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Metabolic Health Screening in Physical Therapist Private Practice in Australia: A Feasibility Study.

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Metabolic Health Screening in Physical Therapist Private Practice in Australia: A Feasibility Study

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Abstract

Importance: Noncommunicable diseases are the leading cause of morbidity and mortality globally. Physical therapists working in private practice have an opportunity to embed health screening in their practice to support chronic disease prevention. However, it is not known if it is feasible to conduct health screenings in physical therapist private practice settings.

Objective: The aim of this study was to determine the feasibility of physical therapists conducting client health screening with point-of-care testing.

Design: This was a feasibility study, comprising of in-depth interviews and descriptive quantitative data.

Setting: The health screenings took place in physical therapist private practices in Australia. The 1-to-1 interviews were conducted via phone, video conference, or face-to-face, according to participant preference.

Participants: Two hundred and thirty adult clients participated in a health screen at a physical therapist practice. Follow-up interviews were completed with 20 clients and 8 physical therapists.

Interventions: Clients had a 30-minute health screen that included collection of self-reported physical activity and dietary intake and physical examination of metabolic risk factors including waist circumference, blood pressure, and point-of-care testing of cholesterol and glucose.

Main Outcomes and Measures: Using interpretative description methods and inductive thematic analysis, themes were identified from the interviews and then mapped deductively onto feasibility domains of acceptability, demand, implementation, practicality, and integration.

Results: Three themes were identified. Clients perceived screening as convenient and

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comfortable; provided important health information; and could be part of usual physical therapy. Physical therapists saw health screening as a valuable add-on service and beneficial for client management but were uncertain about future integration.

Conclusions and Relevance: Incorporating health screening into private practice physical therapist services is feasible and valued by clients but physical therapists were unsure how they could integrate this into their practice/business. Physical therapists working in private practice need additional training to incorporate health screening into their practice. Concurrently, funding models need to support this by prioritizing investment in health promotion and disease prevention.

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Introduction

Noncommunicable diseases (NCDs) such as cardiovascular disease, cancer and diabetes are responsible for 74% of all deaths globally.[1] Not only are they a major cause of mortality, NCDs place significant burden on individuals, communities and health care systems. These diseases are associated with lifestyle factors such as physical inactivity, poor diet, tobacco use and alcohol consumption, that result in metabolic risk factors like obesity, hypertension, hyperlipidemia and hyperglycemia. When people display 3 or more of these metabolic risk factors, they have metabolic syndrome.[2] Metabolic syndrome significantly increases the risk of many NCDs[3] yet it can be improved or even reversed with lifestyle interventions that include physical activity.[4,5]

Consistent engagement in physical activity helps prevent and manage the leading NCDs,[6] yet only 1 in 4 adults globally meet recommended physical activity levels.[6] Therefore, increasing physical activity has been set as a global priority by the World Health Organization (WHO)[6] for the prevention and management of NCDs. The WHO advocates for primary care providers to routinely screen and advise clients on increasing physical activity. As first contact primary care clinicians in many countries, and with their knowledge and skills in exercise prescription, physical therapists are well placed to provide physical activity screening and counselling. Yet, physical therapists report a lack of confidence to integrate this into their practice,[7] and many are not familiar with current physical activity guidelines.[7,8]

The physical therapy summit on global health[9] highlighted that physical therapists are well

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positioned to take a leadership role in supporting clients with healthy lifestyle choices to promote lifelong health and prevent NCDs. There have also been calls-to-action that physical therapists should be routinely screening for and addressing lifestyle and metabolic risk factors to improve clients' overall health and lower risk of chronic disease,[10,11] and recommendations for more training in entry-level physical therapy curricula.[12,13] Despite this, there are few examples of physical therapists performing health screening in clinical practice. The National Health Service in the United Kingdom successfully piloted health and diabetes checks in a physical therapist-led musculoskeletal service, which had considerable uptake and was seen as a positive initiative by both clients and primary care physicians.[14] The health improvement card recommended by WHO as a health promotion tool, has been trialed in a physical therapist-led community care setting and demonstrated reductions in participants body mass index (BMI) and waist circumference.[15] However, once people are accessing community or hospital health care they may have already developed chronic disease. Screening in primary health care settings may allow for early detection and intervention to prevent NCDs.

