

## Research

## Physiotherapists should apply health coaching techniques and incorporate accountability to foster adherence to a walking program for low back pain: a qualitative study

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## KEY WORDS

Exercise  
Adherence  
Low back pain  
Patient preference  
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## A B S T R A C T

**Questions:** What motivates individuals to start a walking program for the prevention of low back pain? What strategies optimise short-term and long-term adherence to a walking program? What strategies can physiotherapists incorporate into clinical practice to facilitate commencement of and adherence to a walking program? **Design:** Qualitative study. **Participants:** Twenty-two adults recently recovered from an episode of non-specific low back pain who participated in a 6-month, progressive and individualised walking program that was prescribed by a physiotherapist trained in health coaching. **Methods:** Semi-structured focus groups conducted online following completion of the walking program. Interview questions explored: primary motivations for starting a walking program, identification of which elements were useful in optimising adherence to the program, and identification of the barriers to and facilitators of engagement with the program. Audio recordings were transcribed and thematic analysis was conducted. **Results:** Three major themes were identified. Theme one identified that strong motivators to start a walking program were anticipated improvements in low back pain management and the added general health benefits of a more active lifestyle. Theme two identified that fear of high-impact exercises led to avoidance; however, walking was considered a safe exercise option. Theme three identified accountability, enjoyment of exercise and health benefits were critical to adherence. **Conclusion:** Participants recently recovered from low back pain reflected positively on a physiotherapist-prescribed walking program. Participants described what elements of the program were crucial to starting exercise and optimising adherence. These findings have informed a list of practical recommendations for physiotherapists to improve patient commencement and adherence to exercise. [Pocovi NC, Ayre J, French SD, Lin C-WC, Tiedemann A, Maher CG, Merom D, McCaffrey K, Hancock MJ (2023) Physiotherapists should apply health coaching techniques and incorporate accountability to foster adherence to a walking program for low back pain: a qualitative study. *Journal of Physiotherapy* 69:182–188]

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## Introduction

Low back pain is a musculoskeletal condition that is commonly treated by physiotherapists and is a leading cause of disability worldwide.<sup>1</sup> The burden of low back pain is largely the result of the recurrent nature of the condition, with approximately 70% of individuals experiencing a recurrence within 12 months following recovery.<sup>2</sup> Current evidence supports the use of exercise for the prevention of low back pain recurrences, but no specific exercise is shown to provide superior benefit.<sup>3,4</sup>

Exercise is associated with significant health benefits, including the prevention and management of non-communicable disease,<sup>5</sup>

enhanced cognitive function,<sup>6,7</sup> promotion of mental wellbeing<sup>8,9</sup> and improved physical function.<sup>10–12</sup> Despite these wide-ranging benefits, global estimates indicate that more than one-quarter (28%) of adults do not meet the World Health Organization's Guidelines on Physical Activity, presenting a major public health problem requiring urgent action.<sup>13,14</sup> Physiotherapists are well placed to address this public health concern by encouraging their patients to have a more physically active lifestyle.

Identifying an exercise strategy that patients are compliant with ideally provides general health benefits and prevents future recurrences of low back pain, which would be a significant advancement in public health. Non-adherence to prescribed home-based

**Table 1**  
Intervention description using the Template for Intervention Description and Replication (TIDieR) checklist.

