



## Is there a need for mental health informed goal setting in physical activity?

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### ABSTRACT

Goals are standard practice when promoting physical activity for mental health and wellbeing and for the management of mental health disorders. While there are benefits of setting physical activity goals, there are also known risks, side-effects, and detrimental outcomes. We illustrate how these can potentially exacerbate mental health symptoms. Given the high rates of mental health disorders worldwide, we argue that mental health informed goal setting is needed in physical activity and may be relevant to hundreds of millions of people worldwide. We present recommendations for setting mental health informed physical activity goals to minimise/avoid the risks of exacerbating mental health symptoms as well as maximising benefits for both physical and mental health.

Mental health is defined as “a state of wellbeing that enables people to cope with the stresses of life, realise their abilities, learn well and work well, and contribute to their community” (World Health Organisation [WHO], 2022a, p. 1). Insufficient physical activity increases the risk of mental health disorders, while regular physical activity can improve mental health and wellbeing (Schuch et al., 2018; Teychenne et al., 2020). It is standard practice for most exercise and health practitioners to encourage clients/patients to set physical activity goals for the promotion of mental health and wellbeing (e.g., Cooper, 2020) and the management of mental health disorders (e.g., Smith & Merwin, 2021) among adults. Traditionally, health professionals are recommended (and sometimes even required) to set *specific performance goals* (i.e., goals that have a focus on achievement of outcomes – Swann et al., 2021), when promoting physical activity/prescribing exercise with consumers, and these goals are often operationalised using the popular SMART acronym (e.g., Specific, Measurable, Achievable, Realistic, Timebound goals – Swann et al., 2023). Example specific performance goals include aiming for 45–60 min of moderate to vigorous-intensity aerobic or resistance exercise 3–5 times per week for anti-depressive effects (Zhou & Fabiano, 2024). Although goal setting is an effective

strategy for increasing physical activity (McEwan et al., 2016), prominent goal setting theorists have highlighted that “the potential risks of goal pursuit should always be examined” (Latham & Locke, 2006, p. 337). Indeed, numerous pitfalls or detrimental outcomes of specific performance goals have been identified in relation to physical activity promotion among the general population (Swann et al., 2021, 2023 – see below). Individuals experiencing mental health challenges face additional vulnerabilities and barriers to engaging in physical activity compared to the general population (Wolfe et al., 2022). Therefore, it is important to ask: is there a risk that some physical activity goals could unintentionally *exacerbate* mental health symptoms? And is there a need for mental health informed goal setting in physical activity?

### 1. What are the risks and pitfalls of setting physical activity goals?

Research among the general population has identified at least five risks, pitfalls, and detrimental outcomes associated with goal setting (Latham & Locke, 2006). First, if goals are unachievably high or unrealistic, or if there are too many goals to pursue at once, individuals may

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experience stress, anxiety, pressure, and/or threat appraisals (Latham & Locke, 2006). Second, specific goals create succeed-or-fail scenarios, and failure to achieve goals may lead to decreased affect, self-esteem, and motivation (Höpfner & Keith, 2021) – even if meaningful increases in physical activity have been achieved. Third, specific goals can induce focus on immediate outcomes and inhibit learning by encouraging means-end engagement (e.g., “I must reach 10,000 steps”), rather than the development of strategies to successfully complete the task (e.g., exploring different modes of exercise – Seijts & Latham, 2005). Fourth, challenging goals can lead to unethical behaviour such as mis-reporting

or over-stating the amount of physical activity that one has completed – particularly when the individual is just short of achieving the goal (Swann et al., 2023). Fifth, some evidence suggests that pursuing specific performance goals can reduce pleasure among insufficiently active individuals (Hawkins et al., 2020), and measuring goal progress quantitatively can reduce enjoyment and intrinsic motivation (Etkin, 2016), which can have long-term effects on the individual’s continued engagement and subjective well-being.

Table 1

Scenarios illustrating risks that physical activity goals could unintentionally exacerbate mental health symptoms.

