

Challenges and opportunities for promoting physical activity in health care: a qualitative enquiry of stakeholder perspectives

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Abstract

Evidence suggests that physical activity (PA) programmes promoted via healthcare settings worldwide may not currently meet the needs of many patients and healthcare professionals (HCPs). This paper describes the outcomes of a qualitative enquiry into the perspectives of patients and professionals from multiple healthcare services regarding the role of PA.

19 patients and 22 HCPs were purposively recruited from physiotherapy, podiatry, chronic pain, diabetes and continence services at a community-based healthcare clinic in the United Kingdom. Participants' views were explored using semi-structured interviews and analysed using thematic analysis.

Results identified five themes: differences between the social and medical rationales underpinning PA promotion; the impact of the patient-professional relationship on patient activation, self-management and PA; a risk culture surrounding PA; challenges to meet variation in patients' needs and preferences; and lack of formal role for PA as a core part of routine healthcare.

The study highlights tensions between needs and aspirations, and the reality of delivering advice and support for PA. Challenges resonated with patients and HCPs across different care groups and were not condition-specific. This highlights a need for sharing good practice across healthcare services and system-level interventions to address organisational barriers to the promotion of PA.

Keywords: Physical activity, health promotion, patients, healthcare professionals, interviews, qualitative

Background

Healthcare settings are frequently identified in global public policy as a key domain for tackling non-communicable diseases through the promotion of physical activity (PA) (Global Advocacy Council for Physical Activity, 2010; World Health Organisation, 2009; Public Health England, 2014). Whilst there are ongoing efforts for national healthcare systems to consider the role of PA in prevention and treatment, with examples of good practice, the existing evidence base indicates limitations in the delivery, uptake and long-term impact of current PA interventions. Questions remain regarding the demographic diversity of attenders and completers and the extent to which PA interventions are engaging those patients most in need of support. For example, the UK National Audit of Cardiac Rehabilitation identifies sub-groups of patients that remain under-represented and significant local variation in programmes meeting minimum quality standards (British Heart Foundation, 2016). In exercise referral schemes there has been lower uptake for patients with mental health issues (Crone, Johnston, Gidlow, Henley, & James, 2008). Meanwhile, the National Pulmonary Rehabilitation Audit (2015) report that only 40% of people commencing PA programmes complete them. Reviews have concluded that many PA referral schemes fail to promote any long-term impact (NICE, 2014).

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Incorporating patients' views in the design of PA interventions

One suggestion to mitigate current challenges in relation to the promotion of PA in healthcare settings is to improve end-user involvement in the design and development of PA interventions (Speake et al., 2016). Hale and colleagues (2012) reconsidered their evidence-based PA programme for people with multiple sclerosis (MS) after reflecting that taking an 'ivory tower' approach risks developing interventions that may not be "feasible, let alone acceptable" for recipients. The International Olympic Committee (IOC) and Faculty of Sport and Exercise Medicine (FSEM) have called for a patient-centred and less disease-specific approach that could enable better use of local resources and meet the needs of more patients (Jones et al., 2014; Matheson et al., 2013). Increasing the depth and quality of public-patient involvement also reflects ongoing calls for patients to be acknowledged as the experts in their own health (Richards, Coulter, & Wicks, 2015). Internationally and in the UK, healthcare policy and strategy is increasingly patient-centred with campaigns such as "no decision about me, without me" (REFERENCE) and the proliferation of standards for patient involvement in research and development (REFERENCE). There are aspirations amongst policy makers and healthcare professionals to support patients, control long-term conditions more effectively and reduce reliance on healthcare services (REFERENCE), for example by developing their own self-management skills and "activating" patients (REFERENCE). Applying user-centred design principles could lead to the creation of empowering (and ultimately, effective) interventions to promote PA.