1. Brief name	The WalkBack Trial
2. Why	Low back pain (LBP) is recognised globally as a prevalent, costly and disabling condition. Recurrences are common and contribute to much of the burden of LBP. Current evidence favours exercise and education for prevention of LBP, but an optimal intervention has not yet been established. Walking is a simple, widely accessible, low-cost intervention that has yet to be evaluated.
3. What materials	Participants allocated to the walking/education intervention received: <ul style="list-style-type: none"> <li>• sessions with a physiotherapist with the primary aim of designing a progressive and individually tailored walking program.</li> <li>• education focused on a modern understanding of LBP that reduces the threat and fear associated with pain and advice on strategies to reduce the risk of a recurrence of LBP.</li> <li>• a wearable physical activity tracker to measure daily steps.</li> <li>• a walking diary to act as a motivator in completing the program and provide a degree of accountability.</li> </ul>
4. What procedures	<ul style="list-style-type: none"> <li>• The first of three face-to-face or video conference calls with the clinician was used to collaboratively design a walking program and provide education and advice related to LBP and the rationale for undertaking the program.</li> <li>• Three telephone calls used health coaching principles to identify barriers to and facilitators of engagement in the walking program, and to provide support to assist participants achieve the walking goals or modify the program as required.</li> <li>• All sessions focused on progression of the walking program by increasing frequency, duration and intensity throughout the program.</li> </ul>
5. Who provided	Clinicians with a tertiary qualification in physiotherapy who have received training through Wellness Coaching Australia on the topic of behaviour change and coaching delivered the intervention.
6. How	The tailored walking program was re-assessed and progressed during follow-up consults with the clinician.
7. Where	The intervention was delivered at approximately 25 private physiotherapy clinics across greater Sydney and south-east Queensland, Australia.
8. When and how much	<ul style="list-style-type: none"> <li>• Following randomisation, those in the walking/education intervention received six sessions with a physiotherapist.</li> <li>• Participants were booked in for an initial consult (week 0) with a physiotherapist lasting approximately 45 minutes.</li> <li>• The telephone-based coaching occurred at three time points (week 2, week 8 and week 26), taking approximately 15 minutes based on each participant's requirement.</li> <li>• Two follow-up sessions (face-to-face or video conferencing depending on proximity to available clinics) took place in week 4 and week 12 and lasted approximately 30 minutes.</li> </ul>
9. Tailoring	The walking program was tailored to participant goals, preferences and current walking capacity.

exercise is reported to be between 50 and 70% in patients with low back pain.<sup>15</sup> A previous pilot trial for low back pain prevention found that centre-based exercise programs, which require a large time and travel commitment, were unacceptable to consumers.<sup>16</sup> Similarly, a discrete choice experiment identified a preference for exercise programs of shorter duration, lower cost and that take place outside of a gym setting.<sup>17</sup> Addressing these barriers, walking is a simple, popular and low-cost exercise that can be performed at a convenient time and place for individuals. A recent systematic review investigating the effectiveness of walking/running for the treatment and prevention of non-specific low back pain found high-certainty evidence that walking was more effective in reducing short-term pain (SMD -0.23, 95% CI -0.35 to -0.10) and disability (SMD -0.19, 95% CI -0.33 to -0.06) compared with minimal or no intervention.<sup>18</sup> There were no trials investigating the effectiveness of walking/running for low back pain prevention; this evidence gap is being addressed by the current WalkBack trial.

The randomised controlled WalkBack trial<sup>19</sup> developed an individualised and progressive walking program specifically for the prevention of low back pain recurrences. The intervention incorporated elements intentionally designed to optimise adherence, including health coaching, support from trained physiotherapists and activity tracking. This qualitative study explored the perspectives and experiences of participants in the intervention arm of the trial. Specifically, the current study aimed to explore participants' primary motivation for starting a walking program, identify which elements were useful in optimising adherence to the program and identify the barriers or facilitators to engagement with the program. It was anticipated that this qualitative study may highlight strategies that could be used by clinicians to increase the physical activity levels of their patients and improve adherence to prescribed exercise programs.

Therefore, the research questions for this qualitative study were:

1. What motivates individuals to start a walking program for the prevention of low back pain?
2. What strategies optimise short-term and long-term adherence to a walking program?
3. What strategies can physiotherapists incorporate into clinical practice to facilitate commencement of and adherence to a walking program?

## Methods

### Design

Online focus groups explored participants' perspectives and experiences with the intervention arm of the WalkBack trial. Reporting of the current study conformed with the consolidated criteria for reporting qualitative research (COREQ) guideline.<sup>20</sup> Ethical approval was obtained from the Macquarie University Human Research Ethics Committee (HREC Approval Number: 52021963424976).

### Overview of the WalkBack Trial

A detailed overview of the WalkBack trial can be found in the published protocol.<sup>19</sup> In this two-armed randomised trial, a walking and education (intervention) aiming to prevent low back pain recurrence were compared with a control group. Included participants were adults who had recovered from a recent episode of low back pain and at trial commencement: were not engaged in regular walking for exercise, were not meeting physical activity guidelines, and did not have comorbidities preventing safe participation in a walking program.

