1)*

Some physiatrists pointed out therapists' unfriendly attitude which was interpreted paradoxically as disorderly, but unintentional (i.e. not an act of resistance) and inconsequential to the continuity of patient care. They added that novice therapists were inexperienced and interested in having autonomy to improve their prestige regardless of the negative impacts this might have on treatment outcomes and patient safety. As such, they justified the need to instruct them:

*"The younger generation of therapists find it stigmatising to work under us because they went to university and all, but they can't be trusted with patients" (Dr19, Physiatrist, Dr-FG5)*

The above comment enclosed an implicit recognition that subordinating university-qualified physiotherapists did not suit their level of qualification and the status that should come with it. There also were several direct references to the improved skills and knowledge of therapists who received modern and quality physiotherapy education, as compared to previous generations of therapists who did not. Despite these acknowledgments, most physiatrists believed that limiting the role of physiotherapists to hands-on care was in patients' best interest because therapists were incapable of making effective evidence-based decisions due to their unscientific background:

*"We [physiatrists] can't let them [physiotherapists] do whatever they want because, unlike them, we actually care about patients" (Dr6, key figure in Physiatrist Society, Dr-FG2)*

The interview data reflected power imbalance in favour of physiatrists given their senior positions and extensive clinical experience. It showed that they maintained the status quo using disciplinary techniques. Covert resistance did not give participants the automatic, unchallenged autonomy and high levels of prestige and respect they desired. Bypassing physiatrists did not enable the novice therapist to reduce their control or "stretch the iron cage" (Prasad and Prasad, 1998; P393). Negotiating with patients did not always allow for a semi-autonomous role because therapists often did not have enough time to persuade patients, and many patients either trusted physiatrists. Having sporadic episodes of partial autonomy with selected patients seemed to have amplified, rather than reduced, the role conflict. This is because participants had some opportunities to implement practice based on their reasoning and values,

or in other words they were sometimes able to enact their individual professional identities. Shifting between the doctor of physiotherapy and technician identities in daily practice heightened the state of incongruence along with negative feelings of anger and lack of self-actualisation. At the end of this stage, covert resistance was considered ineffective; and more open forms of resistance were sought. However, the analysis indicated that overt resistance was usually adopted by more experienced junior and senior physiotherapists, while novice physiotherapists did not seem to have progressed past this stage.

### 7.2.4 Overt resistance:

Physiatrists took an oppressive approach to disciplinary power that relied on techniques to enforce compliance with and punish deviance from the technician role. This form of power limited certain behaviours or in other words semi-autonomous practice for physiotherapists. It functioned through hegemonic inter-professional relationships that prevented therapists from expressing their professional opinions. It aimed to create monopoly of rule over the domain of physiotherapy. If accepted by physiotherapists, this form of power would transform them into self-disciplined subordinates who believe that it is their responsibility to comply with the rules associated with the technician role.

Several physiotherapist participant reported that most senior therapists who qualified with a diploma were not fully prepared for autonomous practice during undergraduate education, and thus easily conformed to the technician identity. Conforming highlights the ability of disciplinary power to constitute subjectivities (i.e. produce identities) as *"discipline 'makes' individuals; it is the specific technique of power that regards individuals both as objects and as instruments of its exercise"* (Foucault, 1991; P170). However, for the study participants, the

behavioural and perceptual modifications, and the identity compromise were substantial. They rejected a non-autonomous role together with the expectations associated with the technician identity, and resisted physiatrists' power.

The literature presented different interpretations of Foucault's ideas about resistance. Repeated criticisms argued that Foucault believed that resistance was impossible. Such criticism have been questioned hence Foucault argued that the very existence of power depended upon the production of resistance; that both were interconnected and entangled (Sharp et al., 2000). Foucault (1991) noted that resistance is not the opposite of power because not only is resistance shaped by existing power dynamics, but also resistance creates power relations. Power and resistance, thus, co-existed in mutually constitutive relationships whereby different types of power produce certain forms of resistance that, paradoxically, reinforce and/or create power relations (Lilja and Vinthagen, 2014). Therefore, this thesis, together with several Foucauldian studies, maintained that resistance is possible, yet always in relation to power and never in a space outside of power relationships (Muckelbauer, 2000).

Lilja and Vinthagen (2014) outlined that power could trigger both covert and overt resistance; both were employed by physiotherapists at different stages of their careers. Since oppressive disciplinary power claims monopoly by commanding certain behaviours while repressing others, resistance involves breaking these commands and repressions, or doing what is punishable (Kelly, 2010). Covert resistance is done in a disguised manner whereby breaking rules and expectations would only be detectable, and thus costly, under intense surveillance. The previous section discussed how individual physiotherapists

engaged in micro-political power plays through covert resistance behaviours to circumvent physiatrists' control and navigate a pathway to semi-autonomous practice.

However, after 2 years of practice, all physiotherapist participants began full-time master degree while working. They were back in the educational environment where their professional identities were developed; hence the doctor of physiotherapy identity standard was more congruent with their self-perceptions. The ongoing contrast between educational and work environments increased the role conflict and identity disjuncture; thereby adding to participants' frustration. They could not or chose not to compromise their behaviours to mimic compliance with the technician role; whereas they have come to consider physiatrists' hegemony as a direct attack on their personal sense of self.

At this stage of the Egyptian physiotherapist journey informal covert resistance was deemed futile, and replaced by formal and organised overt resistance. This transition suggested that the navigator identity was abandoned, while the contender identity became more salient. It also emphasised that physiotherapists' individual professional identities continued to be reshaped by their power struggles with physiatrists. This is because whether the individual responds to or resists power; their subjectivity/identity would be defined and reproduced by the very act of obedience or subversion that in return recreates power relations (Dreyfus and Rainbow, 2014). Much like the confined and navigator identities, the contender identity was another product of power relationships, but it was developed to change the order of said relationships in favour of physiotherapists. Foucauldian insights suggested that explicit

subversions of oppressive disciplinary power often involve openly defiant and challenging behaviours (e.g. demonstrations) that not only attempt to undermine the values and institutions of power, but also overthrow its representatives (Gutting, 2005). Physiotherapists employed overt resistance in a self-described *"revolution against physiatrists" (Pt6).* The comment below captured the motives behind and methods of resistance they employed:

*"I wasn't going to spend the rest of my career scavenging for a little bit of autonomy so I can actually do my job… we rallied-up and we went on strikes" (Pt14, senior, interview)*

Overt resistance took the form of industrial action and involved sit-in strikes, protests and grievances. Industrial action is a type of formal resistance in the workplace that requires organised, collective opposition to power (Prasad and Prasad, 2000). Senior therapists reported going on more strike than juniors giving that they have been employed in these conditions for longer. Strikes refer to the collective withholding of services by a group of workers for the purpose of extracting certain aims that are usually intended for the benefits of strikers (Loewy, 2000). Globally, reasons abound why healthcare workers, including physicians, go on strike in true underlying causes of industrial action. These reasons pertain to career stagnation, healthcare privatisation, and demoralization from working in systems with poor infrastructure, manpower shortages and poor personal remuneration (Briskin, 2012; Chima, 2013; Murphy, 2007; Wilson, 2012).

Recent evidence from Italy, Nigeria and South Africa suggested that allied-health workers went on strikes because they believed that physicians were favoured in the system. Osakede and Ijimakinwa (2014) argued that physicians' sovereign power existed both inside and outside hospital settings. In addition to their authority with respect to patient care; physicians limited allied-health workers' autonomy through prescriptive referrals (Dahi et al., 2011). It has also been documented that physicians' political power extended outside clinical settings for they have been able to influence policymaking as they dominated leadership positions, such as appointment to health minister, and were overrepresented in parliament (Toth, 2015). Nurses, midwives and physiotherapists have been known to strike against medical dominion over the content of their work and against perceived discriminatory policies (Alubo and Hunduh, 2017; Oleribe et al., 2016). Similarly, participants went on strikes in response to physiatrists' tutelage over physiotherapy. Their demands centred on the establishment of physiotherapy departments that would be separate in their location, management and daily practice from physiatrists. It was believed that having independent departments that were led and operated by therapists would enable for more autonomy:

*"We wanted to have our own department and we wanted the head of department to be one of us and the syndicate supported us" (Pt21, junior, Pt-FG4)*

Western literature showed that professional organisations argued against the morality of healthcare staff strikes as they cause harm to patients. For example, the Chartered Society of Physiotherapy and the Nursing and Midwifery Council in the UK declared the right to take strike action as a last resort that should not

be attempted unless all other measures to conclude agreement have been exhausted, and arrangements have been made to ensure that emergency care was available (CSP, 2015; Jennings and Western, 1997). Allied-health providers in Australia, Japan, the UK, Ireland, South Africa and Germany expressed concerns for the standards of treatment that patients would receive in their absence (Clarke and O'Neil, 2001; Gafni-Lachter et al., 2017; Granberg, 2014). Given these concerns, it was documented that they were more likely to go on strike if spending cuts resulted in patient care being compromised (Neiman, 2011). This knowledge suggested that allied-health professionals worldwide believed there was a moral difference between going on strike to protect patient care and going on strike for professional prerogatives, despite the fact that patient care would suffer regardless of the aims of the strike.

Physiotherapists in this study also acknowledged the ethical implications of strike action given the negative impacts it had on the continuity and quality of care. However, they argued that they had no other option to achieve their demands, and believed that realising semi-autonomous practice would optimise care as therapists would be able to utilise their knowledge and expertise. The Egyptian General Physiotherapy Syndicate (EGPTS) adopted the same position, and encouraged members nationwide to participate in several strikes until their demands for semi-autonomous departments were met (EGPTS, 2016). In 2016, the EGPTS succeeded in lobbying the state to issue policy no.166 mandating the establishment of independent physiotherapy departments across the public sector. According to therapists, said policy was not immediately effective in their places of work. They explained that hospital management comprised of physicians who sided with physiatrists.

Some medical doctors who participated in the study vehemently opposed autonomy in physiotherapy under real or apparent concerns for patient safety. Physiatrists tried to dissuade hospital management from meeting therapists' *"unrealistic and unmerited demands" (Dr6)*. Strike actions were described as *"mutiny"* which further indicated that physiatrists believed in the lawfulness of their authority over physiotherapists:

*"The board of directors and the trust agreed with us [physiatrists] that therapists were not qualified to work without supervision in a separate department by themselves, but they kept going on strikes, it was like a mutiny, and patients were protesting too because they weren't getting their sessions" (Dr12, physiatrist, Dr-FG3)*

It was cited that some patients were sympathetic to physiotherapists' cause, while most patients protested the disruption of care and the increased financial burdens of private health services. As such, shutting down services during strike actions enabled therapists to exert pressure on employers, and they eventually succeeded in having independent departments. This gave them more autonomy over different aspects of their role including patient evaluation and determining the treatment choice. However, referral to and discharge from physiotherapy remained under the authority of medical specialists, which legally included physiatrists. Therapists reported being initially satisfied with this level of semi-autonomy for it gave them the opportunity to practice based on their knowledge and values. However, they continued to be disenchanted with their external social identity because medical colleagues refused to acknowledge therapists as fellow doctors with equal expertise and status:

*"When they [physicians] say I can't use the [doctor] title, they mean that I'm not a real doctor, well then who am I? A fraud" (Pt24, junior, Pt-FG4)*

*"I went to university and I studied to become a doctor just like physicians, just like dentists and pharmacists; even vets are considered doctors" (Pt30, senior, interview)*

The above comment suggested that the medical fraternity comprised of physicians, dentists, pharmacists and veterinarians. This group shared common characteristics, which according to most physician participants, were a background of scientific education that allowed for practicing in an informed and self-directed manner. The comment also showed that the medical fraternity was the reference group that physiotherapists identified with and hoped to be accepted into as they aspired for the professional legitimacy and status it would bestow upon them. Stangor (2015) defined a reference group as a collective of individuals that we admire and identify with because we wish to belong to the group. Yet, not all members of a reference group have the same status, for example older members and those who have wider social networks tend to have higher status. High-status members are in a better position to assert influence on the other members because the group often relies upon them to help it reach its goals. High-status individuals are more likely to influence decisions regarding the acceptance of new candidates or the dismissal of existing members. A new candidate who wishes to join the reference group needs to align their belief, behaviours and identity to the norms and standards of the group (Potts, 2015). The reference group, as guided by input from established high-status members, could either accept or reject the new candidate based on the extent to which the candidate's characteristics align with those of the group as well as their perceived added-value. Being accepted by the reference group would affirm the new candidate's self-perceptions, while

being rejected would challenge and destabilise their self-perceived identity (Cornelissen and Van Wyk, 2007).

