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REVIEW ARTICLE



Psychologists' physical activity promotion practices, barriers and facilitators: a scoping review

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ABSTRACT

Strong evidence supports the integration of physical activity (PA) promotion in psychotherapy. As mental healthcare practitioners with expertise in behaviour change, psychologists are well-placed to promote PA as an adjunctive psychological intervention. This scoping review aimed to systematically synthesise evidence on psychologists' PA promotion practices, including their knowledge, confidence and past training on promoting PA. This scoping review mapped psychologists' barriers and facilitators to the 14 domains of the Theoretical Domains Framework. Systematic searches were conducted, with 11 studies meeting the inclusion criteria. Among the studies measuring the frequency of psychologists' PA promotion ($n = 9$), most (67%) reported that >50% of psychologists promote PA with clients. Studies reporting on psychologists' PA promotion training experiences ($n=4$) found that almost two-thirds of psychologists have not received any formal training in PA promotion. The domains most identified as barriers to PA promotion were 'social influences' and 'skills', whilst the domains most identified as facilitators to PA promotion were 'beliefs about consequences' and 'beliefs about capabilities'. Given that PA promotion in psychotherapy is an effective intervention, but psychologists lack formal training in this area, tailored training may benefit psychologists' capabilities and clinical practice to promote PA safely and effectively.

ARTICLE HISTORY

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KEYWORDS

Psychologist; clinical psychology; physical activity; exercise; scoping review; mental healthcare

1. Introduction

Globally, mental disorders are a leading cause of disability (Arias et al., 2022). The disease burden of mental disorders is increasing, with depressive disorders now listed as a leading cause of disability-adjusted life years in several countries (World Health Organisation, 2025). In Western nations,

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treatments for mental disorders typically comprise psychotherapy or pharmacotherapy, or a combination of both (Harvey & Gumpert, 2015). However, physical activity (PA) promotion, both standalone and in combination with psychotherapy, have received increasing empirical support from systematic reviews and randomised trials as an effective component of treatment for several mental disorders such as major depressive disorder and anxiety disorders (Firth et al., 2015; Frederiksen et al., 2021; Heissel et al., 2023; Noetel et al., 2024; Ramos-Sanchez et al., 2021; Rief et al., 2018; Szuhany & Otto, 2020; Thomas et al., 2020). PA-based interventions are useful in improving cognitive health and mental wellbeing (Gallardo-Gomez et al., 2023; Marquez et al., 2020; Vancampfort et al., 2025). Given this strong body of evidence, many clinical practice guidelines now recommend that PA and exercise, PA that is structured, repeated, planned and purposeful (Caspersen et al., 1985), are integrated into mental healthcare as a first-line treatment for some mental disorders by mental healthcare practitioners, including psychologists (Ashdown-Franks et al., 2018; Lam et al., 2024; Malhi et al., 2021).

Considering these clinical recommendations, recent research has examined how PA is implemented in mental healthcare by practitioners (Stubbs et al., 2024). Scoping reviews have identified healthcare practitioners' barriers and facilitators when promoting PA, and healthcare practitioners' attitudes towards PA promotion (Glowacki et al., 2019; Newsome, 2023). However, such reviews comprise a range of health professionals, with mental health nurses comprising most of the sample, and none centred on psychologists. Given that psychologists generally practice in different environments (e.g., private practice) from mental health nurses, are bound by unique codes of conduct and ethics, and have different professional training requirements and competencies, it is important to understand their barriers and facilitators to PA promotion (American Psychological Association, 2017; British Psychological Society, 2017; Psychology Board of Australia, 2025).

In psychological practice, PA promotion is an intervention underpinned by cognitive and behavioural principles aimed at increasing clients' PA levels and subsequent mental health outcomes (Dissanayake et al., 2026). PA promotion in psychological practice rests on psychologists' expertise as highly trained mental healthcare practitioners competent in administering interventions to affect behaviour change, improve mental disorder symptoms and increase mental wellbeing (Psychology Board of Australia, 2024b). Psychologists' role in promoting PA has received minimal attention and could hold potential. Although psychologists' training may vary depending on their geographical location and setting employed in, they are generally well-placed to promote PA by building on their existing knowledge and skills in interventions such as behavioural activation, motivational interviewing and problem-solving therapy; yet their role in this remains largely unexplored (Dissanayake et al., 2026).

If psychologists are to make a consistent contribution to promoting PA, it is important to understand their practices in promoting PA, their knowledge and confidence to do so, and the quantity of training psychologists receive on PA promotion. Psychologists' personal levels of PA may also be associated with their use of PA promotion with clients, as is the case with healthcare practitioners (Hall et al., 2022; Hébert et al., 2012). Understanding psychologists' barriers and facilitators to PA promotion is needed to help guide effective training and professional development, which may improve their competence in PA promotion. To the best of our knowledge, no such review has yet specifically examined the PA promotion practices of psychologists, nor synthesised the literature on psychologists' training and education on PA promotion.

Utilising a systematic, theoretically informed framework to synthesise psychologists' barriers and facilitators lays the foundation for future interventions to increase the frequency and quality of PA promotion. The Theoretical Domains Framework (TDF) provides such guidance by linking behaviour change techniques and theories to improve behaviour itself (Cane et al., 2012). The TDF is a particularly suitable framework given it has been used to understand and change the behaviour of healthcare practitioners working with individuals who have mental disorders in previous studies (Glowacki et al., 2019; Mangurian et al., 2017). The TDF also identifies modifiable domains of behaviour change, laying the foundation for future research on changing psychologists' PA promotion within the context of psychotherapeutic interventions. The TDF is comprised of 14 domains which are

purported to be determinants of behaviour: behavioural regulation; beliefs about capabilities; beliefs about consequences; emotion; environmental context and resources; goals; intentions; knowledge; memory, attention and decision processes; optimism; reinforcement; skills; social/professional role and identity; social influences (Cane et al., 2012).

Given that the aim of this study was to map and summarise current literature to identify research gaps and future directions for clinical practice, rather than to evaluate the efficacy of an intervention, a scoping review was selected as the knowledge synthesis method. The aim of this scoping review is to examine psychologists' PA promotion practices and factors associated with psychologists' PA promotion. Specifically, we aimed to synthesise research on the frequency of psychologists' PA promotion, confidence, knowledge, past training on PA promotion and personal PA levels. This scoping review also aimed to map research on the barriers and facilitators affecting PA promotion practice according to the TDF.

2. Materials and methods

2.1. Study design

This scoping review was developed utilising methodological guidance for the conduct of scoping reviews (Peters et al., 2020), which is recommended to be used in tandem with the PRISMA extension for Scoping Reviews (PRISMA-ScR; Tricco et al., 2018). As such, reporting was conducted in line with the PRISMA extension for Scoping Reviews (PRISMA-ScR; Tricco et al., 2018; see Supplementary Material 1). The protocol for this scoping review was pre-registered on OSF (<https://osf.io/ewdta/>).

2.2. Eligibility criteria

Studies were included if (i) their sample was comprised of 50% or more psychologists (this 50% threshold was selected to maximise the available evidence while maintaining a predominantly psychologist sample), (ii) they examined psychologists' PA promotion with clients, including any of the following outcomes; PA promotion practices, knowledge of PA, confidence to promote PA, personal PA behaviour, frequency of PA promotion training psychologists received or perceived barriers and facilitators towards PA promotion, (iii) were published in English language. Studies of any design (e.g., quantitative, qualitative) were included in this scoping review. Gray literature was included if it met the inclusion criteria. Studies were excluded if they did not meet any of the above criteria.

