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McGrath, Ryan L; Shephard, Sophie; Parnell, Tracey; Verdon, Sarah; Pope, Rodney

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Recommended approaches to assessing and managing physiotherapy clients experiencing psychological distress: a systematic mapping review

Ryan L. McGrath BPhysio(Hons), PT ^{a,b,c}, Sophie Shephard MScMed PT ^b, Tracey Parnell PhD, OT ^a, Sarah Verdon PhD, SLP ^a, and Rodney Pope PhD, PT ^a

^aDepartment of Rural Health, University of Melbourne, Shepparton, Australia; ^bSchool of Allied Health, Exercise and Sports Sciences, Charles Sturt University, Albury, Australia; ^cAllied Health Education and Research Unit, Goulburn Valley Health, Shepparton, Australia

ABSTRACT

Background: Some physiotherapists find assessing and managing clients experiencing psychological distress challenging and are uncertain regarding the boundaries of the profession's scope.

Objective: To map the approaches recommended for physiotherapists in scholarly literature, with respect to the assessment and management of clients experiencing psychological distress.

Methods: A systematic mapping review was conducted. CINAHL, APA PsycINFO, Embase, and Medline ALL databases were systematically searched for secondary and tertiary literature relevant to the research objective. Recommended approaches were extracted from each article and analyzed descriptively and thematically.

Results: 3884 records were identified with 40 articles meeting the inclusion/exclusion criteria. Most recommendations related to identifying, assessing, and managing pain-related distress, with depression screening and referral also receiving some attention. Three approaches to detecting and assessing psychological distress were identified: 1) brief depression screen; 2) integrated suicide/nonsuicidal self-harm and depression screen; and 3) multidimensional screen and health-related distress assessment. Regarding the management of psychological distress the main approaches identified were: 1) education and reassurance; 2) cognitive-behavioral approaches; 3) mindfulness; and 4) case management.

Conclusion: While assessment and management of health-related distress by physiotherapists is commonly recommended, further guidance is needed to differentiate various forms of distress.

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Physiotherapy; psychological distress; depression; mental health; suicide

Introduction

In 1975, Emeritus Professor and prominent psychiatrist Beverly Raphael published an article in the Australian Journal of Physiotherapy arguing that physiotherapists, due to the nature of the clients with whom they work and whether employed in public or private practice, need to be prepared to support clients who are experiencing overwhelming feelings of anxiety, anger, sadness, loss, resentment, fear, or disappointment (Raphael, 1975). Despite almost 50 years having passed since the publication of Raphael's paper and the knowledge that physiotherapists frequently encounter people experiencing psychological distress, it appears that many physiotherapists lack confidence in the assessment and management of clients experiencing psychological distress (Driver, Kean, Oprescu, and Lovell, 2017; Henning and Smith, 2022; Lucas and Parker, 2022; McGrath, Verdon, Parnell, and Pope, 2023; Singla, Jones, Edwards, and Kumar, 2015).

While there is no universally accepted definition of psychological distress, it is often described in terms of symptoms of depression and anxiety (Drapeau, Marchand, and Beaulieu-Prévost, 2012; Mirowsky and Ross, 2003; Phillips, 2009). However, focusing only on these symptoms fails to capture the entire spectrum of psychological distress, which may also include grief, rumination, feelings of vulnerability, despair, sadness, anguish, helplessness, fear, hopelessness, loneliness, worthlessness, and irritability (Laporte and Aita, 2021; Mirowsky and Ross, 2003). Psychological distress may also emerge in the presence or absence of a stressor (Drapeau, Marchand, and Beaulieu-Prévost, 2012; Ridner, 2004). When referring to psychological distress that is, at least in part, associated with a specific stressor, some researchers use more specific terminology such as trauma-, poverty-, illness-, or pain-related distress (Cano and Goubert, 2017; DePrince, Chu, and Pineda,

CONTACT Ryan L. McGrath BPhysio(Hons), PT  ryan.mcgrath@unimelb.edu.au  Department of Rural Health, University of Melbourne, 49 Graham Street, Shepparton VIC 3630, Australia

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2011; Lo et al., 2011; Sharkey et al., 2018; Thomas et al., 2018).

Given the variability in the forms of psychological distress that can be experienced, it is unsurprising that physiotherapists have reported frequently encountering clients experiencing psychological distress associated with a range of different stressors, with illness/injury-, financial-, and bereavement-related distress (McGrath, Parnell, Verdon, and Pope, 2022; McGrath, Verdon, Parnell, and Pope, 2023). In total, the physiotherapists participating in the study by McGrath, Verdon, Parnell, and Pope (2023) perceived that approximately 36 out of every 100 clients they encountered experienced some degree of psychological distress, of which almost half were perceived to be experiencing severe psychological distress. The frequency and variety of the forms of client psychological distress encountered pose a significant clinical challenge to physiotherapists, and this challenge is likely worsened by a lack of clarity around the role of physiotherapists in working with clients experiencing psychological distress (Lord, 2018; McGrath, Parnell, Verdon, and Pope, 2022; McGrath, Verdon, Parnell, and Pope, 2023; Ribeiro et al., 2022; van Dijk et al., 2023).

While physiotherapists should not attempt to subvert the role of mental health professionals, their exposure to clients experiencing psychological distress necessitates recognition of, and at least some involvement in the management of the distress (Connaughton, 2018; Watson and Kendall, 2000). According to the International Organization of Physical Therapy in Mental Health (IOPTMH), all physiotherapists should be able to engage with and explore the perspectives of clients experiencing distress, and assist them to navigate the mental health care system (Probst et al., 2020). Furthermore, as primary contact health professionals, physiotherapists have a responsibility to respond appropriately to presenting problems identified during the consultation, which may involve screening for psychological distress and considering its management within care planning (American Physical Therapy Association, 2023; Physiotherapy Board of Australia, Physiotherapy Board of New Zealand, 2015). The purpose of screening is generally described as identifying important areas which may need further evaluation (American Psychological Association, American Psychological Association Practice Organization Work Group, 2014; Franzen, 2003). While sometimes considered interchangeably with screening, assessment aims to identify and comprehensively understand the construct at issue (e.g. anxiety), including its severity and the broader context in which it is occurring (American Psychological Association, American Psychological

Association Practice Organization Work Group, 2014; Franzen, 2003).

When faced with uncertainty in clinical practice, physiotherapists may find it useful to draw on clinical guidelines, approaches, protocols, pathways, and instruments to guide their practice (Almond, Zou, and Forbes, 2021; Djulbegovic, Hozo, and Greenland, 2011; Scurlock-Evans, Upton, and Upton, 2014; Timmermans and Angell, 2001; Woolf et al., 1999). While physiotherapists generally acknowledge the importance of drawing on the literature to inform their practice, barriers such as limited time and skills in locating, appraising, and extracting relevant information from research articles have been found to impede this process (Scurlock-Evans, Upton, and Upton, 2014). Lennon et al. (2020) and Keefe, Main, and George (2018) argued that there is a paucity of clear guidance to assist physiotherapists in assessing and managing clients experiencing psychological distress or mental illness. Consequently, there is a lack of clarity around the role and scope of practice of physiotherapists in supporting clients experiencing psychological distress (Lennon et al., 2020; Lucas and Parker, 2022; McGrath, Verdon, Parnell, and Pope, 2023; Ribeiro et al., 2022).

Cupler et al. (2020) posited that the development of an “evidence map” may help improve the translation of research to practice by providing practitioners with a concise, and comprehensive clinic-friendly tool that summarizes the evidence. Rather than mapping evidence, the aim of this review was to systematically map recommendations for physiotherapists published in the scholarly literature regarding approaches to the identification, assessment, and management of clients experiencing psychological distress.