Participants allocated to the intervention received six sessions (three face-to-face or telehealth sessions based on geographical proximity to trial-trained clinicians, and three telephone calls) with a physiotherapist to facilitate a progressive and individualised walking program over a 6-month period. The aim was to reach a minimum dosage of walking five times per week, for at least 30 minutes by the end of the program, and for participants to then continue independently. The physiotherapist underwent training in health coaching that comprised motivational interviewing, goal setting and building self-efficacy. This training aimed to optimise participant adherence with the intervention. A summary of the intervention following the Template for Intervention Description and Replication (TIDieR) checklist<sup>21</sup> is presented in Table 1.

Participants allocated to the control group did not receive any treatment as part of their involvement in the trial. However, they could engage in strategies to prevent or treat episodes of low back pain as required.

**Table 2**  
Characteristics of participants.

Characteristic	Participants (n = 22)
Gender, n (%)	
female	13 (59)
male	9 (41)
Age (yr), mean (SD)	56 (10)
Relative status of economic advantage <sup>a</sup> , n (%)	
quintile 1	3 (14)
quintile 2	2 (9)
quintile 3	4 (18)
quintile 4	4 (18)
quintile 5	9 (41)
Previous number of low back pain episodes <sup>b</sup> , n (%)	
1 to 5 episodes	5 (23)
6 to 10 episodes	4 (18)
11 to 25 episodes	3 (14)
26 to 100 episodes	8 (36)
> 100 episodes	2 (9)
Intervention delivery, n (%)	
face-to-face	11 (50)
telehealth	11 (50)
Self-rated adherence (0 to 10) <sup>c</sup> , mean (SD)	
at 3 months	7.95 (1.71)
at 6 months	7.14 (2.14)

<sup>a</sup> Economic advantage is based on participants' postcodes and evaluated using the Socio-Economic Indexes for Areas (SEIFA) interactive maps produced by the Australian Bureau of Statistics. Quintile 1 = 20% least advantaged population. Quintile 5 = 20% most advantaged population.

<sup>b</sup> An episode of low back pain was defined as pain in the area between the 12th rib and buttock crease not attributed to a specific diagnosis such as vertebral fracture or cancer, lasting > 24 hours with a pain intensity > 2 (0 to 10 Numeric Pain Rating Scale).

<sup>c</sup> 0 is 'not at all compliant' and 10 is 'very compliant'.

## Participants

Consecutive participants in the intervention arm of the WalkBack trial were invited (between May and August 2021) to participate in the current study, shortly after completing the 6-month intervention. The questionnaire at the 6-month assessment concluded with a description of the qualitative study, followed by a question asking whether participants were interested in finding out more. Those indicating 'Yes' were sent an email with the Participant Information and Consent Form and then contacted via telephone to discuss potential involvement.

Sampling was planned to be purposive, to ensure a balanced representation based on participants' age, sex, number of previous low back pain episodes, mode of intervention delivery (ie, face-to-face or telehealth) and self-rated adherence with the intervention. Self-rated adherence was collected using a modified version of the Brief Adherence Rating Scale (collected at 3 and 6 months) where 0 is 'not at all compliant' and 10 is 'very compliant'.<sup>22</sup> Recruitment ceased when ongoing analysis indicated that sufficient data were collected to address the study aims and no new themes were identified from the final interviews.<sup>23</sup>

## Focus groups

An experienced qualitative researcher (JA) trained a fellow research team member (NCP) who then conducted the focus groups. Questions were piloted between members of the research team prior to data collection. The focus groups were semi-structured and questions focused on: motivations for participation in the WalkBack trial; reflections of experience with the program, detailing specific elements of the program that they liked or disliked; barriers and facilitators to engagement with the program; and the opportunity to provide general feedback. The interview guide used to facilitate the discussion is presented in Appendix 1 on the eAddenda.

The focus groups were conducted via Zoom. Sessions were recorded and transcribed verbatim by an external third party. The script was compared with the focus group recording and checked for errors by the interviewer (NCP).