2.3. Search strategy

We searched four databases in April 2025: CINAHL Ultimate, PsycINFO, PubMed and Scopus. The search was limited to articles from 2005, given both the critical mass of evidence supporting the use of PA as a treatment in mental health care and the development of clinical practice guidelines encouraging mental healthcare practitioners to promote PA, has been published during this time (Lam et al., 2024; Malhi et al., 2021; Noetel et al., 2024; Schuch et al., 2016; Singh et al., 2023). The search strategy involved using search terms relating to three core concepts, defined as follows; psychologists (i), trained professionals who develop and apply psychological principles ethically and scientifically to promote the development, wellbeing and effectiveness of stakeholders (European Federation of Psychologists Associations, 2021), barriers and facilitators (ii), factors that enable or impede a target behaviour (Cane et al., 2012) and PA promotion (iii), an intervention in psychological practice underpinned by cognitive and behavioural principles aimed at increasing clients' PA levels and subsequent mental health outcomes (Dissanayake et al., 2026). A librarian was consulted to develop the search strategy. Three groups of search terms were used. The first group included terms relevant to the composition of the samples in each study ('therapist', 'clinician', 'psychologist', 'mental health professional'). The second group included terms relevant to the outcome variables of

interest ('attitude', 'facilitator', 'practice'). The third group included terms relevant to PA ('physical activity', 'exercise prescription', 'physical activity promotion'). Syntax was modified according to the specific database. On 12 April 2025, we searched Google Scholar using the search terms outlined in the three groups above, sorted results by relevance and published since 2005, and screened the first 100 records to identify additional sources.

A Google Scholar search using the search terms was conducted for gray literature. Reference lists of relevant reviews (e.g., Glowacki et al., 2019; Newsome, 2023) were hand-searched for further eligible studies.

2.4. Study selection

All studies from the search across the four databases were uploaded to Covidence (Version 2). Duplicates were removed. Two authors (ID and RL) then screened the titles and abstracts of all the studies included. Full-text review of all studies was performed independently by the two authors by reading through each study line-by-line. Authors of articles were emailed directly where further information was required to determine eligibility status. At each stage, conflicts were resolved through discussion between the two authors and a third author (OL). See Figure 1 for the selection process.

2.5. Data collection

Data from included studies were extracted in Covidence (Version 2) and included: publication information, bibliographic information and data relevant to psychologists' PA promotion variables. Data extraction was performed by two independent authors (ID and PW). Bibliographic information included the title, authors' names, the country in which the study was conducted, and the year of publication. Publication characteristics included the type of study, aim of the study, study funding sources, possible conflicts of interest and characteristics of the sample (gender breakdown, mean age, % of psychologists in sample, practice setting of the sample). Information on psychologists' PA promotion included the frequency, confidence, knowledge, barriers and facilitators of PA promotion. Bibliographic information and publication characteristics are reported in Table 1.

Barriers and facilitators to PA promotion were included only if they were clearly relevant as influencing psychologists' PA promotion practices. For quantitative studies, the percentage of participants endorsing each barrier and facilitator was extracted and reported. Likert scales were collapsed and dichotomised to indicate agreement (e.g., 'agree', 'strongly agree') or disagreement ('disagree', 'strongly disagree') with barriers and facilitators (Glowacki et al., 2019). Neutral responses (e.g., 'neither agree nor disagree') were not extracted as they did not indicate endorsement of barriers or facilitators. For qualitative studies, barriers and facilitators were extracted if they were themes reported as influencing psychologists' PA promotion practices.

After extracting barriers and facilitators across all included studies, the authors (ID and PW) developed a codebook based on the TDF (Cane et al., 2012). The TDF codebook categorised all extracted barriers and facilitators into one or more domains. Examples of the TDF codebook are in Appendix 1. Conflicts in coding the TDF were resolved through discussion between the two authors and with a third author (OL).

2.6. Synthesis of results

A narrative synthesis was adopted to report information on psychologists' PA promotion, including psychologists' knowledge, confidence and personal PA behaviour. The TDF model informed barriers and facilitators that psychologists reported directly affected their PA promotion practices, allowing for a theoretically informed categorisation of barriers and facilitators that can subsequently inform future research on psychologists' PA promotion practices (Cane et al., 2012).

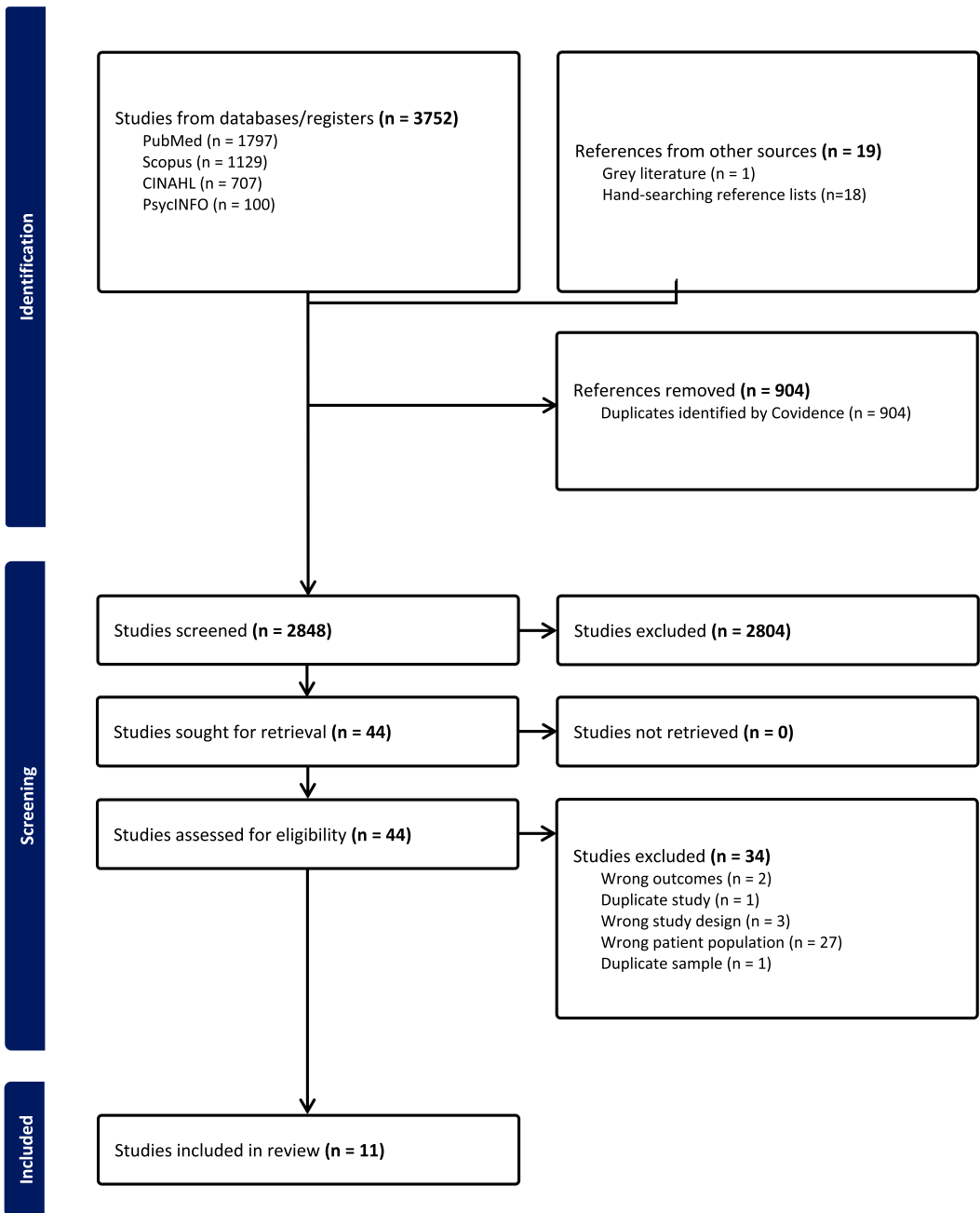


Figure 1. PRISMA flow diagram of study selection.