Qualitative research provides an opportunity to develop a rich understanding of patients' views towards PA (Walker et al., 2015). To date, qualitative research involving patients has been dominated by two research questions: understanding motives and determinants underpinning PA participation (Hellem, Bruusgaard, & Bergland, 2012; Ungar, Sieverding, Ulrich, & Wiskemann, 2015) and exploring the acceptability of existing interventions amongst participants and completers (e.g. O'Donovan & Kennedy, 2015; Reunanen, Järviöskki, Talvitie, Pyöriä, & Härkäpää, 2016). This research has been invaluable in identifying the barriers and facilitators to undertaking PA for patients across a broad spectrum of health conditions. While this provides valuable insights into lived experiences of pre-designed PA programmes, these studies have tended to be an adjunct to controlled trials, using samples of patients who successfully complete the intervention. They therefore provide a limited perspective on the more general views of patients towards PA.

The views of healthcare professionals towards delivering PA interventions

Healthcare professionals (HCPs) are in themselves users of PA interventions and their views are therefore critical to the development of interventions. Previous research involving HCPs has sought to understand the PA promotion behaviours of specific professional subgroups (Granger et al., 2016; Mulligan, Fjellman-Wiklund, Hale, Thomas, & Häger-Ross, 2011). Other research has considered the acceptability of using new or existing intervention strategies (Beighton et al. 2015). To date, research has been predominantly conducted amongst general practitioners (GPs), practice nurses and physiotherapists based in primary care, anecdotally described as 'well-placed' to promote PA. This potentially overlooks the role of allied health professionals in other healthcare settings in the promotion of PA.

1 A lack of time and feasible protocols are commonly cited barriers to the promotion of PA in healthcare settings (Din, Moore,
2 Murphy, Wilkinson, & Williams, 2015; Heron, Tully, McKinley, & Cupples, 2014). Evaluations of primary care PA pathways
3 suggest that professionals adapt advice and referral processes according to local practices, time constraints and their own
4 confidence (Beighton et al., 2015; Jackson, Myers, Oates, & Martin, 2014). Engaging and involving HCPs in the design of
5 interventions is likely to increase their propensity toward adopting new working practices, and could mean that programmes will
6 be more feasible to deliver (Al-Itejawi et al., 2016; Van Hecke, Grypdonck, Beele, Vanderwee, & Defloor, 2011).

7
8 To be successful, healthcare systems designed to promote and deliver PA need to consider the perspective of frontline HCPs
9 and patients. Ensuring these views are represented could identify key issues and challenges to be addressed by future PA
10 programmes.

11 **Aims of the current study**

12 The primary aim of this study was to develop insights into potential users' perspectives regarding the role of PA within usual care
13 in the UK National Health Service (NHS). This study formed the first part of a process of co-designing a PA pathway with patients
14 and HCPs as outlined elsewhere (Speake et al., 2016). Objectives were:

- 15 1. to understand patients' health and care experiences and their perspectives on PA as part of NHS care
- 16 2. to understand the professional interests of HCPs and perceived opportunities and barriers to promoting PA within
17 existing care pathways
- 18 3. to use these insights to identify specific challenges and opportunities for promoting PA in healthcare settings

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20
21 The study produced a series of practical insights from patients and HCPs that were taken forward into subsequent co-design
22 workshops. Meanwhile, analysis of the data highlighted broader challenges and opportunities related to the promotion of PA in
23 the healthcare setting. This paper focuses on those wider themes.

24 **Methods**

25 *Recruitment and sampling*

26 Patients and HCPs from multiple clinical groups were recruited with the intention of exploring general perspectives towards PA
27 rather than condition-specific issues. Services represented were community-based musculoskeletal physiotherapy, diabetes,
28 podiatry, chronic pain and continence services, operating clinics at one community location. Inclusion criteria was anyone aged
29 18-64 receiving or delivering care within one or more of these services. Any patients within this age range were approached on
30 their arrival at the community clinic reception by the lead researcher and given written and verbal information about the study.
31 HCPs were contacted by email via service leads or in person during clinics. Potential participants who expressed an interest
32 were followed up 24-48 hours later by telephone and an interview was scheduled. To ensure that different health conditions were
33 represented, recruitment continued until a range of patients and HCPs across the different services had been interviewed.
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1 NHS ethical approval was granted by East Midlands - Nottingham 1 research ethics committee and written informed consent was
2 obtained from all participants.