Professional socialisation during undergraduate education encouraged therapists to construct their individual identities based on the doctor of physiotherapy identity standard. This identity standard was promised to give physiotherapists automatic membership to the medical fraternity (i.e. reference group) upon graduation. However, the reality in the workplace was that most medical doctors (i.e. oldest and highest-status members of the reference group) believed that physiotherapists did not possess the required characteristics to be recognised as doctors. This is because their education was judged as lacking and therefore therapists were considered unqualified for autonomous practice. Dentists, pharmacists and veterinarians were considered to have the same characteristics as physicians and thus were accepted as members of the medical fraternity, while physiotherapists were not and therefore were denied membership to the group. This denied status manifested in an attempt to limit therapists' clinical autonomy and challenge their use of symbols that distinguished the medical fraternity (i.e. the doctor title and attire).

Strike actions helped physiotherapist participants to increase their level of autonomy, but it did not enable them to change the perceptions of most physicians who did not consider therapists competent enough to be accepted as equal members of the medical fraternity. It could be argued that this form of overt resistance reinforced pre-existing power dynamics. Specifically, physiotherapists' demands to become acknowledged as doctors perpetuated the taken-for-granted notion that the medical fraternity, particularly physicians, were in charge of judging the legitimacy and professionalism of allied-health

providers. Therefore, they might have inadvertently consolidated, rather than undermined, the sovereign power of the medical profession over the healthcare ecology in Egypt.

Foucauldian insights suggested that sovereign power should be countered by resistance that claims different authority and challenges the monopoly of those in control (Thompson, 2003; Hoy, 2004). This resistance needs to undermine the values, methods, status symbols and claims of legitimacy of the sovereign power and its preventatives (Hartmann, 2003). Resistance, being entangled with power, needs to refute and transform the key mechanisms or technologies of power especially the deeply-seated beliefs that supported its monopoly of rule (Nealon, 2008). Lilja and Vinthagen (2014) explained that resistance will succeed when this sovereign power is publicly challenged in a sustained way by key groups in society of which the de facto sovereignty depends. Sovereign power is effectively undermined through widespread ideas and behaviours that negate its legitimacy and render its authority ineffective.

Physiotherapists' aspirations and endeavours to be accepted by the medical profession suggested that they subscribed to its sovereignty, and thus were unable to challenge its power. The idea that 'being a doctor meant being the best' was instilled within their personal belief system during primary socialisation at home and school, as well as professional socialisation during physiotherapy education; which all mirrored the perceptions of the wider Egyptian society. As therapists sought to legitimate their professional identity by gaining acceptance of the medical profession, they reinforced its cultural authority, public legitimacy and superiority over allied-healthcare.

Therefore, overt resistance did not seem to have undermined power of the medical profession, as many physician participants considered physiotherapists as *"technicians"* whose demands for equal autonomy and status were unfounded (see Chapter 6 Section 6.4.2.2). Physiotherapists also reported that some physicians discredited their knowledge claims and undermined patient trust in them. Seven patient participants feared that physiotherapists were not qualified and knowledgeable enough to work without being instructed by medical personnel. They supported physiatrists' dominance because they feared that therapists might provide harmful or ineffective treatments:

*"She [physiatrist] reassured me that she will oversee everything, she would even change the therapist for me if they weren't good, like if I didn't improve… she [physiatrist] reassured me that she wrote the correct instructions and movements that the therapist will do for me" (Pa6, Pa-FG2)*

Physiotherapists described negative feelings of frustration and lack of self-actualisation due to the perceived rejection and sabotage of the medical profession. Being rejected by high-status members (i.e. physicians) of the reference group they aspired to belong to, challenged their sense of self and prevented them from achieving identity salience. Therefore, despite acquiring more autonomy, the identity disjuncture continued; as the feedback of some physicians and patients continued to disconfirm physiotherapists' self-perceived professional identity against their external social identity.

Furthermore, physiotherapists' overt resistance against physiatrists' disciplinary power gave rise to a new power relationship between both groups. Given that therapists were practicing semi-autonomously in their own departments, the role of physiatrists was reduced to nonprescriptive referrals for they could no longer

dictate the choice of treatment. This situation triggered resistance on the part of physiatrists who began providing physiotherapy treatment sessions in their departments. Accordingly, a new power struggle was created whereby physiotherapists and physiatrists were competing over the same role and involved in boundary work to establish the superiority of one's approach and expertise over the other. This evidence aligned with Foucault's premise that resistance is not the reverse of power; instead power and resistance recreate on another and could produce new power relationships (Foucault, 1997). At this point of the journey, the Egyptian physiotherapist embarked on another struggle to defend their role exclusivity and professional boundaries, while working to protect the level of autonomy they achieved and to legitimise their identity as doctors of physiotherapy.

### 7.2.5 Boundary work:

The term boundary work was adapted from Gieryn (1983); it refers the strategies used by professionals to distinguish their practice from others in order to protect and increase their jurisdictions and status at moments of role flexibility. Most physiotherapists and physiatrists in this study found the overlap between their roles unacceptable. They were reluctant to exchange expertise, cooperate or share the domain of physiotherapy. Physiotherapists believed that physiatrists expanded their role by encroaching on that of therapists. They considered this an attempt to hijack the scope of physiotherapy and a *"guerrilla action that aimed to attack our [physiotherapists'] exclusivity" (Pt23).* It was believed that the current role overlap threatened the autonomy of therapists who feared that they might find themselves resubordinated given that professional boundaries have become flexible or *"up for grabs" (Pt31).*

Moreover, there were concerns that some patient might facilitate the restoration of physiatrists' dominion, which emphasised the need to protect boundaries in daily practice as explained below:

*"First we had to fight to get out of their departments and now we have to fight to get them out of our field… we could lose our department because if a patient expects us to take orders from a doctor, physiatrists take advantage of situations like this to go back to their old ways" (Pt13, key figure in EGPTS, interview)*

Physiatrists argued that physiotherapy practice fell within the jurisdictions and professional scope of medicine, and thus they were within their legal rights to offer treatments in their own departments. They felt that physiotherapists' attempts to exclude them from the domain of physiotherapy practice were unjust:

*"We are being eaten-alive over here; they [physiotherapists] are trying to exile us out of the field because they know they can't face the competition, but we won't let them undermine our right to practice physiotherapy" (Dr8, Key figure in Physiatrist Society, Dr-FG2)*

Both occupational groups were involved in covert and overt boundary work that aimed to differentiate between their roles as an attempt to construct distinct professional jurisdictions in the workplace. The following 2 sections discuss the strategies used in both types of boundary work.

**7.2.5.1 Covert boundary work:**

Subtle or covert boundary work centred on the use of discourse as a method of micro-political boundary management in the workplace. Both occupational

groups employed a range of discourses to demonstrate the superiority of their practice to patients, hospital management and the trust. Furthermore, some participants described several situations where they appeared to have employed discursive practices as a key strategy to distinguish their approach from the other in order to secure funding or protect their autonomy. On other occasions, discourse was a fundamental resource used to justify the lack of interdisciplinary collaboration by characterising the other as unprofessional and uncivil, therefore difficult to work with. It was also a tool during interviews to legitimise one's exclusivity and delegitimise the existence of others within the field. Four interrelated discourses were identified from participants' narratives, namely evidence-based practice, clinical competence, patient safety and social status discourses. Table 7.1 compares the use of discourses between both participant groups.

**Table 7.1: Legitimacy discourses used by participants**

| Discourses | Physiatrists | Physiotherapists |
|---|---|---|
| Evidence-based practice discourse | X | X |
| Clinical competence discourse | X | X |
| Patient safety discourse | X | |
| Social status discourse | X | |

The evidence-based practice discourse was used by physiatrists to differentiate themselves from physiotherapists on basis of their superior scientific knowledge and approach that ensured optimal therapy outcomes. This discourse served to persuade hospital management with the need to employ more physiatrists and allocate more financial resources to their department. It also aimed to argue for downgrading therapists' role once more to technical and routine activities given their unscientific background and practice:

*"I have a leading role in the department so I have to negotiate with the board to expand our department… I have to show the board that we provide the best results and we do, because we offer better treatment than therapists because they don't apply recent protocols and evidence" (Dr20, physiatrist, Dr-FG5)*

*"Physiotherapists have a role; they are good technicians, but he [hospital general manager] shouldn't expect them to diagnose or make evidence-based decisions about the treatment or prognosis" (Dr7, Key figure in Physiatrist Society, Dr-FG2)*

Physiotherapists instrumentally employed evidence-based practice as a resource to protect their autonomy and legitimise their identity as doctors of physiotherapy by demonstrating knowledge and accountability to hospital management and in one case to the trust's board of directors. To achieve this aim, therapists highlighted the similarities between their work and that of physiatrists. They argued that their work was founded upon the same scientific body of knowledge and approach to evidence-based practice that physiatrists used:

*"They [physiatrists] are still trying to convince management that we aren't qualified to have our own department and we still have to present our case in meetings to prove that our work is based on the same principles and knowledge they follow and we apply evidence-based protocols only" (Pt31, junior, interview)*

During interviews with the researcher the clinical competence discourse was utilised to legitimate role exclusivity in relation to expertise as exemplified by participants' views that the skills of their own profession were sufficient to ensure effective therapy outcomes. Physiatrists believed that physiotherapy was a highly technologized field. They aimed to demonstrate that they were more competent than therapists in using complex technologies in addition to

manual therapy. EMG and electrotherapy devices were constructed as boundary objects to divide between both occupational groups:

*"Therapists can't interpret EMG tests, let alone conduct it… they use machines like technicians because they don't know how to use it judiciously and effectively, but we know when and how to augment manual therapy with laser or ultrasound" (Dr13, physiatrist, Dr-FG4)*

Physiotherapists noted that their expertise in manual and electrotherapy and their wide knowledge of exercises were fundamental to the professional role and the delivery of high standards of patient care. Their discourse around clinical competence was used to convince patients with the superiority of their diverse and advanced treatment skills in comparison to physiatrists' limited skills and hands-off practice:

*"I explain to the patient that they'll get their exercises, their mobilization, their stretches and electrotherapy, everything, lots of manual hands-on work… I explain to the patient that my way is more effective, it's the real deal, unless you want some lousy ultrasound, because that's all physiatrists do, they only use machines because they don't have any manual skills" (Pt13, key figure in EGPTS, interview)*

The third discourse centred on patient safety and was deployed by physiatrists only to delegitimise therapists' claims for autonomy and role exclusivity. It was founded upon arguments of scientific knowledge, evidence-based practice and clinical competence. It featured stories where physiotherapists were consistently constructed as negligent and incompetent. Physiatrists argued that extending their role to provide physiotherapy treatments protected patients from

physiotherapists' potential malpractice and ensured that patients received effective management:

*"They [physiotherapists] have harmed patients in the past because they aren't aware of recent protocols and what the evidence says and the patient obviously can't tell what's best for them, so we provide patients with safe and effective treatment to protect them" (Dr21, physiatrist, Dr-FG5)*

Finally, 2 physiatrists (Dr6 and 8) used a discourse of social status to set themselves apart from physiotherapists based on their higher birth caste. They emphasised that they offered professional care as guided by their upper-class values. On the contrary, physiotherapists' personal manner and attitude towards therapeutic and inter-professional relationships were considered unprofessional and were associated with socially unacceptable behaviours that were linked to low birth caste. These 2 physiatrists attributed the lack of collaboration with physiotherapists to the latter's unprofessional and uncivil manner:

*"We treat patients with dignity because we come from good families and we are decent, with physiotherapists I just feel like they haven't learned how to respect people; their voices are loud, they roll their eyes and talk with their hands [emotive body language], which is vulgar… and I keep saying to him [hospital executive manager] don't expect me to be able to work with them because they can be vulgar" (Dr8, Key figure in Physiatrist Society, Dr-FG2)*

The findings presented in this section showed that physiotherapists confined themselves to the evidence-based practice and clinical competence discourses. They sought to legitimise their autonomy and clinical philosophy by highlighting the resemblance between their practices and those of physiatrists. Foley and Faircloth (2003) observed a similar tendency whereby the legitimacy discourses employed by nurses and midwives reflected a form of clinical and ideological

isomorphism with medicine. On the other hand, physiatrists confidently used all four discourses to discredit therapists' claims of knowledge, autonomy and professionalism. Their rhetoric centred on the differences between their scientific (safe and effective) approach and therapists' technical work. This reflected their dominant position in the healthcare hierarchy which enabled them to reinforce the taken-for-granted premise that medical doctors were responsible for determining the legitimacy of allied-health providers.

The literature identified an inverse relationship between a profession's position in the status hierarchy and the number of legitimacy discourses used. Superior professions tended to employ fewer discourses to back their claims (Sanders and Harrison, 2008). However, the opposite was true in this study given that physiatrists' discursive practices were more diverse than physiotherapists. This evidence suggested that an encroaching profession might require a greater variety of legitimacy discourses, despite its higher professional status.