## Data analysis

The analysis team comprised a mix of musculoskeletal researchers (with physiotherapy, chiropractic and exercise science backgrounds), behavioural scientists with qualitative research expertise, and two consumers with experience of back pain and involvement in the WalkBack trial. These consumers did not contribute data to the focus groups, but instead advised on interpretation and analysis of collected data. The moderator of the focus groups and primary analyst (NCP) has background training in physiotherapy but was not an intervention provider in the WalkBack trial.

Framework analysis<sup>24</sup> was used to analyse data, which involved the following steps: familiarisation with the transcripts; assigning codes to sections of transcripts; sorting codes under similar themes/sub-themes; charting quotes under each theme; and summary and interpretation of the data.

Two transcripts were independently coded by JA and NCP to observe similarities and differences in coding. Any discrepancies were discussed, and these principles guided coding of the remaining three transcripts. Preliminary themes with supporting quotes were then presented to the consumers and the research team. Through discussions, the preliminary themes were critically reviewed, reflected on and revised. The revised themes were continuously compared with the transcripts to ensure that updated themes were supported by the data.

## Results

### Flow of participants through the study

During recruitment, 47 participants allocated to the intervention arm of the WalkBack trial were candidates for the current study (ie, had completed their 6-month follow-up questionnaire and were invited to participate). Of these, 25 agreed to participate, of which 22 provided data for the focus groups (three participants were unable to attend the scheduled times). Five focus groups with a mean duration of 56 minutes were conducted.

### Participant characteristics

The percentage of male and female participants closely reflected the numbers enrolled in the main trial, with the majority being females (59%) and a mean age of 56 years. Most participants lived in metropolitan areas across Australia, and more than half of the participants (59%) lived in areas indexed to be in the two highest quintiles of relative socioeconomic advantage, using the Socio-Economic Indexes for Areas (SEIFA) 2016 interactive classification maps.<sup>25</sup> The participants who agreed to participate in the focus groups, by chance, had characteristics that reflected a wide range of age, sex, socioeconomic status, history of low back pain and self-reported adherence (Table 2). Therefore, although all consenting participants took part, which is not typical of purposive sampling, the goal of purposive sampling was achieved.

## Main findings

Three main themes were formed from the data. The first theme detailed the various motivators for involvement in an exercise program to prevent low back pain. The second theme comprised beliefs around exercise and low back pain. The third theme discussed the process of commencing a walking program and explored what assisted initial adherence and long-term engagement. Illustrative quotes from the focus groups are used throughout the results section to support the key findings.

### Theme 1: Identifying motivations for engaging in low back pain prevention

Low back pain is characterised by a largely unpredictable and fluctuating pattern of recurring episodes, impacting individuals

differently. As a result, participants' motivations to then engage in exercise to manage their low back pain varied. All participants shared a desire to use a preventative approach to evade a long-term course of low back pain, increase their self-management over the condition, and reduce the impacts of low back pain on participation in daily activities of importance to them.

*Subtheme 1.1: I've had a history of low back pain and don't want to re-experience it*

Participants described varied experiences ranging from a long-standing history of repeated episodes to a single distinct and severe episode. Participants' interest in the trial had stemmed from a 'fear' of future exacerbations and wanting to identify a strategy to mitigate the frequency, severity and impact of future recurrences.

*... having had a couple of years of intermittent pain, I didn't want to go through it again. It was really debilitating and I was just frightened to do anything ... because it was so unpleasant. (Female, 68 years)*

*... when my lower back twinged, I literally collapsed on the floor, I couldn't move, managed to crawl to the bed and then spent the next week lying in bed ... particularly being so young, that prevention aspect for me was really critical. It was terrifying. (Female, 32 years)*

*Subtheme 1.2: I want to help myself and decrease my reliance on healthcare to manage my back pain*

Most participants had not previously considered a preventative approach to managing their low back pain. The intervention's focus on a preventative self-management strategy was appealing because it was an opportunity to independently self-manage their condition.

*I was interested in what could be done, especially from a remote area. It's easier, I'm sure, if you're in the city and have access to medical help but I'm remote so I needed something that I could do ... to help prevent back pain. (Female, 57 years)*

Participants described not wanting to rely on the healthcare system. The time and money commitment for treating low back pain was frustrating. There was also a desire to prevent future and potentially more severe episodes, which may require extensive medical management such as medication or considerations of surgery.