Symptoms of depression	Scenario	A new mother with clinical postnatal depression is experiencing low mood, fatigue/exhaustion, overwhelm and struggle to find the energy/motivation to get out of bed. They appreciate the benefits of being physically active, and have previously led an active lifestyle, but they have not been able to be active since giving birth.
	Goal setting approach	After seeing a GP, they are advised that “any exercise is better than no exercise. However, more exercise sessions have a greater effect on mood than fewer sessions” (RACGP, 2015), and that small and progressive goals should be set with individuals experiencing depression (Fortier et al., 2020). With their GP, they set an ‘easy’ goal to either go for a 10-min walk, or do 10 min of home-based resistance exercise, three times a week for the next month (Cooper, 2020).
	Risks/pitfalls in goal setting approach	<b>Failing to achieve goals:</b> Although the goal appears achievable, managing logistics (such as unpredictable infant feeding/sleeping routines) whilst experiencing exhaustion, low motivation and overwhelm results in being unable to meet the goal they agreed to (Anderson et al., 2023; Rothbaum et al., 2009). While they do increase their physical activity by going for one to two 10-min walks per week, they reflect that: “ <i>You have these specific goals, which you’re not capable of making or don’t have the resources to meet, and then you inevitably fail, and when you do that often enough you begin self-loathing at your inability to help yourself. Failing to meet even easy goals means even greater self-loathing.</i> ”
	Exacerbated symptoms of depression	As a result, they experience exacerbated depressive symptoms including feelings of sadness, guilt, low self-worth, and hopelessness about the future because they are unable to reach even achievable goals (Jones et al., 2013). The inability to achieve even these small amounts of activity also perpetuates feelings of shame and guilt given they previously led an active lifestyle (Meade et al., 2020). They decide to give up on trying to be more active, reflecting that: “ <i>I’m feeling hopeless, don’t even talk to me about goals or exercising.</i> ”
Symptoms of anxiety	Scenario	A high functioning individual in a pressurised job spends long hours at work, and engages in exercise on an ad hoc basis but they have not been able to prioritise it. They generally enjoy both cardio and resistance training, so they decide to commit to a gym-based program to help manage their generalised anxiety disorder.
	Goal setting approach	They search the internet for advice and identify the UK’s National Health Service (NHS, 2022) recommendations for self-help with generalised anxiety disorder in adults which states that: “You should aim to do at least 150 min of moderate-intensity exercise a week.” They also find RANZCP clinical guidelines (Andrews et al., 2018) which suggest they undertake 30 min of cardio exercise three times per week to reduce their anxiety symptoms. They set a challenging-yet-achievable goal to complete 90–150 min of exercise per week via a combination of cardio and resistance training at their gym, ideally by going 3–5 times per week for the next 8 weeks.
	Risks/pitfalls in goal setting approach	<b>Stress, anxiety, pressure, threat appraisals:</b> They are initially motivated to achieve the goal. However, their busy job – with unpredictable hours and frequent need to work late – means they find it complex to fit exercise in during the week, and they reach the weekend with the majority of the goal/weekly minutes left to achieve. They start feeling pressure, stress, anxiety and threat appraisals about their goal (Drach-Zahavy & Erez, 2002): “ <i>I feel pressure to do more exercise in order to reach my goal which adds to my stress and anxiety during the week. I end up doing most of my exercise on the weekend which makes me feel like I’m not able to relax as much.</i> ”
	Exacerbated symptoms of anxiety	They feel negative affect because they’re not making progress (Carver & Scheier, 1990), and that the goal is an added responsibility on top of a busy work schedule. The pressure, stress, anxiety and threat appraisals they experience about their goal (Drach-Zahavy & Erez, 2002) exacerbates their symptoms of generalised anxiety disorder. Ultimately, they decide it is best to abandon their physical activity goal as it is an additional burden.
Symptoms of PTSD	Scenario	A recently retired firefighter with symptoms of PTSD from their work is currently not engaging in exercise and averages <2000 steps per day, despite having been very fit and active for over 15 years through their job. They decide to see an exercise professional to improve their mental and physical health.
	Goal setting approach	The person works with a practitioner to collaboratively set SMART goals which are tailored to the individual based on their own preferred level of difficulty – in line with recommendations for the management of mental health disorders through exercise (Smith & Merwin, 2021). They agree to a SMART goal to increase their average daily step count by 10% each week for the next 6 weeks (reaching >3500 steps per day), and measuring progress using their smartwatch.
	Risks/pitfalls in goal setting approach	<b>Inhibition of learning, means-end engagement, and unethical behaviour:</b> They focus solely on their step count goals each day, declining other activities (like going to the swimming pool with their children) which do not count towards their goal (i.e., means-end engagement - Sweller & Levine, 1982). When they meet with their practitioner after week 3, they (mis)report that they have hit all of their targets despite a drop-off in week 2 (i.e., unethical behaviour – Latham & Locke, 2006). At the end of the program, despite reaching >3500 steps per day, they reflect that: “ <i>I had a routine for reaching my target step counts, but I didn’t find the process enjoyable – instead it felt like a ‘chore.’</i> ”
	Exacerbated symptoms of PTSD	They blame them self for their inability to meet the goal in week 2, which makes them feel guilt and shame (Meade et al., 2020). They experience further negative thoughts and feelings with distorted beliefs about themselves (“ <i>if I can’t complete all of my goals does this mean I am not SMART? And does it mean that I’m not able to improve my mental and physical health?</i> ”; Rothbaum et al., 2009). They also believe they have let the practitioner down and they feel detached because they did not enjoy the process (Harada et al., 2013). Consequently, they do not see the progress they have made in increasing their physical activity, and they decide not to return for another program.