The number of physical therapists working in private practice is growing across many countries.[16-18] Approximately half of the physical therapist workforce in Australia work in private practice settings.[16] In these settings, Australian physical therapists provide first contact services within the community, to clients across the lifespan, where clients (or third-party funders) pay directly for physical therapist services. More than two-thirds of people in Australia access private physical therapy without referral from a primary care physician.[19] Physical therapists working in this sector have an important role to play in reducing the burden of NCDs by embedding health screening and health promotion advice in their

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practice. However, we do not know if it is feasible to conduct health screenings in physical therapist private practice settings, nor specifically to screen for metabolic syndrome. Therefore, the objective of this study was to determine the feasibility of physical therapists conducting client health screening to identify metabolic risk factors in private practice in Australia.

Methods

Study Design

A feasibility study with in-depth interviews using interpretative description methods[20,21] and inductive thematic analysis, was conducted to assess the feasibility of physical therapists performing health screenings for clients in private practice. Qualitative data was supplemented by descriptive quantitative data. Feasibility was determined according to Bowen's framework[22] and focused on 5 key domains: acceptability, demand, implementation, practicality and integration. This study is reported consistent with the Good Reporting of a Mixed Methods Study (GRAMMS) checklist.[23] Ethical approval was received from La Trobe University Human Ethics Committee (HEC21374) prior to participant recruitment and all participants provided written informed consent prior to participation.

Participants and Recruitment

From January 2022 to January 2023, participants were recruited from 6 private physical therapist clinics (identified via professional network of the research team), situated in metropolitan Melbourne and regional Victoria, Australia. The practices were typical of those in Australia,[24] varying from small to large, and all offering generalist physical therapist services with a focus on the management of musculoskeletal conditions.

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Adults (18+ years), who could communicate effectively in conversational English and sought physical therapy for any condition, were eligible to participate in a health screen. The recruitment process involved consecutive sampling, with health screening flyers placed in waiting rooms or promoted through clinics' social media platforms.

Purposive sampling[25] was used to recruit clients and physical therapists involved in the health screening to complete a follow up interview between January and May 2023. Only clients who had a health screen and indicated they were happy to participate in future research were invited to an interview. To ensure it was a representative sample, clients from all participating clinics of varying age, sex and metabolic health status were sought. Similarly, physical therapists representing each of the clinics with varying years of clinical experience and mix of practice directors and employees were approached.

Description of screening

Clients completed 3 self-administered questionnaires and a face-to-face physical examination, immediately prior to or following their physical therapy appointment. There were no additional costs to clients for the health screen, which took approximately 30 minutes. All clients received a written summary of their health screening results (Suppl. Material 1). Clients completed questionnaires on socio-demographic characteristics, lifestyle factors, personal medical history, and perceived importance/confidence/interest in lifestyle change; the International Physical Activity Questionnaire Short Form (IPAQ-SF);[26] and the Commonwealth Scientific and Industrial Research Organization (CSIRO) Healthy Diet Score survey.[27,28]

The researcher, an independent physical therapist (S.M.) with no relationship with any of the clinics, conducted the physical examination to identify metabolic risk factors by measuring

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height, body weight, waist circumference, and blood pressure (using a digital blood pressure monitor) as described previously.[29] Point of care testing of blood glucose and cholesterol levels, rarely performed by physical therapists, were included as these are important metabolic risk factors that enable diagnosis of metabolic syndrome.[2] Blood glucose was measured with a random (ie, not fasting) capillary blood test[30,31] using a Accu-Chek Performa (Roche Diabetes Care; Mannheim, Germany). Triglycerides and high-density lipoprotein cholesterol were assessed with a capillary blood test using a CardioChek Analyser (Polymer Technology Systems Inc.; Whitestown, IN, USA).[32] A full description of the screening process has been reported elsewhere.[29]

Interviews

Individual, in-depth interviews with clients and physical therapists were conducted by the researcher (S.M.) who had previously conducted the health screening after completion of the screening program. Interviews were semi-structured and followed a flexible question guide (Suppl. Materials 2 and 3) they were conducted via phone, video conference or face-to-face, depending on participant preference, as all have been found to be comparable methods of data collection.[33,34] All interviews were audio-recorded and transcribed verbatim.

Feasibility outcome measures

Feasibility was examined according to the following domains (Table 1):

Acceptability was evaluated from the interviews considering the extent to which the health screens were judged as appropriate or satisfying to deliver/receive in a physical therapist private practice setting by physical therapists and clients.

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Demand was assessed by reviewing 1) the percentage of private practices approached to participate that accepted; and 2) the percentage of clients offered a health screen who accepted. Additionally, interviews with physical therapists explored the extent to which health screening is likely to be used in the clinic in the future.