3. Results

3.1. Selection of evidence

A total of 3752 articles were identified from database searching and screening (Figure 1). Following the removal of duplicates ($n = 904$), all remaining studies were title and abstract screened ($n = 2848$). The remaining 44 articles underwent full-text screening, with 32 not meeting the inclusion criteria.

Table 1. Characteristics of included studies.

Study	Type	Method	Location	n	n (%) Female	n (%) Psychologists	Client population	PA promotion Variables measured
Bakker et al. (2016)	Qualitative	Semi-structured interviews	Netherlands	7	NR	4 (57.1%)	NR	Barriers and facilitators to PA promotion
Burton et al. (2010)	Quantitative	Questionnaire	Australia	236	200 (84.7%)	236 (100%)	Mostly individuals with mental health issues (e.g., anxiety, depression)	Barriers and facilitators to PA promotion Confidence to promote PA Knowledge of PA Personal PA levels Prevalence of PA promotion Training on PA promotion
Greenspan et al. (2022)	Qualitative	Focus groups	USA	20	18 (90%)	20 (100%)	Elementary level school students	Barriers and facilitators to PA promotion
Mailey et al. (2022)	Mixed-methods	Questionnaire and focus groups	USA	125	NR	69 (54.5%)	Clients with a range of issues (e.g., child/adolescent mental health, trauma)	Barriers and facilitators to PA promotion Knowledge of PA Prevalence of PA promotion Training on PA promotion
Newsome et al. (2025)	Quantitative	Questionnaire (Counsellor Activity Self-Efficacy Scales)	USA	255	170 (66.7%)	147 (57.6%)	College students	Barriers and facilitators to PA promotion Confidence to promote PA Personal PA levels Prevalence of PA promotion Training on PA promotion
Petzold et al. (2024)	Quantitative	Questionnaire (Exercise in Mental Illness Questionnaire – Health Professionals adapted for German)	Germany	454	395 (87%)	454 (100%)	Mostly individuals with affective disorders	Barriers and facilitators to PA promotion Confidence to promote PA Knowledge of PA Personal PA levels Prevalence of PA promotion Training on PA promotion
Phongsavan et al. (2007)	Quantitative	Questionnaire	Australia	51	38 (74.5%)	51 (100%)	NR	Barriers and facilitators to PA promotion Prevalence of PA promotion
Radovic et al. (2018)	Mixed-methods	Questionnaire (Exercise in Mental Illness Questionnaire – Health Professionals adapted for adolescents)	Australia	125	100 (80%)	69 (55.2%)	Adolescents with depression	Barriers and facilitators to PA promotion Confidence to promote PA Knowledge of PA Personal PA levels Prevalence of PA promotion Training on PA promotion
Shrestha et al. (2021)	Mixed-methods	Questionnaire (Exercise in Mental Illness Questionnaire – Health Professionals adapted for adolescents) and focus groups	Australia	17	13 (76.5%)	14 (82.4%)	Youth (12–25 years) with mental health challenges	Barriers and facilitators to PA promotion Knowledge of PA Prevalence of PA promotion Training on PA promotion
Vasilj (n.d.)	Quantitative	Questionnaire (Exercise in Mental Illness Questionnaire –	USA	146	112 (76.7%)	80 (54.8%)	NR	Barriers and facilitators to PA promotion Personal PA levels Prevalence of PA promotion Training on PA promotion

Studies were excluded because (i) their sample did not comprise 50%+ psychologists ($n = 26$), (ii) they were review studies that did not collect primary empirical data ($n = 3$) and (iii) outcomes relevant to PA promotion practices by psychologists were not included ($n = 2$). One duplicate study was removed. Twelve studies were included in the final analysis for data extraction. The sample in two studies (Shrestha et al., 2021, 2022) was the same group of 17 healthcare practitioners whose PA promotion practices were both measured using the Exercise in Mental Illness Questionnaire – Health Professional Version (Stanton et al., 2014), as confirmed by private communication with the lead author. As such, results were merged, and these were treated as one study in the final analysis, leaving 11 studies for analysis.

3.2. Study characteristics

Six (55%) of the studies included used quantitative methods, three (27%) used mixed-methods and two (18%) used qualitative methods (Table 1). Five (46%) studies collected data in the USA and four (36%) collected data in Australia. Among studies that reported gender breakdown of samples, all were predominantly female. The total sample comprised 1610 mental healthcare practitioners, of whom 1318 (82%) were psychologists. Of the 11 studies, five had samples that were comprised of 100% psychologists (Burton et al., 2010; Greenspan et al., 2022; Petzold et al., 2024; Phongsavan et al., 2007; Wendt, 2005) one had a sample of 82.4% psychologists (Shrestha et al., 2021), and five had samples that were comprised of 54.5–57.6% psychologists (Bakker et al., 2016; Mailey et al., 2022; Newsome et al., 2024; Radovic et al., 2018; Vasilj, n.d.). Across the included studies, 11 (100%) reported on psychologists' barriers and facilitators to PA promotion, eight (73%) reported on psychologists' frequency of PA promotion, eight (73%) identified psychologists' training in PA promotion, five (46%) identified psychologists' knowledge on PA, five (46%) highlighted psychologists' confidence to promote PA and four (36%) measured psychologists' personal PA behaviours.

3.3. Synthesis of evidence

3.3.1. Frequency of psychologists' PA promotion practices

Nine (82%) studies analysed the frequency of PA promotion by psychologists (Burton et al., 2010; Mailey et al., 2022; Newsome et al., 2024; Petzold et al., 2024; Phongsavan et al., 2007; Radovic et al., 2018; Shrestha et al., 2021; Vasilj, n.d.; Wendt, 2005). Six (67%) of these studies reported that more than half of psychologists promote PA in treatment with clients, although there was significant variability in what such PA promotion practices entailed (Burton et al., 2010; Mailey et al., 2022; Petzold et al., 2024; Radovic et al., 2018; Shrestha et al., 2021; Wendt, 2005). In studies that provided specific details of the PA promotion practices that psychologists used, two out of three reported that psychologists more frequently endorsed asking clients about their PA levels than providing generalised recommendations or individualised PA counselling (Burton et al., 2010; Mailey et al., 2022).

