

RESEARCH

Moving towards more physical activity

PHYSIOTHERAPY RESEARCH FOUNDATION Breanne Kunstler, APAM, recipient of a PRF 2016 Tagged Grant, discusses her research project into the promotion of physical activity by physiotherapists.

Project overview

Physical inactivity is the fourth-leading risk factor for global mortality, placing it as a significant contributor to early death, alongside smoking and obesity (WHO 2010). Globally, 31 per cent of adults do not meet the minimum recommended physical activity levels (Hallal et al 2012). In 2008, nine per cent of deaths around the world were caused by complications arising from inactivity (Lee et al 2012) and in 2013 alone, the direct and indirect health costs associated with inactivity totalled INTL\$67.5 billion (Ding et al 2016). The picture is much worse in Australia where 44.5 per cent of Australian adults are not meeting the minimum recommended physical activity levels (ABS 2015), which contributed to 10 per cent of deaths in 2008 (Lee et al 2012) and cost the Australian economy \$805 million in 2013 alone (Ding et al 2016).

Physiotherapists encourage their patients to be physically active to treat the symptoms of musculoskeletal conditions. People presenting to Australian ambulatory clinics with musculoskeletal conditions are often inactive, overweight or obese and have comorbidities such as diabetes. It is the role of the physiotherapist to not only promote physical activity to treat the patient's presenting condition but also to prevent and improve poor health. Physical activity promotion for the purposes of improving or enhancing general health and preventing non-communicable disease is an example of non-treatment physical activity (NTPA)

promotion. My work focuses on NTPA promotion by physiotherapists.

The APA released an influential video as part of its 2014 Australia's Biggest Killer campaign, which encouraged physiotherapists to promote physical activity to their patients to help reduce the number of adults at risk of, and suffering from, non-communicable disease. This campaign also encouraged consumers to see a physiotherapist for help to become physically active.

Little is known about the promotion of NTPA by Australian physiotherapists, despite it being an important part of physiotherapy practice now and into the future. It is important to know how Australian physiotherapists currently promote NTPA, and what factors influence their choice to promote it, to support future research into successful ways to promote NTPA.

Interventions to increase patients' physical activity levels use behaviour change techniques (BCTs) (eg, goal setting); interventions that use many BCTs can be more successful than those that use fewer. Only a small amount of research has explored the techniques