3

4 *Data collection*

5 Semi-structured interviews were identified as the most suitable method to explore patients' and HCPs' perspectives in detail and
6 individually (Patton, 2002). Interview guides were developed undergoing two rounds of pilot testing. For patients, this included
7 open questions about their care journeys to date, health priorities and aspirations; latterly, their views towards PA and its role in
8 their lives and their health. HCPs were asked about typical care pathways of their patients, the role of PA generally and finally
9 opportunities and barriers for PA within their current service and/or role. Participants chose whether to be interviewed face-to-
10 face or by telephone. All interviews were carried out by the lead researcher (HS), audio recorded and transcribed verbatim.

11

12 *Data analysis*

13 Inductive thematic analysis based on the process outlined by Braun and Clarke (2006) was used to identify themes and patterns
14 closely reflecting the data (Patton, 1990). Audio recordings were transcribed by a professional transcription company. Transcripts
15 were uploaded to QSR-NVivo10, read and re-read to develop familiarity with the data. Segments of raw data relevant to the
16 research aims were highlighted by the first researcher and assigned an initial code. As more transcripts were analysed, the
17 number of codes increased and diversified. Codes were refined and merged to create lower order themes. Mind maps, tables
18 and charts were used to 'play around' (Braun and Clarke 2006) with the data until meaningful groups (higher order themes) were
19 established.

20 To aid methodological and researcher reflexivity, two other researchers read and coded a selection of transcripts independently
21 and then together with the first researcher. A fourth researcher, independent to the study but with experience of qualitative
22 research in exercise psychology, reviewed summaries and rich descriptive quotes for each higher order theme. Discussion with
23 these critical friends (Creswell, 2013) continued until an agreed set of themes was established.

24

25 **Results**

26 19 patients (10 male, 9 female, age range 31-64) and 21 HCPs (7 male, 15 female, clinical experience ranging 3-33 years) took
27 part in interviews lasting approximately 45 minutes each. HCPs included: clinical specialists in pain management, specialist
28 occupational therapists, specialist nurses (continence and diabetes), consultants in diabetes and orthopaedics, specialist
29 diabetes dieticians, specialist and enhanced role physiotherapists (continence and MSK), specialist and advanced podiatrists.
30 Several patients had multiple morbidities and were receiving care from multiple teams, but their primary reason for coming to the
31 clinic on the day of recruitment was as follows:

32 5 from the diabetes service, 3 pain management, 5 physiotherapy, 4 continence and 2 podiatry.

33

34 Five higher order themes were identified across HCP and patient interviews:

- 35 • Differences between the social and medical rationales underpinning PA
- 36 • Impact of patient-professional relationship on patient activation and self-management
- 37 • Risk culture surrounding PA: overlapping concerns about risk and liability

- 1 • Challenges to meet variation in patients' PA needs and preferences
- 2 • Lack of formal professional practices regarding PA promotion

3

4 Themes are described below with illustrative quotes. Pseudonyms have been used to protect the identity of participants.