When providing PA recommendations, psychologists most frequently either did not recommend a specific intensity or recommended clients engage in moderate-intensity PA. Two studies (Petzold et al., 2024; Radovic et al., 2018) reported that over 90% of psychologists recommend aerobic PA as the type of PA for clients to engage in, whilst one study identified that psychologists do not provide specific recommendations on PA type (Shrestha et al., 2021). In all three studies (Petzold et al., 2024; Radovic et al., 2018; Wendt, 2005), less than half of psychologists referred clients to exercise professionals, community-based PA programmes or gyms. A summary of the frequency of PA promotion practices and themes coded for PA recommendations given by psychologists is provided in Table 2.

3.3.2. Psychologists' personal PA behaviour

Five (45%) studies reported on psychologists' personal PA levels using various self-report measures, including the International Physical Activity Questionnaire-Short Form (Craig et al., 2003) and novel

measures (Burton et al., 2010; Newsome et al., 2024; Petzold et al., 2024; Radovic et al., 2018; Vasilj, n.d.). Studies found that >50% of psychologists engage in either at least 'moderate levels of weekly activity' (600–1499 Metabolic Equivalent of Task min/per week; Newsome et al., 2024; Radovic et al., 2018), engage in vigorous exercise three or more days per week (Vasilj, n.d.) or meet the World Health Organisation's recommendations of at least 150-min of moderate-intensity PA per week (Petzold et al., 2024). One study found that >50% of psychologists self-report engaging in 'regular exercise' (Burton et al., 2010).

3.3.3. Confidence to promote PA

Five (45%) studies examined psychologists' confidence to promote PA (Burton et al., 2010; Newsome et al., 2024; Petzold et al., 2024; Radovic et al., 2018; Wendt, 2005). Confidence was most commonly ($n = 4$) assessed using the Exercise in Mental Illness Questionnaire – Health Professional Version (Stanton et al., 2014). In all studies, >50% of psychologists reported at least *average* confidence in their ability to promote PA (Burton et al., 2010; Newsome et al., 2024; Petzold et al., 2024; Radovic et al., 2018; Wendt, 2005). One study distinguished between psychologists' confidence to integrate PA into treatment in different ways (e.g., asking about PA levels versus providing individualised PA counselling; Burton et al., 2010). It found 83% of the 236 psychologists in the sample were confident to provide general PA advice, 57% were confident to assess PA levels using questionnaires and 32% were confident to tailor PA recommendations to clients' individual needs.

3.3.4. Training on PA promotion

Eight (73%) studies assessed psychologists' training on PA promotion (Burton et al., 2010; Mailey et al., 2022; Newsome et al., 2024; Petzold et al., 2024; Radovic et al., 2018; Shrestha et al., 2021; Vasilj, n.d.; Wendt, 2005). Outcomes ranged from *attitudes towards PA promotion training to whether psychologists had attended past training on PA or not*. The prevalence of psychologists who had received formal training in this area ranged from 4.6% to 35.3% across four studies (Burton et al., 2010; Shrestha et al., 2021; Vasilj, n.d.; Wendt, 2005). The two studies that assessed the prevalence of psychologists who had received formal training in PA promotion in the USA found this to be 4.6% (Wendt, 2005) and 22.6% (Vasilj, n.d.). It was reported that only 35.3% of a sample of Australian mental healthcare practitioners, most of whom were psychologists, had received formal training on PA promotion (Shrestha et al., 2021). Burton et al. (2010) reported that only 31% of Australian psychologists received formal education on PA promotion in postgraduate university training, specifically. Quantitative studies ($n = 5$; 100%) reported that >60% of psychologists were interested in future training on PA (Burton et al., 2010; Mailey et al., 2022; Newsome et al., 2024; Petzold et al., 2024; Radovic et al., 2018).

In focus groups, psychologists highlighted that education on PA promotion should be part of formal clinical training and that professional development would help them better integrate PA into treatment (Shrestha et al., 2021). Only two studies assessed what topics psychologists would prefer such training to include (Petzold et al., 2024; Radovic et al., 2018). Both identified that obtaining and maintaining motivation in clients, understanding what type of PA is best and assessing clients' suitability for PA promotion were the most preferred topics for training (Petzold et al., 2024; Radovic et al., 2018).

3.3.5. Knowledge of PA promotion

Five (45%) studies examined psychologists' knowledge of PA (Burton et al., 2010; Mailey et al., 2022; Petzold et al., 2024; Radovic et al., 2018; Shrestha et al., 2021). In the two studies that measured knowledge using items from the Exercise in Mental Illness-Health Professional Version, over 86% of psychologists rated their knowledge of *exercise prescription* as average or better (Petzold et al., 2024; Radovic et al., 2018). One study used a novel item to assess knowledge, with 55.2% of psychologists self-reporting being knowledgeable about national PA guidelines (Mailey et al., 2022). Burton et al. (2010) found most (>65%) psychologists correctly

Table 2. Prevalence of psychologists' PA promotion practices.

Study	<i>n</i> (%) Psychologist	Quantitative (frequencies)	Qualitative (themes)
Burton et al. (2010)	236 (100%)	PA promotion 61% frequently ask clients about PA 59% frequently discuss PA with clients 53% frequently recommend PA to clients 33% frequently provide general PA advice 12% frequently provide PA counselling	
Mailey et al. (2022)	69 (54.5%)	PA promotion 62.8% ask all/most clients about PA levels 59.8% provide verbal PA recommendations to all/most clients 3.1% provide written PA recommendations to all/most clients	PA promotion <i>Asking about PA is common practice</i> <i>Many psychologists recommend PA when it is relevant for treatment</i> <i>Psychologists rarely 'prescribe' PA or exercise</i>
Newsome et al. (2024)	147 (57.6%)	PA promotion 10% of the time- assess clients' PA levels 31% of the time- prescribe PA/exercise	
Petzold et al. (2024)	454 (100%)	PA promotion 82.2% frequently recommend PA to clients 97.4% use personal discussion 46.5% refer clients to exercise professionals 37.5% refer clients to community-based programmes 17.4% use brochures or pamphlets Type of PA 90.5% recommend aerobic PA 84.8% recommend relaxation activities 31.2% recommend weight or resistance training 29.5% recommend combat sports Intensity 32.2% do not recommend any intensity 30.6% recommend moderate-intensity PA 27.1% recommend PA at a level that makes them feel good 4.0% recommend low intensity PA Frequency 33.7% recommend clients to be active most days of the week 27.5% recommend being active once to twice a week 15.0% recommend being active as often as clients feel they can	

(Continued)

Table 2. Continued.