Previous studies presented a number of recurring legitimacy discourses across a range of different countries, health-professions and clinical settings. The literature could be compared to the discourses identified in this section, though with some differences. In this study, the evidence-based practice discourse represented an overarching scientific discourse, which resonated with existing evidence that healthcare providers sought to legitimise their work with reference to science (Borthwick et al., 2009). The literature showed that healthcare providers tended to legitimate their practice by situating their clinical philosophy within the body knowledge 'owned' by their profession whilst stressing on characteristics that make them equal to, but also different than other professions (Baxter and Brumfitt, 2008). However, physiotherapists interviewed

in this study did not argue for their exclusive body of knowledge, instead they stressed that they applied the same scientific knowledge as physiatrists. This argument contradicted with their claims of having unique expertise and diluted the boundaries between physiotherapy and physiatry. Moreover, therapists and physiatrists said that their skills were too sophisticated to become accessible to the other, but they reported on similar skills. It, thus, seemed that the clinical competence discourse also emphasised the overlap between their roles and approaches. The utilisation of competence discourses was previously documented as professions often stressed the high level of skill that they possessed (Leonard, 2003).

The clinical competence discourse also showed that physiotherapists and physiatrists valued technological aptitudes and argued for their ability to effectively use machines in assessment and treatment. This is unlike Timmons and Tanner's (2004) nurses who used a technology discourse to construct operating department practitioners as technicians because they dealt with machines. This discursive practice could be considered a reflection of nursing's patient-centred ideology. Discourses of patient-centeredness were widely used by western nurses and physiotherapists to establish the superiority of their profession that treated the whole patient and respected their choices (Norris, 2001). Patient-centeredness did not feature in participants' narratives and was in contrast to the patient safety discourse. Physiatrists legitimised their existence within the domain of physiotherapy by arguing that their safe and effective practices protected patients from the malpractice committed by physiotherapists. The discourse presented patriarchal views that denied patients the agency and capacity to make informed judgements about the quality of care that physiotherapists provide. This evidence suggested that

patients might be marginalised as professionals focus on their prerogatives and jurisdictional advantages.

It is also of interest that the existing literature did not feature professionalism as an explicit legitimacy discourse. Instead, claims of higher professional status have been implied in numerous discourses as physicians associated nurses with technical, thus less prestigious, work (Leonard, 2003). In this study, physiotherapists' unprofessional demeanour as related to class-values was another legitimacy strategy that characterised physiatrists' social status discourse. The devise utilisation of social status as a resource to undermine therapists' professionalism reflected the hierarchical and class-conscious nature of the Egyptian society where the social mobility of allied-health providers seemed difficult.

In summary, the findings presented in this section supported the notion that professional boundaries are dynamic, permeable and socially constructed (Martin, Currie and Finn, 2009). Although policymakers and professional bodies can outline the boundaries, they remain a negotiated order determined by practitioners in clinical settings (Salhani and Coulter, 2009). Many physiotherapists and physiatrists engaged with micro-political boundary management that involved power struggles to construct professional jurisdictions in the workplace. However, the power struggle was not simply over status; it rather centred on issues of professional legitimacy, role exclusivity, autonomy and identity. Both groups used discourse as a subtle or covert strategy to demarcate their role from the other by highlighting the scientific nature and effectiveness of their practice. Physiatrists' discursive practices aimed to construct the identity of physiotherapists by delegitimising therapists'

knowledge claims, ability to practice autonomously and professionalism. According to participants' responses, physiatrists succeeded in expanding their professional boundaries by acquiring tasks that were previously performed by therapists (i.e. the provision of physiotherapy treatment). This type of boundary expansion is known as vertical role substitution where a profession that is considered higher on the hierarchy obtains tasks that were formerly within the domain of another occupational group (King et al., 2015). Therapists used discourse mainly to legitimise and defend their autonomy and identity by highlighting the similarities between their knowledge base and clinical methods, and those of physiatrists. Although physiatrists tried to depict their practice as more scientific, effective and safer than therapists, both occupational groups did not identify unique skills or tasks that distinguished their role from the other. Their discursive practices emphasised the role overlap and did not enable participants to construct clear professional jurisdictions in the workplace. Consequently, both groups also engaged with more overt and challenging boundary work strategies.

#### 7.2.5.2 Overt boundary work:

Many physiotherapists and physiatrists utilised different overt boundary work strategies to achieve role exclusivity. These strategies included ample workplace conflicts with regards to task performance and interpersonal relationships. Barki and Hartwick (2004) typology was used to define and differentiate between the two types of conflicts. Task-related conflicts were defined as preventing the other from doing what they think should be done in a task, while interpersonal conflicts involved disagreement with the other's personal values and negative feelings directed towards the other as a person.

Some physiotherapists and physiatrists were involved in task-related conflicts as a form of overt boundary work that aimed to disadvantage the other and prevent them from performing tasks by limiting their access to equipment, treatment facilities, patient records and managerial meeting notes. Participants recognised that task-related conflicts were detrimental to patient care:

*"I took our [laser] machine from them [physiatrists]… it is unfair for patients, but next time they'll know to come to our department" (Pt30, senior, interview)*

In a few cases, participants' pre-occupation with setting boundaries between their practice and that of the other had direct negative impacts on patients. One physiatrist (Dr15) and 2 therapists (Pt6 and 13) reported denying treatment to patients who insisted on having input from the competing professional group. Therapists argued that such patients were uncooperative and thus were expelled from the department, but they were not deprived of treatment hence they were referred to the physiatry department. Physiatrist participant 15 presented a similar argument, and equally acknowledged that this attitude was unprofessional and deleterious to quality interdisciplinary patient care that patients wanted:

*"If the patient wants what the physiotherapist has to offer, I let them know that they can just go to her [therapist], I avoid seeing those patients again, which is not ideal, but I won't treat patients based on what she [head of physiotherapy department] thinks" (Dr15, physiatrist, Dr-FG4)*

Some of the participants' narratives suggested that overt boundary work strategies also involved interpersonal conflicts between physiotherapists and physiatrists. Conflicts related to interpersonal relationships were coded as

'corridor confrontations'. Some physiotherapists and physiatrists openly disputed each other's professionalism and sometimes exchanged personal criticisms in front of patients and colleagues. Some physiotherapists said that physiatrists directed negative feelings of hostility and anger towards them and vice versa, while both groups acknowledged that they had feelings of animosity towards the other. Yet, both groups of professionals blamed the other for initiating interpersonal conflicts in the workplace. Physiotherapists believed that said conflicts aimed to deflate their self-esteem and they were more damaging to their public image because physiatrists' identity as medical doctors was safeguarded:

*"They [physiatrists] are so snobbish, but when I say they are rude, they [physiatrists] say 'oh look, doctors of physiotherapy like to fight, they aren't professional'… I have to assert myself, but the problem is that patients could get the wrong idea about doctors of physiotherapy" (Pt31, junior, interview)*

Two patient participants reported that they have witnessed personal confrontations between physiotherapists and physiatrists and felt that these incidents affected their trust in both:

*"They were fighting in the corridor about my case and I could hear them exchanging harsh words… frankly I started thinking that none of them understood my case" (Pa10, Pa-FG2)*

Thus, overt boundary work in the form of task-related conflicts was attempted to achieve role exclusivity by preventing the other from performing tasks. Boundary work through inter-personal conflicts negatively affected physiotherapists' self-esteem. However, the success of these boundary work

strategies seemed questionable because neither physiotherapist participants nor physiatrist participants were able to exclude the other. Instead, task-related conflicts prevented the delivery of interdisciplinary care which resulted into patient attrition, while interpersonal conflicts decreased some patients' trust in both occupational groups. Some therapists argued that this approach was the most challenging method to defend their role, autonomy and scope of practice. Therefore, they continued to be involved in role-boundary disputes and face-to-face confrontations with physiatrists. As such, physiotherapists' power struggles with physiatrists over the professional role continued. Nevertheless, physiotherapists' internal struggle to attain identity salience was unresolved because their individual professional identity was being invalidated by the external identity that some patients and most physiatrists ascribed to them. Consequently, they continued to experience negative feelings of anger and limited self-actualisation:

*"Sometimes I feel so angry because after 30 years of experience, I still have to fight with physiatrists on many cases because they try to dispute my knowledge… they want to me make me feel like I'm not a professional" (Pt13, key figure in EGPTS, interview)*

Some physiotherapists (n= 10) did not seem to have progressed beyond this stage of the journey. They were disenchanted with their work conditions and professional status. For some therapists (n= 9) the journey of professional identity development continued beyond the struggle stage. It extended into a stage of emancipation that resulted into professional identity transformation:

*"I was a little bit focused on the idea that I'm a doctor or like a doctor or a doctor of physiotherapy which is exactly like a doctor, but it was like a rabbit hole and I just wanted to get out" (Pt20, senior, interview)*

### 7.3 Emancipating:

#### 7.3.1 Breaking away:

So far, the findings presented in the core category showed that therapists struggled to achieve salience because their individual professional identity as doctors of physiotherapy was being refuted by feedback generated from their interactions with physiatrists in the workplace. Therapists were involved in power struggles to legitimise their identity, protect their autonomy and professional boundaries. The power struggle featured micro-political boundary work whereby therapists were involved in ample task-related and interpersonal conflicts with physiatrists. They noted that *"fighting with physiatrists was like a second full-time job"* that they needed to attend to in order to protect their scope of practice. All therapists felt burned-out as a result of working in such a stressful environment, yet some of them were determined to follow the same approach. Some therapists (n = 10) believed that engaging with workplace conflicts was the most effective method of boundary work that would enable the eventual exclusion of physiatrists from the field of physiotherapy. They explained that achieving role exclusivity would facilitate external occupational closure that was necessary to attain professional legitimacy and consolidate the identity of physiotherapists as doctors hence their role would become unique and invaluable:

*"Each doctor in the medical field has a specific role; like a gynaecologist can't practice neurosurgery and therefore no-one can practice physiotherapy expect doctors of physiotherapy… we are trying to make a position just for us and our profession in the medical field and we are trying to stop them [physiatrists] because they are the invaders, and by the way they cause problems here*

*[workplace], my colleagues and I are just defending" (Pt13, key figure in EGPTS, interview)*

Some therapists (n= 9) explained that their interactions with patients inspired them to evaluate and change their attitudes towards inter-professional relationships with physiatrists. Patients' input was the catalyst that prompted therapists to undertake an individual self-reflective process. Therapists began to consider the adverse impacts of their aggressive attitudes towards physiatrists on the quality of patient care. They realised that by initiating conflicts and being uncooperative they triggered further resistance on the part of physiatrists who often responded in a similar manner. This created a vicious cycle of inter-professional rivalry that impeded communication and prevented the coordination of holistic care that combined the knowledge and expertise of both occupational groups:

*"It wasn't until I saw how unfair it was for patients that I decided to be a part of the solution because no one knows everything and we [physiotherapists and physiatrists] should work together, we should ask each other for advice especially if the case is complex or if the patient isn't improving" (Pt9, junior, Pt-FG2)*

Self-reflection helped this group of physiotherapists recognise that their tendency towards role-protectiveness stemmed out of insecurity due to the perceived unequal status of both occupational groups. This insecurity triggered concerns that if therapists were willing to share the domain of physiotherapy with physiatrists, then physiatrists might once more try to limit therapists' autonomy and confine their role to the provision of prescriptive treatments. Physiotherapists explained that such insecurities and concerns motivated them to initiate and participate in boundary work and conflicts in order to reduce

physiatrists' ability to practice physiotherapy. They attested that this territorial attitude disadvantaged patients, and they realised the importance of holding themselves accountable for negatively influencing patient care:

*"It wasn't easy to work with physiatrists because there was no guarantee that they won't try to boss me around again because they were, in fact, in a stronger position in front of patients because they are doctors and I just wasn't as confident as I'm now, so naturally I felt like no, but I knew that I had to break away from this competitive mentality, I knew I had to work on my own self-confidence and increase my abilities" (Pt20, senior, interview)*

The above comment showed that self-reflection helped physiotherapists develop greater responsibility towards patients and identify the source of insecurity behind their reluctance to cooperate with physiatrists; together with a solution to increase their self-confidence. Physiotherapists identified continuous professional development as a method of self-empowerment to increase their clinical competence and build the confidence needed to forge collegial working relationships with physiatrists from an empowered and informed position. 'Breaking away' was an in-vivo code extracted from physiotherapists' narratives to capture the change in their mind set that emerged through self-reflection and resulted into abandoning territorial feelings and attitudes that were considered both deleterious to patient care and the ability of physiotherapists to focus on their own professional development. This change in physiotherapists' mind set indicated that the former contender identity was gradually being abandoned and that a new empowered identity was in the making. The next phase of the journey describes how physiotherapists formed a community of practice in the workplace to support their professional growth which had a significant impact on their professional identity.