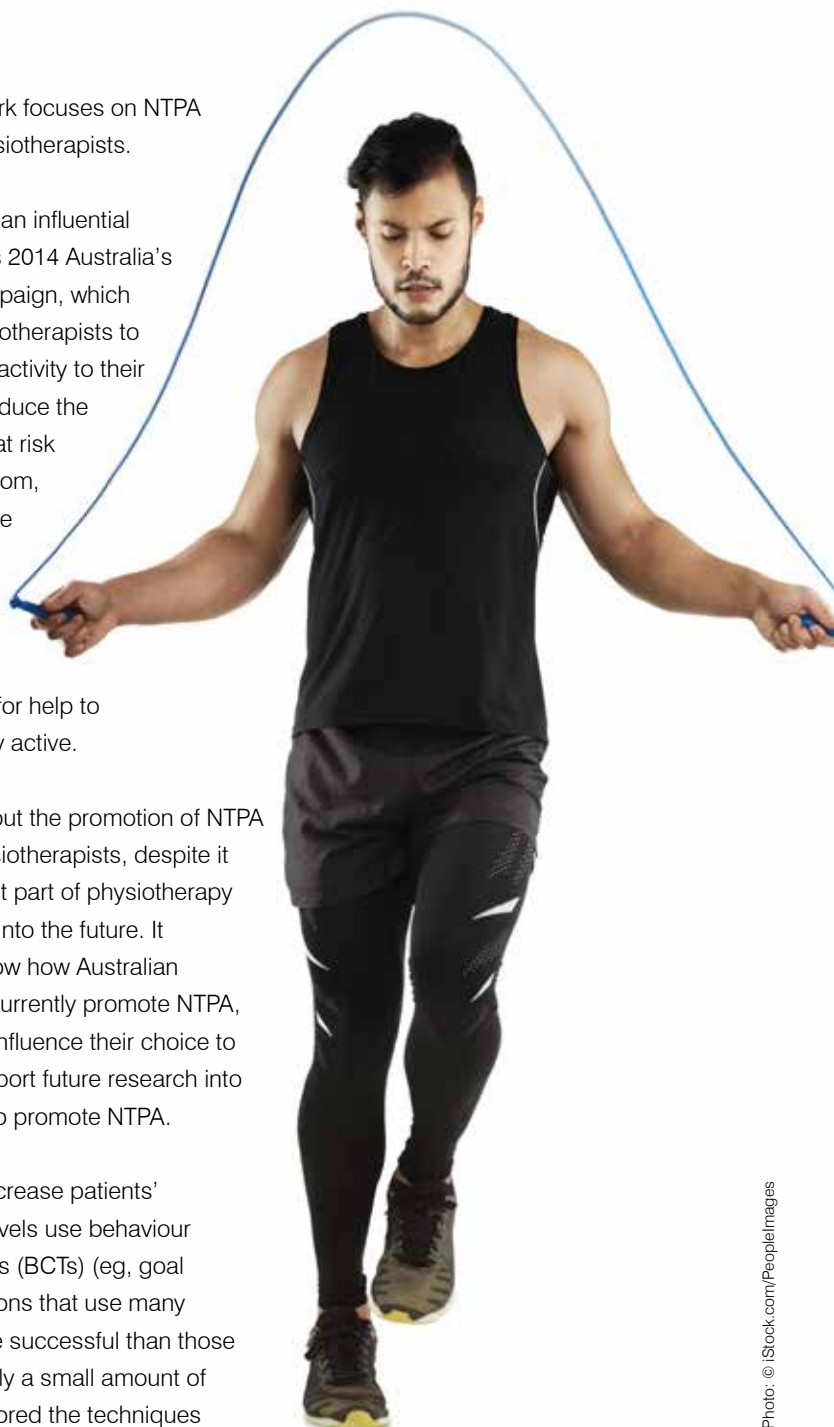


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physiotherapists use to promote physical activity and none of this work is specific to BCTs, NTPA and Australian physiotherapists. My project will identify the BCTs Australian physiotherapists use to improve the NTPA levels of their patients.

Many factors can influence a physiotherapist's decision to promote NTPA to their patients. Researchers in the Netherlands asked physiotherapists what helped them promote physical activity and found that having sufficient knowledge and capability was necessary to promote physical activity well.

This suggests physiotherapists need sufficient knowledge and capability to successfully promote physical activity. It is important to do similar research in Australia and make this specific to NTPA. This project will identify the factors that determine if a physiotherapist will promote NTPA.

Knowing the determinants of NTPA promotion and the BCTs Australian physiotherapists use will allow researchers to design new NTPA interventions specifically for the Australian physiotherapy context that take into consideration the difficulties physiotherapists face when promoting NTPA.

This approach to intervention design will ensure the intervention is clinically relevant for the Australian physiotherapy context, potentially making NTPA promotion easier and more common in Australian physiotherapy practice.

Identifying the determinants of NTPA

promotion will assist the APA and other education providers to understand the difficulties faced by Australian physiotherapists when promoting NTPA. This will hopefully lead to improvements in existing education and professional development programs.

The PRF Tagged Grant will support two projects. Both projects will identify the determinants of NTPA promotion and the BCTs physiotherapists use to promote NTPA. These projects will form part of my PhD, which is supported by the Australian Collaboration for Research into Injury in Sport and its Prevention (ACRISP) at Federation University Australia.

Methods

The participants recruited for these projects were Australian physiotherapists treating patients with musculoskeletal conditions in private practice and outpatient clinics. Participants were recruited using social media and advertisements in APA and Sports Medicine Australia news emails.