Study	n (%) Psychologist	Quantitative (frequencies)	Qualitative (themes)
		12.3% recommend being active everyday 11.5% recommend other frequencies Duration/time of exercise sessions 38.1% recommend 30 min 27.1% recommend other durations 14.5% recommend as long as clients can 12.3% recommend 20 min 7.0% recommend 10 min 0.9% recommend 60 min	
Phongsavan et al. (2007)	51 (100%)	40% have recommended PA to clients in the past	
Radovic et al. (2018)	69 (55.2%)	PA Promotion 67.7% frequently prescribe PA/exercise 96.8% use personal discussion 43.2% refer clients to community-based programmes 36.8% refer clients to exercise professionals 22.4% use brochures or pamphlets Type of PA 92.0% recommend aerobic PA 78.4% recommend relaxation activities 70.4% team sports 27.2% recommend weight or resistance training Intensity 30.6% do not recommend any intensity 27.4% recommend PA at a level that makes them feel good 23.4% recommend moderate-intensity PA 0.1% recommend vigorous intensity PA Frequency 47.6% recommend clients to be active most days of the week 18.5% recommend being active as often as clients feel they can 12.9% recommend being active everyday Duration/time of exercise sessions 32.8% recommend 30 min 20.8% recommend as long as clients can	
Shrestha et al. (2021)	14 (82.4%)	PA promotion 82.4% frequently prescribe PA/exercise 88.2% use personal discussion 35.3% refer clients to community-based programmes	PA Promotion <i>Psychologists tended to not make specific recommendations for type, duration and frequency of PA Instead of structured exercise, psychologists more likely to recommend incorporating PA into</i>

17.6% refer clients to exercise professionals
17.6% use brochures or pamphlets
11.8% use the internet
5.9% recommend sporting clubs
29.4% use no specific method

Type of PA

82.4% recommend aerobic PA
65.7% team sports
41.2% recommend swimming
41.2% recommend weight or resistance training
35.3% recommend combat sports
29.4% recommend any PA clients enjoy
5.9% recommend dancing
5.9% recommend group sessions at gym

Frequency

35.3% recommend being active as often as clients feel they can
35.3% recommend clients to be active most days of the week
17.6% recommend clients be active everyday
11.8% recommend being active once or twice per week

Intensity

47.0% recommend PA at a level that makes them feel good
29.4% do not recommend any intensity
23.5% recommend moderate-intensity PA
11.8% recommend low intensity PA
5.9% recommend vigorous intensity PA

Vasilj (n.d.)

80 (54.8%)

everyday activities e.g., active transport

Try to create a narrative by explaining to clients the ways in which increasing PA led to improvements and by providing examples of PA success stories from other clients

Recommend clients use smartphone applications to increase motivation for and engagement in PA

PA promotion

49.3% frequently prescribe PA/exercise

Intensity

27.4% recommend moderate-intensity PA
24.7% do not recommend any intensity
14.4% recommend PA at a level that makes them feel good
8.9% recommend low intensity PA
4.8% recommend vigorous intensity PA
19.9% recommend other intensity

Frequency

32.2% recommend clients be active most days of the week
28.8% recommend being active as often as clients feel they can
11% recommend being active once or twice per week
5.5% recommend clients be active everyday

(Continued)

Table 2. Continued.

Study	n (%) Psychologist	Quantitative (frequencies)	Qualitative (themes)
			22.6% recommend other frequency Duration/time of exercise sessions 25.3% recommend 30 min 12.3% recommend 10 min 11.6% recommend 20 min 5.5% recommend 60 min 20.8% recommend as long as clients can 32.9% recommend other durations
Wendt (2005)	174 (100%)	PA promotion 53.4% explain the risks/benefits of PA 52.6% ask new clients about PA levels 22.5% assist clients choose a type of PA 16.8% assist clients to set a start date of PA 5.8% prompt clients to keep track of PA levels 5.8% refer clients to a gym 4.7% refer clients to a medical doctor 3.5% provide self-help materials on PA to clients	

Table 3. Psychologists' barriers to PA promotion.

TDF Domain	Barriers (Quantitative)	Barriers (Qualitative)
Social Influences	Clients think PA promotion from psychologist is inappropriate Burton et al., 2010 – 8% Wendt, 2005 – 17.6% PA promotion can negatively affect therapy relationship Wendt, 2005 – 18.8% Clients are not interested in starting exercise Wendt, 2005 – 27.7% Clients with a mental illness won't engage in PA because they don't think they can Newsome et al., 2024 – 5.9% Petzold et al., 2024 – 58.6% Shrestha et al., 2021 – 47.1% Vasilj, n.d. – 40.4% Client stigma about MI precludes them from engaging in PA Petzold et al., 2024 – 37.6% Vasilj, n.d. – 30.9% Clients lack social support to engage in PA Petzold et al., 2024 – 28.4% Vasilj, n.d. – 34.9% Clients do not know exercise is good for physical health Newsome et al., 2024 – 13.8%	Clients are typically unaware of the importance of PA for mental health Shrestha et al., 2021 Clients assume mental health professionals do not have the capacity to recommend PA as part of mental health treatment Shrestha et al., 2021 Psychologists' perception that including PA in treatment may damage therapeutic alliance Mailey et al., 2022 Shrestha et al., 2021
Skills	Lack of knowledge on how to promote PA with clients who have a mental illness Petzold et al., 2024 – 8.8% Vasilj, n.d. – 23.3% Radovic et al., 2018 – 24.6% Shrestha et al., 2021 – 29.4% Lack of/no prior training on PA promotion Burton et al., 2010 – 69% no training during postgraduate training Petzold et al., 2024 – 85.9% Shrestha et al., 2021 – 64.7% Vasilj, n.d. – 77.4%	Lack of knowledge on how to promote PA with clients who have a mental illness Shrestha et al., 2021 Lack of professional training Greenspan et al., 2022
Knowledge	Lack of knowledge on how to promote PA with clients who have a mental illness Petzold et al., 2024 – 7.2% Radovic et al., 2018 – 24.6% Shrestha et al., 2021 – 29.4% Vasilj, n.d. – 23.3% Lack of/no prior training on PA promotion Burton et al., 2010 – 69% no training during postgraduate training Petzold et al., 2024 – 85.9% Shrestha et al., 2021 – 64.7% Vasilj, n.d. – 77.4%	Lack of knowledge on how to promote PA with clients who have a mental illness Shrestha et al., 2021 Lack of professional training Greenspan et al., 2022
Environmental Context & Resources	Not enough time for PA promotion Newsome et al., 2024 – 13.5% Petzold et al., 2024 – 1.8% Shrestha et al., 2021 – 17.7% Vasilj, n.d. – 1.4% Wendt, 2005 – 13.4% No prior training on PA promotion Burton et al., 2010 – 69% no training during postgraduate training	Not enough time for PA promotion Greenspan et al., 2022 Mailey et al., 2022 Lack of professional training Greenspan et al., 2022 Lack of staff resources Greenspan et al., 2022

(Continued)

Table 3. Continued.

TDF Domain	Barriers (Quantitative)	Barriers (Qualitative)
	Petzold et al., 2024 – 85.9% Shrestha et al., 2021 – 64.7% Vasilj, n.d. – 77.4%	
Beliefs about Consequences	A promotion can negatively affect therapy relationship Wendt, 2005 – 18.8% PA promotion may worsen some client's problems Newsome et al., 2024 – 4.3% Petzold et al., 2024 – 0.4% Newsome et al., 2024 – 4.3% Petzold et al., 2024 – 0.4% Wendt, 2005 – 20.5%	Including PA promotion in treatment may damage therapeutic alliance Mailey et al., 2022 Shrestha et al., 2021
Goals	PA promotion less important than other treatment goals Wendt, 2005 – 47.3%	PA promotion less important than other treatment goals Shrestha et al., 2021
Beliefs about Capabilities	Clients' mental health makes it impossible for them to participate in PA Shrestha et al., 2021 – 5.9% Clients' physical health makes it impossible for them to participate in PA Shrestha et al., 2021 – 5.9% Poor or very poor confidence to promote PA Newsome et al., 2024 – 12.2% Petzold et al., 2024 – 4.1% Radovic et al., 2018 – 17.3%	Lack of knowledge on how to promote PA with clients who have a mental
Intentions	Not interested in promoting PA Newsome et al., 2024 – 5.1% Petzold et al., 2024 – 1.3% Radovic et al., 2018 – 0.8% Vasilj, n.d. – 0.7%	
Emotions	Concerned client may get injured while exercising Petzold et al., 2024 – 3.1% Radovic et al., 2018 – 0.8%	
Memory, Attention & Decision Processes		Psychologists prioritise other types of mental health treatment (e.g., CBT) over PA promotion Shrestha et al., 2021
Behavioural Regulation Reinforcement		

Note: TDF domains are listed in order of prevalence from most endorsed to least endorsed.

responded to statements about the benefits of PA, displaying good knowledge. However, in focus groups, psychologists self-reported an overall lack of knowledge in providing PA recommendations to clients, as evident in the coded theme of *barriers for PA and sedentary behaviour counselling* (Shrestha et al., 2021).