### 7.3.2 Forming a community of practice:

The first step towards emancipation required individual physiotherapists to evaluate and leave behind their competitive stance towards inter-professional relationships with physiatrists. This self-reflective process was promoted by patient demands and dire need for cooperation between both occupational groups. Reflection cultivated a critical realisation that being preoccupied with boundary work created a stressful work environment for it was an arduous process that detracted from physiotherapists' capacity to channel their efforts towards developing their expertise. Therefore, a group of 9 physiotherapists organised themselves into a community of practice to facilitate professional growth. The following excerpt showed that the objectives behind forming said community centred on promoting professional development as tool for increasing physiotherapists' confidence and ability to engage physiatrists in mutually collaborative relationships for the benefit of patients:

*"I think we [physiotherapists] galvanised towards one another because we were all kind of fed-up with the competition that was going on, we wanted to develop our knowledge and we actually wanted to cooperate with physiatrists because we wanted the best for our patients" (Pt32, junior, verification interview)*

The structure and dynamics of this community of practice were geared towards achieving its aims of promoting professional growth through situated learning and peer-education in the workplace. Physiotherapists exchanged knowledge, transferred their manual skills to one another and collaborated to increase their critical thinking, problem solving and research competencies. These skills and competencies are essential for the cognitive processes that underpin clinical

reasoning and effective independent clinical practice; they all facilitate the critical use of research evidence and the application of that knowledge to the clinical context (Rushton and Lindsay, 2008). The comment below describes how the community of practice was formed and how it functioned:

*"We basically spend 2 hours just for learning at the end of the week; we plan the focus of our learning sessions at the beginning of the month, but this can change if we got new interesting cases… we watch clinical videos and practice our techniques, we discuss research articles and we review all of the patients' progress and evaluate the success of the treatment, we work on our reasoning like how to make holistic assessment in a short time, and how to critique what we read and be critical learners" (Pt10, junior, Pt-FG2)*

According to physiotherapists, this community of practice was originally established by 2 senior physiotherapists (Pt15 and 16). Their ability to demonstrate enhanced knowledge and the emotional support that the group provided attracted new members. Seven more therapists (Pt8, 9, 10, 11, 12, 20 and 32) joined the group; which at the time to data collection encompassed a total of 9 members which represented all physiotherapists working in that hospital. The increase in the size of the community of practice could be considered evidence of its success in allowing for professional development. Further evidence of success was also provided by physiotherapists given that they have been to influence positive practice change that improved patient care. They gave some examples of interventions they have introduced in the department, such as patient-centred outcome measures, group therapy and a new documentation system for recording and storing patient data. They indicated that these interventions were based on previous research evidence, yet were adapted to suit the limited resources that physiotherapists had.

Physiotherapists emphasised that one of the significant accomplishments they have been able to achieve as a community of practice was to change their attitudes towards the professional role by becoming more patient-centred. They explained that their group discussions of current research helped them reach a deeper and more critical understanding of evidence-based practice. It was believed that the clinical philosophy of contemporary physiotherapy interpreted evidence-based practice as a process whereby the therapist builds a partnership with the patient and encourages their participation in decision-making. This partnership is founded upon joint autonomy to ensure that decisions are made based on the therapists' knowledge of the best research evidence and the patient's knowledge of their condition along with their goals, values and treatment preferences.

According to their clinical experience and knowledge of recent literature, physiotherapists argued that this approach to evidence-based practice resulted into better therapy outcomes because it empowers patients to take the responsibility of managing their own health. Indeed, physiotherapists' perceptions of evidence-based practice have been corroborated by the literature (Dawes et al., 2005; Schreiber and Stern, 2005; Scurlock-Evans, Upton and Upton, 2014). The following comment described how such an understanding of evidence-based practice was enlightening for physiotherapists as it prompted them to adopt the role of the facilitator whereby they approached the professional role from a holistic, biopsychosocial and patient-centred perspective:

*"The idea that the therapist should choose the treatment and decide everything for the patient isn't in the spirit and the principles of our profession, it is outdated and ineffective because unless you get the patient on board you can't uncover*

*and address the personal and emotional stuff, and therefore the management will be lacking" (Pt11, junior, Pt-FG2)*

Physiotherapists reflected on their former clinical philosophy and understanding of evidence-based practice and how these perceptions influenced their attitudes towards the professional role. They indicated that they have developed their former understanding during undergraduate education and described it as *'limited'* and *'outdated'* because it was built on a biomedical model and a patriarchal approach to the professional role.

It was explained that physiotherapy education presented a biomedical understanding of physiotherapy knowledge and evidence-based practice whereby the management focused on identifying and addressing the patient's physical symptoms and did not dedicate attention to psychosocial aspects of illness. They elaborated that the biomedical model of evidence-based practice oppressed patients because the physiotherapist was considered the sole decision-maker based on their scientific knowledge, whilst the patient's opinions were considered ill-informed and their role was limited to being passive recipients of treatment. The comment below summarised the criticisms that this group of physiotherapists had regarding the philosophy of Egyptian physiotherapy that was conveyed to them during undergraduate education:

*"I think the [bachelor of physiotherapy] course focused on fixing things; fixing posture, fixing gait, fixing range of motion, you know, fixing the patient, I think this is very limited because people are more complex… we [the participants as students] didn't learn how to involve the patient because the course emphasised evidence, evidence, evidence and it didn't really teach us how to make the evidence work for the patient and I think this is what we [community of practice] discovered and what we have been trying do as a group" (Pt12, junior, Pt-FG2)*

The above comment insightfully captured the effect of learning in a community of practice on physiotherapists' understanding of their own body of knowledge. It showed that peer learning generated an emancipatory understanding of physiotherapy practice that informed physiotherapists' clinical philosophy. This understanding allowed therapists to advance their practice as they transformed their approach to the professional role by embracing a holistic, patient-centred philosophy. Such professional development allowed physiotherapists to empower and emancipate their patients by encouraging them to play an active role in the management.

### 7.3.3 Transforming professional identity:

All 9 physiotherapists who formed the community of practice that was studied in this research articulated that their objective was professional development. They sought progress that they believed was not possible to be achieved individually. For example, physiotherapist participant 8 was focused on improving his clinical reasoning abilities, physiotherapist participant 12 wanted to gain more knowledge in the management of musculoskeletal conditions and physiotherapist participant 20 sought to increase her understanding of research methods to support her doctoral studies. Although they placed emphasis on different competencies, all of them stressed that their overall aim was to support each other's learning and growth to improve the standards of patient care and further their careers.

The community of practice gave physiotherapists the opportunity to increase their knowledge in relation to their speciality or subject area and thereby facilitating their identity transformation from a general physiotherapist to musculoskeletal specialist physiotherapists. Previous studies identified similar

identity transition from general to specialist practitioners as a result of undertaking postgraduate studies (Grafton, 2013; Petty, Scholes and Ellis, 2011; Stathopoulos and Harrison, 2003).

Physiotherapists in this study described the growth they achieved from being a part of a community of practice as the development of high levels of clinical reasoning, critical analysis in practice approach, judicious use of research evidence to inform clinical practice, improved problem solving and advanced self-evaluation, reflexivity and ability to identify learning needs. These skills and attributes indicate a transformation of professional identity whereby physiotherapists have become more critical and reflective in their practice.

This group of 9 physiotherapist participants described a development in their cognitive capacities and explained how their thinking had changed as a result of engaging with situated peer learning within a supportive and stimulating community of practice. They indicated that they had engaged with *"critical evaluation of research", "learning how to judge the quality of research"* and *"exploring the core philosophy of physiotherapy".* As a result of engaging with these activities, physiotherapists identified that their thinking has *"become more critical"* and *"analytical"* as they no longer *"memorised and regurgitated information".* Instead, they developed the ability to *"question the information"* and contextualise knowledge *"to see if the interventions could be applied in our department".* These skills are fundamental for cognitive processes that underscore clinical reasoning and effective autonomous practice hence they enable a critical and informed use of research evidence and the application of such evidence in clinical settings (Jones, Jensen and Edwards, 2008; Ramli, Joseph and Lee, 2013; Solomon, 2005).

The development of such attributed illuminated the transformation that occurred to physiotherapists' professional identity as they have *"become more self-critical"*, able to identify and address their own learning needs and keen on *"challenging each other to reach higher potential and deeper understanding of our role".* Similar transformations have been documented in previous studies exploring the value of communities of practice in facilitating professional identity development (Kilbride et al., 2011; Plack, 2006; Smith and Boyd, 2012; Wilding, Curtin and Whiteford, 2012). In this study, some physiotherapist participants (Pt8, 12, 16 and 20) also emphasised that their awareness of Egypt's healthcare needs and their role in fulfilling those needs has increased as a result of group discussions. They have identified and assumed greater responsibility towards improving access to physiotherapy in rural areas:

*"I think I used to have this microscopic vision because I was focused on my day to day practice, but lately I feel like my vision is becoming more telescopic because X [Pt20], Y [Pt16], and Z [Pt8] and I try to discuss wider issues in the system like the fact that people in rural areas don't have access to physiotherapy that's why all of us [all 9 members of the community of practice] volunteer in hospitals in Banha and Al-Faiyum [rural cities]" (Pt12, junior, Pt-FG2)*

Nevertheless, this community of 9 physiotherapists identified a change in their clinical philosophy and attitude towards the professional role as an outcome of exploring and reflecting on physiotherapy school of thought. They identified emancipatory physiotherapy practice as the unique paradigm that underpins the profession from a global perspective. They defined emancipatory physiotherapy practice as a democratic partnership between the therapist and the patient that is based on mutual respect, reciprocity and join autonomy. They believed that

the role of the physiotherapist is to facilitate patient active involvement in all aspects of the management process in order to find agreement on treatment priorities that are appropriate for the patient's goals and suited to their lifestyle, needs and values. They explained that following this approach requires the physiotherapist to engage the patient in an open dialogue to identify the psychosocial dimension of the patient's experience and understand their way of living with their health conditions. The identification of this knowledge from the patient's perspective was considered essential to holistic patient-centred care that empowers the patient to play an active and leading role in the management and to participate in clinical decision-making.

Physiotherapist participants' understanding of emancipatory physiotherapy practice has also been articulated by western physiotherapists and documented in a number of previous studies (Trede et al., 2012; Trede et al., 2003; Trede and Haynes, 2009). The following quote summarised physiotherapists' understanding of emancipatory physiotherapy practice that has become the clinical philosophy that guided their patient-centred attitude to the professional role:

*"I think I do things differently now; my practice has changed because I don't expect the patient to just lie down while I do everything. I try to follow the contemporary approach of physiotherapy so I try to help the patient become involved and make them trust in their ability" (Pt32, junior, verification interview)*

The change in physiotherapists' clinical philosophy and practice was fundamental to the transformation of their professional identities. They reconstructed their professional identity by grounding it within the philosophy of emancipatory physiotherapy that encompassed notions of patient-centeredness

and empowerment through partnership, joint autonomy and adopting a holistic biopsychosocial approach; all of which were considered key components of a distinct physiotherapy identity. They did not want to imitate the professional identity of medical doctors; they rather aspired to self-actualisation underpinned by an ontological security of self-belief and anchored upon their unique epistemological understandings of physiotherapy knowledge and practice. They sought the rewards associated with an established unique professional identity. Said rewards included self-confidence and fulfilment, ability to offer distinctive contributions to inter-disciplinary patient care and being able to demonstrate esoteric knowledge and accountability that would justify and protect autonomy of practice. They articulated an explicit rejection of the doctor of physiotherapy identity because it did not reflect the distinctiveness of physiotherapists' role and the participants' emancipatory clinical philosophy. It was considered important for physiotherapists to have an identity that capitalises on their unique approach:

*"Why will I want to be seen as a doctor of physiotherapy? I don't, because it means that I'm similar to an orthopaedist or a dentist, but I'm not; I spend more time with the patient, I don't just come in and fix them, I build a strong personal connection with them… I work with people, I empower them and they empower me" (Pt11, junior, Pt-FG2)*

*"Trying to prove that we are equal or similar to doctors is actually nerve wrecking because it makes us [physiotherapists] feel insecure because most physicians don't want to approve of us" (Pt15, senior, interview)*

As shown above, it was explained that for an Egyptian physiotherapist to embody the doctor of physiotherapy identity, they required the acceptance of the medical profession and their recognition of said identity as a 'true'

representation of what it meant to be a doctor. This group of physiotherapists believed that the need for this validation was a source of ontological insecurity that pushed them to doubt the legitimacy of their claims of knowledge and autonomy as well as the value of their professional role, which all negatively affected their self-confidence. They realised that abandoning the doctor of physiotherapy identity liberated them from these insecurities. It empowered them to define and reconstruct a transformed, distinctive professional identity:

*"In our society we believe that the doctor is the best thing in the world and that's why the title used to be important to me, for respect and prestige and to show that I'm a professional not a technician, but I've changed I don't think like this anymore; I actually believe that my approach is different because it is focused on the patient and it makes me unique" (Pt9, junior, interview)*

The ideas articulated in the above comment resonated with Foucault's insights about reflection as a tool for emancipation. Foucault (1984) argued that self-reflection and critical thinking could enable the individual to question taken-for-granted discourses in order to uncover hidden sources of oppression that are embedded with such discourses. Foucault expounded that identifying and dismantling the hidden workings of power could give the individual the possibility to explore their thoughts and discover ways of constituting their identity as an ethically conscious and politically aware individual (Foucault and Bernauer, 1981). The former comment showed that this community of physiotherapists were involved in a process of collective reflection that allowed them to question the faith they had in the apparent face-validity of medical sovereignty. They realised that the notion that *"being a doctor meant being the best"* was an omnipresent source of oppression embedded within social discourses and norms that perpetuated the cultural authority of medicine and

subjugated physiotherapists' identity. This realisation enabled physiotherapists to embrace real power by liberating their thinking from these discourses that was once valued in their self-perceptions, attitudes and antecedent professional identity. Accordingly, they were able to construct an emancipated professional identity.