Method

Research design

A systematic mapping review methodology was adopted. According to Hansen, Præstegaard, and Lehn-Christiansen (2021) systematic mapping reviews analytically describe and interpret the research field, rather than identify scientific evidence. Systematic mapping reviews are particularly well suited to practice-relevant review questions (Grant and Booth, 2009). The protocol for this systematic mapping review was registered with Open Science Framework on July 13th 2022 (McGrath, Pope, Parnell, and Verdon, 2022). As there are no reporting guidelines for systematic mapping reviews, the Preferred Reporting Items for Systematic Reviews and Meta-analyses Extension for Scoping Reviews

(PRISMA-ScR) was used (Tricco et al., 2018). While the initial aim was to map recommendations published in any type of scholarly literature such as research reports, journal articles, research theses and clinical guidance articles, after familiarity with the nature and breadth of the literature was gained during the initial title and abstract screening, the scope of our review was narrowed to only include secondary and tertiary literature that provided guidance on approaches to the identification, assessment, and management of psychological distress for physiotherapists based on pragmatic (i.e. resource and time limitations) and methodological considerations. While the definitions of secondary and tertiary literature vary, in the context of this review, secondary literature refers to literature that involves interpretation, synthesis or evaluation of primary sources, while tertiary literature refers to literature that includes distillation and collection of primary and secondary sources, and these sources are often composed of commentary and discussion of literature (Howlett and Rogo, 2021). The reviewers concluded that mixing primary research articles with secondary and tertiary literature would complicate analysis and mapping. The recommendations from primary research articles we screened tended to relate to future research rather than clinical practice, limiting their relevance to this review. Furthermore, when clinical recommendations were included in primary research articles, they tended to be highly tentative and specific to the results of the particular study being reported. In contrast, clinical recommendations from secondary and tertiary literature tended to be more general and aimed at translating a broader range of knowledge or evidence to practice. Articles published between January 1, 1990 and May 30, 2023 inclusive were eligible for inclusion. The year 1990

was chosen as the start date of the search as the “1990s saw evidence-based practice emerge as a new paradigm” (Turner, 2001). While systematic mapping reviews share similarities with both umbrella reviews and scoping reviews, umbrella reviews only include systematic reviews and meta-analyses and scoping reviews typically include primary research (Aromataris et al., 2015; Paolo and Joaquin, 2018; Pham et al., 2014).

Eligibility criteria

The inclusion and exclusion criteria for the systematic mapping review (Table 1) were developed using the Population/Concept/Context Framework (Peters et al., 2020). For the purpose of this review, VandenBos’s (2015) definition of “approach” as a particular method or strategy used to achieve a goal or purpose was used. Based on the existing work of key authors in the area (Drapeau, Marchand, and Beaulieu-Prévost, 2012; Laporte and Aita, 2021; Mirowsky and Ross, 2003; Payton, 2009), psychological distress was defined as follows. Psychological distress is a subjective, unpleasant emotional state that may be transitory, episodic, or permanent. Psychological distress is often characterized by depressive and anxiety symptoms but may also include a range of other negative emotions such as anger, frustration, grief, rumination, obsession, and feelings of being isolated or vulnerable. Psychological distress exists on a continuum, ranging from low to very high levels of psychological distress. Psychological distress may occur in response to a specific stressor or multiple stressors, or it may emerge in the absence of a stressor. The emotional symptoms of psychological distress may in some instances be the same as symptoms

Table 1. Inclusion and exclusion criteria.

Element	Inclusion criteria	Exclusion criteria
Population	The approach recommended is specifically recommended for physiotherapists to use with clients experiencing psychological distress. If published in a physiotherapy journal it is assumed that it is recommended for physiotherapists unless otherwise stated.	May mention health professionals in general but the approach does not specifically mention relevance for physiotherapists.
Concept	Discusses an approach that is consistent with the VandenBos (2015) definition of an approach. Discusses an approach that provides guidance on assessing and managing clients experiencing psychological distress or mental disorders	Discusses an approach that does not provide guidance for assessing and managing clients experiencing psychological distress.
Context	Discusses an approach relevant to an area of clinical physiotherapy practice.	Discusses an approach relevant to non-clinical areas of physiotherapy practice (e.g. clinical educators identifying distress among physiotherapy students)
Type of literature	Published between 1/1/1990 and 30/05/2023 inclusive. Secondary or tertiary literature (e.g. reviews, clinical practice guidelines, masterclasses, and commentaries) Literature which has been published in an academic journal.	Original research articles (e.g. trials, observational studies, and case reports). Literature which has not been published in an academic journal, such as magazine articles, news articles, books and book chapters,
Practical Considerations	Full text available online. Published in English.	

related with mental disorders such as major depressive disorder, generalized anxiety disorder, and post-traumatic stress disorder.

Given the ambiguity around the scope of practice of physiotherapists in the identification, assessment, and management of psychological distress, the eligibility criteria were designed to ensure included articles provided recommendations that have been made explicitly for physiotherapy practice, to enhance understanding current perceived role boundaries for physiotherapists (Table 1).

Search strategy

The literature search was completed on May 30th, 2023, using the search terms reported in Table 2. The search terms were informed by the literature on psychological distress and a review of the controlled vocabulary used in the selected databases. A preliminary search of CINAHL (EBSCO) was conducted in order to pilot the search strategy. No amendments to the search strategy were required. After piloting the search strategy, CINAHL (EBSCO) was searched again, along with the databases of APA PsycINFO (Ovid), Embase (Ovid), and Medline ALL (Ovid). The search strategy used to query the Medline ALL (Ovid) database is presented in Table 3 as an example, with the search strategies for the APA PsycINFO (Ovid), Embase (Ovid), and CINAHL (EBSCO) databases reported in Supplemental Material 1. A citation search and reference list screening of potentially relevant and included articles was performed. Additionally, the reference lists of two recent reviews conducted in the general topic area were screened (Heywood et al., 2022; Ribeiro et al., 2022).

Screening and selection methods

The citation details for literature identified via the search strategy were imported into EndNote (Version 20) and Covidence (<https://www.covidence.org/>). Once imported, duplicates were removed and the titles and abstracts each screened by a single reviewer (RLM or SS) with only clearly irrelevant articles excluded at this stage. Each article identified as potentially relevant was assessed against the eligibility criteria by two reviewers (RLM or SS) independently. Any inconsistencies were handled by a discussion between the reviewers (RLM or SS) and if resolution could not be achieved, a third reviewer was consulted. Review by a third reviewer was not required as all inconsistencies were resolved through discussion between RLM or SS. The results of the search, screening and selection processes were documented in a PRISMA flow diagram (Haddaway, Page, Pritchard, and McGuinness, 2022).

Data extraction, analysis and presentation

Data from the included literature were extracted using a data chart form (Supplemental Material 2). RLM performed data extraction, with SS reviewing the extracted data to confirm accuracy. Data analysis involved descriptive analysis, interpretive thematic mapping, and summarizing of the data. Zotero (version 6.0.19), and Microsoft Excel (version 365) were used for the descriptive analysis. Thematic mapping was informed by Iterative Thematic Inquiry as described by Morgan and Nica (2020). As per Iterative Thematic Inquiry, RLM drafted preliminary themes based on knowledge of the literature, which was continually updated as new data (i.e. the articles identified) reinforced, challenged, or expanded understanding. Once all data had been

Table 2. Search terms.

Concept	Search terms
Physiotherapist	Physical therapist, Physiotherapy, Physical therapy
Psychological Distress	Emotional distress, mental distress, distress, depression, anxiety, suicide, nonsuicidal self-injury, mental health, mental disorder, mental illness
Approach	Guideline, guide, protocol, pathway, screen, assessment, management, tool, instrument, questionnaire, referral, decision making

Table 3. Search strategy for Medline ALL on the Ovid platform.

Query
1 (Physiotherap* or "Physical therapy" or "Physical therapist" or "Physical therapists").tw. or (exp Physical Therapists/)
2 (distress* or depress* or anxi* or suicid*, "self-injury," "self-harm" or "mental health" or "mental illness" or "mental illnesses" or "mental disorder" or "mental disorders" or "psychosocial factor" or "psychosocial factors" or "psychological factor" or "psychological factors").tw. or (exp Psychological Distress/or exp Depression/or exp Anxiety/or exp Self-Injurious Behavior/or exp Mental Health/)
3 (guide* or protocol* or pathway* or screen* or assess* or manag* or tool* or instrument* or questionnaire* or refer* or "decision making").tw. or (exp disease management/or exp Practice Guidelines as Topic/or exp risk assessment/or exp Decision Making/or exp Mass Screening/or exp Surveys and Questionnaires/or exp Referral and Consultation/)

tw = Text Word (title and abstract); exp = Exploded Subject Heading. The Boolean operator "and" combined queries 1 and 2 and 3. Limiters of publication date (1/1/1990 to 30/05/2023 inclusive) will be used. Terms sourced from the Ovid MEDLINE controlled vocabulary thesaurus are preceded by "exp."

extracted, coding of the data was used to evaluate the identified themes and ensure they were grounded in the data. Microsoft Excel (version 365) and NVivo (version 10) were used to aid the reviewers in the thematic mapping process. As per the systematic mapping review convention, critical appraisals of the included literature were not performed (Grant and Booth, 2009; Hansen, Præstegaard, and Lehn-Christiansen, 2021)

Results

Overview

The search returned 6925 articles (Figure 1). After the removal of duplicates (3041) the titles and abstracts of 3884 articles were screened for relevance. Of these, 185 articles were identified as potentially relevant. Subsequent full text review identified 21 articles as meeting the eligibility criteria of the systematic mapping review. Screening of the reference lists and a citation search using Scopus led to the identification of 13 further articles eligible for inclusion. Six other eligible articles known to the authors were also included in the review. In sum, 40 secondary or tertiary scholarly articles met the eligibility criteria and were included in the review.