3.3.6. Barriers and facilitators

All included studies ($N = 11$) analysed psychologists' barriers and facilitators to PA promotion. Most quantitative studies ($n = 8$) reported the number of participants endorsing each barrier or facilitator. However, one study (Mailey et al., 2022) reported participants' mean ratings of how often each barrier prevented them from promoting PA on a scale from 1 (*never*) to 5 (*very often*; Appendix 2). Psychologists' barriers and facilitators to PA promotion, separated by TDF categories and listed from most endorsed domain to least commonly endorsed, are presented in Tables 3 and 4, respectively. The percentages of the sample in each study that endorsed each barrier and facilitator are also presented. The most reported barriers

Table 4. Psychologists' facilitators to PA promotion.

TDF Domain	Facilitators (Quantitative)	Facilitators (Qualitative)
Beliefs about Consequences	My PA promotion will help clients' exercise behaviour Wendt, 2005 – 78.3% PA promotion can positively affect therapy relationship Wendt, 2005 – 79.9% Clients would find PA advice from psychologist acceptable Burton et al., 2010 – 63% Clients would find PA counselling from psychologist acceptable Burton et al., 2010 – 55% Value PA promotion as the most important/one of the most important psychological treatments for mental health Mailey et al., 2022 – 84% Radovic et al., 2018 – 14.3% Shrestha et al., 2021 – 64.7% The benefits of PA are long lasting Shrestha et al., 2021 – 76.4% Regular ex benefits physical health Newsome et al., 2024 – 88.2% Regular ex benefits mental health Mailey et al., 2021 – 99.2% Newsome et al., 2024 – 94.5%	Regular PA benefits mental health Bakker et al., 2016 Mailey et al., 2022 Greenspan et al., 2022
Beliefs about Capabilities	My PA promotion will help clients' exercise behaviour Wendt, 2005 – 78.3% Good or excellent confidence to promote PA Burton et al., 2010 – 83% Newsome et al., 2024 – 48.6% Petzold et al., 66.5% Radovic et al., 2018 – 46.9%	Being more active themselves puts psychologists in a better position to recommend PA Shrestha et al., 2021
Social/Professional Role & Identity	PA promotion is part of a psychologists' job Burton et al., 2010 – 61% Phongsavan et al., 2007 – 51% Many psychologists utilise PA promotion Wendt, 2005 – 22.6% Acknowledge that clients with a mental illness know PA is good for their mental health Shrestha et al., 2021 – 41% Acknowledge that clients with a mental illness know PA is good for their physical health Newsome et al., 2024 – 68.7% Shrestha et al., 2021 – 52.9% Clients would find PA advice from psychologist acceptable Burton et al., 2010 – 63% Clients would find PA counselling from psychologist acceptable Burton et al., 2010 – 55%	Being more active themselves puts psychologists in a better position to recommend PA Shrestha et al., 2021
Knowledge	Have good or excellent knowledge of PA Petzold et al., – 37.9% Phongsavan et al., 2007 – 57% Radovic et al., 2018 – 41.7% Aware of current public health recommendations for PA Radovic et al., 2018 – 41.7% Have received prior formal training on PA promotion Burton et al., 2010 – 31% during postgraduate education Petzold et al., 2024 – 14.1%	Psychologists' increased awareness of clients engaging in excessive sedentary behaviour Shrestha et al., 2021 Being more active themselves puts psychologists in a better position to recommend PA Shrestha et al., 2021

(Continued)

Table 4. Continued.

TDF Domain	Facilitators (Quantitative)	Facilitators (Qualitative)
Environmental Context & Resources	Shrestha et al., 2021 – 35.3% Vasilj, n.d. – 22.6%	
	Organisation expects me to promote PA Newsome et al., 2024 – 18.1% Colleagues believe it is important to promote PA Newsome et al., 2024 – 46.2% Have received prior formal training on PA promotion Burton et al., 2010 – 31% during postgraduate education Petzold et al., 2024 – 14.1% Shrestha et al., 2021 – 35.3% Vasilj, n.d. – 22.6%	
Skills	My PA promotion will help clients’ exercise behaviour Wendt, 2005 – 78.3% Have received prior formal training on PA promotion Burton et al., 2010 – 31% during postgraduate education Petzold et al., 2024 – 14.1% Shrestha et al., 2021 – 35.3% Vasilj, n.d. – 22.6%	
Social Influences	Can positively affect therapy relationship Wendt, 2005 – 79.9% Colleagues believe it is important to promote PA Newsome et al., 2024 – 46.2%	Families of clients may view PA favourably as a mental health tx Greenspan et al., 2022
Optimism	My PA promotion will help clients’ exercise behaviour Wendt, 2005 – 78.3%	
Behavioural Regulation		
Emotions		
Goals		
Intentions		
Memory, Attention & Decision Processes		
Reinforcement		

Note: TDF domains are listed in order of prevalence from most endorsed to least endorsed.

across the literature were the TDF domains of ‘social influences’ (the interpersonal processes that can cause individuals to change their thoughts, feelings or behaviours e.g., beliefs that clients do not want PA promotion from a mental health professional) and ‘skills’ (an ability or proficiency acquired through practice). The most commonly reported facilitators across the literature were the TDF domains of ‘beliefs about consequences’ (acceptance of the truth, reality or validity about outcomes of a behaviour in a given situation) and ‘beliefs about capabilities’ (acceptance of the truth, reality or validity about an ability, talent or facility that a person can put to constructive use).

4. Discussion

This scoping review synthesised findings from 11 studies examining psychologists’ PA promotion practices and associated factors, including psychologists’ frequency, confidence, knowledge and past training on PA promotion and personal PA behaviour. Using the TDF, we identified the barriers and facilitators that influence psychologists’ integration of PA into psychological practice.

4.1. Psychologists’ PA promotion practices

Based on the included studies, this review highlighted that most psychologists regularly promote PA with their clients. This finding was observed across all studies and across the subgroup of studies that included only psychologists (Burton et al., 2010; Petzold et al., 2024; Phongsavan et al., 2007; Wendt,

2005), rather than other mental healthcare practitioners too. This is consistent with several clinical practice guidelines which purport that PA and exercise should be incorporated into mental healthcare as adjuvant or standalone treatment for some mental disorders, especially major depression (Ashdown-Franks et al., 2018; Helsedirektoratet, 2025; Lam et al., 2024; Malhi et al., 2021). Despite this, other prominent clinical practice guidelines are less supportive of PA promotion. The American Psychological Association (APA) highlights that PA should only be incorporated ‘for adults with depression for whom psychotherapy or pharmacotherapy is either ineffective or unacceptable’ (APA, 2017, p. 11). Some national professional associations of psychologists may lack awareness of both the strong evidence underpinning the efficacy of PA and how frequently the clinicians they represent are promoting PA in practice.