Implementation was evaluated by considering the equipment and resources required to set-up and run the health screening.

Practicality considered perceived factors affecting implementation ease or difficulty, quality of implementation, and positive or negative effects on clients from client and physical therapist interviews. Any adverse events during testing were also considered. Costs of equipment and consumables required to run the health screening were recorded by the research team in $AUD and have also been expressed in $USD using current exchange rates.

Integration was assessed via interviews with physical therapists about the perceived fit and sustainability of health screening with their organization.

Data analysis

Descriptive statistics were used to summarize participant demographics, demand and integration. Consistent with interpretative description methods,[20,21] inductive thematic analysis was used to explore and derive themes from the interviews.[35,36] In the second stage of analysis themes that emerged were then mapped deductively onto Bowen's feasibility framework.[22] NVivo (v 1.7; QSR International, Massachusetts, USA) and Quirkos (v 2.5.3; Edinburgh, UK) software were used to manage qualitative data and pseudonyms were substituted for participant names. Two researchers read the data line by line and independently coded transcripts. Connections and comparisons among the codes were

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explored to develop themes. Data were collected and analyzed simultaneously to guide further interviews and assess for data saturation.[25] The main themes were summarised by the researchers and checked by participants to ensure it was an accurate interpretation of their perceptions and to enhance credibility (member checking).[25,37] Results of the qualitative analysis were triangulated against the quantitative data from the health screens, to determine if data converged or diverged.[38,39]

Rich description of the participants and research methods, for transferability and dependability respectively was provided,[25,37] enabling an audit trail of the methods and decisions made.[20] The analysis of data involved a team of researchers to improve the confirmability, dependability, and credibility.[25,37] Recognising that researchers' backgrounds could impact the study, concise summaries are included to enhance reflexivity.[40] The lead researcher (S.M.) was a physical therapist working and studying at an affiliated university, while the other researchers were academic physical therapists with expertise in qualitative research (C.P., N.T.); and physical activity and metabolic health (C.P., A.L., C.D.). Reflexivity was further addressed through a reflective journal that documented the researchers' thoughts, feelings, ideas and hypotheses formed during the study, uncovering any potential biases or preconceptions.[20,37]

Results

Participants

A total of 230 clients (mean age of 54 (SD 18) years, 63% identified as female, and 71% were overweight or obese with BMI ≥ 25 kg/m^2)[41] participated in a health screen. Most clients

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were seeking physical therapist care for a musculoskeletal/orthopedic issue. Metabolic syndrome was present in 37% of clients, with central obesity the most common metabolic risk factor (65%), followed by hypertension (58%) and elevated triglycerides (33%). The results of the health screens have been described in detail elsewhere.[29]

Twenty clients (mean age 61, 70% female, 45% with metabolic syndrome) participated in a follow-up interview (Table 2), and 8 musculoskeletal physical therapists, (4 practice directors and 4 employees, 37% female, mean 19 years of experience) completed a follow-up interview (Table 3) with no new ideas identified in the final interviews.

The clients interviewed were on average 7 years (95% CI = −1 to 15) older than those who did not take part in an interview, however there was no statistically significant differences in sex, ethnicity, education, waist circumference or metabolic syndrome status between these groups.

Themes - Clients

Three main themes emerged from the clients' perspective where they perceived screening as: 1. Convenient and comfortable; 2. Provided important health information; and 3. Could be part of usual physical therapy.

Convenient and comfortable

Overall clients found the health screening program acceptable and positive. This was attributed to the accessibility and convenience as they were already at the clinic, and the screen was quick and easy to complete.

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"The whole process was very easy. It was good to undertake at the point of being at the physio, rather than someone randomly coming and asking me if I'd be interested in doing it, because it's a good thing to have it done and it didn't take long." (C10)

A part of client acceptability was their feeling of comfort during the health screen. This related to feeling welcomed and respected at the clinic, being well informed with clear explanations provided throughout.

Provided important health information

Clients valued receiving information about their health.

"I was interested in hearing about my health and how it can be taken better care of and a bit better informed." (C7)

Talking about diet and nutrition was new to many clients and they appreciated being more informed about their metabolic health.

"It was interesting just finding out all the information and I didn't even know about the metabolic syndrome thing." (C12)

Many clients found it reassuring when they received positive health screen results or by the absence of any negative results. For others the screen alerted them to health problems they were not aware of. Positively, the health screen even prompted behavior change for some clients.