Table 4 summarizes the topics covered in the included articles and the contexts for which the recommendations they contained were intended. The majority of the articles (31/40) primarily offered guidance for physiotherapists on assessing and managing

psychological distress in the context of people experiencing pain. Of these, eight articles focused on low back pain with other conditions of focus including: pelvic pain (3); pain associated with whiplash injuries (3); patellofemoral pain (1); cancer-related pain (1); and pain associated with temporomandibular disorders (1). The remaining articles provided guidance on the identification, assessment, and management of psychological distress in various other contexts including: acute care (1); post-intensive care (1); return to work rehabilitation (1); care of older adults (1); care of people with chronic physical illness (1); running activities postpartum (1); care of people with mild brain injuries (2); and care of people with depression (1).

Types and distribution of included articles

The articles identified were published from 1999 to 2023, with a majority (22/40) having been published during or after 2018 (Figure 2). The types of articles identified included thirteen perspectives, ten commentaries, nine reviews, four clinical practice guidelines, three masterclasses, and an editorial. One masterclass was published in two parts (Sterling, 2009; Sterling and Kenardy, 2008) and two perspectives were published as companion papers (Main et al., 2023, 2023). For the purpose of the current review, each article published in multiple parts or as companion papers was counted as a single article, given the close relationships between the components or companion parts. The articles were published across 13 journals, with over half published in

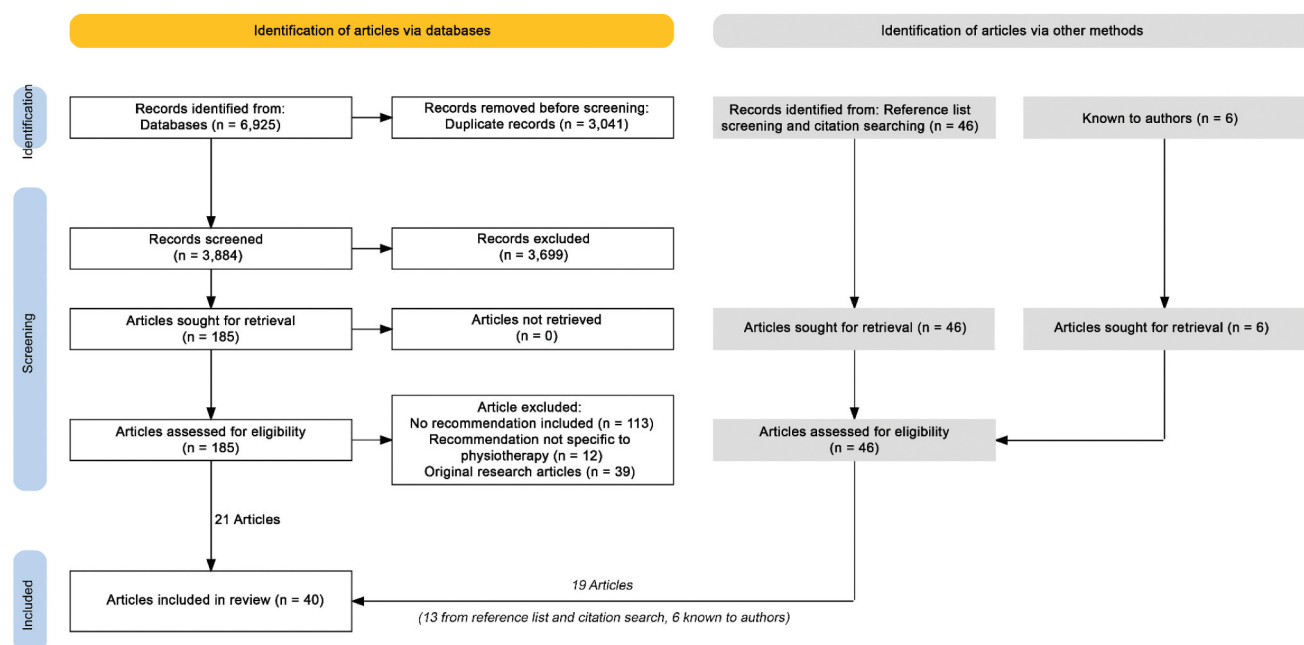


Figure 1. Literature search, screening and selection flowchart (Haddaway, Page, Pritchard, and McGuinness, 2022).

Table 4. Recommended approaches identified in the review.

Author	Country*	Type	Topic	Clients	Identification/Assessment	Management
Alappattu and Bishop (2011)	USA	Perspective	Treating pain-related fear	People with chronic pelvic pain	Routinely screen psychological variables, particularly pain-related psychological factors, using measures such as the STAI, FPQ, PCS. Continue to monitor psychological variables over the course of treatment. Pain-related fear assessment should be informed by the score on the screening tools, and interpreted through the Fear Avoidance Model.	Physiotherapists can address pain-related fear using cognitive coping strategies, pain and psychological education, and appropriate trained physiotherapists could use cognitive-behavioral interventions. Refer to a mental health professional, such as a psychologist and/or sex therapist, if the results of screening tools warrant further evaluation.
Billek-Sawhney, Wagner, and Braun (2014)	USA	Perspective	Screening for, and managing depression	People in acute care settings	Be observant to the signs and symptoms of depression. In inpatient settings, screen for depression using the 2-item PRIME-MD with Arroll's "Help" question. Also mentions a three-question tool (Jamison, 2006). In outpatient settings, also consider screening through the interview and with intake forms, using the longer tools such as the GDS-15, BDI-II, or SDS. If risk of suicide is perceived, ask directly about suicidal ideation, and if confirmed, ask about plans, means, and intent.	Use exercise as an intervention for depression, and adapt management to promote self-efficacy and empowerment, through strategies such as graded activity and offering clients "some choice." Allow clients to vent therapeutically and involve others to reinforce social support. Clients with depression should be referred to mental health professionals, and those at risk of suicide should be immediately evaluated by a medical or mental health professional.
Bunzli et al. (2017)	Australia	Commentary	Understanding pain-related fear	People with low back pain	Assess pain-related fear using the CSM framework, which involves asking questions such as "do you worry that [your low back pain] will impact all the other things you need to get done?" and "how hopeful are you for the future?" during the interview.	Management of pain-related fear involves helping the person make sense of their pain along the five dimensions of the CSM, reflecting on the basis of these beliefs, discussing how these beliefs influence behavior, presentation of new information, and adopting new behaviors.
Cancelliere and Mohammed (2019)	Canada	Commentary	Assessing and psychosocial factors	People with mild traumatic brain injury	Screen for common mental disorders (depressive disorders, anxiety disorders including PTSD), emotional regulation issues, apathy, aggression, irritability using the ACE symptom checklist, PHQ-9, GAD-7, PC-PTSD-5, and PCL-5. Screening for anxiety and depression should occur whenever the physiotherapist observes symptoms.	Offer management strategies such as education and reassurance in relation to mild traumatic brain injury symptoms and prognosis, sleep hygiene, stress management, CBT, and collaborate with other health professionals when needed.
Caneiro et al. (2022)	Australia	Perspective	Treating pain-related fear	People with musculoskeletal pain	Prior to the interview, screen all clients using a multidimensional screening tool such as the short form ÖMPSQ-SF, SBST, or STarT Musculoskeletal Tool. Use scores of individual items to guide interview. During the interview, explore client's story, fears, worries, and concerns. Explore pain-related emotions with the CSM framework. Use behavioral experiments to explore emotional response to pain.	To address pain-related fear, using CFT (e.g. exposure with control, and making sense of pain) as an approach to promote safety learning. Refer to (and facilitate) co-care as needed.
Caneiro, Bunzli, and O'Sullivan (2021)	Australia	Masterclass	Role of beliefs	People with musculoskeletal pain	Prior to the interview use a multidimensional screening questionnaire (ÖMPSQ-SF). Use relevant items to guide the interview and to facilitate disclosure. During the interview, assess pain-related distress using the CSM, asking questions such as "does this pain get you down" and "do you worry about your pain?" In addition, explore general mental health including anxiety, mood, and stress. Use guided behavioral experiments to assess emotional response.	Use behavioral learning, and education to empower self-management and disconfirm unhelpful beliefs. Refer to a psychologist when comorbid mental health conditions (e.g. emotional distress and depression) are identified, ideally as part of integrated multidisciplinary team.
Chimenti, Frey-Law, and Sluka (2018)	USA	Perspective	Mechanism-based approach to physiotherapy	People with acute or chronic pain	If psychological factors are identified, or suspected, during the interview, follow-up with a screening tool or tools. Examples include the 2-item PRIME-MD, PROMIS Depression Item Bank, PROMIS Anxiety Item Bank, PROMIS Anger Item Bank, GAD-7, DRAM, SBST, PCS, FABQ, and TSK.	If screening is positive, particularly score for the DRAM and SBST, engage or refer for PIP, and/or a MDT approach with a psychologist. When psychosocial factors are identified, consider cognitive-behavioral therapy – informed techniques, education, and manual therapy.