### 7.3.4 Transforming the working culture:

The emancipated physiotherapist has transformed their professional identity and increased their knowledge and self-confidence which resulted into feelings of empowerment and a sense of security. This position in the data was represented by 9 physiotherapists; namely Pt8, 9, 10, 11, 12, 15, 16, 20 and 32. They have identified and embraced personal and collective responsibility for the lack of collaboration between physiotherapists and physiatrists and its negative impacts on patient care. This sense of responsibility motivated physiotherapists to adopt cooperative attitudes in order to transform the focus of inter-professional relationships from competition to collaboration:

*"We [physiotherapists] knew we had to take the first step and it isn't difficult when you are confident in your knowledge so we just had to show them that we were keen on cooperating" (Pt11, junior, Pt-FG2)*

This group of physiotherapists initiated the process of collaboration by approaching physiatrists in an informal and friendly manner to seek their professional opinions in the hospital corridor. This strategy was coded as 'corridor consultations' and it helped physiotherapists to lay the foundations of collegial working relationships with physiatrists:

*"I just walked up to him [physiatrist Dr9] and said 'good morning Doctor X, I need your opinion on a patient', you see very polite and friendly so he was more than happy to discuss... he began approaching me too and everybody started interacting a lot better" (Pt16, senior, interview)*

The comment below also showed that physiotherapists' conflict management strategy changed from confronting to compromising which encouraged physiatrists to do the same:

*"We [physiotherapists and physiatrists] had tensions and problems in the past, but with a little compromising and a lot of give and take we changed things around here, now nobody clashes; people have become flexible and friendly… we are still two separate departments, but we work like one big team" (Pt15, senior, interview)*

Thus, some physiotherapist and physiatrist participants were able to transform the culture in the work environment from being stressful, competitive and dysfunctional to being friendly, collaborative and enabling. Physiotherapists indicated that this transformation occurred over 2 years during which the extent of inter-professional collaboration continued to increase. Two physiatrists (Dr9 and 10) from the same hospital were also interviewed. The narratives of these 2 physiatrists and 9 physiotherapists identified several forms of collaboration between both groups including morning in-patient rounds, joint outpatient consultations, and weekly inter-departmental meetings and using a standard assessment sheet that facilitated the exchange of patient records. Those participants emphasised the positive impacts of such collaboration on the standards of physiotherapy services provided at the hospital. They reported improvements in organisational aspects of care, such as shorter waiting times

and seamless referrals between physiotherapists, physiatrists and other healthcare providers. Better organisation was attributed to efficient division of labour:

*"We [physiotherapists and physiatrists] have become very efficient because we divide the referrals between us so patients don't wait… we rotate each week for example 2 therapists and 2 physiatrists will give inpatient sessions, some will work the outpatient clinic, some in the ICU and so on" (Dr9, physiatrist, Dr-FG3)*

Improvements in patient outcomes were also noted and attributed to the effectiveness of collaborative clinical decision-making:

*"We [physiotherapists and physiatrists] have complex cases because a lot of patients couldn't afford to get good treatment early because getting benefits takes a long time so they have deteriorated and lots of patients have co-morbidities like hepatitis and diabetes… I think we have been achieving good results with cases like this because we combine our expertise and give holistic treatment" (Dr10, physiatrist, Dr-FG3)*

The data highlighted a change in those participants' perceptions and attitudes towards the overlap between their professional roles. Specifically, the similarities between the therapeutic interventions that physiotherapists and physiatrists offered were seen as shared competencies; rather than one group borrowing from the skill set of the other. Both groups believed they were serving the same patient population as they specialised in the management of similar health conditions and aimed to achieve comparable treatment outcomes. This view replaced the former notion that one group was encroaching on the clinical scope of the other:

*"As senior physiotherapist I struggled for a long time to get autonomy so I was like 'oh now you [physiatrist] want to do give the session, well you made us [physiotherapists] do it for years while you acted like a boss and did the assessment' so I were against them when they started giving [physiotherapy] sessions… but there is the bigger picture and it's easy to see; we work with the same type of patients, so we have to share the field" (Pt20, senior, interview)*

The participants also identified that each occupational group had unique expertise. Physiatrists believed that physiotherapists had advanced manual skills in assessment and treatment, while physiotherapists added that physiatrists were more proficient in the application of nerve conduction and EMG tests. The participants sought to capitalise on their shared competencies and draw on each other's unique expertise along with exchanging knowledge to facilitate the transfer of skills:

*"We [physiatrists] didn't train on techniques as much as physiotherapists did, so many physiatrists don't do manual stuff and substitute with medications and electrotherapy, but my physiotherapist colleagues helped me become more precise and effective in my technique, so I do a lot more manual stuff now" (Dr9, physiatrist, Dr-FG3)*

*"I think because they [physiatrists] are medics they are geared towards establishing an accurate diagnosis so they do most of the EMG tests here, but they trained us more than once, so we do the tests when they are swamped" (Pt10, junior, Pt-FG2)*

Physiotherapist participant 12 explained that the unique expertise of each occupational group introduced diversity and flexibility in the Egyptian physiotherapy workforce, while the competencies they shared enabled them to

work collaboratively to address the high public demand for physiotherapy services. A physiatrist also articulated a similar view as shown below:

*"I think physiotherapists and physiatrists are a part of the same taskforce because we do very similar things, but we also have some specialised skills so there is variety and I think this is the ideal situation for patients" (Dr10, physiatrist, Dr-FG3)*

As a consequence of such strong working relationships and the emergent mutual understandings, physiatrists (Dr9 and 10) attested that their ill-informed and negative perceptions of physiotherapy have changed. They acknowledged physiotherapists' expertise:

*"We [physiatrists] weren't aware that physiotherapists who went to university were such experts" (Dr10, physiatrist, Dr-FG3)*

*"I was against them having a department and they were hostile too so both of us were in the wrong, but it has been water under a bridge for a while now" (Dr9, physiatrist, Dr-FG2)*

Finally, the emancipated physiotherapist worked to transform the external identity of Egyptian physiotherapy by demonstrating professionalism and cooperative behaviours that would inform the perceptions of physiatrists and other medical personal and encourage them to collaborate with physiotherapists from an equal standing. The emancipated physiotherapist also aimed to transform the internal identity of Egyptian physiotherapy by transferring their individual professional identity to peers:

*"I'm not saying I'm better than other therapists, but I hope that they would stop comparing themselves to medics and to get over this need for external validation; we don't need to be doctors of physiotherapy; I know prestige is*

*important in Egypt, but we can make our own profession prestigious if we wear the physiotherapist title with pride" (Pt32, junior, verification interview)*

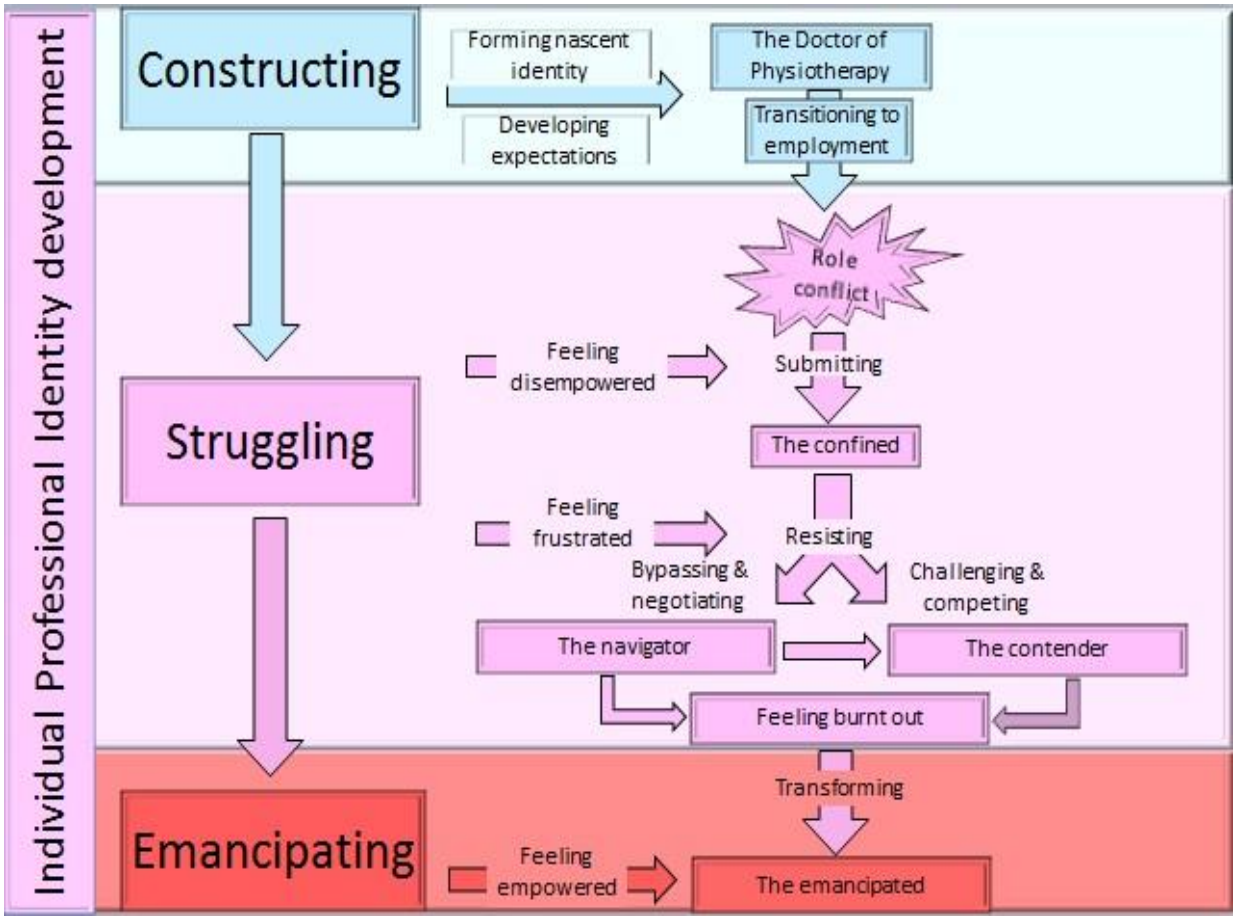
## 7.4 Conclusion:

Professional identity is fluid and it has been hypothesised that an Egyptian physiotherapist's professional identity underwent a continuous process of development and change throughout their academic and career experiences. The professional identity development involves 3 stages, 'constructing', 'struggling' and finally 'emancipating' for those who complete the journey by transforming their professional identities. Figure 7.1 represents the theoretical model that explains the stages of professional identity development and the Egyptian physiotherapist journey to emancipation.

'Constructing' is the first stage whereby an individual's nascent professional identity is formed through a process of professional socialisation during undergraduate studies. The professional identity that is formed reflects the culture in which the education and socialisation occurred. 'Struggling' happens when an individual moves into a work environment that is culturally different from what they are expecting and is incompatible with the individual's professional identity. They may be unable to work autonomously, apply the knowledge and skills they have gained during their formal education and may not have access to professional development opportunities. The transition into an incompatible employment scenario may result in a struggling stage that involves both internal struggles with role conflict and identity disjuncture, and external power struggles in order to perform the individual's preferred professional identity. 'Emancipating' occurs through self-empowerment using

continuous professional development and self-reflection that facilitates transforming professional identity in a way that enables the individual to change the role-expectations and culture in the workplace. Successful transformation of professional identity requires forming a community of practice that supports personal and professional growth, and harnesses the collective efforts of individuals to forge collaborative inter-professional relationships. It is suggested that if a group of individuals are successful in transforming their identity and at changing the work culture, they are in an empowered position to transfer their professional knowledge and emancipatory ideas to peers in order to improve practice and to transform the identity of the profession.

**Figure 7.1: An explanatory matrix of the grounded theory of a journey of professional identity development**



# Chapter 8: Discussion

## 8.1 Introduction:

This research aimed to explore the identity of physiotherapy in Egypt from the perspectives of physiotherapists, patients and physicians. The findings suggest ambiguity around physiotherapy identity with different contradictory perceptions of its role, expertise, and body of knowledge, autonomy and professional status. They also reflect a complexity of issues that impacted upon physiotherapists' individual identity. Several challenges associated with physiotherapy practice in Egypt have been identified in relation to medical dominance and the role-boundary disputes with physiatrists; all of which affected physiotherapists' autonomy, self-feelings, individual professional identity and continuous professional development. From this research a grounded theory has been constructed that suggests that the identity of Egyptian physiotherapists is fluid and develops over three stages; 'constructing', 'struggling' and 'emancipating'. This chapter summarises the key findings and outlines the main recommendations for Egyptian physiotherapy. The research limitations are discussed and suggestions for further research are identified.