5

6 ***Differences between the social and medical rationales underpinning PA promotion***

7

8 Patients described a wide range of factors impacting on their health including sleep problems, concerns about weight and diet,
9 work and financial stress. Participants appraised their current health and PA status by comparing themselves to what they
10 considered appropriate for someone of their age. Physical activity was perceived as being associated with normality and social
11 connectedness:

12 "...just to be part of the world do you know what I mean, be part of a community, be out and about" (*Ayesha, continence*
13 *patient*)

14

15 PA was predominantly seen as a social event, influenced by who else is present during the activity, and how it fits around
16 relationships and other commitments. Barriers to PA included family and caring responsibilities, mental health concerns such as
17 anxiety, and cultural factors such as needing women-only environments to exercise. Those who indicated they would enjoy PA
18 in a group setting valued having peers of a similar age, weight and baseline physical fitness, but not necessarily the same health
19 conditions:

20

21 "...like an over 60s meet up or anything like that where you're all in the same boat, you've got a few pounds on you...
22 you wouldn't feel out of place" (*Charles, diabetes and physiotherapy*)

23

24 This conceptualisation of PA as part of one's social identity differed from HCPs' descriptions, which focused on physical health
25 and function. HCPs recognised that there were benefits to treating patients holistically, but felt limited in their ability to do so:

26

27 "They've got a lot of problems, psychological, family, social, financial... the pain isn't potentially the main issue. But
28 that's the easy symptom..." (*Clinical specialist in pain management 3*)

29 HCPs indicated that their primary responsibility was to focus on their patient's physical health and the specialty for which they
30 were trained. The rationale for bringing PA into the consultation therefore had to be linked to the health condition:

31

32 "It's important to control your blood sugar levels... so again that comes back to weight and obesity and then we can
33 link exercise in that way... but really fundamentally we've got to talk about feet." (*Podiatrist 1*)

34

35 This medical orientation was reinforced when HCPs described adherence to PA:

36

1 "And once we've achieved it [PA adherence] or we are maybe on our way to achieve it, the patients are very good and
2 compliant with treatment and lifestyle changes, we can then safely hand them back to GPs." (*Diabetes specialist nurse*
3 2)
4

5 The limitation of providing a medicalised argument for PA was that it didn't necessarily address the complexity of factors
6 underlying lifestyle behaviour, and therefore was harder to facilitate with more complex patients:
7

8 "It's the wide discrepancy between someone... who's young, healthy, fit, looks after themselves, but it's just something
9 mechanical that's happened and we can reverse it, as opposed to someone who's generally not looking after
10 themselves... what do we do with these people?" (*Specialist physiotherapist MSK*)
11

12 ***Impact of the patient-professional relationship on patient activation, self-management and PA***

13

14 There was significant variation between individual patients' dependence on medical care and consequently their acceptance of a
15 role in self-managing their health conditions:
16

17 "...the only thing that's going to make me change is having [knee surgery]." (*Darren, physiotherapy*)

18 "...I thought right, I can't do anything about [multiple health conditions], but I can do something about my weight."
19 (*Sonia, continence*)
20

21 Patients' confidence about managing their health was associated with realistic expectations of the likely care pathway. This
22 necessitated clear information from the healthcare professional and good rapport between both parties. Conversely, poor
23 communication experiences undermined patients' confidence and led to feelings of helplessness. For the majority of HCPs,
24 increasing PA was an opportunity to support patients towards becoming more independent of the health service:
25

26 "If you prescribe medication you take some control from the patient. [Physical activity is] to give them the control back
27 and they can decide if they want to really do something about it." (*Diabetes specialist nurse 1*)
28

29 Despite the intent to increase patient autonomy, a lack of time was cited by HCPs as a significant barrier to engaging in
30 constructive and empowering dialogue with patients regarding PA:
31

32 "It won't work if I just prescribe 10 minutes walking every day and I'll see you next week. People just do not do it. So I
33 think exercise prescription without adequate explanation and onboarding in patients with low self-efficacy is a waste of
34 time." (*Clinical specialist in pain management 2*)
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36 "because we are in clinics we don't really have time.... to sort of individually counsel people and help them work out
37 what's the best thing for them." (*Diabetes consultant*)

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Risk culture surrounding PA: overlapping concerns about risk and liability