"I know when I walked away from you, I had some thoughts about how I can improve my diet, my exercise, and that is education, and that is preventative medicine. So, it really is worthwhile." (C18)

"Since I had that session with you, I have been more aware, it has reinforced what the dietician said to some degree. I have changed my diet." (C2)

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"It gave me a bit of incentive to lose a bit of weight. So, I've lost a couple of kilos since then, which is good." (C9)

Screening could be part of usual physical therapy

Clients all agreed that integrating such a service into physical therapist practice in the future was a good idea. They compared the health screen at their physical therapist practice to accessing 1 at a primary care physician/general practitioner clinic and highlighted perceived differences. This related to the relationship they had built with their physical therapist who, due to the nature of physical therapist consultations, they had developed rapport with and whom they trusted.

"I think it's a good idea actually. I mean, I used to see my physio at the start twice a week. And you know, we had quite a rapport in the end, and I trusted her. (C7)

I've been to see [physio] so often, I think she knows every spot on my body, you know, there is that trust, I think." (C18)

Clients also perceived it was easier to get a physical therapist consultation compared to a primary care physician appointment which made screening accessible.

The difference in the clinical environment was a consideration for some clients.

"I feel that when I go to see my physio there are people there who have ailments, but they're not sick, and I feel better going there. Whereas when I go to my GP [primary care physician], people are coughing, people unwell, and so I only go if I have to." (C18)

Linked to this, it was clear that many clients were not already accessing this health information from a physician, and so providing this service within a physical therapy setting could increase reach to the broader community.

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"I don't go to my doctor [primary care physician] for a health screen unless there's something I think is already wrong." (C15)

However, the importance of communication with their physician regarding health screen findings was highlighted.

Some clients could see the relevance of a health screen to their physical therapy and the impact this could have on their physical therapy program.

"You could see how it was related to physio work and overall wellbeing." (C18)

"But I think that it's actually quite important for the physio, just like it's important for the GP [primary care physician] to highlight to the patient that it's everything, everything is connected. And the hip problem, yes that might be what's driven you to the physical therapist, but there might be other things that is causing the hip problem as well, and so we actually just have to make sure that we are not missing anything." (C16)

Many commented that it would be useful to incorporate into a physical therapy initial assessment in the future. Other suggested changes for future implementation included: greater marketing so that clients would be aware of this new service; ensuring adequate training for those conducting health screening; physical activity and diet measures that capture data over a longer period or more objectively; and ensuring equipment is suitable for all body shapes and sizes.

Willingness to pay for such a service in the future was highly individualized based on clients' circumstances, however several clients suggested:

"If you could get it through Medicare [Australia's universal health insurance scheme] or get it through… health insurance, I think then people would do it." (C18)

"Having a charge gives it some value." (C19)

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Themes - Physical therapists

Three main themes emerged for physical therapists: 1. Valuable add-on service; 2. Beneficial for client management; and 3. Uncertainty about future implementation.

Valuable add-on service

Physical therapists were positive and satisfied with the health screen program that was implemented. They saw it as *a value-add to the patient (P8)*, in that clients had gained new heath information and were positive about their experiences. Generally, they felt it ran smoothly and it was easily embedded into their practice in that format with little disruption to the clinic.

They could see the relevance to physical therapist practice. For some this was highlighted by the prevalence of metabolic syndrome within their clientele.

> *"Majority of our patients had some risk factors come up that are off the back of that screening, so yes, it's relevant." (P1)*

However, the health screening was viewed as *a nice kind of adjunct to the service at that time (P7)* and not part of usual physical therapist practice.

> *"It would be something that obviously you have to add on top of what we do at the moment." (P2)*

Beneficial for client management

Physical therapists could see the benefit of offering this service and there was a bit of a shift in thinking.

> *"It's absolutely a consideration going forward, and I'm interested to see where this*

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goes as well because it's going to impact all of us in the future." (P6)

They were more aware of metabolic health and its impact, it facilitated broader health and lifestyle discussions with clients and enhanced their focus on taking a thorough medical history.

They could see how it addressed a need - *GP land is overrun and therefore we are well placed to run as a parallel service (P8)*, and that it could offer a unique selling point for their business.

Based on the positive experience and impact, physical therapists expressed some interest in offering health screening in the future.

"I think implementing some sort of screen into our practice a bit more regularly and daily, would be extremely worthwhile." (P4)

Uncertainty about future implementation

Although there was interest to embed a health screening program into their private practice in the future, it was seen as a challenge. Physical therapists had not thought about this in-depth and consequently were uncertain how this could or should best occur.