The first project was an online survey that was piloted prior to the study commencing. A total of 486 Australian physiotherapists attempted the survey and it took an average of 25 minutes to complete.

The second project was an interview study. Ten physiotherapists from around Australia participated in a 60-minute interview that involved discussing how they promote NTPA to their patients and what makes it easy or hard to do. Interviews were conducted face-to-face, over the phone and over Skype. Data collection is complete

A 2016 PRF Tagged Grant is supporting Breanne Kunstler's current research. The PRF is calling for applications for 2017 Project Grants (formerly Tagged Grants) and the Beryl Haynes Memorial Grant. See page 11 for more details.



for both studies and analysis of the data has begun.

Findings

Early results suggest that physiotherapists feel responsible for promoting NTPA to their patients and see it as part of their role, but patient expectations and workplace-specific factors can influence how they do it and how often they do it. Physiotherapists use many different BCTs to promote NTPA, often without realising it.

Additionally, physiotherapists want more training resources to improve their skills in BCT use and NTPA promotion and see the APA as the main provider of these. Final project results are expected by the end of 2017.

Email info@physiotherapy.asn.au for references.



PROMOTING PHYSICAL ACTIVITY: YOUR PATIENT HAS THE ANSWERS

AUSTRALIAN ADULTS ARE NOT MEETING THE RECOMMENDED LEVELS OF WEEKLY PHYSICAL ACTIVITY. PHD CANDIDATE **BREANNE KUNSTLER**, APAM, DISCUSSES PATIENT EXPECTATIONS AND PHYSIOTHERAPISTS' KEY ROLE IN PROMOTING PA.

Australian adults are not meeting the recommended levels of weekly physical activity (PA). The Australian Physical Activity & Sedentary Behaviour Guidelines for Adults state that adults must participate in 75–150 minutes of vigorous intensity PA (eg, running) or 150–300 minutes of moderate intensity PA (eg, brisk walking), as well as muscle-strengthening activities on at least two days each week to be considered physically active (Commonwealth of Australia 2014). In 2014–15, 44.5 per cent of Australian adults did not achieve the minimum recommended PA levels (Commonwealth of Australia 2015). Those with musculoskeletal conditions report lower PA levels (McPhail et al 2014a), potentially due to their condition acting as a barrier (McPhail et al 2014b). As many as 10.1 per cent of Australian deaths in 2008 were directly attributed to physical inactivity (Lee et al 2012). Physical inactivity is therefore a major contributor to early death.

Physiotherapists have a role to play in PA promotion and have a responsibility to improve the PA levels of their patients (World Confederation for Physical Therapy 2012). But the real question is:

Are we any good at increasing our patients' PA levels?

I have almost completed a PhD exploring PA promotion by Australian physiotherapists. One of my PhD projects found that physiotherapists can increase their patients' PA levels, but only by a small amount (eg, 17.9 minutes daily) and improvements were not maintained beyond one year (Kunstler et al 2017). So, what is the problem? Why are PA improvements small and not maintained? How can we improve the way we promote PA?

The Australian Physical Activity & Sedentary Behaviour Guidelines for Adults provide physiotherapists with a recipe for how frequently and intensely adults should exercise to be considered physically active and reap the associated health benefits (Commonwealth of Australia 2014). The guidelines also provide guidance on the amount of time adults should exercise and gives some examples of types of activity to do (Commonwealth of Australia 2014). However, what they do

not do is encourage the physiotherapist to adopt a tailored approach to physical activity prescription. In other words, the guidelines can be used by some as a stock-standard recipe for PA promotion, but the result may be PA prescriptions that are not tailored to the patient.

Physiotherapists often tailor their treatment to their patients. Is that weight too heavy? Let's reduce it. Is that exercise causing excessive pain? Let's modify it. Does the patient balance a busy life of work and family? Suggest suitable times to squeeze in exercises. We should treat PA promotion the same way. Physical activity prescriptions should be tailored to the patient. If this is done, we might see greater improvements.