(Continued)

Table 4. (Continued).

Author	Country*	Type	Topic	Clients	Identification/Assessment	Management
Daley et al. (2021)	USA	Clinical practice guideline	Assessment and management	People returning to work post injury/illness	During history taking, screen for yellow flags, including catastrophizing, fear avoidance beliefs, kinesophobia, low self-efficacy, and enquire about comorbidities such as anxiety and depression. When screening for yellow flags use reliable and valid tools, such as the ÖMPSQ, WHQ, PACE Tool, BDRQ, TSK, PRODI, CPFI and FABQ, as part of the evaluation and throughout treatment.	If psychosocial barriers are present, then coordinate care and referral to a psychologist with the employer, worker, and other key stakeholders. Additionally incorporate PIP strategies, such as individual goal setting, motivational interviewing, education regarding activity pacing, problem solving, relaxation, and coping techniques into the plan of care.
De Baets et al. (2023)	Belgium	Commentary	Management of fear of movement	People with chronic musculoskeletal pain	Use a combination of an in-depth interview, screening tools (TSK, FABQ) and behavioral assessment to identify pain-related fear and avoidance. When screening using self-reported measures, item-based analysis is recommended over total score analysis.	To address pain-related fear, the authors recommend in vivo exposure therapy and discourage safety behavior.
Delitto et al. (2012)	USA	Clinical practice guideline	Assessment and management	People with low back pain	Effective screening for depression involves more than just generating a clinical impression. Use screening tools, such as the 2-item PRIME-MD, to screen for depression. When the screen is positive, the client should then complete a full-length depressive symptom questionnaire such as the PHQ or BDI. Similarly, screen for other severe psychiatric disturbances (e.g. anxiety), and pain-related distress (using FABQ and PCS). If affective symptoms are noted, consider diagnosis of (I) acute or subacute low back pain with-related cognitive or affective tendencies, or (II) chronic low back pain with related generalized pain.	Use education, counseling, graded exercise to address cognitive factors, affective tendencies and pain behaviors (e.g. depression, fear avoidance, and pain catastrophizing). Refer to a medical professional or mental health professional if the results of the interview and questionnaire suggest the presence of depressive symptoms. An immediate assessment by a medical professional and/or mental health professional is indicated for safety reasons if the client had a plan to harm himself/herself or others. A similar process could be used for clinicians who screen for other psychopathology (e.g. anxiety).
Donnelly, Brockwell, Rankin, and Moore (2022)	UK	Commentary	Whole-systems assessment	People returning to running postpartum	Screen psychological well-being using a validated tool, such as the EPDS or the CAPS-5. Consider assessment of fear of movement using the TSK, and if running being used as a coping strategy.	Refer to specialist clinicians when signs of excessive and obsessive beliefs and behaviors are observed, or when the results of the screening tests are suggestive of poor psychological wellbeing.
Edgerton et al. (2019)	USA	Literature review	Role in the BPS approach	People with chronic pain	Use the clinical interview to subjectively explore a person's pain experience and psychosocial symptoms such as anxiety, trauma, and depression. Consider using tools such as the ÖMPSQ, SBST, FABQ, and PCS to assess for mental impairment.	Employ an interdisciplinary approach involving a psychotherapist. Education and exposure learning to target fear avoidance, and maladaptive thoughts, and CBT for pain-related distress.
Faulkner and Snell (2023)	New Zealand	Perspective	Framework for understanding psychosocial factors	People with persistent post-concussion symptoms	Screen for (i) acute psychological distress following concussion using the DASS-21 or HADS, (ii) preinjury mental health status using the STAI, or ASI, (iii) processes that drive psychological distress using tools such as the FAB-TBI, IPQ-R, C-scale, and SF-36).	Normalize emotional symptoms of concussion and acute stress reaction through education. Offer strategies, such as diaphragmatic breathing, to manage emotional symptoms of concussion. Referral for specialized mental health treatment, when indicated, such as in the presence of preexisting mental health problems.
George and Zeppieri (2009)	USA	Commentary	Fear-avoidance model	People with chronic low back pain	During the first session, assess fear-related to specific activities using the FDAQ. Reassess during management using the FDAQ. Also mentions the FABQ for assessment of general pain-related fear. The assessment is informed by the fear-avoidance model.	Manage pain-related fear and fear of activities using a behavioral approach. Items ranked 40/100 on the FDAQ or higher are targeted as part of graded exposure. Education is used to support adaptive coping strategies, and exercise prescription is a part of graded exposure.
Harland and Lavalée (2003)	UK	Literature review	Psychological assessment and management	People with chronic low back pain	Routinely screen for depression and anxiety using the HADS, and SDS, or DRAM. Also mentions the YFQ, and CSQ. However, results from the HADS and SDS should only be used in audit measurement and as referral criteria for psychological input, unless trained and authorized to act on these assessments.	Referral is recommended when scores suggest the presence of anxiety or depression, which requires an evaluation from a mental health professional. Management when psychological factors are present involves taking an active, rather than passive treatment approach to avoid reinforcing maladaptive behaviors.

(Continued)

Table 4. (Continued).