Despite the majority of patients expressing that they would like to increase their PA levels, they also voiced concerns including embarrassment (for example, regarding their lack of fitness, body image or about others seeing them exercising) or uncertainty about what to do. A common fear was the risk of injury or making their condition worse:

"I'd love to be able to do it I'm just really petrified that if I do, what's it going to do to me?" (*Pete, physiotherapy*)

Meanwhile, some HCPs were also apprehensive about advising on PA. A fear of professional liability resulting from potential adverse effects deterred some HCPs from giving specific PA advice:

"you've always got to be careful what you actually suggest to patients.... in case it comes back to you." (*Continence specialist nurse 1*)

Comments by HCPs indicated that hesitation about giving PA advice might stem in part from an organisational culture of risk aversion:

"...as soon as you put the NHS name to it there's much more responsibility that comes higher and higher with that. You have to be accountable." (*Specialist physiotherapist MSK 1*)

Challenges to meet variation in patients' needs and preferences regarding PA

HCPs stated that there was no 'one size fits all' when it came to PA, and that they needed the ability to recommend a variety of options tailored to different patients' needs. This was evidenced by the diversity in patients' interviews, where participants described enjoying different types of PA in different contexts and environments. Employment and financial status, culture, religion, family commitments, and previous experiences of PA all influenced what activity was suitable, in addition to any physical or mental health factors. Patients differed not only in terms of preferred PA, but the level of support they would like from the NHS.

HCPs found it challenging to give advice that reflected these individual differences. In particular they perceived a need for lower entry points to PA interventions that might be more palatable for their most inactive patients:

"So I think a lot more very, very low grade starting points for people who just wouldn't think about doing exercise" (*Clinical specialist occupational therapist*)

An additional complication was keeping track of the local PA options and being able to provide accurate information on prices, timings or what to expect in terms of the experience their patients might have. This limited confidence in referring patients. At the same time, a tension existed between wanting to provide personalised and specific advice that a patient might be more likely to act on, alongside the need for quick and simple referral processes to enable PA to be slotted into clinic times:

1 "... when you haven't got much time you just want to be able to go click, form, fill in, there you are, off you go..."

2 (*Enhanced role physiotherapist 2*)

3 4 5 **Lack of a formal role for PA within NHS care**

6
7 Amongst HCPs, there was a lack of consensus about roles and responsibilities for promoting PA. Whilst some thought they
8 should be doing more to prioritise PA within care pathways, others were dubious about the extent of their involvement. HCPs
9 noted a need for formal processes that would put PA in a central role:

10 "I suppose I would make it part of the standard assessment... if they saw it was being prioritised by the service that
11 might make them think a bit more about it." (*Diabetes Consultant*)

12
13 The inconsistent experiences of receiving PA advice reported by patients corroborated the notion that PA referrals were
14 inconsistent and lacked impact. Patients had one of three experiences: a) some had previously been referred to an exercise
15 scheme which they had been unable to attend b) others could not recall having ever received any advice or information or c)
16 patients had received general, informal advice about PA, which they found somewhat ineffective:

17
18 "Nobody's ever given me any advice other than saying you must be a bit more physical for your health. But that's just a
19 proposal to you isn't it really? It's not helping you, it's not telling you what to do or giving you advice on how to do it."
20 (*Darren, physiotherapy*)

21
22 One HCP suggested that to raise the status of PA, HCPs needed to feel more confident and informed about the underlying
23 evidence base:

24 "...You've constantly got drug companies coming in here telling us how wonderful their latest medication is...we're
25 inundated with that sort of thing... people know generally that physical activity is good, but I think it really just needs to
26 be out there all the time... all the evidence." (*Specialist diabetes dietician 1*)

27 28 **Discussion**

29 This qualitative study set out to explore the views of HCPs and patients regarding the role of PA in health care in the UK NHS.
30 Thematic analysis of semi-structured interviews found conflicts between beliefs about best practice for promoting PA and the
31 realities of doing so. Issues highlighted by stakeholders were not specific to any particular health condition, but instead
32 emphasised the extent of variation in attitudes and behaviours across and between patients with different health conditions, and
33 HCPs from different services and roles. This suggests that strategies to address challenges should consider individual views but
34 are also likely to apply across different parts of the healthcare system.