## 8.2 Key findings underpinning the theory:

Egyptian physiotherapists were disenchanted with their professional status, level of autonomy and working conditions within a context of an Egyptian nation that is struggling with considerable poverty, political instability, significant health needs and variations in healthcare provision (WHO, 2014). However, the future

direction of the development of Egypt's healthcare services and the government's identified need to utilise the expertise of allied-health providers in order to address Egypt's workforce requirements and thereby meet population health needs (EL-Zanaty et al., 2003), appeared to have been hindered by ineffective governance. Nearly a decade worth of state legislations to provide a legal measure for defining the scope and role of physiotherapy and regulating its level of autonomy seemed to have been wasted. This highlights the intricate power struggles and inflammatory discourses that appeared to influence the future of Egypt's healthcare provision.

Within the context of Egypt's large healthcare market and its growing health needs, most physicians were keen on maintaining their position as the only authorised autonomous professionals in Egyptian healthcare. The ongoing rejection of the medical profession to recognise physiotherapists as doctors and the conflict it created to with therapists regarding their use of the doctor title, suggested that physicians rejected any association between their medical identity and physiotherapists.

However, the medical profession's vehement opposition of autonomous physiotherapy practice and the macro and micro-political power struggles that ensued highlighted that many physicians were concerned with potential threats to their medical identity. Such threat of an equally legitimate and autonomous physiotherapy identity reflected the ambiguity of physician's dominant position in the healthcare ecology and the society. On the other hand, it emphasised the dual positionality of Egyptian physiotherapy. On one side the role of physiotherapy was belittled, its expertise were questioned and autonomy was challenged, but on the other hand its development appeared threating to the

medical profession which refused to relinquish its tutelage over physiotherapy. Western literature featured several discourses that support the decline of medical hegemony over healthcare provision and the demise of their cultural authority within the society in certain countries such as the UK (Kenny and Adamson, 1992). This gradual demise of medical professional identity and authority was caused by the rise of consumerism, the emancipation of patients, increased autonomy of allied-health providers and changes in the structure and funding of healthcare (Sullivan, 2000; Ritzer, 2002 and Watts, 2009). Thus, it was understandable that, given the Egypt's huge health demands and the changes required to address them, that Egyptian medical authorities and most physicians wanted to protect their professional autonomy, identity and privileged position from the autonomy aspirations of others.

According to Foucault (1991), identity is a form of subjugation and a tool to exercise power over others and ensuring that their thinking and behaviour remain within pre-determined boundaries. Dominance of the medical profession in Egypt could be deemed as subjugating physiotherapists only to provide treatment according to physiatrists' prescription and thereby adopt a technician identity; which mirrors Foucault's insights. Yet, in assuming a technician role-identity the Egyptian physiotherapist was oppressed by dominant social discourses that promote the sovereign power of medicine and support its cultural authority.

Physiotherapists' compromised status in the healthcare hierarchy resulted into perceived low-levels of public respect and trust in therapists' expertise. Professional status and respect are strong determinants of cultural capital in Egyptian society; that are considerably more significant for Egyptians than

individuals in western societies. Egyptian societal power has a substantial impact through hierarchy, symbolic power and domination, and it permeates all aspects of social and professional life; especially for women where there are significant familial and societal expectations of being cultured and sophisticated (Cleveland and Bunton, 2013). Thus, Egyptian physiotherapy sought to develop its standards of educational and practice in order to gain autonomy and cultural capital. Through more autonomy and cultural capital, Egyptian physiotherapists would obtain respect and social stature within the healthcare hierarchy and society.

Nevertheless, the findings indicated that the key strategy adopted by Egyptian physiotherapy to legitimise itself as a profession was to transform and shed its identity as technical occupation or para-profession by replicating the identity of the medical doctor. The data suggested that Egyptian physiotherapy focused the professional project on gaining an equal professional legitimacy and status to the medical fraternity. Their aim was for physiotherapists to be recognised as doctors so that physiotherapy would become accepted as an established member-profession of the medical fraternity that is led by physicians and includes pharmacists, dentists and veterinarians. In order to achieve this aim, Egyptian physiotherapy created the doctor of physiotherapy identity by mimicking the identity of medical doctors (i.e. physicians) as they perceived it. The doctor of physiotherapy identity became the identity standard of the professionalising physiotherapy vocation. The identity standard of a profession represents the norms, accepted behaviours and shared beliefs that its members ought to uphold. It is the metric according to which physiotherapy students construct their individual professional identities through their interactions with educators and peers ect.

The data indicated that the doctor of physiotherapy identity was created through isomorphism with the medical profession. Isomorphism is a similarity of the values, beliefs, method and structure of one organisation or profession to those of another. There are 3 types of isomorphism; namely normative, memetic and coercive. Normative isomorphism is similar to coercive isomorphism where professions are forced to change by external factors be it government legislations, changes in funding streams or consumer demands. Both normative and coercive isomorphic changes are in contrast to mimetic isomorphism where uncertainty encourages one profession to imitate the other (Mizrachi, Shuval and Gross, 2005).

It could be argued isomorphism of Egyptian physiotherapy with the medical profession featured all 3 patterns. Normative and coercive isomorphism between physiotherapy and indeed all healthcare professions could have been brought about by government legislations in relation to standards of university education, crediting educational achievements and licensing. These isomorphic changes could have also been stimulated by the increase in Egypt's health needs that required developing the allied-healthcare workforce.

Nonetheless, a key aspect of physiotherapy's isomorphism with medicine appeared to be memetic and involved both deeply-seated ideological and micro isomorphism. Specifically, aspects of ideological memetic isomorphism between Egyptian physiotherapy and medicine could be observed in physiotherapy's extrapolation of the biomedical model of evidence-based practice. According to physiotherapist participants, undergraduate education was focused on developing the ability to make clinical decisions based on objective assessment and scientific research evidence. Physiotherapists were prepared to be the sole

clinical decision makers with regards to the treatment choice. Although physiotherapist participants' expressed their respect for patient perceptions and feelings, patient opinions and preferences were considered subjective and unreliable, thus irrelevant to the application of evidence-based practice. This understanding of evidence-based practice was evident in the perceptions and attitudes of many physiotherapists who adopted the treater and teacher roles in their clinical practice. Treater physiotherapists did not elicit patient treatment preferences and considered their opinions irrelevant to effective physiotherapy management. Teacher physiotherapists were keen on encouraging and answer patient questions about their conditions. However, teacher therapists saw patient education as a one-way process whereby they imparted their knowledge on patients to facilitate self-management, but they did not expect or try to learn from their patients because they believed patient opinions were unscientific and ill-informed.

Adopting the biomedical model could be considered an ideological form of memetic isomorphism that was taken from medicine to validate physiotherapists' claims of knowledge and autonomy, and legitimise their identity as figures of authority in relation to patients. Memetic micro-isomorphism with the medical profession also included using the doctor title and attire as powerful legitimacy symbols to validate the doctor of physiotherapy identity and command the same degree of respect and status that come with it.

Moreover, to achieve close isomorphism with the perceived identity of the medical profession, Egyptian physiotherapy appeared to have shed aspects of its professional role that were associated with the technician identity. These aspects included massage, care work and the application of non-evidence

based treatments such as bloodletting. As such, the new and improved doctor of physiotherapy identity was created by replicating the medical doctor identity; in order to transform the macro or organisational identity of Egyptian physiotherapy and support its professionalisation by gaining the legitimacy, authority and status that are conferred upon the medical fraternity.

The above process of memetic isomorphism signals independent development that highlights the inability or reluctance of Egyptian physiotherapy to establish a unique identity that is grounded in its own body of knowledge, clinical philosophy and values; in order to distinguish the role and existence of its members in the healthcare ecology, raise its public profile and advance its professional project.

Instead, to professionalise itself, physiotherapy sought to model its identity as a 'profession' by replicating the medical doctor identity and acquiring the attributes associated with medicine. Imitating the medical doctor identity fosters unrealistic expectations on the part of physiotherapy students that results into role conflict, loss of professional identity, occupational burn-out and insecurity post-qualification.

The strategies utilised by physiotherapy to acquire the individual attributes of the medical profession included the adoption of ethical codes, the formation of a professional body and a lengthy period of university educational and professional socialisation. Despite the acquisition of these attributes, physiotherapy cannot guarantee the autonomy and professional prestige of its members. This suggests that Egyptian physiotherapy's approach to professionalisation has not been successful, and it creates frustration amongst

physiotherapists as their expectations of being treated as professionals or 'doctors of physiotherapy' by patients and physicians are not realised.

### 8.3 Recommendations for Egyptian physiotherapy:

*"I think the main problem is that we as a profession have been walking in the shadow of the white coat and I think the solution is to emerge from this shadow as confident physiotherapists who are secure in their own identity and happy to wear the physiotherapist title with pride" (Pt12, junior, Pt-FG2)*

The stages of professional identity development and constructs within this discourse offer a knowledge base upon which Egyptian physiotherapy can self-reflect and locate a journey to emancipation and empowerment. Foucault elaborated that critical reflection and knowledge of the self can expose the sources of power, and identify the reasons behind social asymmetries, inequalities and hierarchies; and thus can provide a powerful tool for the emancipation of individuals and groups (Kelly, 2002). Foucault (1972) argued that power is not owned or concentrated in the hands of certain individuals; it is rather exercised in dynamic relationships. There is a multitude of power relationships at play whenever power is exercised; yet power is not always restrictive and can have positive outcomes.

The discourse around emancipation offers an opportunity for Egyptian physiotherapy to reflect on its own professional identity in order to harness emancipatory power as opposed to being subjugated by the sovereign power of doctors over the healthcare ecology and their cultural authority in the society. There is the opportunity to redefine and re-construct an identity that enables physiotherapists to tackle the challenges they face and achieve their aspirations

for professional legitimacy, autonomy and status. This identity would not mimic the identity of the medical doctor. Instead, Egyptian physiotherapy identity would need to be grounded in a deep understanding of and passion for the professional role. This idea was clearly articulated by some physiotherapist participants and appeared to be echoing in western literature. The literature emphasised the importance of having a unique professional identity that is well-understood and upheld by members of the same profession and is clear to others in order to avoid confusion in interdisciplinary practice (Booth and Hewison, 2002). However, Egyptian physiotherapy identity cannot be wholly extrapolated from western physiotherapy because identity is culturally and contextually dependent; also the structure of healthcare systems and population health needs tend to vary between countries. There are several interconnected factors that could shape the future of Egyptian physiotherapy and this study illuminates on some discourses that could influence the direction of the profession.

Throughout the interviews, resistance of the medical profession to recognise physiotherapists as doctors and the effect it had upon individual therapists' self-feelings and identity was significant. Most physiotherapists suggested that when a law is issued to establish their right to use the title, the medical recognition problem would be solved together with the issues associated with it including problems with limited autonomy and professional legitimacy. While state legislations are an important part of governmental power structures that can help professional groups achieve and protect their legitimacy and prerogatives (King et al., 2015), it is suggested that there are related discourses that would not immediately be solved through legislations. Physioherapists indicated that variability in the standards of physiotherapy practice was another factor that

threatened its legitimacy and autonomy; it also negatively affected the level of trust and respect that patients invested in therapists. The standards of physiotherapy were related to the culture of a department, and while this culture was strongly influenced by physiatrists' attitudes towards inter-professional relationships; it was also created, defined and changed by physiotherapists. Variable standards of practice and department culture that were described by participants create a substantial problem for Egyptian physiotherapy. Disabling working cultures appeared to be one of the key causes of the disillusion that newly qualified physiotherapists experienced. They could also be a potential barrier against workforce retention hence many therapists felt acutely dissatisfied, they considered either finding a career alternative to physiotherapy.

Additionally, participants reported that some physiotherapists did not espouse the professionalism needed to attain an autonomous status and so will continue to affect the public image and perceived respect for the 'profession'. The challenge for Egyptian physiotherapy is to embody professionalism in all of its members through engagement with continuous professional development, evidence-based practice, clinical reasoning and a supportive culture that stimulates innovation.

The data showed that professional learning and collaboration fostered confidence in practice and encouraged individual therapists to pursue and explore ideas with their peers. This would enable the construction of esoteric knowledge that would be pertinent to and contextualised within Egypt as informed by individuals' professional practice and rooted within life-long self-directed and peer learning (Richardson, 1999). Some physiotherapists identified that they have formed a community of practice in the workplace to facilitate their

professional development by increasing their individual and collective knowledge and enhancing their critical thinking skills. Nearly all physiotherapists reported that undergraduate education provided a good balance between theory and hands-on practice, but many felt that it did not facilitate learning at higher cognitive levels. Egyptian physiotherapy educational organisations had their own clinical departments which were a key asset, but many participants perceived an imbalance between gaining technical competencies, and stimulating students to develop reflective, critical thinking and innovative problem solving skills. Creating a culture and capacity for research was deemed to be important for Egyptian physiotherapy, in order to produce new clinical knowledge and contextualise existing research, both of which would improve the Egyptian physiotherapy knowledge foundation. The ability to demonstrate exclusive knowledge could help Egyptian physiotherapy establish its accountability and thereby increase its professional legitimacy and defend its claims for autonomy. Nevertheless, the need for additional research expertise in Egyptian higher education in general has been emphasised at the highest government levels (EL-Zanaty et al., 2003).