Author	Country*	Type	Topic	Clients	Identification/Assessment	Management
Harrison, Thorp, and Ritzline (2014)	USA	Commentary	Diagnostic classification	People with temporomandibular disorders	Screening for psychological issues occurs during the clinical interview, or in the waiting room prior through the use of questionnaires such as the PHQ-ADS. During the clinical interview, listen for signs and disclosures of depression, anxiety, and psychological stress. When diagnosing temporomandibular disorder, the examination involves psychosocial aspects (such as depression anxiety, fear and anger) that either foundationally or indirectly contribute to the primary symptoms.	Provide education and use pain-modulation strategies such as stress reduction, sleep hygiene, physical activity and diaphragmatic breathing. When major psychological disorders such as moderate to severe depression, anxiety, and/or pain-related disability are identified, refer to a behavioral health specialist.
Hodges (2019)	Australia	Commentary	Hybrid approach to a model of care	People with low back pain	Stratification to High, Medium, and Low risk profiles using the SBST. After stratification, those classified as medium risk have their pain mechanism classified using the combination of interview, questionnaires, and clinical examination of pain system function. As part of this process, psychological features are assessed using the DASS-21, CES-D, FABQ, and PCS.	For those classified as high-risk, consider/use psychological treatments including behavioral therapies, pain coping skills, cognitive-behavioral, and acceptance-based therapies, education, and movement training. For those classified as medium-risk, treatments vary depending on pain mechanism and may include pain education, reassurance, psychologically informed interventions, fear conditioning, acceptance, graded activity and social intervention. Referral to a psychologist for specialist psychological treatments is indicated for those classified as high risk, and those classified as medium risk with neuropathic pain and central pain mechanisms.
Linton and Shaw (2011)	Sweden	Perspective	Incorporating psychological factors into practice	People with chronic pain	Routinely screen for mood symptoms during intake and initial consultation. After 2 weeks, if no immediate resolution screen for yellow flags and take a thorough clinical history looking for pain-related distress (e.g. fear avoidance and pain catastrophizing) and other forms of preexisting distress.	Physiotherapists can address pain-related fear through graded exposure, self-management, problem-solving strategies, and return-to-work planning. Appropriately trained clinicians can address pain-related distress (fear, anxiety, depression) with acceptance and commitment, cognitive-behavioral therapy, activation, relaxation, and positive psychology techniques.
Linton, Flink, and Vlaeyen (2018)	Sweden	Perspective	A psycho-etiological approach	People with chronic pain	Through the combination of a clinical interview and psychological screening with tools such as the ÖMPSQ, transdiagnostic factors can be identified. These transdiagnostic processes include forms of distress such as worry, general anxiety, avoidance, and catastrophizing.	Treatments target transdiagnostic factors to deal with problem as a whole, such as those factors that underpin depression and pain-related dysfunction. Examples of interventions include education/communication, exposure training, and coping planning.
Main and Watson (1999)	UK	Review	Psychological aspects of pain	People with pain	Pain-related fear should be assessed subjectively and with behavioral indicators of fear such as guarded movement. Tools used to screen and identify pain-related distress may include pain drawing (not as a standalone), behavioral observation rating test, behavioral (nonorganic) signs, with questionnaires such as FABQ and TSK mentioned.	If pain-related distress is observed, psychologically oriented treatment such as a pain management program may be needed. Physiotherapists should offer education and reassurance to the client about their pain. Pain-related depression may be treated with a cognitive behavioral approach. Unless psychiatrically ill, a referral may be harmful and magnify distress.

(Continued)

Table 4. (Continued).

Author	Country*	Type	Topic	Clients	Identification/Assessment	Management
Main et al. (2023) and Main et al. (2023)	USA	Perspective	Communication in psychologically informed practice	People with chronic pain	Prior to the interview, have the client complete a tool such as the SBST, ÖMPSQ-SF, or OSPRO-YF. Facilitate self-disclosure by being open about the context of the consultation and the focus of the assessment. Use the aforementioned tools to inform the interview. Ask about pain interference to explore its impact and how they are coping with it using questions such as "You noted that pain here was an 8/10, so your pain is clearly significantly troublesome." Consider using the aforementioned tools as a treatment monitoring tool.	The role of the physiotherapists in management is like that of a coach, with the focus on re-engagement in usual activities. Management has a specific focus on addressing obstacles, which may include psychological factors. Addressing psychological factors may involve facilitating behavior change to help the client cope with their pain through education, CBT, ACT, motivational interviewing, guided optimism, stress reduction and mindfulness. The management approach should be the product of shared decision-making. It is also important to revisit any psychological obstacles during management.
Nijs et al. (2019)	Belgium	Masterclass	Pain neuroscience education	People with cancer-related pain	Consider assessing pain-related distress through the interview and with questionnaires such as the Brief IPQ, PCS, TSK, PIPS, and FPQ. Use the STAI, BDI, and HADS to screen for depression and anxiety.	Manage pain-related distress with biopsychosocially-driven pain management strategies, including acceptance-based interventions, stress-management, graded exposure and education (including pain neuroscience education).
O'Sullivan et al. (2018)	Australia	Perspective	Description of CFT	People with low back pain	Prior to interview, use a multidimensional screening questionnaire (e.g. the ÖMPSQ). Explore the client's story and listen for any signs of fear and pain-related distress. During the interview, directly ask clients about their emotional response to pain, such as depressed mood (e.g. does it get you down? In what way?) and anxiety (e.g. Do you worry about the pain?). Use guided behavioral experiments to assess pain response such as pain-related distress.	Help clients make sense of their pain, target pain-related distress (such as fear of movement) via exposure with control, and support positive lifestyle changes, such as using relaxation strategies and physical activity to address sleep disturbances related with pain, worry, or stress. Interdisciplinary care is indicated in the presence of psychiatric and/or psychological comorbidities such as major depressive disorder and post-traumatic stress disorder.
O'Sullivan, Smith, Beales, and Straker (2017)	Australia	Commentary	Multidimensional Perspective	Adolescents with low back pain	During the clinical interview, explore the adolescent's story and concerns noting signs of psychological distress (anxiety and depressed mood) and other psychosocial factors. To facilitate this, use a multidimensional screening questionnaire, such as the ÖMPSQ, and SBST.	As part of a CFT management approach, provide education regarding the association between pain and distress, provide reassurance, and reinforce learning through experiential learning. Consider support from others including guardians and a psychologist (and other health professionals) when pain is disabling, and related with high levels of depressed mood, anxiety, and social stress.
Rabey and Moloney (2022)	UK	Perspective	Integrating allostatic load into practice	People with musculoskeletal pain	Through the clinical interview and use of screening tools, screen for psychological stressors (e.g. anxiety). Use screening tool (e.g. ÖMPSQ) prior to consultation or at the start of the consultation. If indicated, explore further during the interview and consider a more specific questionnaire (e.g. DASS and FABQ). During the interview, explore potential psychological stressors (e.g. adverse childhood experiences, sustained emotional stress, and severe trauma), their relevance to the presentation, and management of such stressors. Be observant for signs of hyper-related or hypo-arousal states. Examine pain/movement-related distress responses through movement-based physical examination. Use a clinical reasoning framework (Mitchell, Beales, Slater, and O'Sullivan, 2018) or a bubble diagram to clinically reason the relative contributions of the examination results.	If psychological assessment and management is beyond the individual scope of the clinician, refer onwards to a health professional skilled in that area. Management is likely to be highly individualized and emerges from a client-centered shared-decision process. Examples of management approaches may include mindfulness, stress inoculation, meditation and breathing practices, sleep interventions; however, consider timescales/resources available such as access to psychotherapy if necessary. Management may be multidimensional, however, a predominantly unidimensional approach with limitations discussed may also be appropriate.

(Continued)

Table 4. (Continued).

Author	Country*	Type	Topic	Clients	Identification/Assessment	Management
Rebeck (2017)	Australia	Commentary	Review of exercise, education, and behavioral interventions	People with whiplash	For WAD grades I to III, assess psychological distress (including post-traumatic stress), pain catastrophizing, and fear avoidance during initial consult for chronic whiplash, or 3 weeks after for acute whiplash. In some instances, assessment of psychological factors before 3 weeks may be indicated for acute whiplash. For chronic whiplash, reassess psychological distress again before 6 months.	Consider exercise plus behavioral therapy approach when person is experiencing high pain levels, high disability, and psychological distress. Consider referral to a psychologist if high levels of psychological distress are noted.
Simon and Hicks (2018)	USA	Perspective	Comprehensive management approach	Older adults with low back pain	Screen for depression using the GDS or CES-D. With the exception of depressive symptoms, which the authors state is beyond the scope of physiotherapists to assess, they recommend assessment of pain-related fear using the PCS or FABQ, and assessment of pain catastrophizing using the PCS.	Use cognitive-behavioral physical therapy to manage psychological distress when it is a symptom of client's low back pain. Cognitive-behavioral physical therapy include mindfulness, mindfulness-based exercise (e.g. tai chi and graded tasking). The mindfulness interventions may help with general distress. Refer/interventions with the primary care physician when depressive symptoms are identified.
Simonds, Abraham, and Spitznagle (2022)	USA	Clinical practice guideline	Assessment and management	People with pelvic girdle pain during the postpartum period	Screen for mood disorders and suicidal ideation using the EPDS. Consider screening for aspects of low mood and anxiety not captured by the EPDS using additional scales. Also consider use of questionnaires for fear and kinesiophobia, particularly for those with persistent pelvic girdle pain or those not responding well to management.	Refer to a physician and/or a mental health professional if the EPDS score is 10 or above. For suicidal ideation, if any positive response to item 10 on the EPDS, should be considered a red flag and immediately referred to the emergency department. Physiotherapists should establish connections with mental health professionals in anticipation of referrals.
Smith et al. (2020)	USA	Perspective	Assessment and management	People with post-intensive care syndrome	Screen all clients with a history of hospitalization, particularly those who required intensive care unit (ICU) care, for depression and anxiety using the HADS. The authors also mentioned the 2-item PRIME-MD but caution against its use in this context. Use the IES-R to screen for PTSD symptoms.	Coordinate care with an interprofessional team, when symptoms of depression, anxiety, and PTSD in clients are identified. This may involve a referral to a mental health professional or other specialists. Consider encouraging clients to access peer-support groups where survivors of critical illness can connect and support each other's recovery.
Spearing and Bailey (2012)	UK	Analytical literature review	Screening for, and managing depression	People with chronic physical illness	Screen all clients with the 2-item PRIME-MD. If positive, follow up with a validate measure of depression, such as the PHQ-9, BDI-II, BDI-PC, CES-D, and SDS. Engage in further questioning regarding depressive symptoms if competent to do so.	For clients with chronic physical ill health, general advice to promote wellbeing would be staple practice for many therapists, for example: promoting healthy eating, avoiding excess alcohol and smoking, and taking regular exercise. All clients suspected to be experiencing depression to be referred for a full evaluation and diagnosis.