35
36 In previous studies, patients' definitions of PA have tended to reflect physical ability, and what patients think they can or cannot
37 do (Kaptein et al., 2013; Normansell et al., 2016; Rastad, Martin & Asenlof, 2014). This has consequences for patients' likely

1 receptiveness to PA interventions. In the current study, patients' perceived physical and psychological ability and/or disability
2 influenced their views and experiences of PA in a variety of ways, including their relative optimism about self-managing their
3 health, perceived risk of injury or exacerbation of an existing condition, and preferences for different types of PA and support
4 needs to be more active. Nevertheless, interviews with patients revealed that PA was not just about their physical health, but
5 related to the social world and their identity within it. This echoes previous research suggesting that social identity might be a
6 significant determinant of PA-related behaviour (Stevens et al., 2017). Patients also described the significance of their core social
7 circle for maintaining activity in their lives. Support from family and friends has previously been acknowledged as a key facilitator
8 to PA (Veldhuijzen van Zanten et al., 2015). Meanwhile, HCPs tended to relate PA to their patient's health condition, framing
9 benefits and risks in that context. Morris and colleagues (2015) describe "diverging social and biomedical constructions of PA"
10 and suggest that a typically biomedical focus by HCPs could lead to overemphasis of the physical and functional aspects of PA.
11 The current study suggests there may be value in further promoting the social benefits of PA explicitly. Understanding how PA
12 can impact upon (and be affected by) an individuals' social identity could help HCPs to broaden the conversation about PA
13 beyond the direct physical health benefits. In doing so, it might help strengthen empathy with patients, widen the appeal of PA
14 and identify individually-relevant mechanisms for support. This also has implications for the types of activity that are being
15 recommended through healthcare settings, for example supporting patients into activities that can incorporate or enhance their
16 existing social networks.

17
18 Patients' varying expectations of the treatment pathway influenced the extent to which they adopted a passive or proactive
19 attitude to managing their own health. This is consistent with research into 'patient activation', which has found that patients with
20 the skills and confidence to engage with their care have better health outcomes and experiences (Hibbard & Greene, 2013).
21 Findings from the current study support previous research (e.g. Darlow et al., 2016) that suggests an association between
22 patients' experience and knowledge about their health conditions and greater confidence about PA. Qualitative research has
23 previously shown that patients engaging in PA interventions seek confidence, reassurance and accountability from HCPs
24 (Eriksson, Arne, & Ahlgren, 2013; Palazzo et al., 2016; Withall, Haase, Walsh, Young, & Cramp, 2015). In the current study, lack
25 of time in consultations and a lack of confidence in the advice they were providing meant that HCPs felt limited in their ability to
26 lead those empowering conversations. NICE currently recommends brief advice (NICE, 2013) as being cost-effective for
27 delivery in primary care, although the guidance is ambiguous about what this should include and where the boundaries lie with
28 enhanced interventions. A large proportion of patients in the current study indicated a preference for bespoke support rather than
29 generic advice to 'be more active', whereas the lack of time identified by health professionals has implications for the level of
30 intervention they think is feasible to deliver. This raises questions about the extent to which patients' support and advice needs
31 can be met in routine care.