"From an overall business point of view, there's a lot more we need to figure out before we can actually do it properly I think." (P4)

Barriers to integrating this into future practice related to costs, culture and competencies.

Although physical therapists agreed that cost was a consideration for future implementation, there was no consensus as to how that would be managed with either the client paying or the clinic absorbing the costs within the consult fee.

"Specific costing and pricing I don't actually know, but it wouldn't be free, I guess." (P4)

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Considerations of who would be responsible for conducting future health screens also varied between the clinics. Some proposed they would train their physical therapists to provide the service, while others considered contracting an external provider would be more feasible. Physical therapists expressed that health screens do not currently fit within their scope of practice, their organizational culture or business model, and therefore some sort of organizational change would be required to integrate this in the future.

> *"It would be a shift, I think from what we're doing now at the clinic, but there wasn't such a big change that I think it would be really hard to incorporate if it were to go that way... What my idea of being a physio is would have to shift a little bit too, which is not necessarily a bad thing." (P3)*

Physical therapists felt marketing would be integral to future implementation to ensure clients engaged.

Physical therapists lack of competencies regarding performing and interpreting the health screen results was highlighted as a challenge to future implementation.

> *"I'm not sure how to change my practice and if there was some guidance out there or someone that could come and train us up further to implement this, then I think it would be highly beneficial." (P6)*

This could be overcome with training and upskilling physical therapists, including how they can assist clients to manage metabolic health issues with appropriate lifestyle interventions.

Feasibility of health screening in physical therapist private practice

A summary of the data mapped to the feasibility domains, and triangulation of the quantitative and qualitative data sources are presented in Table 4.

Acceptability

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Overall, the health screening, as completed by the physical therapist researcher, was highly acceptable to both the clients and physical therapists.

Demand

Six physical therapist private practice clinics were approached to be screening sites and all (100%) agreed to participate. Of the 311 clients offered a health screen, 230 (74%) agreed to participate and completed a health screen, indicating high demand (Figure). The most common reasons for not participating included not having enough time, not being interested, or having had a recent visit to their physician.

Implementation

Health screening was successfully delivered and easily implemented in the physical therapist private practices. The researcher physical therapist brought all necessary equipment with them, most of which (eg, digital scales, measuring tape, alcohol wipes, gloves, sharps/biowaste bin, adhesive bandage) would already be available in physical therapist clinics. Equipment that may need to be purchased for future implementation would include a blood pressure monitor, lipid analyzer, glucose monitor and related consumables (lipid and glucose test strips, capillary collection tubes, safety lancets and gauze).

Implementation challenges included determining an appropriate booking system for the health screening appointments with the external physical therapist. Another challenge was inflexibility of health screening times as this was determined by clinic room availability as well as the single researcher's availability.

Practicality

Two minor adverse events occurred during the health screening program where participants needed to lie down for a few minutes following the capillary blood collection due to feeling faint. No major adverse events were recorded.

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Costs associated with conducting the health screen included equipment costs (approximately $962 USD for set-up equipment and $9 USD per screen for consumables), and time required for the researcher to conduct the health screens, with each health screen approximately 30 minutes duration. There was no cost to clients to participate in a health screen.

Integration

Despite clients feeling that health screening, (completed by an external research physical therapist as part of this study), should be integrated into physical therapist practice, physical therapists had difficulty determining how such a program could be integrated into their current business model. A degree of organizational change would be required in most clinics, and physical therapists reported a lack of knowledge regarding how to instigate change. An appropriate change management process could include reviewing perceived barriers; staffing implications (eg, who conducts health screenings); practical integration into existing practice (eg, whether the service would be conducted as a separate appointment for clients or incorporated into a usual consult); financial implications and marketing of this new service to key stakeholders.

Discussion

The addition of a health screening program in Australian physical therapist private practices was easily implemented, highly acceptable to clients and physical therapists, and addressed a gap in provision of health information. Clients, primarily with musculoskeletal problems, found it convenient and comfortable, valued the important health information received, and thought it should be integrated into future physical therapist practice. Physical therapists

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saw it as a valuable add-on service that was beneficial to client management; however, they were uncertain how they could integrate this into their practice and business in the future. The mismatch observed between clients and physical therapists' ideas about future integration of health screening into practice is supported by current literature. When surveyed, clients have reported they expected their physical therapist to give them advice to improve their general health and that it was important their physical therapist provided advice to prevent future illness.[42] Therefore, it is not surprising the clients in this study could see it integrated into future physical therapist practice. Yet physical therapists perceive that clients do not expect them to discuss their general health[43,44] and lack confidence and training to implement health promotion in their practice.[7,8,43,45] Therefore, future work is needed to ensure physical therapists are sufficiently trained to provide health promotion interventions.