Results from this scoping review suggest psychologists vary widely in the depth to which they integrate PA into their practice, from simply asking clients about their PA levels to providing generalised recommendations (e.g., ‘walking regularly can improve your mood’) to engaging clients in individualised PA counselling. Although these are all forms of PA promotion, providing a generalised PA recommendation is a different intervention from engaging in individualised PA counselling, where more extensive behaviour change techniques like goal-setting and self-monitoring are employed (Burton et al., 2010; Samdal et al., 2017). Psychologists appear to consistently recommend aerobic PA as the type of PA their clients engage in. This recommendation occurs despite evidence indicating that other types of PA (e.g., resistance training, Yoga) are also effective in improving mental health outcomes (Banyard et al., 2025; Vella et al., 2023).

However, psychologists varied significantly in their recommendations based on other PA variables, such as intensity and time of PA. This variability may be indicative of a lack of structured resources available for psychologists to guide their PA promotion with clients (Vella et al., 2023). Importantly, this scoping review identified that there is minimal research examining if and how psychologists consider the contextual variables (e.g., social context, physical environment) affecting PA. Clients’ social context of PA (e.g., group PA versus individually enacted PA) and whether PA is enacted indoors or outdoors are some of the many contextual variables psychologists must consider. For example, meta-analytic evidence indicates that PA performed outdoors in greenspace has greater benefits for affect and enjoyment than indoor PA (Lahart et al., 2019). These factors likely not only influence mental health outcomes, but also how affectively pleasing PA is, and clients’ subsequent adherence to PA goals (Rhodes & Kates, 2015; Teixeira et al., 2012; Vella et al., 2023; White et al., 2024). Despite the importance of such variables, the reviewed literature did not examine how psychologists integrate these into PA promotion. Thus, future research should investigate if and how psychologists consider clients’ contextual variables. When discussing these contextual variables, psychologists should seek to adopt a person-centred approach by accounting for individuals’ values and preferences, with the goal of helping clients maximise pleasure during PA engagement.

Future research should identify how commonly psychologists integrate PA into their practice based on the depth of each method of doing so (e.g., asking about PA versus providing generalised PA recommendations), rather than treating PA promotion homogeneously by only assessing whether psychologists promote PA or not. This may reveal important differences in psychologists’ practice, given the clinical implications of assessing a client’s PA behaviour are different to providing generalised PA recommendations, for example. Future research should also examine psychologists’ use of contextual variables given their importance to clients’ PA levels and mental health outcomes.

4.2. Psychologists’ confidence and knowledge of PA promotion

Psychologists consistently self-report high levels of confidence in their ability to promote PA. However, most studies treat PA promotion as a homogeneous practice, rather than distinguishing between psychologists’ confidence to engage in different levels of PA promotion with their clients. The one study that distinguished confidence levels accordingly found that psychologists were confident to provide general PA advice but were less confident to engage in individualised

PA promotion practices (Burton et al., 2010). Given the difficulty in changing individuals' PA behaviour, particularly for those with mental disorders who often have additional barriers to behaviour change (Ashdown-Franks et al., 2018; Glowacki et al., 2017), psychologists' lack of confidence to engage in individualised PA counselling may preclude them from meaningfully affecting change in PA levels. This could limit the effectiveness of PA promotion as an intervention.

Psychologists report good knowledge of the benefits of PA for clients' health. However, knowledge only of the benefits of PA is unlikely to be adequate for psychologists to effectively integrate this into psychological interventions; this ties strongly to the 'know-do' practice gap (Leggat et al., 2021). Psychologists' skills in how to affect PA behaviour change in clients are crucial to the effectiveness of PA promotion as an intervention, but this was not assessed among the studies included in the current scoping review. This parallels other healthcare professionals, where a lack of skills specifically on how to facilitate behaviour change is a key barrier to engaging clients in lifestyle behaviour change interventions (Keyworth et al., 2020). Similar to improving psychologists' confidence levels, further training should target psychologists' PA promotion skills, rather than simply increasing knowledge. Training should seek to build upon psychologists' existing skillsets in motivational enhancement, problem-solving therapy and behavioural activation, with specific application to PA promotion. Psychologists may also benefit from improving skills in PA assessment to identify individuals at high-risk of adverse events and in need of a referral to an exercise specialist.

4.3. Psychologists' personal PA behaviour

The finding that psychologists themselves engage in regular PA is encouraging. In this review, psychologists reported that being physically active places them in a better position to integrate PA into treatment with clients (Shrestha et al., 2021). Prior research indicates that healthcare practitioners who personally engage in healthy lifestyles are more likely to promote healthy lifestyles with their clients (Keyworth et al., 2020). Conversely, some healthcare practitioners report feeling disingenuous about promoting PA if they themselves do not engage in this regularly (Hall et al., 2022). By practising what they preach and being physically active themselves, psychologists may develop stronger self-efficacy in their ability to affect PA behaviour change in clients.

4.4. PA promotion training for psychologists

The variability of PA promotion practices used by psychologists may also reflect a lack of standardised, formal training on PA promotion that psychologists receive. In our scoping review, the proportion of psychologists who had received prior formal training on PA promotion ranged from 4.6% to 35.3%. To the authors' knowledge, the only prior study evaluating training on PA provided in postgraduate psychology degrees in England similarly found that this to be a rare occurrence (Faulkner & Biddle, 2001), although this was published 25 years ago and prior to any studies included in this review. Although 'formal training' was operationalised differently in each study, examples included training on PA promotion received during university and vocational workshops (Burton et al., 2010; Shrestha et al., 2021; Vasilj, n.d.). Clearly, the finding that psychologists are frequently promoting PA despite having minimal formal training in this area indicates a gap and need within the profession. Equipping psychologists with such training may improve the frequency with which psychologists engage in more individualised PA promotion practices, rather than only asking about PA levels or providing general advice, thus also improving the effectiveness of this advice. This may be particularly important for client mental health and physical health outcomes given the emerging evidence in several randomised trials highlighting the efficacy of PA promotion by psychologists (Bryant et al., 2023; Rief et al., 2018; Szuhany & Otto, 2019). Promisingly, though, all studies found that psychologists were interested in future training on PA promotion.

4.5. Barriers and facilitators to PA promotion

Psychologists most commonly endorsed ‘social influences’ as the TDF domain of barriers to PA promotion (Cane et al., 2012). In this TDF domain, psychologists held perceptions that PA promotion may damage the therapeutic relationship, clients lack self-efficacy to increase their PA levels and that clients lack social support to engage in PA. Such perceptions from psychologists may reflect both their lack of formal training on PA promotion and lack of confidence to engage in more individualised PA counselling (Burton et al., 2010). Many of these perceptions held by psychologists are also congruent with surveys and interviews of individuals with mental disorders themselves, where individuals report a lack of social support from friends and family and an identity that impedes increased PA engagement (e.g., ‘I’m not an exercise-person’) (Glowacki et al., 2017; Vancampfort et al., 2015). Therefore, psychologists should engage in problem-solving that helps clients identify social support and collaboratively develop a PA schedule that prioritises pleasure and mastery to increase adherence, therapeutic tasks they are well-placed to implement (Martell et al., 2022; Nezu et al., 2013).