**Table 2**  
Considerations for developing mental health informed goal setting in physical activity.

Focus	Consideration
Policy/ guidelines	Dedicated resources and efforts should be invested into the development of guidelines for mental health informed goal setting in physical activity in a co-designed manner with individuals who have lived/living experience of mental health challenges (e.g., <a href="#">Larkin et al., 2015</a> ), and with practitioners who can guide <i>how</i> mental health informed goal setting should be implemented.
	The development of mental health informed goal setting in physical activity should align with trauma-informed practice (e.g., <a href="#">Harris &amp; Fallot, 2001</a> ), including principles of empowerment, voice, and choice.
	Mental health symptoms and conditions should be considered comprehensively, while also recognising that conditions (e.g., depression, anxiety) often co-exist rather than presenting in isolation ( <a href="#">Rebar et al., 2017</a> ), meaning there is a need to ensure goal setting appropriately considers comorbid conditions too.
	Organisations and professional associations should support access to mental health literacy training for practitioners to facilitate understanding of mental health symptoms and the ways in which they may be influenced by physical activity goals.
	For individuals experiencing mental health challenges, organisations and professional associations should avoid promoting goal setting in a one-size-fits-all manner – particularly via specific performance goals ( <a href="#">Swann et al., 2021</a> ) and the SMART acronym ( <a href="#">Swann et al., 2023</a> ) given the potential risks and pitfalls.
Practice	When working with people experiencing mental health challenges, consider a joint focus or balance between increasing physical activity and improving mental health (i.e., rather than solely focusing on achieving the optimal/maximal dose of physical activity; <a href="#">Dumuid et al., 2021</a> ).
	Consider setting alternative types of goal with clients experiencing mental health challenges, including learning goals (e.g., ‘identify and try out 3 ways to increase your step count this week’; <a href="#">Swann et al., 2021</a> ) and open goals (e.g., ‘see how many steps you can reach today’; <a href="#">Hawkins et al., 2020</a> ), based on their presenting mental health symptoms, personal preferences, and evidence where available.
	Consider recommendations for optimising the effects of physical activity on mental health and wellbeing, including the type, domain, environment, and the way in which it is delivered ( <a href="#">Vella et al., 2023</a> ).
Research	Generate further empirical evidence on the relationships between goal setting and mental health symptoms in physical activity, including which types of goal are most (and least) beneficial to physical activity and mental health for those with different (e.g., high vs low) physical activity level (e.g., <a href="#">Hawkins et al., 2020</a> ).