The findings also raised the issue of whether the health screening fits within the scope of practice for physical therapists working in private practice. This has also been expressed by physical therapists as a concern regarding identification and management of metabolic syndrome.[44] Health screening is relevant to physical therapy in private practice as musculoskeletal disorders can be the first manifestation of systemic disease.[46] Physical therapists in private practice, particularly in countries where they serve as primary contact practitioners such as Australia, often see clients who are yet to develop chronic disease. Because of this, and because they establish trust and rapport with their clients, physical therapists are ideally placed to offer health screening and health promotion.

This aligns with both national and international standards of physical therapist practice.[47,48] The American Physical Therapy Association Standards of Practice[47] state that: "Wellness and

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prevention encounters may occur without the presence of disease, illness, impairments, activity limitations, or participation restrictions. Physical therapist services include the use of assessments to identify the presence of risk factors, and cognitive and environmental barriers and opportunities that may be targets for health promotion activities" p.3. The World Physiotherapy Standards of Physical Therapy Practice[48] report that physical therapist interventions can address prevention, health promotion, fitness, and wellness. So, incorporating health screening into physical therapist practice is endorsed as part of physical therapist practice.

Incorporating more comprehensive metabolic and lifestyle health screening into physical therapist private practice might help to improve the global burden of chronic disease. Many primary health care systems around the world are at crisis point.[49-51] This is due to many factors such as our ageing populations, the rise of chronic diseases and multimorbidity,[52] and physician workforce issues.[49-51,53] As a result, clients are finding it more difficult to access and afford primary care physicians.[49,53] This was expressed by clients in this study, and is especially relevant in Australia given many clients attend physical therapist private practice without a primary care physician referral. This may also be relevant in other countries where physical therapists are similarly working as primary contact practitioners. Primary contact physical therapists have an opportunity to contribute to chronic disease prevention, by incorporating metabolic and lifestyle risk factor screening into their practice, and providing advice, physical activity prescription, and interdisciplinary referrals as appropriate.

One of the barriers to integrating health screening into future physical therapist practice is the uncertainty about funding. In 2019, OECD (Organization for Economic Co-operation and Development) Countries invested on average only 2.4% of public expenditure on health

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towards health promotion and disease prevention.[54] With limited funding of health promotion and chronic disease prevention in the public sector, we may need to look to private health insurers to bridge the gap. Engagement in chronic disease prevention by private health insurers is increasing[55] and has been shown to be effective in increasing healthy eating, physical activity and lowering hospital admissions, especially when interventions are continued in the long term (at least 2 years).[56] For widescale implementation of health screening into physical therapist practice, there is a need to advocate for policy level change and changes to funding models that support prevention and health promotion within physical therapy. For example, programs that provide incentives to improve the quality of care such as the Merit-Based Incentive Payment System (MIPS) in the United States may facilitate screening of chronic disease risk factors by therapists in private practice.[57] Future research into the effectiveness of health promotion activities in primary care are needed to support this.

Limitations

The clients in this study comprised adults from mainly urban areas, predominantly residing in regions with elevated socioeconomic status, with most seeking physical therapist care of a musculoskeletal condition. This aligns with the demographic profile of individuals who typically seek private physical therapist services in Australia.[24] The findings of this research can be generalized to private practice settings in Australia, since all comply with national practice regulations and characteristics of included practices are representative of national characteristics. Generalizability to other health systems is uncertain, given private practice physical therapy may operate very differently in other countries, although under-diagnosis of metabolic syndrome is widespread in developed countries.[58,59] The costs associated with

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the addition of a health screening service in physical therapist private practice, and how and who covers these costs, will vary in different health care systems and will likely influence feasibility.

Conclusions

Adding a health screening program to private practice physical therapist services is feasible and valued by clients. Clients supported future integration of this into routine physical therapist practice. For this to occur, physical therapists may require further education and training about how to incorporate this into their practice and need to be supported by health policy and funding models that advance investment in health promotion and disease prevention.