Another discourse that emanates from the grounded theory is the power struggle between physiotherapists and physiatrists in the workplace. Many physiotherapists were involved in micro-political boundary work in order to protect their autonomy and gain role-exclusivity by excluding physiatrists. In such context, Egyptian physiotherapy finds itself in juxtaposition. On one side, a large segment of the 'profession', including educational organisations, the syndicate and individual therapists, are keen on achieving external occupational closure in a hierarchical healthcare system that is medically controlled; and as a result many therapists were dissatisfied with their working conditions. On the

other side, Egypt's huge healthcare needs require effective utilisation of its invaluable health workforce, especially given patient demands for collaboration between physiotherapists and physiatrists; all whilst the physiotherapy 'profession' is fighting for autonomy and role exclusivity in order to meet its potential. As a result of recent developments in physiotherapy education, there is a significant potential that highly qualified physiotherapists could enhance the Egyptian healthcare provision if they were able to cooperate with and share the domain of physiotherapy with physiatrists. This study's findings show that successful cooperation and efficient division of labour between both professional groups was highly dependent upon physiotherapists' ability to abandon their competitive mind set and adopt collaborative behaviours that encouraged physiatrists to be more cooperative. This behavioural change required physiotherapists to overcome deeply-seated feelings of insecurity that caused role-protectiveness.

The findings suggest that insecurity originated from therapists' tendency to seek external validation of their identity as doctors from physicians, while emancipation required therapists to reflect and act upon their individual professional identities to overcome this tendency; in order to construct an emancipated identity. To develop an emancipated identity, physiotherapists needed to draw self-worth from the value of their role for patients and gain self-confidence in their clinical competencies and knowledge through professional learning; rather than finding self-worth by being perceived as doctors.

Undergoing this transformation helped some physiotherapists reconceptualise and ground their own identity in newly-found meanings that focused on patient-centeredness and self-agency in developing individual expertise and the

profession. Physiotherapists who were able to achieve a state of emancipation realised that it was necessary to share the domain of physiotherapy with physiatrists in order to improve the quality of patient care and meet Egypt's huge health needs. Therefore, the success of inter-professional collaboration was highly contingent upon physiotherapists' ability to construct an emancipated identity, together with their ability to perform this new identity in clinical settings.

If Egyptian physiotherapy wants to rise to the challenge of satisfying the nation's health needs, it would need to support physiotherapy students to build a strong, unique and secure identity that is not a replica of the medical doctor identity. This identity would need to be built on passion for physiotherapy; rather than an attraction to the doctor of physiotherapy identity and the potential that embodying this identity would give therapists the opportunity to reconcile their aspirations and shattered dreams of becoming physicians.

If Egyptian physiotherapy wants to change the medical profession's hegemonic attitude and improve its social profile, it might benefit from facilitating the development of a distinctive physiotherapy identity to characterise its graduates and help them feel confident in their expertise and prepared to tackle the challenges they could face post-qualification. Confident physiotherapists who are no longer subjugated by dominant social discourses that subscribe to medical sovereignty would feel secure in their own identity and capable of sharing aspects of the professional role with physiatrists without fear of losing autonomy and professional identity. They would be able to demonstrate the professionalism needed to support the professionalisation and transformation of physiotherapy in Egypt.

It is, thus, the recommendation of this study that Egyptian physiotherapy reflect on its approach to professional socialisation and the aims of professional project. Egyptian physiotherapy is invited to consider grounding physiotherapy identity in the expertise, knowledge and clinical philosophy of physiotherapy, rather than seeking legitimacy through isomorphism with the medical profession. Instead of aiming to achieve role-exclusivity, Egyptian physiotherapy is encouraged to evaluate the possibility of sharing aspects of the professional role with physiatrists in order to satisfy Egypt's health needs.

**8.4 Reflexivity:**

This thesis represents a personal journey for me. This journey took me back to a place that was involved in my development, both from a personal and a professional point of view. There were multiple influences that motivated me to undertake this study, including my learning experiences as a physiotherapy student in Egypt including my interactions with my educators and peer. Unlike the study participants, physiotherapy was my first career choice. I was personally motivated to study physiotherapy after positive treatment experiences. Yet, much like the study participants, I was exposed to a similar process of professional socialisation during undergraduate education that informed my initial understandings of physiotherapy and shaped my nascent individual professional identity around the notion of the doctor of physiotherapy. I, too, perceived myself as a doctor of physiotherapy which for me meant that my career was as prestigious as medicine, dentistry and pharmacy. The 'Dr' prefix was significant for me as it represented my academic achievements; perhaps because I belong to a family of physicians and I used to see this title as a testament of accomplishment and success. Accordingly, my experiences as a

physiotherapy student made me an insider who shared some of the participants' experiences and perceptions.

However, my work experience in Egypt was rather brief. I spent only 1 year working as a teaching assistant in the same institution where I completed my Bachelor of physiotherapy. Thus, my 'real life' experiences with colleagues, patients and physicians in clinical practice were limited. Given that I worked in the same environment where I studied and my professional identity was developed, I was not exposed to the multitude of opinions, debates and discourses around physiotherapy identity in clinical practice. My limited clinical experiences made me an outsider as I did not begin the research with a formulated understanding of the complexity of the issues that emerged from participants' narratives. My insider-outsider stance was critical for me in order to build a degree of rapport with participants that enabled the co-construction of knowledge, whilst being able to look afresh at the data without being increasingly biased by pre-set assumptions.

During my short career in Egypt as a teaching assistant I developed an interest in research, and thus I moved to the UK to increase my research expertise. Over the past 7 years, my academic and work experiences in the UK were primarily focused on research. I worked part-time during the course of this PhD as a student researcher at Sheffield Hallam University. I was involved in several research projects that investigated different health-related topics and a wide range of student experiences in higher education.

My early interactions with the study participants prompted me to reflect on my professional identity. I realised that I have come to perceive myself as a researcher more than a clinical physiotherapist. My professional identity has

been transformed throughout my research practices in academic and work settings. I could not relate to my former professional identity as a doctor of physiotherapy. It was challenging to reflect on this antecedent identity for I have not performed it in many years and it was no longer a part of my personal sense of self, but as I engaged with participants and the data I was able to revisit and explore my former professional identity. I realised that the meanings I used to associate with being a doctor of physiotherapy and the 'Dr' prefix were not of personal significance to me anymore; perhaps because I have been living in a western society where such meagre forms of cultural capital are not strong determinants of individual's value to the society.

During initial interviews, I found some of the patient and physician discourses emotive, and I was shocked to discover such negative perceptions of physiotherapy in Egypt. Yet, I was not personally disheartened perhaps because my insider-outsider stance helped me remain open to participants' views in order to advance theoretical development based on the data itself. I also strongly emphasised with physiotherapists, but many of their narratives did not resonate with my self-perceptions and lived experiences as an empowered researcher in the UK. I quickly realised that I had an initial parochial understanding of the complexity of issues that impacted upon the practice of physiotherapists in Egypt and their relationships with patients and physicians.

As I engaged with participants throughout this work, I realised how much my knowledge, or the lens through which I interpreted the data, was directly shaped by the research itself. My interpretive lens was made up of knowledge and assumptions from multiple lenses including relevant literature and my personal experiences in the UK which differed from those of most participants. Yet, this

lens was immersed in a symbiotic relationship with the research participants, processes and the data. The multi-directional push–pull relationship of my research experiences and personal life is undeniable, and the constructivist methodology that I worked within not only allowed me to fully engage this multi-directional relationship, but, I believe, it required me to do so.

I have faced many challenges throughout the PhD journey. Before beginning this study, my knowledge of identity theories was limited. I did not have any experience in researching such intricate individual and social phenomena as identity. On reading the literature related to psychology, sociology and qualitative approaches, I became aware of the field and I gradually felt comfortable in carrying out the research.

Additionally, reading professional identity research in physiotherapy and the wider healthcare literature contributed to my thinking, particularly about professional roles and cultural influences. The majority of previous studies focused on conceptualising the identity of physiotherapists in relation to their attitudes towards the professional role and therapeutic relationships. The main focus of this arena is on physiotherapists' clinical philosophy and professional values, rather than their individual personal and professional sense of self or self-feelings, which were identified as a potential gap in the literature that this study could fill. Most studies explored patient experiences of physiotherapy treatment for a particular condition or the factors influencing patient satisfaction in a clinical encounter, while other studies investigated physician awareness of physiotherapists' role. There are no recent and in-depth studies that combined physiotherapists, patients and physicians perceptions of physiotherapy in relation to it's a body of knowledge, clinical role and philosophy, professional

values and status; which all were considered essential components of the self and ascribed identity of physiotherapists and physiotherapy as a profession. Moreover, there is a relative dearth of non-western literature about physiotherapy practice in general and identity in particular. I was in a fortunate position to develop a unique and in-depth perspective that combined Egyptian patient, physiotherapist and physician perceptions of physiotherapy which could add to the field of identity research in physiotherapy.

Another challenge was in choosing the methodology approach and my position as a researcher. Prior to the study, I was not proficient in using many qualitative research methodologies and I was not familiar with philosophies of research such as the different ontological and epistemological perspectives. I began to learn about and evaluate several qualitative methodologies, including phenomenology, discourse analysis and grounded theory, which all had different versions and approaches. After several meetings and discussions with my supervisors, I chose Charmaz's (2006) approach of constructivist grounded theory as the most suitable methodology to address the research question. Before undertaking fieldwork, I conducted a systematic review of previous grounded theory studies in physiotherapy which helped me understand how the tenets and methods of grounded theory could be applied. It has also challenged my thinking and led me to consider ways in which this study could be explanatory rather than descriptive.

I have learned a lot about qualitative research by carrying out this study. As a PhD student, I have been exposed to various theoretical perspectives and conceptual models and became more aware of how our perspectives and expectations colour our views of ourselves and our social realities. In fact,

undertaking this research has had a consequent improvement in my awareness, my skills in research methodology and my confidence, and it has shed light on my potential role as a contributor to literature on grounded theory methodology.

When I initiated participant recruitment, it was encouraging that the study was well received and of interest, especially to the female physiatrists who seemed keen on communicating their views. I had anticipated encountering challenges in gaining access to participants, particularly physicians, and was not sure how they would perceive the study. I was concerned they might not see their participation worthy of the time commitment. However, this was not the case.

This study served as my introduction to conducting in-depth qualitative research. Upon beginning the constructivist grounded theory research process, I felt confident that I understood the various methods and components of grounded theory. However, I could not envision how the process would actually unfold. Specifically, I wondered how I would really move from codes through to memos and then the developed theory. I also wondered if I would have enough data to generate insights.

Once reflective writing analysis was underway, I began to understand that the coding process occurs very naturally, because it begins so closely and literally tied to the data. As I realised that codes were repeated within and across data sources, the more abstract coding also seemed to happen easily. It was at this point that I noted, in my reflexive diary: ''I can understand why some grounded theorists, particularly those who adopt the Glaserian approach, would suggest that the data speaks for itself and that the theory emerges rather than is built by the researcher''. It felt as though the concepts emerged on their own without my

interpretations. However, keeping a reflective diary helped me realise that I coded the data based on my understanding. This diary helped me stay true to the tents of constructivist grounded theory as I began regularly noting the way my lens may be impacting the way I ‘saw’ the data.

I encountered to significant difficulties in writing the study findings and I often shared my frustrations with my supervisors who referred me to Charmaz's suggestions. Charmaz (2006) suggested writing extensive memos to facilitate a step by step process to writing the theory. This observation proved to be true for me; the memo writing, in combination with diagramming and sorting, ultimately created the framework for the findings presented in chapters 6 and 7.

I was also convinced of the iterative process described in the grounded theory texts. Again, in preparing to conduct the research, I read across schools of grounded theory and conducted a systematic review of grounded theory studies, and found that grounded theory methodology is an iterative process. The constant comparative method is often cited in qualitative literature; however, until I experienced it, I did not fully understand it. I was able to make use of theoretical sampling based on existing data, and was also able to return to the previous data after further data was collected. In this way, I feel that I strongly followed the grounded theory core method of constant comparative analysis, moving between data collection, analysis, writing, and theoretical sampling in a constantly iterative way.

Finally, I return to three important goals for constructivist grounded theory, as previously mentioned in Chapter 4 and 5. A constructivist grounded theorist should strive for: (1) a researcher’s reciprocal relationship with a participant who constructs meaning with the researcher and ultimately develops a theory

grounded in the experiences of both; (2) establishment of a balanced relationship between researcher and participant, with explicit attempts to mediate inherent power imbalances; (3) clear positioning of the author's role in the text, and the influence of the literature review and how participants' stories grew into theory through the writing process (Mills et al., 2006). In this chapter, and in Chapter 5, I have tried to demonstrate my explicit attempts to achieve the three goals stated above.