*... going to a physio all the time, it's a lot of money too; whereas, now we can help ourselves [with a walking program], that's the best part. (Female, 58 years)*

*Subtheme 1.3: I've previously dealt with pain, but it's now impacting aspects of daily life important to me*

Some participants indicated that they would have previously endured low back pain and rarely taken action to address it. The desire to reduce the impact of future episodes on participation in activities perceived as critical to daily life (eg, occupation, housework) or commitments important to them (eg, leisure, family activities, hobbies) was a motivator for engaging in prevention.

*I've dealt with back pain for many years. I'm that stupid, arrogant, 'Yeah - I'll be right' just push through, deal with everyone's problems and ignore my own. But when you see the disappointment on your son's face when all he wants to do is kick a footy some days and you can't do it, then that was it [enough motivation] for me. (Male, 42 years)*

*I'm on a farm, so there's a need to be fit and healthy to help on the farm. I just would find myself putting my back out just with ordinary daily tasks and then I can't work for a couple of weeks. (Female, 57 years)*

**Theme 2: Positive views on exercise, but cautious of which exercise is 'right' for low back pain**

Participants were aware of the health benefits associated with a more active lifestyle but were not engaging in exercise regularly at commencement of the trial. One reservation for engaging in exercise was identifying a safe and appropriate exercise for low back pain that would not exacerbate their symptoms. Due to this uncertainty, participants would avoid high-impact exercises, but there was consensus amongst participants that walking was a generally safe exercise unlikely to trigger low back pain.

*Subtheme 2.1: I know increasing exercise and reducing sedentary behaviour is beneficial to general health*

The walking program was seen as an opportunity to tap into the various benefits achieved by a more active lifestyle. Some participants reflected positively on impacts of exercise to their general health, while others believed they could use physical activity to address health-related ailments.

*I truly believe that movement helps you ... but I wasn't necessarily doing it regularly. (Male, 42 years)*

*If I committed to daily walking, the hope was that I would also lose weight. I have obstructive sleep apnoea and I had tried to lose weight for a few years. I struggled with a bit of a bad hip too, so needed to lose weight ... It [motivation to exercise] was multi-faceted for me. (Female, 67 years)*

Some participants noted that periods of lockdown during the COVID-19 pandemic amplified sedentary behaviour. Participants described a link between exacerbations of their low back pain and these periods of increased sedentary behaviour.

*You're a lot more sedentary [working from home] because you're not walking to and from train stations or bus stations or going out at lunch. I noticed that sitting all day is not great ... from psychological benefits to general health and fitness (Female, 54 years)*

*Subtheme 2.2: I'm concerned that engaging in high-impact exercise will worsen my low back pain*

Many participants believed that exercises of high intensity or impact contributed to low back pain. This led to avoidance of specific exercises perceived to increase the chance of injury or recurrence.

*Because I surf, I know surfers have problems with their backs in general. So I thought, perhaps I have to stop surfing if I want to not have pain ... (Male, 47 years)*

There was one participant who spoke extensively about advice provided by his healthcare provider. The advice deterred the participant from continuing with his previously active lifestyle and highlights the potential impact of fearful messaging from healthcare professionals.

*I saw a physio and he said 'With your degenerative back, you should not be running. You should be very careful about how much exercise you do and make sure it's low impact' and that was a bit of a shock for me ... He said, 'You've got to be really careful or you'll end up in a wheelchair.' He gave me this framework of we've got a serious health problem here - don't overdo it. (Male, 50 years)*

*Subtheme 2.3: I perceive walking as an easy to do exercise, unlikely to trigger my back pain*

Contrasting with the avoidance of high-impact exercises, participants reported that walking was one of the few exercises they felt they could manage, even during an acute episode of low back pain. While participants reported a fear of engaging in certain exercise, the same beliefs were not held about walking.

*Walking is one of those activities I can still do, even when I'm going through periods where there's things like bending and lifting that I can't do ... (Male, 42 years)*

Additionally, walking was reported by most participants to be an accessible type of exercise that could be more easily tailored to their needs and embedded within their daily routine. The ease of walking added to the appeal of the program.