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CRediT – Contributor Roles

Sally Mastwyk (Conceptualization [Lead], Data curation [Lead], Formal analysis [Lead], Investigation [Lead], Methodology [Lead], Project administration [Lead], Visualization [Lead], Writing - original draft [Lead], Writing - review & editing [Equal]), Nicholas F. Taylor (Conceptualization [Supporting], Formal analysis [Supporting], Methodology [Supporting], Supervision [Supporting], Visualization [Supporting], Writing - review & editing [Supporting]), A. Lowe (Formal analysis [Supporting], Methodology [Supporting], Supervision [Supporting], Visualization [Supporting], Writing - review & editing [Supporting]), C.F. Dalton (Methodology [Supporting], Supervision [Supporting], Writing - review & editing [Supporting]), Casey L. Peiris (Conceptualization [Supporting], Formal analysis [Supporting], Methodology [Supporting], Supervision [Lead], Visualization [Supporting], Writing - review & editing [Supporting]).

Supplementary Material

Supplementary material is available online.

Ethics Approval

The study was approved by the La Trobe University Human Research Ethics Committee (HEC21374) and was conducted in accordance with the National Health and Medical Research Council National Statement on Ethical Conduct in Research Involving Humans.

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Disclosures

The authors completed the ICMJE Form for Disclosure of Potential Conflicts of Interest and reported no conflicts of interest.

Data Availability

Data are available on reasonable request to the corresponding author.

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Table 1. Feasibility Data Sources[a]

Feasibility Domain	Quantitative Data Source(s)	Qualitative Data Source(s)
Acceptability	N/A	Interviews with clients and physical therapists.
Demand	Percentage of clients offered a health screen who accepted.	Uptake by clinics and interviews with physical therapists.
Implementation	Equipment and resources required to set-up and run the health screening.	N/A
Practicality	Number and type of adverse events from testing. Costs associated with conducting the health screening.	Interviews with clients.
Integration	N/A	Interviews with physical therapists.

[a]N/A = not available.

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Table 2. Client Demographic Characteristics (n = 20)

Participant no.	Sex	Age, Y	Ethnicity	Highest Level of Education	Metabolic Syndrome Present
C1	Female	67	British/Irish	High school, not Y12	No
C2	Male	83	British/Irish	High school, not Y12	Yes
C3	Female	37	European	Tertiary	Yes
C4	Male	30	Asian	Tertiary	No
C5	Female	69	British/Irish	Tertiary	Yes
C6	Male	56	British/Irish	Tertiary	No
C7	Male	60	British/Irish	High school, not Y12	Yes
C8	Female	40	Asian	Tertiary	No
C9	Female	60	British/Irish	Tertiary	Yes
C10	Female	62	British/Irish	Tertiary	No
C11	Female	48	European	High school, Y12	Yes
C12	Female	54	European	High school, not Y12	No
C13	Male	73	European	Tertiary	Yes
C14	Female	80	British/Irish	Tertiary	Yes
C15	Female	62	European	Tertiary	No
C16	Female	71	British/Irish	Tertiary	No
C17	Female	63	European	Tertiary	No
C18	Female	69	British/Irish	High school, Y12	No
C19	Female	63	British/Irish	High school, Y12	Yes
C20	Male	67	British/Irish	High school, not Y12	No

Table 3. Physical Therapist Demographic Characteristics (n = 8)

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Participant no.	Sex	Clinical Experience, Y	Practice Position	Completed Further Education/Training Related to Chronic Disease Management
P1	Male	23	Practice director	Yes
P2	Male	17	Employee	No
P3	Female	3	Employee	Yes
P4	Male	5	Employee	No
P5	Female	43	Practice director	No
P6	Male	3	Employee	No
P7	Female	26	Practice director	No
P8	Male	34	Practice director	Yes

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Table 4. Triangulation of Findings[a]