Physiotherapists in Australia and globally have scored poorly on their knowledge of the PA guidelines (Shirley et al 2010, Mohan et al 2012, Lowe et al 2017), which might suggest that physiotherapists are not following the guidelines and prescribing PA incorrectly to their patients. Having a general understanding of how much PA people should do to maintain health is an important prerequisite to prescribing PA.

However, I suggest that physiotherapists who do not strictly adhere to the black-and-white, hard-and-fast 'you must do 150–300 minutes of brisk walking per week' part of the guidelines have an excellent approach to PA prescription. This is because they stop thinking about how much PA their patient needs to do to be considered physically active, and instead they focus on the lesser mentioned part of the guidelines that suggest that doing any amount of physical activity is better than doing none (Commonwealth of Australia 2014). Thus, these physiotherapists tailor their PA prescription to suit the patient, rather than trying to make the patient suit the prescription.

Physical activity interventions, just like any other intervention, need to be tailored to the patient to be successful (Noar et al 2007, Dohrn et al 2016). You might think that if physiotherapists do not prescribe PA following the guidelines then they are not prescribing enough PA for their patient to achieve any health benefits. Do not think that.

Recent research has clearly demonstrated that doing a small amount of PA (eg, 15 min per day) is sufficient to achieve health benefits (Wen et al 2011). Regularly participating in PA of any intensity, and even at low levels, in leisure time can protect against developing depression in the future (Harvey et al 2017). Therefore, prescribing a small amount of PA can be enough to achieve some benefit and might be the perfect amount for some patients, if this is all they can achieve.

Let's use an example. Brian is a 45-year-old banker who presents to you with right shoulder pain. You notice he is overweight, possibly obese. He casually mentions to you that he avoids exercise 'like the plague' but tries to do at least 10 minutes of walking per day. You convince Brian that becoming physically active can help improve his overall health and that he should be doing more.

Question: what PA prescription do you give Brian?

- 150–300 minutes of brisk walking per week
- 75 minutes of running per week
- 12 minutes of walking this week with the aim to increase to 14 minutes next week

Answer: all of these PA prescriptions follow the guidelines, however, the third option gives Brian an achievable small goal and considers his activity preferences and abilities. Because of this, the third option gives Brian a better chance at engaging in PA and maintaining it over time.

Why are goals important?

Setting goals gives the physiotherapist and patient a target to aim for. We often ask patients what they want to achieve during their time in physiotherapy. Physiotherapists are encouraged to frame patient goals using the SMARTS (specific, measurable, achievable, realistic, timely and self-determined) acronym (American College of Sports Medicine 2013).

However, a recent editorial in the *British Journal of Sports Medicine* argues that specific goals might be less effective than simple, vague goals (eg, just encouraging Brian to walk a little more next week) (Swann & Rosenbaum 2017). Swann and Rosenbaum (2017) make the very valid point that specific, often challenging, goals might see people participate in less PA, contradicting our aim. Aiming to be physically active (eg, walking 150 minutes per week) might be too challenging for someone who is currently inactive (Swann & Rosenbaum 2017).

Put yourself in Brian's shoes for a moment: how successful do you think you will be at achieving your PA goal if your physiotherapist just told you to run for 75 minutes per week? Tailoring your PA prescription to the patient is important for success.

What can I do to help patients maintain PA?

Physical activity maintenance is hard. The PA improvements seen in patients who receive a PA prescription from their physiotherapist are only maintained up to one year (Kunstler et al 2017) and up to 15 months in young and middle-aged adults (Murray et al 2017). Initiating PA and maintaining it over time requires effort from the patient and the physiotherapist.