(Continued)



Table 4. (Continued).

Author	Country*	Type	Topic	Clients	Identification/Assessment	Management
Stearns et al. (2021)	USA	Commentary	Screening and managing psychosocial factors	People with musculoskeletal pain	Screen all clients using a multidimensional screening tool such as OSPRO-YF, SBST, and ÖMPSQ. Also cite the PROMIS Depression Item Bank and PROMIS Anxiety Item Bank. Alternatively, screen clients who don't respond to routine care after 4–6 weeks. Assess psychosocial factors identified during initial screening with multidimensional measures and relevant unidimensional screening tools, such as the PCS, TSK, FABQ, PASS-20. Scores on screening tools can guide the clinical interview. Psychological factors should be reassessed every 2 weeks to monitor progress.	Management of psychosocial factors is largely within the scope of physiotherapy, and physiotherapists should establish a referral network. Management options include standard physiotherapy, psychologically informed physiotherapy with referral, and immediate referral. Psychologically informed physiotherapy involves motivational interview, self-management, cognitive behavioral strategies, and coping skills. If the physiotherapist feels ill equipped to manage pain-related distress, perceives that additional specialized care may be beneficial, or there are symptoms of mental illness then a referral should occur. Cotreating after referral to a psychological service is appropriate. In the event of signs of serious mental illness such as clinical depression and suicidality, an immediate referral is indicated.
Sterling (2014)	Australia	Review	Physical and psychological assessment	People with whiplash injuries	Based on client history and interview, select a questionnaire based on the symptoms noted. For example, the IES for post-traumatic stress symptoms, PHQ-9 for depression, or the PCS for pain catastrophizing.	If moderate levels of psychological distress are measured with the relevant questionnaire, physiotherapists can address this as part of psychologically informed physiotherapy if they are confident to do so. If high levels of distress are identified, or the distress is persisting after a period of psychologically informed physiotherapy, a referral to the client's general practitioner or a clinical psychologist is recommended.
Sterling and Kenardy (2008), and Sterling (2009)	Australia	Masterclass	Physical and psychological assessment	People with whiplash injuries	Use the IES (or IES-R) to screen for post-traumatic stress symptoms, and the GHQ-28 and SF-36 for general psychological distress. Fear-avoidance and catastrophizing could also be assessed.	Advice and reassurance may help alleviate some distress during the initial period post injury. Referral for a psychological evaluation should occur after 3 to 4 weeks if recovery is not apparent, because early psychological referral could interfere with normal recovery. If referral for a psychological evaluation is indicated, co-care should occur.
Van Wyngaarden, Noehren, and Archer (2019)	USA	Restricted literature review	Assessing psychosocial profile	People with musculoskeletal pain	Screen all clients with the PHQ-2 and OSPRO-YF. With clients with LBP, use SBST and then the OSPRO-YF at follow-up to reduce client burden. If PHQ-2 is positive, complete PHQ-9. Based on scores of OSPRO-YF, classify as noncontributory psychosocial profile, moderate psychosocial profile, moderate-to-high psychosocial profile, or high psychosocial profile. Consider further assessment using unidimensional assessment tools such as the PCS and TSK. Continue to monitor psychosocial profile using screening tools.	Clients classified as having a moderate, or moderate-to-high, or high psychosocial profile should continue to be monitored and provided with psychosocial interventions such as cognitive-behavioral therapy, pain education, graded exposure, and motivational interviewing. If the client is classified as having a high psychosocial profile and their profile remains elevated after a month of management, they should be referred to a psychosocially informed physiotherapist and/or a psychologist.
Vandyken and Hilton (2017)	Canada	Literature review	Treatment of Central Pain Mechanisms	Women with sexual pain	During history taking, look for personal challenges or threats that occurred when the pain began. Use screening tools to assess pain-related negative appraisals and cognitions, such as the PCS and TSK. Assess for mental distress using the DASS-21.	Engage in the following management if within the individual physiotherapist's scope of practice or refer on if not. To manage stress, anxiety, catastrophizing, and fear avoidance, suggested interventions include pain education, mindfulness meditation, and CBT. In addition, breathing exercises, yoga, and sleep hygiene for stress, a self-soothing routine and gratitude training for anxiety, social support is recommended for catastrophizing, and CFT, graded exposure, and graded motor imagery for fear avoidance.

(Continued)



Table 4. (Continued).

Author	Country*	Type	Topic	Clients	Identification/Assessment	Management
Varela and Melvin (2023)	USA	Narrative Review	Role of physiotherapy	People with depressive disorders	Screen for depressed mood and diminished interest as part of the standard health status intake questionnaire. To assess severity of depression, use the PHQ-9. Screening for suicide signs as part of the assessment of depression, with item nine on the PHQ-9 being used to screen for suicide. Assessment of depressive symptoms continues after the initial screening process	When depression is suspected, collaborate with mental health professionals. Immediately refer any client at imminent risk of suicide or self-harm to the client's health care team. Suicidality without immediate risk should still be communicated with a mental health professional and refer. While direct treatment of depression is beyond scope, interventions of the mind and body awareness (e.g. physical activity), mindfulness training, and sleep hygiene education can have an impact on depression.
Vieira, Brown, and Raue (2014)	USA	Selective literature review	Screening for, and managing depression	Older adults	Screen clients with the PHQ-2, and if positive, complete PHQ-9. Also consider using the GDS-15. Suggests that physiotherapists go beyond the use of screening tools in their assessment; however, does not provide further details, instead referring the reader to other training material.	PHQ-2 scores of 2 or 3+ should be referred to for a mental health evaluation. Physiotherapists play a role in facilitating referrals, which may involve education, mirroring the client's language, encouragement, and discussing referral in the context of other mental health conditions (e.g. poststroke depression). Clients experiencing persistent depressive symptoms should also be referred.
Watson (1999)	UK	Editorial	Psychological assessment	People with musculoskeletal pain	Use the clinical interview to explore client's psychological wellbeing, and if the client does not respond to treatment, formally screen for depression, anxiety, poor coping, injury/pain-related fear, avoidance beliefs, somatic anxiety stress, high self-report of stress or anxiety, using psychosocial questionnaires such as DRAM, and the ÖMPSQ.	Physiotherapists play a key role in managing pain-related distress, such as targeting treatment at reducing fears and increasing activity. Non-pain-related distress, such as distress related with marriage or financial issues should prompt a referral to a mental health professional. Management may also involve joint multidisciplinary or interdisciplinary management.
Wijma, van Wilgen CP, Meeus, and Nijs (2016)	Belgium	Perspective	Biopsychosocial assessment	People with chronic pain	Ask specifically about emotional factors related to pain, such as psychological issues arising from work, family, financial, or social stressors, psychological traumatic onset of the pain, and fear of movement. Screen for perceived injustice (a form of anger) using the IEQ. To assess pain-related distress, use the PCS, Brief IPQ, and if necessary, the TSK. To screen for anxiety and depression use clinical questioning. If necessary, consider using a tool such as the STAI, CED-S, PHQ-2, and PHQ-9. Screen for PTSD and stress through the clinical interview.	During pain neuroscience education, if pain-catastrophizing, anxiety, depression, perceived injustice, PTSD, and stress are identified, then education between the interplay of mental health and the pain neuromatrix is provided. In addition, basic psychological support should be included such as acknowledgment, and comfort. To inform referral, physiotherapist asks themselves "is this patient (with chronic pain) in the right place here with me, or should he/she be treated in a multidisciplinary setting or referred to another provider?"
Willy et al. (2019)	USA	Clinical practice guideline	Assessment and management	People with patellofemoral pain	Screen for psychological factors that require a referral to a mental health professional. Screen for anxiety, depression, fear avoidance, kinesiophobia, and catastrophizing using the OSPRO-YF, FABQ, and the PCS.	Based on screening and examination, determine whether the client is (i) appropriate for physiotherapy alone, (ii) appropriate for physiotherapy as a part of co-care with another health professional, or (iii) not appropriate for physiotherapy. If psychosocial factors are identified, consider cognitive behavioral treatments, reassurance, and graded exposure to activity.