*It was practical and something that you can do as part of your normal routine. (Male, 49 years)*

*It can be tailored to all ages, from young people with back problems to elderly ... And whether you work full-time, part-time and all that, you can always manage to find half an hour to walk. (Female, 58 years)*

### **Theme 3: Structures facilitating the starting of and ongoing adherence to an exercise program**

Participants were able to identify key elements of the program that assisted their transition from a sedentary lifestyle to a more active one. Strategies used to start exercising related to being held accountable to their exercise program, and shared planning of the program between the participant and physiotherapist. The use of a flexible and adaptive program, support from the physiotherapist, enjoyment of exercise and observed health benefits appeared critical to optimising long-term adherence to the walking program.

#### *Subtheme 3.1: When starting to exercise, being held accountable improved my adherence*

Participants believed that involvement in a structured and monitored walking program would force commitment to more regular exercise. Participants described low motivation as a major hurdle to commencing exercise independently.

*I would have to agree that accountability was really big for me ... it's great when you have that structure around you, because I don't know if I can create it for myself to be honest. (Female, 38 years)*

Participants described various strategies useful for starting the walking program. Most crucial to increasing adherence were regular check-ins with the physiotherapist and diarising of exercise.

*I've got to put these steps in, put the step count down, because [the physiotherapist] is going to want to see it. So it's like, 'Okay, I gotta do it. Don't miss it'. (Female, 49 years)*

*The diary was a fantastic motivator for me. I wanted to follow the rules and I knew [the physiotherapist] was going to be checking, so I wanted it to look the best. (Female, 32 years)*

Although most participants continued to maintain some level of walking beyond the intervention period, many indicated that it was more difficult to maintain the program when no longer being monitored by the treating clinician.

*Having to be accountable was important for me. Gradually life intervened, and the appealing thing about it initially was how easy it [walking] was. You didn't need equipment. You didn't need anything. I was annoyed and disappointed that when I wasn't held so accountable, it did drop off. (Female, 68 years)*

#### *Subtheme 3.2: A flexible and supportive program encouraged my ongoing engagement*

Although accountability was flagged by participants as an important driver to start exercising, lapses in adherence to the program and disengagement with the program still occurred. Primarily, participants described that barriers such as poor weather and lack of time influenced their adherence; however, these were often

addressed by discussing with their physiotherapist and adjusting aspects of the program to suit their needs and lifestyle.

*Four months of the year, we have incredibly high temperatures. It's not conducive to walking unless you get up at five in the morning. I mean, some people can manage that, but it's not a good start for me. I ended up going to the gym and walking on the treadmill during that heat instead. (Female, 60 years)*

*I like my mornings. I prefer sleeping, so we knew that right off the bat, it's not going to be a morning walk. So that's why I felt the program was tailored around my lifestyle, it was incorporated into my day, walking to and from meetings. (Female, 57 years)*

Many participants described setting unrealistic goals for their walking early in the program. These goals were discussed in consultation with the physiotherapist, who provided guidance in setting realistic and achievable walking targets. This expertise and guidance were perceived as important to a participant's success and maximising chances of sustained engagement.

*I thought the idea was to get faster and longer through the program. The physiotherapist kept pulling me back and saying, 'Let's make it achievable'. I'm glad he did, otherwise I would have been writing down that I'll walk for two hours daily, which is not achievable at all. (Male, 47 years)*

Many participants expressed that daily life could impede their ability to remain consistent with an exercise program and emphasised that the flexibility of the program, alongside positive support provided by the physiotherapist, allowed setbacks to not be seen as a failure, but instead a normal process in the journey to making exercise a habit.

*I have a son who was in and out of hospital, so sometimes I couldn't walk. The physiotherapist said, 'Look, just put in some more intense sessions when you can and don't worry about when you can't'. You just go with ebb and flow, fit it in when you can and just relax if you can't do it. (Female, 67 years)*

#### *Subtheme 3.3: The benefits I saw from walking enhanced my long-term adherence*

Participants described benefits that ranged from reduced severity of episodes through to complete resolution of low back pain recurrences with the program. No participants described walking to have a deleterious impact on their back pain. Participants noted that once they had become less adherent to walking, the benefits were not sustained in the long term. This was a motivator to continue regular exercise.