Psychologists also commonly endorsed the TDF domain of ‘skills’ as a barrier to PA promotion (Cane et al., 2012). Psychologists identified a dearth of formal training on PA promotion, whilst some highlighted a lack of competence to promote PA with clients who have a mental disorder. Psychologists’ lack of prior training can be addressed by developing and disseminating formal training on PA promotion. Psychology can draw encouragement from other healthcare professions where training to better equip practitioners to promote healthy behaviours like PA demonstrates effectiveness in improving skills and resultant client health outcomes (Hatfield et al., 2020; Keyworth et al., 2026).

Psychologists most commonly endorsed the TDF domains of ‘beliefs about consequences’ and ‘beliefs about capabilities’ as facilitators to promoting PA (Cane et al., 2012). Psychologists’ beliefs in the efficacy of PA as a treatment and that clients would accept PA promotion from a psychologist were key facilitators. Such efficacy beliefs reflect psychologists’ high levels of self-reported knowledge of PA. One prominent theme identified in the ‘beliefs about consequences’ domain was that many psychologists viewed PA as an effective intervention for mental disorders compared to empirically supported psychotherapies such as cognitive behavioural therapy (Radovic et al., 2018; Shrestha et al., 2021), demonstrating an appreciation of the potency of PA promotion.

4.6. Implications for clinical practice

There is a clear need for training on PA promotion to be developed for psychologists. Whilst psychologists self-report good knowledge of PA, the skills to promote this in practice need addressing. Barriers and facilitators according to the TDF domains can be used to guide the evidence-based development of training programmes, including understanding which behaviour change techniques should be integrated into such training (Atkins et al., 2017).

Our results indicate that psychologists hold mixed beliefs about their role in promoting PA. While some psychologists endorsed the belief that PA promotion is part of their job, others believed PA promotion should be delivered by exercise professionals. This aligns with the barrier of ‘role perception’ that many other healthcare professionals identify as precluding them from implementing lifestyle behaviour change interventions and centres on the notion that, whilst PA is effective, it should be promoted ‘in someone’s clinic, but not mine’ (Keyworth et al., 2020; Nelson et al., 2014).

Despite this belief, most psychologists report not referring clients to exercise professionals – an important training gap. This may also be a result of a lack of affordable, accessible pathways for psychologists to refer their clients to exercise professionals, although this is unexplored in the literature. Psychologists can play a key role in PA promotion by utilising their behaviour change expertise and leveraging the therapeutic alliance to help clients increase PA levels. However, exercise prescription, where an individualised exercise programme based on fitness assessments and physical capacity is

developed, is a key function of exercise professionals. Psychologists should refer clients to exercise professionals (e.g., physiotherapists and exercise physiologists) when additional, specialist support is required, such as when clients have physical health comorbidities (Rosenbaum et al., 2025). Uncovering the mechanisms underpinning why psychologists seldom refer clients to exercise professionals in clinical practice is an important area of future research necessary to facilitate an increase in referral behaviour. Additionally, developing interdisciplinary teams of psychologists and exercise specialists in mental healthcare will permit the collaboration required to effectively utilise physical activity-based interventions for improved mental health outcomes in clients (Lederman et al., 2026).

Psychologists must adhere to professional standards and ethical codes which stipulate enforceable benchmarks of psychological practice (Health & Care Professions Council, 2023; Psychology Board of Australia, 2024a). This includes working within their scope of practice and boundaries of competence (Health & Care Professions Council, 2023; Psychology Board of Australia, 2024a). However, if psychologists undertake continuing professional development in this area, they can build skills relevant to their existing knowledge base in behaviour change and motivation, allowing them to safely and effectively integrate deeper forms of PA promotion (i.e., individualised PA counselling) into practice. For this to occur, organisational support from universities and professional associations (e.g., American Psychological Association) in the dissemination of such training will be crucial. Training content should seek to build on psychologists' existing expertise in psychological interventions and behaviour change by improving psychologists' abilities to integrate PA promotion into psychotherapies such as Behavioural Activation and Cognitive Behavioural Therapy. Training should also aim to upskill psychologists to identify when a referral to an exercise specialist is necessary.

4.7. Strengths and limitations

To the authors' knowledge, this is the first review to synthesise and examine factors affecting psychologists' PA promotion practices. This is particularly significant given recent increased calls for mental healthcare practitioners, including psychologists, to promote PA in mental healthcare settings (Lam et al., 2024; Malhi et al., 2021). The review provides a synthesis of psychologists' PA promotion practices, which can guide the development of future training for psychologists in this area. The review generally reported pooled results across professional groups rather than profession-specific analyses. Although samples of the eligible studies included other mental health practitioners such as mental health nurses and psychiatrists, 82% of the total sample in the scoping review were psychologists. This scoping review utilised an integrative theoretical framework, the TDF, to map barriers and facilitators influencing psychologists' practices (Cane et al., 2012). However, identifying which factors were barriers and facilitators, rather than cognitive or behavioural factors that did not explicitly impact psychologists' PA promotion practices, required careful judgement from the research team. To mitigate the risk of researcher bias, we adopted independent coding by two authors, consistent cross-checking with the TDF framework and domain definitions, and third author review where consensus was unable to be achieved (Cane et al., 2012). Another limitation was that we did not distinguish between PA and its subset, exercise, in our synthesis of study findings (Caspersen et al., 1985). This was reflective of the literature, which was inconsistent in how it measured PA promotion-related concepts. Findings from this review are based on a small sample of only 11 studies, with significant heterogeneity in study designs, outcome measures and how PA promotion was defined.

Regarding the search strategy, studies were gleaned from four databases across psychology and allied health, though no databases on exercise science (e.g., SPORTDiscus) were included. The gray literature search included reviewing Google Scholar but did not include dissertation databases such as ProQuest Dissertations and Theses. Thus, it may be possible that primary sources related to the topic were not included, and that publication bias may be present in this scoping review, limiting the representativeness of the evidence and conclusions drawn. Nonetheless, the databases

chosen may have comprehensively captured the literature required to answer the research questions, particularly with the addition of searching through grey literature. Sampling bias may be present in that surveys included in the review may have recruited psychologists who are more knowledgeable about, confident in, and have more favourable attitudes towards PA promotion. That >50% of psychologists in all five studies engaged in regular weekly PA may suggest this sampling bias is present, as most mental healthcare practitioners do not meet PA guidelines (Deenik et al., 2022). Furthermore, most studies included psychologists from the USA or Australia, limiting generalisability of the findings to other contexts. Finally, because the methodological quality and risk of bias of the included studies were not formally assessed, the findings should be interpreted as a mapping of the available evidence, rather than an evaluation of the strength or certainty of the evidence. Implications for clinical practice or policy should be interpreted cautiously, which is consistent with the objectives and methodology of a scoping review.

5. Conclusion

This review highlights psychologists' PA promotion practices and the cognitive and behaviour factors that influence such practices. Psychologists consistently utilise PA in treatment with clients, although how PA is integrated into treatment varies significantly. 'Social influences' and 'skills' are the most common barriers precluding psychologists from promoting PA, whilst 'beliefs about consequences' and 'beliefs about capabilities' facilitated PA promotion. The findings in this review may inform the evidence-based development of future training for psychologists that enable psychologists to address key barriers to PA promotion and to safely integrate this into practice to meaningfully change client PA levels and mental health outcomes.

Note

7. #NR#
4. (57.1%)

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