36-Item Short Form Survey (SF-36), Acute Concussion Evaluation symptom checklist (ACE), Back Disability Risk Questionnaire (BDRQ), Beck Depression Inventory (BDI), Beck Depression Inventory 2ND Edition (BDI-II), Beck Depression Inventory for Primary Care (BDI-PC), Brief Illness Perception Questionnaire (Brief IPQ), Center for Epidemiological Studies Depression (CES-D), Clinician-Administered PTSD Scale for DSM-5 (CAPS-5), Cognitive Behavioral Therapy (CBT), Cognitive Functional Therapy (CFT), Cogniphobia Scale (C-scale), Cumulative Prognostic Factor Index (CPFI), Depression Anxiety and Stress Scales – 21 item (DASS-21), Distress and Risk Assessment Method (DRAM), Edinburgh Postnatal Depression Scale (EPDS), Fear Avoidance Behavior after Traumatic Brain Injury Questionnaire (FAB-TBI), Fear Of Daily Activities Questionnaire (FADQ), Fear of Pain Questionnaire (FPO), Fear-Avoidance Beliefs Questionnaire (FABQ), General Anxiety Disorder-7 (GAD-7), General Health Questionnaire (GHQ-28), Geriatric Depression Scale (GDS), Hospital Anxiety and Depression Scale (HADS), Impact of Event Scale (IES), Injustice Experience Questionnaire (IEQ), Optimal Screening for Prediction of Referral and Outcome Yellow Flag (OSPRO-YF), Örebro Musculoskeletal Pain Questionnaire (ÖMPSQ-SF), Örebro Musculoskeletal Pain Question (ÖMPOQ), Pain Anxiety Symptom Scale (PASS-20), Pain Catastrophizing Scale (PCS), Patient Health Questionnaire (PHQ-2), Patient Health Questionnaire (PHQ-9), Patient Health Questionnaire Anxiety and Depression Scale (PHQ-ADS), Patient-Reported Outcome Measurement Information System Anger (PROMIS Anger), Patient-Reported Outcome Measurement Information System Depression (PROMIS Depression), Plan of Action for a Case (PACE Tool), Posttraumatic Stress Disorder (PTSD), Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5), Psychological Inflexibility in Pain Scale (PIPS), Psychosocial Risk for Occupational Disability Instrument (PRODI), Revised Illness Perception Questionnaire (IPR-R), Revised Impact of Event Scale (IES-R), STarT Back Screening Tool (SBST), State-Trait Anxiety Inventory (STAI), Tampa Scale for Kinesiophobia (TSK), Work and Health Questionnaire (WHQ), Zung Self-Rating Depression Scale (ZSDS).

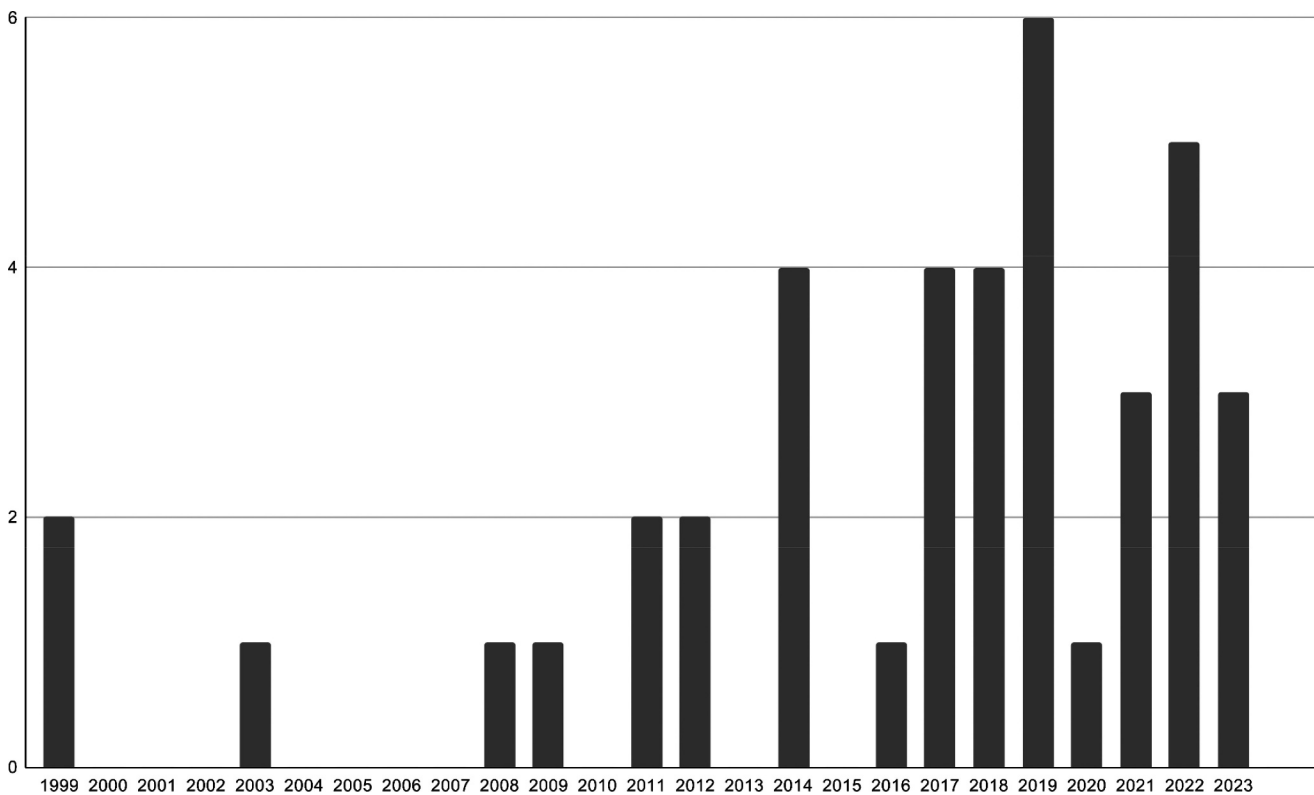


Figure 2. Distribution of included articles by year of publication.

either the Journal of Orthopaedic and Sports Physical Therapy (12) or the Physical Therapy and Rehabilitation Journal (11). The most common country listed as the address for the corresponding author was the United States (17). Of the authors whose clinical backgrounds could be ascertained ($n = 122$) there were 94 physiotherapists, 18 psychologists including one in training, one dual-qualified physiotherapist and psychologist, five physicians, two chiropractors including one in training, a counselor, and a nurse practitioner. With the exception of three articles (Cancelliere and Mohammed, 2019; Faulkner and Snell, 2023; Linton, Flink, and Vlaeyen, 2018) all were authored or coauthored by at least a physiotherapist. Fifteen articles were authored or coauthored by at least one psychologist.

Identification and assessment of psychological distress

All articles recommended the use of the clinical interview and/or a screening or assessment tool to identify and evaluate psychological distress. The screening and assessment tools identified in this review as recommended for use by physiotherapists are listed in Table 5. Screening for psychological distress was recommended and considered within the scope of physiotherapy practice in all included articles, for example:

Screening and addressing behavioral and mental health concerns is within the scope of the physiotherapy practice guidelines (Varela and Melvin, 2023).

However, there was a consensus that the formal assessment of psychopathology is beyond the scope of physiotherapy.

It is rightly beyond the scope of physiotherapy practice formally to assess and treat specific psychological disorders (Watson, 1999).