*If I did have some time without walking, I would start to feel a twinge, and as soon as I started walking again, it just went away. It was like magic ... Who would've thought you could prevent your back pain just by walking? (Female, 68 years)*

*I need to get back to [walking] because I felt the difference once I stopped. I had low back pain a few weeks ago for the first time in months, and it coincided with stopping the routine walks. (Male, 49 years)*

Aside from the benefits related to low back pain, participants were motivated to continue with walking because various additional benefits were noted. These benefits included improved sleep, mood, mental health and improved general health and fitness.

*I'll definitely be doing more walking than I was before the program. Similar to others [participants], the weight loss, fitness and mental health benefits have been really good. I'm now using it as a strategy for a whole bunch of my wellness as well as my back pain. (Female, 32 years)*



**Table 3**

Recommendations to aid clinicians in promoting a walking-based exercise program and assist patient commencement and adherence to exercise.

Incorporate prescription of general exercise in routine clinical practice.

- Ask patients about current levels of physical activity and if sedentary, assess willingness to change this behaviour.
- If the patient is willing to increase physical activity, discuss the health benefits afforded by a more active lifestyle (eg, weight loss, disease management, mental health benefits).<sup>5</sup>
- Understand patient perceptions of physical activity and address misconception or fears related to exercise.<sup>29</sup>

Use health coaching techniques during the collaborative planning of exercise goals.

- Share planning of exercise programs with the patient, considering exercise preferences, functional ability and lifestyle.<sup>28</sup>
- Provide guidance in setting realistic and achievable goals.<sup>30</sup>
- Discuss potential barriers to exercise and how the patient may mitigate these.
- Modify (increase or decrease) exercise targets as required and provide positive support even when exercise targets are unmet.<sup>30</sup>

Use accountability as a strategy to aid early adherence to exercise.<sup>26</sup>

- Once the program is prescribed, ensure scheduled follow-ups to specifically review and discuss exercise progress.
- Monitor a patient's compliance with exercise using exercise logs, pedometer data, etc.
- Provide feedback on patient performance and adherence to the program at each follow-up session.<sup>31</sup>

Support patient in long-term adherence to exercise.

- Discuss progress and ask patient to reflect on additional health benefits attained (eg, better sleep, reduced stress, weight loss).
- Review with patient whether health benefits from walking are sustained during periods when walking has ceased.
- Work with patient to ensure that the ongoing program is enjoyable (eg, exercising in new environments, forming social exercise networks).<sup>31</sup>

Note: These recommendations have been formulated from the key findings of the current qualitative study, with the addition of supporting literature.

*I found mentally that I was feeling calmer ... I just felt more relaxed during the [walking] program. (Male, 60 years)*

Almost all participants described a genuine enjoyment for walking following the program. It was a means of exercising, allowing exploration of local geography, whilst also establishing new hobbies, interests and expanding social networks.

*I've joined a hiking group and meet new people and it has been great fun. I've really enjoyed it because I'm travelling a bit more, going to places that I hadn't been before ... (Male, 60 years)*

*Going to scenic places and trying to go to a nice park, or somewhere beautiful just made it [walking] a lot more enjoyable ... I learnt where all the great parks were and always had shoes in my car and a pedometer in my bag. I really enjoyed learning to be a 'walker', it was pretty, pretty cool. (Female, 38 years)*

## Discussion

This qualitative study identified three major themes related to initiation and adherence to a physiotherapist-prescribed walking program for the prevention of low back pain recurrence. Theme one described motivations to initiate exercise, which varied between participants but mostly included anticipated improvements to low back pain management and the added general health benefits of a more active lifestyle. Theme two described participants' attitudes towards exercise and fears of exacerbating pain, leading to avoidance of high-impact and intensive exercise, whereas walking was widely considered a safe exercise option. In the third theme, participants identified accountability as a crucial strategy in the early stages of their exercise program, while enjoyment of exercise and experiencing improved health aided long-term adherence.