Maintenance of PA requires contact with the physiotherapist over an extended period and the use of follow-up prompts, self-monitoring, goal-setting and action-planning (Swedish Council on Technology Assessment in Health Care 2007, Fjeldsoe et al 2011, Dombrowski et al 2012, Olander et al 2013, Murray et al 2017). This means that

PA maintenance requires ongoing contact with the physiotherapist beyond the usual treatment timelines. As part of this extended contact, it is necessary to contact the patient while they are away from the clinic to see how they are going with their current plan (this is an example of using follow-up prompts).

Self-monitoring is also a useful tool to support maintenance and involves the patient using devices (eg, a smartphone app or exercise diary) that measure the amount of PA they do. This information can be automatically uploaded online for the physiotherapist to use when establishing if goals need reassessing or a new plan is needed.

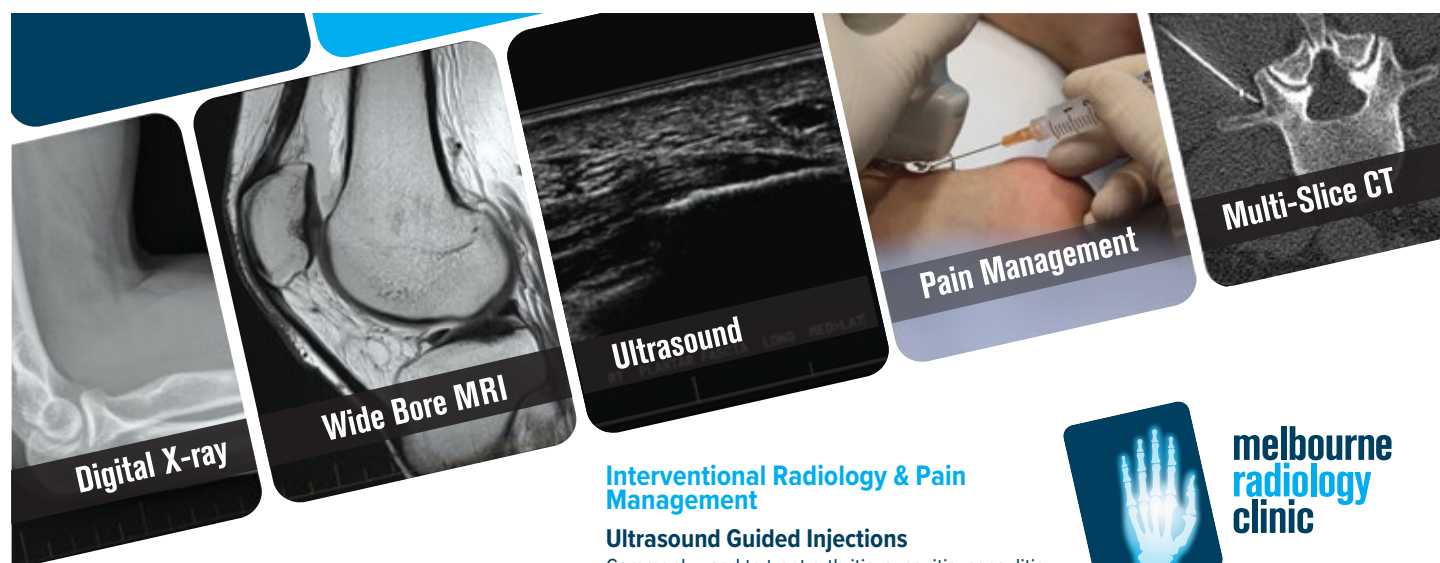
Promoting PA is complex and has several challenges. Overall, it is important to remember that every patient is different and will respond to your advice differently. Therefore, be sure to prescribe an amount of PA that suits your patient, even if you think it is not enough. Physical activity levels can be progressed over time; some people will take longer to become physically active and some might never reach that level of activity. Use the resources available to you (eg, use reasonable goal-

setting, set plans, monitor progress) and keep in contact with your patients. Checking in occasionally might be the one thing they need to keep on track.

For references, email ngeditor@physiotherapy.asn.au

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