Feasibility Domains	Quantitative Findings	Qualitative Findings - Client	Qualitative Findings – Physical Therapist	Triangulation
Acceptability	N/A	Clients reported the screenings were convenient, comfortable, and positive, and provided them with useful information about their health.	Physical therapists were satisfied with the screening and saw it as a valuable addition to current clinical practice. They could see the relevance to their practice and found it facilitated broader discussions with clients about their health.	Convergent
Demand	74% clients agreed to be screened. 100% of clinics approached agreed to participate in the study.	Clients agreed that offering such a service in physical therapist practices in the future is a good idea.	Physical therapists expressed an interest in offering health screening in the future.	Convergent
Implementation	Health screening was successfully and easily implemented in the clinics by a single physical therapist researcher. Implementation challenges included determining an appropriate booking system, and inflexibility of health screening times.	N/A	N/A	N/A
Practicality	2 minor adverse events occurred. Equipment costs: approximately $1,500 AUD ($962 USD) for initial set-up, $12AUD ($7.7 USD) per lipid test strip, and $2 AUD ($1.3 USD) per screen for other consumables. Health screens took approximately 30 min each. 7% clients did not complete the diet survey despite sending email reminders.	Most clients reported no negative effects from participating. Some were nervous about the health screen results or by having their weight or waist circumference measured. Clients found the health screen easy to do and felt comfortable, however the diet survey was easy to forget if the client opted to complete this at home. Thoughts about paying for such a service in the future varied based on clients' circumstances.	Physical therapists reported the screening ran smoothly, with minimal interruption to the clinic. When considering costs for future implementation, clinics varied on how they suggested they would cover costs.	Convergent
Integration	N/A	Clients perceived health screening fitted well with physical therapy and should be part of usual practice. Many suggested this could be integrated into 1:1 physical therapist consultations.	Physical therapists were uncertain how to integrate health screening into their business and perceived it did not fit with current practice.	Divergent

[a]N/A = not applicable.

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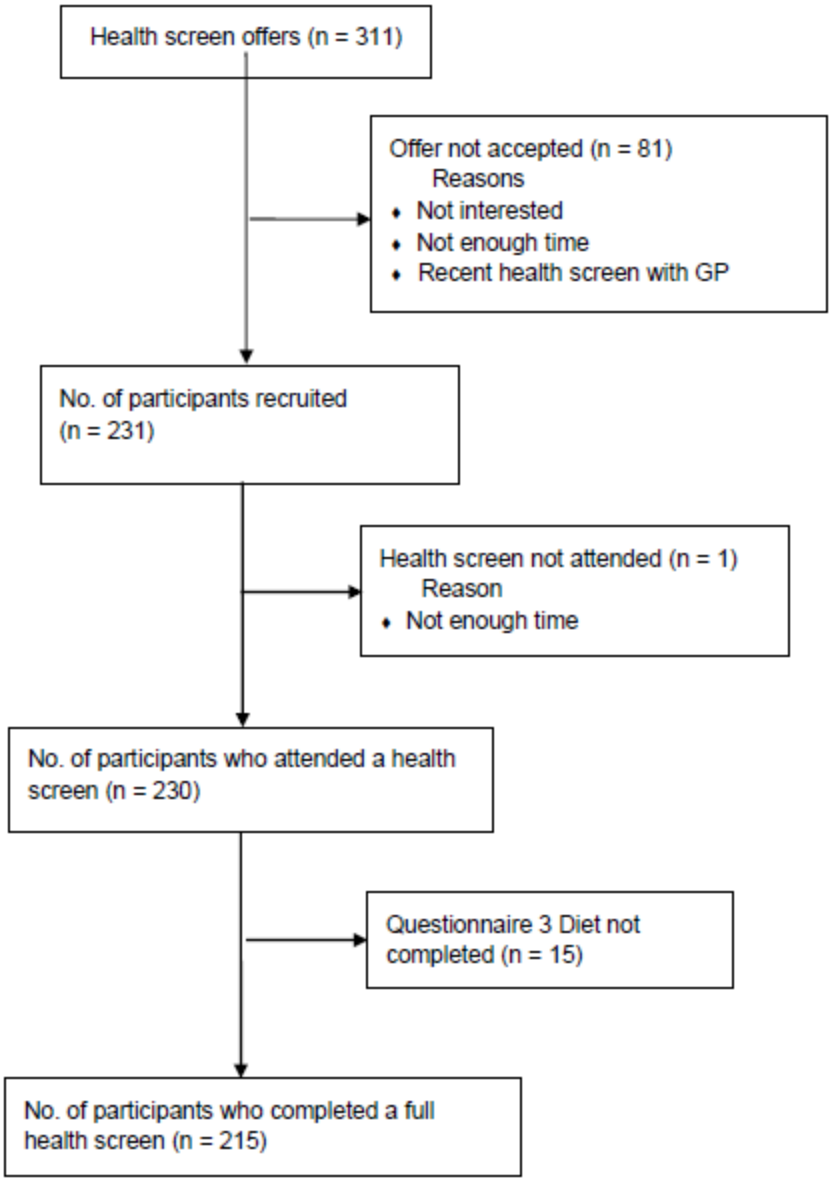

Figure. Demand: health screen program. GP = general practitioner.

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