Participants in this study were motivated to start exercise for two main reasons: to potentially prevent low back pain and to improve their general health. Exercise is recommended for the prevention of low back pain,<sup>3,4</sup> but it is unclear whether a particular exercise type offers superior benefit. Physiotherapists aim to provide targeted treatment to address highly specific pathology and impairments, and may neglect incorporating prescription of general exercise in routine clinical practice. The effectiveness of the WalkBack intervention (individually prescribed, progressive walking and education program) for preventing low back pain is yet to be determined, as the trial is not yet complete. Regardless of its effects on low back pain prevention, clinicians may consider the prescription of walking as an adjunct to targeted exercise for patients.<sup>18</sup> Walking has the advantage of being accessible, low-cost, safe and

provides general health benefits, which may motivate a patient to start a more physically active lifestyle.

Participants described accountability to the treating physiotherapist as critical in the early stages of adherence to exercise, a notion supported by previous literature.<sup>26</sup> While all participants valued the importance of exercise, many reflected on how a key challenge previously faced when trying to create regular exercise habits was to convert positive intentions into action. A recent qualitative study with physiotherapists identified that supporting patients who are not in pain is difficult (ie, patients working towards prevention and self-management). Implementing passive support strategies such as an open-door policy or encouraging patients to email or call if needed was largely unsuccessful, with few patients acting on these opportunities.<sup>27</sup> In contrast to this, the WalkBack trial took a more active approach, where accountability was implemented with regularly scheduled follow-up sessions, ongoing monitoring of participant progress, and encouraging participants to diarise their exercise (ie, use of pedometer and walking diary). Overall, participants reflected positively on the ability of these strategies to improve adherence in the early stages of a walking program.

Participants reflected positively on clinicians' use of health coaching and its impact on adherence in the early stages of the program. The key aspects of health coaching were the shared planning and ongoing adjustment of realistic exercise goals. The exercise program in WalkBack was designed collaboratively with the participant and accommodated their preferences, functional ability, available time and lifestyle. Despite participants valuing this approach, and the positive effects of shared decision-making in improving outcomes and satisfaction, the literature indicates that physiotherapists struggle to provide shared decision-making and it is an area requiring improvement.<sup>27,28</sup>

This study highlighted that enjoyment of the program and satisfaction with outcomes (ie, feeling better both mentally and physically) were critical to long-term exercise adherence. The participants used walking to explore their local area, build social networks and establish new hobbies (eg, hiking). These strategies led to greater enjoyment of the program and appeared to improve long-term adherence. Participants also described that the benefits felt from walking (eg, improved low back pain, reduced stress, better sleep) were short-lasting. If participants had a period of non-adherence, the loss of these health benefits was a strong influence in recommencing exercise. Clinicians should prompt patient's reflection on the additional health benefits attained by a more physically active lifestyle, to aid long-term adherence to exercise.

Based on these study findings and supporting literature, we have developed a list of practical recommendations to aid clinicians' promotion of a walking-based exercise program and to assist patient commencement and adherence to exercise (Table 3). These

recommendations are relevant to promoting walking programs for reasons other than prevention of low back pain, including achieving physical activity recommendations.

A strength of this study was the refinement of themes by a multidisciplinary authorship team and two consumers who provided their perspectives on the interpretation of themes. This study reflects the perspectives of participants with an underlying interest in walking, mostly living in metropolitan areas across Australia, posing a potential limitation to the generalisability of the findings. The participants may have provided different views on exercise motivation, adherence and enjoyment compared with those not interested in exercise, those already engaged in high levels of exercise and those in rural or remote areas with different priorities.

To conclude, this study found that sedentary people who had recently recovered from low back pain were interested in a walking program because they thought that walking was a safe and accessible way of potentially managing low back pain, with the potential for broader health benefits. It also identified that elements of accountability, health coaching, enjoyment and the benefits of exercise, which improved participant adherence to walking in the short-term and long-term.

**What was already known on this topic:** In people with low back pain, walking reduces short-term pain and disability; however, adherence to walking or other general exercise is low to moderate in this population.

**What this study adds:** Physiotherapists should use health coaching techniques to collaboratively plan walking or other general exercise goals as part of routine care for people with low back pain. Arranging for patients to be accountable at scheduled follow-ups or via exercise logging aids early adherence to the general exercise. Reflecting on health benefits obtained from the general exercise supports longer term adherence.

**Ethics approval:** The Macquarie University Human Research Ethics Committee approved this study. All participants gave written informed consent before data collection began.

**Competing interests:** Nil.

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