**8.5 Trust worthiness and rigor:**

The combination of credibility and originality was considered essential to increase the resonance and usefulness of grounded theory methodology studies together with the value of the resultant contributions (Charmaz, 2006). Participants' comments and the narratives presented in this thesis support the credibility of the observations and arguments made. The analysis provides an original conceptualisation of participants' narratives, and is shown to be resonant with the participants and the Egyptian discourse. Reflections on the study's limitations would enable the usefulness and the value of the constructed theory to be contextualised and illuminated.

As a qualitative methodology, grounded theory doesn't aim to achieve the same level of generalisability or population representativeness that could be achieved with quantitative studies such as surveys. Instead, it aims to generate in-depth and rich data that Foucault described as looking at the phenomenon under study through a glass door rather than through a keyhole (Rainbow, 1984). The interview data generated in this study facilitated the development of in-depth understanding that allowed for the construction of a theory that is rooted in the data. Yet, the resultant theory represents the researcher's understanding of

participants' stories which could be considered a limitation. Thus, to ensure resonance, participant feedback verified that the preliminary theory captures their perceptions, and it was then fine-tuned to represent additional comments.

Patients and physicians articulated different perspectives of physiotherapy. Physiotherapists had contradictory views about the importance of being recognised as doctors in relation to their own sense of self and the professionalisation of Egyptian physiotherapy. It was, however, considered that the theory took into account all of the participants' perceptions, and that the core category captured the different stages of identity development and transformation that physiotherapists went through along the journey to emancipation. Nevertheless, the researcher recognises that the resultant theory presented one possible construction of the process of Egyptian physiotherapists' identity development and that several other theoretical renderings could have been produced from such rich data. A main feature of grounded theory methodology is that it allows for an understanding of the evolving narrative and focuses the emerging analysis on a direction (in this study around professional identity emancipation) that was not pre-determined or predicted at the beginning of the study (Corbin and Strauss, 2008).

In this study, data collection and analysis have not been limited by preconceived notions or existing western literature around the identity of physiotherapy and physiotherapists. Instead, conceptual development was guided by issues that were significant to participants in the Egyptian context (i.e. theoretical sampling), and how the researcher interpreted these issues with participants during interviews (i.e. knowledge co-construction). Strauss emphasised that grounded theory research should study the unstudied, problematise that which appears mundane, and explore that which is made

invisible by the taken-for-granted discourses that dominate the research context (Clarke, 2005). This enables the grounded theory inquiry to progress towards an unexpected direction in the analysis and produce original and valuable knowledge contributions. Nonetheless, in following a particular direction to answer specific questions, many more questions emerged. Thus, it was suggested that a key aspect of the usefulness of a grounded theory study relates to the ability of the analysis to highlight further research questions (Morse et al., 2009). This section discusses the limitations of the study and the associated future research directions that have been identified and illuminated as a result of the analysis conducted in this study.

The theory presented in this study is a substantive theory and is grounded in participants' narratives and the Egyptian physiotherapy context; thus can be utilised to explore and explain perceptions and attitudes in this context, but cannot be generalised. However, it identified a wide range of issues that might provide useful insights in other comparable contexts.

The suggested transferability is only feasible if the discourse underlying the theory is understood and interpreted in the context in which it arose; in which case it might provide a relationship between the local and global (Clarke and Charmaz, 2014). The journey stages from the emancipating professional identity theory may offer a useful discourse to other physiotherapists and allied-health providers from other developing countries. However, the social context and the structure of the healthcare system in which other allied-health providers work must be carefully considered for resonance with the Egyptian context. Moreover, the socialising culture of educational institutions in other countries ought to be taken into account to draw meaningful inferences from the findings

presented in this study. It is also important to consider some limitations of the current study to make informed decisions about the transferability of some of its findings.

It could be argued that using interviews to collect data may have introduced an element of subjectivity in the form of social desirability as participants may voice opinions that they thought would be consistent with social norms, or they might have misreported or under-reported some of their opinions and attitudes. Nevertheless, the objective of this study was to explore the identity of physiotherapy in Egypt from the perceptions of key stakeholders, and interviewing is consistent with the chosen qualitative methodology which is most appropriate to understand social phenomena in the natural setting, from the varied and potentially contradicting perspectives of participants (Charmaz, 1998). The aim of this qualitative study was to develop a deeper and contextual understanding of how physiotherapy is perceived and practiced from the perspectives of individual physiotherapists, patients and physicians. Interviewing was chosen as it was congruent with the study's constructivist epistemological position, and it enabled participants to reflect on their opinions, attitudes and experiences which suited the study aims. However, it could be suggested that participants could modify their answers in order to please the researcher and appear in a positive light. Being aware of this possibility during interviews enabled me to monitor and minimise the 'interview effect' by further questioning and probing more deeply into participants' responses.

Holloway and Wheeler (2002) advised researchers to spend time with participants to gain their trust and built rapport that could minimise the interview

effect. In this study, building rapport with participants was facilitated by using the first quarter of each interview to have a relaxed, unstructured conversation. For example, physiotherapists were asked about which institution they studied at and when they qualified, which prompted participants to ask the researcher the same questions. Engaging in this friendly conversation helped the researcher to begin building a relationship with participants and created a natural transition to more-focused questions, such as what made participants decide to study physiotherapy. Initial conversations with patients centred on building rapport by taking an interest in their health, for instance patients were asked how they were feeling. These introductory questions were important to help patients feel relaxed and used to speaking and interacting with the researcher. Such questions also showed that the researcher cared about the patient's health, and was not engaging with them for the sole purpose of extracting specific information.

Physicians were the most difficult group to build initial rapport with because there was a possibility that they might withhold some opinions to please the researcher. Therefore, initial conversation with physicians focused on their own practice, for example they were asked about their field of speciality and to describe a typical day in the hospital for them. These questions enabled a smooth transition to questions about the nature of their interactions and work relationships with physiotherapists. These examples of introductory questions showed how the researcher engaged in a friendly conversation with participants to facilitate a trustful relationship, so that they would feel comfortable in sharing their opinions and provide more specific details about their perceptions and experiences. Moreover, the findings presented in Chapters 6 and 7 featured several of the participants' critical opinions of physiotherapy. This indicated that

the researcher's overt stance as a physiotherapist did not bias participants or discourage them from expressing their honest views, which adds to the credibility of the study. Although participants always qualified critical opinions with phrases such as *"with all though respect",* they did feel able to articulate their views without worrying about their potential effects on the researcher or the participant-researcher relationship.

Nevertheless, the researcher's own skills in conducting qualitative studies and using grounded theory methodology impacted the quality of the study and should be taken into consideration upon evaluating the study limitations. Before the beginning of field work, the researcher aimed to increase her understanding of the methodology by conducting a systematic review of previous grounded theory research in the field of physiotherapy (see Chapter 4). She attended workshops, immersed herself in grounded theory literature and benefited from her supervisors' expertise in using the methodology. All such practices helped the researcher understand what the methodology was 'all about' such as its purpose and processes (i.e. key tenets), but picturing how these processes would play out in the field was more challenging. Consequently, during fieldwork the researcher grappled with the synchronous process of gathering and analysing data, and at times it was difficult for her to determine the direction of future data collection. Adherence to the tenets of grounded theory methodology such as writing extensive memos, using diagrams to identify relationships between aspects of the data and keeping an accurate record of the evolving codes helped the researcher identify appropriate sources of information and questions that would focus the inquiry and advance conceptual development (i.e. theoretical sampling). Yet, the researcher struggled to 'see the bigger picture' so that categories and subcategories were sufficiently abstract. The

insights of the supervisory team were crucial for they prompted the researcher's thinking, challenged her interpretations of the data and encouraged her to view the narratives from alternative perspectives. They helped the researcher look at the data from a 'bird's eye view' to identify key constructs and core processes that explained observations. Finally, keeping an accurate record of the literature that was consulted at different stages of the study enabled the researcher to recognise how the evolving analysis compared to pre-existing knowledge and integrate the final theoretical model within relevant literature.

This study identified several issues related to professional socialisation but no physiotherapy educators were interviewed. The theoretical sampling that is a key tenet of GTM did not highlight how this group of participants would have added to the development of the categories and the theory derived from the interview data. However, Egyptian physiotherapy educators would be a group of interest in future research around the professionalisation and development of physiotherapy practice in Egypt. Moreover, action research involving patients, physiotherapists and physiatrists could be recommended as a way to further explore possible ways of increasing collaboration between both occupational groups while capitalising on patients' input to ensure that their needs and perceptions are prioritised in physiotherapy research and practice.

## 8.6: Conclusion

This study is important as the findings and constructed theory offer new knowledge, and provide an original consideration of a phenomenon that affects Egyptian physiotherapy and physiotherapists across the world. This research offers an understanding of the professional identity of Egyptian physiotherapy and of inter-professional collaboration that could inform physiotherapy practice and education. The findings showed that physiotherapists' openness to reconstruct their professional identity was accompanied by a positive attitude towards inter-professional collaboration with physiatrists which in return improved the quality of healthcare provision. The analysis and resultant theory confirm the importance of considering issues of professional identity in the planning, implementation and running of inter-disciplinary work settings in healthcare. Caution must be applied in drawing inferences from one clinical setting to another, which is a fundamental aspect of the qualitative approach adopted in this study that particular contexts shape experiences and attitudes. Nonetheless, detailed qualitative research of specific contexts can help develop understanding of phenomena that are transferrable to other settings based on the degree to which they share relevant characteristics. Research like this study can also contribute by adding to the body of knowledge, building a more detailed picture of the phenomena under study.

An important finding in this study was the extent to which physiotherapists and physiatrists experienced role-overlap in joint working settings. A degree of role-overlap is inevitable when professionals from relatively similar backgrounds are required to work together, and it may be beneficial as it allows for seamless service provision. However, the findings indicate that too much overlap can have negative effects, resulting into role protectiveness and defensive hardening of professional identities which makes collaboration difficult. Thus, the findings of

this study highlight the importance of defining roles clearly, with regards to their scope and aspects of interaction with service users and other professionals, before implementing joint work projects. It is important to define these roles in negotiation with clinical and managerial staff. Involving clinicians can reduce role ambiguity and protectiveness, and can help clinicians to feel a sense of ownership in creating collaborative work arrangements. Effective communication between clinicians from different professional groups is imperative to building good relationships and can encourage role flexibility and help in changing negative stereotypes of other professions. Facilitating good inter-professional communication and relationships can be challenging for managers particularly as some key factors may be difficult to influence such as differences in professional status and public respect as well as the impact of national policies. However, based on the findings of this study in addition to the wider literature the following recommendations can facilitate good relationships:

I. Create opportunities for communication: The findings of this study suggest that if communication is restricted to formal meetings involving head of departments and top-level management only, there will be limited opportunities for clinicians to understand the role, approaches and philosophy of other professionals. Furthermore, formal settings tend to be used as a medium to obtain professional prerogatives and voice contradictory opinions that emphasise differences in professional identity rather than promote flexibility. Therefore, it is recommended that first-line management creates opportunities for informal contact and communication between clinicians by benefiting from their co-location in joint work settings to give clinicians the chance to develop shared understandings and a coordinated approach towards service provision.

II. Create equity between professions in the operation of joint work settings: The contributions of each group of professionals should be acknowledged and no profession should be seen as more important. The findings of this study provide strong evidence that real or perceived inequalities tend to create a focus on differences in values and practices and result into negative feelings that hinder collaboration. It is imperative for managers to adopt a democratic approach by maintaining regular contact and sharing information with all professional groups and involving them in decision-making where appropriate and encouraging their participation in the development of seamless inter-professional services that are geared towards the best interest of service users.

Inter-professional education and training are also required to address the issues highlighted in this study. Inter-disciplinary teaching during the course of professional education can generate greater understanding between professions and influence the development of professional identity in a way that facilitates collaboration. Introducing interactive shared learning modules during undergraduate education can help students reflect upon different clinical approaches, develop positive attitudes towards collaboration and communication skills. Furthermore, the study findings emphasise the significance of continuous inter-professional education and training in the workplace. This could be achieved through joint seminars, workshops and shadowing other professions which can facilitate knowledge transfer, promote understanding and respect for different professions and enable for professional identity (re)construction to embrace and cope with the increasing demands for multi-disciplinary healthcare. To conclude, this study does not claim that addressing issues related to professional identity alone will offer the solution to effective collaboration across healthcare professions; however, the

study findings provide strong evidence that professional identity plays a significant role in facilitating or inhibiting collaboration. The findings add to the body of literature around professional identity and highlight that failure to address issues of identity can result in less effective collaboration. Therefore, the knowledge generated from this study will be disseminated in the form of articles in journals, such as Physiotherapy Research International and Global Health, to ensure that it reaches wider audience given the relevance of the study recommendation to multidisciplinary collaboration worldwide. Nevertheless, the study provides key recommendations to Egyptian physiotherapists and physicians that will be communicated during national conferences and relayed to professional bodies in Egypt.

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