**2. When are specific performance goals beneficial?**

Recent research indicates that specific performance goals are not uniformly beneficial for increasing physical activity (e.g., [Hawkins et al., 2020](#)). In line with goal setting theory ([Locke & Latham, 2013](#)), a specific performance goal should only be set when the individual has the necessary knowledge, ability, commitment, feedback, and resources to achieve it – which is likely to be the case for individuals who are already active ([Swann et al., 2021](#)). Indeed, “trying for specific, challenging goals may actually hurt performance in certain circumstances ... (such as) during the early stages of learning a new, complex task” ([Latham & Locke, 1991](#), p. 229), and it has been highlighted that “as tasks become more complex, the typical motivational effects of specific difficult goals may not be sustained and may even become harmful” ([Drach-Zahavy & Erez, 2002](#), p. 668). Therefore, specific performance goals are less likely to be beneficial for insufficiently active individuals who may find physical activity adoption and maintenance more complex and may have less-developed skills and resources to manage setbacks ([Swann & Rosenbaum, 2018](#)). More broadly, specific performance goals are less likely to be beneficial for individuals experiencing mental health challenges (regardless of their level of physical activity) given their symptoms may make engaging in physical activity more complex ([Faulkner & Taylor, 2009](#)).

**3. Could physical activity goals unintentionally exacerbate mental health symptoms?**

The sections above indicate that individuals who are experiencing mental health symptoms are potentially vulnerable to the risks and pitfalls of specific performance goals, and those who are insufficiently active may be most vulnerable. [Table 1](#) illustrates three scenarios whereby the risks/detrimental outcomes of goal setting could potentially exacerbate mental health symptoms (i.e., cause harm) – focusing on symptoms of common mental disorders: depression, anxiety, and post-traumatic stress disorder (PTSD).<sup>1</sup> It is also important to

acknowledge that many disorders such as depression and anxiety co-present/co-exist more often than presenting in isolation ([Rebar et al., 2017](#)), which further highlights the importance of avoiding one-size-fits-all approaches such as the predominant use of specific performance goals.

**4. Is there a need for mental health informed goal setting in physical activity?**

Given there is a risk that specific performance goals could unintentionally exacerbate mental health symptoms (and potentially cause harm), it is essential that goal setting is delivered in a mental-health informed manner. Goal setting should be sensitive and considered for anyone experiencing mental health challenges regardless of their physical activity level – while those who are insufficiently active *and* experiencing mental health challenges may be most vulnerable to potential risks and pitfalls. Indeed, the risks of exacerbating mental health symptoms via specific performance goals potentially apply to *hundreds of millions* of people worldwide. To illustrate: approximately 301 million people experience an anxiety disorder ([WHO, 2022b](#)), and 22.9% of people with anxiety were found to have low physical activity levels ([Stubbs et al., 2016](#)); approximately 280 million people experience depression ([WHO, 2022b](#)), and 60.2% of people with major depressive disorder were found to not meet physical activity recommendations ([Vancampfort et al., 2017](#)); approximately 290 million people experience PTSD ([WHO, 2022b](#)), and 52.3% of people with probable PTSD were found to report no weekly exercise ([Adams et al., 2020](#)). Building on calls for physical activity guidelines for mental health ([Teychenne et al., 2020](#)), [Table 2](#) outlines initial considerations for the development of mental health informed goal setting in physical activity. By developing and implementing mental health informed goal setting in physical activity, it may be possible to help minimise risks and maximise benefits among hundreds of millions of people experiencing mental health challenges worldwide.

<sup>1</sup> We recognise that there are other mental health challenges with different symptoms, but have focused on depression, anxiety, and PTSD as they are among the most prevalent worldwide.

## CRediT authorship contribution statement

**Christian Swann:** Writing – review & editing, Writing – original draft, Conceptualization. **Darren Wagner:** Writing – review & editing, Writing – original draft. **Melanie M. Clarke:** Writing – review & editing, Writing – original draft. **Scott G. Goddard:** Writing – review & editing, Writing – original draft. **Grace McKeon:** Writing – review & editing, Writing – original draft, Conceptualization. **Simon Rosenbaum:** Writing – review & editing, Writing – original draft, Conceptualization. **Stewart A. Vella:** Writing – review & editing, Writing – original draft. **Megan Teychenne:** Writing – review & editing, Writing – original draft, Conceptualization.

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## Data availability

No data was used for the research described in the article.

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