32
33 Risk was a ubiquitous issue amongst participants. Fears about exacerbating health conditions or injury from PA are a commonly
34 highlighted barrier for patients with a range of health conditions (Clarke et al., 2015; O'Brien, Finlayson, Kerr, & Edwards, 2014;
35 Kaptein et al., 2013). Meanwhile, Morris and colleagues (2015) suggest that professional risk aversion may be "rooted in health
36 service safety culture". Addressing concerns directly could strengthen the resolve from HCPs to commit to engaging their
37 patients in PA and provide the reassurance needed by patients to act on advice given. There may be an opportunity to apply

1 principles of assets-based approaches, which are gaining popularity in community-based public health promotion (Whiting,
2 Kendall, & Wills, 2012). These approaches emphasize positive attributes of people, communities and organisations, and are
3 reflective of the salutogenic framework focusing on people's capacity to create health rather than risks, ill health and disease
4 (Lindstrom & Eriksson, 2005).

5
6 HCPs in the current study described a need for graded introductions to PA for patients. Previous research has recommended the
7 importance of timing interventions appropriately and selecting patients who are 'ready' for PA (Shaw et al., 2012; Smith, Hale,
8 Mulligan, & Treharne, 2013). A drawback of this approach could be to inadvertently exclude patients who need the most support
9 and may as a consequence represent the most inactive, for whom PA can have the greatest and most immediate benefit. The
10 current findings highlight an opportunity to challenge misconceptions of 'readiness' by providing attainable introductory points
11 that bridge the gap between inactivity and PA. This could also contribute to mitigating concerns about risk that may hamper PA
12 promotion and/or uptake.

14 **Strengths and limitations of the current study**

15
16 Previous research has focused on the views of PA based on those who choose to participate in interventions. This study
17 recruited participants randomly across different healthcare services, and did not form part of a trial or pilot intervention. As such,
18 it allowed us to explore perspectives on PA more broadly and may have reduced the bias towards any particular form of PA or
19 intervention. As a result, the findings have potential to inform the development of novel ways to promote PA. Exploring the
20 perspectives of patients and HCPs reveals opportunities to develop strategies that serve the needs of both user groups,
21 identifying and tackling potential obstacles to implementation and delivery. Recruiting patients and HCPs from a number of
22 services enabled a broader exploration of the challenges to promoting and delivering PA that may resonate or have wider
23 implications throughout the healthcare system, representing organisational as well as individual factors.

24
25 The findings should be considered in light of the following methodological limitations. There is risk of self-selection bias amongst
26 patients and HCPs who agreed to take part, which is difficult to avoid in research of this nature. Steps were taken during
27 recruitment to ensure that a diverse range of views were captured. Some participants did not express positive views towards
28 delivering or receiving PA advice which provides some reassurance that the bias was not overwhelmingly in favour of PA. The
29 semi-structured interview guide was designed to facilitate an open conversation determined as much as possible by what the
30 interviewee considered important. Nevertheless, different questions may have yielded different answers and resulted in
31 alternative themes.

33 **Conclusions**

34 Greater involvement of users at the outset of designing (and implementing) PA interventions will enable their needs to be
35 addressed more effectively as opposed to trying to entice and persuade users to adopt predetermined interventions. The current
36 study highlights that the needs of either group cannot be considered in isolation.

1 Exploring the role of PA in community healthcare settings from the perspective of patients and healthcare professionals has
2 highlighted a number of areas where there are similarities or contradictions in beliefs and behaviours. For example, presenting a
3 strongly medicalised rationale for PA risks creating a risk-based context wherein the patient is dependent rather than
4 independent. A challenge for HCPs (and the wider healthcare system) is to balance the support and guidance reportedly needed
5 by patients to feel confident about PA with aspirations, reflected in current healthcare policy and the views of HCPs in this study,
6 to build patient autonomy and independence. Opportunities include reducing the concerns of HCPs and patients about the risks
7 of PA, providing introductions to PA that are attainable and unthreatening, and fostering support amongst patients, their peers
8 and their families in more creative ways thereby encouraging initiation and maintenance. This could be achieved through better
9 translation of the evidence base for PA, more consistency in public health messages and striking a balance between exploiting
10 HCPs' credibility to provide health advice and empowering patients to make their own decisions about PA.
11 (4,596 words)

12

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14

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16

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