It was suggested that physiotherapists have a responsibility to screen for depression and other mental disorders, such as generalized anxiety disorder and post-traumatic stress disorder (Donnelly, Brockwell, Rankin, and Moore, 2022; Smith et al., 2020; Varela and Melvin, 2023). Further limitations on the scope of physiotherapy in the assessment of mental health were highlighted by Harland and Lavalley (2003). Harland and Lavalley (2003) noted that without training, physiotherapists may not be able to use some questionnaires due to practical and legal issues:

Recognised training is necessary, both practically and legally, when dealing with questionnaires such as the Hospital Anxiety and Depression scale and Zung Depression Inventory (Harland and Lavalley, 2003).

In contrast, the assessment of psychosocial factors, including health-related psychological distress (i.e.

mainly pain-related distress) was generally viewed to be within the scope of the physiotherapy profession. This assessment of health-related psychological distress allows physiotherapists to determine whether or not its management falls within their individual scope of practice.

The assessment of mental distress is another central aspect of pain research and treatment. When failing to measure these psychosocial factors, physical therapists lose the opportunity to address them in treatment when it is within their scope of practice (Vandyken and Hilton, 2017).

It was commonly acknowledged that there are differences between the scope of the physiotherapy profession in assessment of health-related distress, and the scope of an individual physiotherapist, for example:

It is acknowledged that each clinician has an individual scope of practice and may need to upskill or refer onwards for some components of multidimensional assessment/management (Rabey and Moloney, 2022).

Three general approaches to the identification and assessment of psychological distress were identified in this review and are now discussed in turn. Other approaches were also identified and are reported in Table 4.

Brief depression screen

An approach for physiotherapists recommended by several authors was to routinely screen for depression using a brief 2-item depression screen, followed by a longer screening tool when the 2-item screen is positive (Delitto et al., 2012; Spearing and Bailey, 2012; Vieira, Brown, and Raue, 2014; Wijma, van Wilgen CP, Meeus, and Nijs, 2016).

An efficient strategy is to complete the PHQ-2 and then complete the 7 remaining symptoms [in the PHQ-9] for those with a positive initial screen (Vieira, Brown, and Raue, 2014).

Due to its brevity, the brief 2-item depression screen could be verbal administered during the consultation or completed via self-report using the Patient Health Questionnaire-2 (PHQ-2).

Verbally Screening for Depression: 1. During the past month have you been feeling down, depressed, or hopeless? 2. During the past month have you been bothered by having little interest or pleasure in doing things? (Billek-Sawhney, Wagner, and Braun, 2014)

In addition to administering a longer depression screen, Delitto et al. (2012) and Spearing and Bailey (2012) suggested that physiotherapists should further explore

the person's depressive symptoms through the clinical interview, if competent.

A patient with a positive screening result for major or severe depressive symptoms should receive a focused clinical interview and should complete a full-length depressive symptom questionnaire (Delitto et al., 2012).

Billek-Sawhney, Wagner, and Braun (2014) recommended a similar approach to screening for depression in the inpatient acute care setting. However, instead of completing the nine item Patient Health Questionnaire (PHQ-9) or a similar tool, Billek-Sawhney, Wagner, and Braun (2014) recommended a third question, “*is this something with which you would like help?*” be added to the initial two screening questions, due to time constraints faced by physiotherapists in this context. Smith et al. (2020) cautioned against the use of the 2-item depression screen with people experiencing post – intensive care syndrome, as the approach has not been validated with this population. While the above approach was described in reference to depression, Delitto et al. (2012) suggested that a similar process could be used for clinicians who screen for other psychopathology (e.g. anxiety).

Integrated suicide/nonsuicidal self-harm and depression screen

As part of the depression screening, several authors also suggested that nonsuicidal self-harm and suicidal distress should be screened for (Delitto et al., 2012; Harrison, Thorp, and Ritzline, 2014; Simonds, Abraham, and Spitznagle, 2022; Stearns et al., 2021; Van Wyngaarden, Noehren, and Archer, 2019; Varela and Melvin, 2023; Vieira, Brown, and Raue, 2014). For example:

The screening for suicide occurs in part through assessment of depression (Varela and Melvin, 2023).

While not all authors who recommend the use of the PHQ-9, Patient Health Questionnaire Anxiety and Depression Scale (PHQ-ADS), Edinburgh Postnatal Depression Scale (EPDS), Beck Depression Inventory (BDI), or Zung Self-Rating Depression Scale (ZSDS) mentioned that these questionnaires ask about some aspect of suicidality, Varela and Melvin (2023) and Simonds, Abraham, and Spitznagle (2022) drew specific attention to this, within the PHQ-9 and EPDS, respectively:

The 9-item questionnaire ... include[s] suicidal ideation ... [Specifically] the sense of hopelessness is elaborated upon in the ninth question that screens for suicidal ideation ... Higher scores on the ninth

question prompts clinicians to discuss suicidal ideations with their patients, referring practitioners, and mental health providers (Varela and Melvin, 2023).

Any positive response to the suicidal ideation on item #10 [of the EPDS] (even with a score < 10) should be considered a red flag ... (Simonds, Abraham, and Spitznagle, 2022).

When suicidal ideation was identified, Billek-Sawhney, Wagner, and Braun (2014) and Varela and Melvin (2023) recommended that these thoughts be explored, such as if the person has a plan for suicide and means available to them:

Any messages expressed by the patient related to suicide must be followed up ... Follow-up questions should explore whether the patient has a plan, has means/access, and has intent to harm. 'Attempted suicide should be considered a cry for help' (Billek-Sawhney, Wagner, and Braun, 2014).

Multidimensional screen and health-related distress assessment

An approach commonly recommended for physiotherapists practicing in pain, disability, and musculoskeletal settings involved conducting an initial screen of all patients attending with pain-related issues followed by further assessment of positive or concerning findings (Caneiro et al., 2022; Caneiro, Bunzli, and O'Sullivan, 2021; Hodges, 2019; Main et al., 2023, 2023; O'Sullivan et al., 2018; O'Sullivan, Smith, Beales, and Straker, 2017; Rabey and Moloney, 2022; Stearns et al., 2021). It was recommended that a multidimensional screening tool, such as the Örebro Musculoskeletal Pain Questionnaire (OMPQ), the Optimal Screening for Prediction of Referral and Outcome Yellow Flag (OSPRO-YF), the Keele STarT Back Screening Tool (SBST) or the Keele STarT Musculoskeletal Tool be employed as the use of multiple full-length unidimensional tools to assess several psychological constructs could result in an excessive administrative burden for the client and the physiotherapist during an initial consultation. To further reduce administrative burdens it was recommended by several authors that screening prior to the physiotherapy consultation be carried out using self-report questionnaires and multidimensional instruments, for example:

Multidimensional tools (eg, the OSPRO-YF and the Örebro Musculoskeletal Pain Questionnaire) are an attractive option for screening because they evaluate multiple dimensions of distress with low response burden (Stearns et al., 2021).

Relevant items from the multidimensional screening tools can subsequently be explored by the physiotherapist as part of the clinical interview and with unidimensional tools, exploring constructs relating to pain such as pain and/or movement-related fear and anxiety.

The use of a screening questionnaire prior to the interview provides the clinician with a perspective on the person's pain and disability levels, cognitions, and emotions, providing opportunity for targeted exploration of their concerns within the interview (Caneiro et al., 2022).

Unidimensional tools, such as the Pain Catastrophizing Scale, the Tampa Scale of Kinesiophobia, and the Fear-Avoidance Beliefs Questionnaire were commonly recommended in the included articles (see Tables 4 and 5). The exploration of pain-related distress as part of a clinical interview was informed by several psychological theories and approaches, including the Fear Avoidance Model, the transdiagnostic approach, fear learning, and the Common-Sense Model (Bunzli et al., 2017; Caneiro et al., 2022; George and Zeppieri, 2009; Linton, Flink, and Vlaeyen, 2018). For example, Bunzli et al. (2017) described how the Common-Sense Model can be used as a clinical framework to assess pain-related fear. While the Common-Sense Model primarily explores illness representations, the construct referred to as emotional response requires specific questioning to identify and characterize pain-related distress (Caneiro, Bunzli, and O'Sullivan, 2021):

How does the pain make you feel?
How do you feel about losing the ability to do things you love?
Does this pain get you down?
Do you worry about your pain?
Do you fear your pain or doing damage to yourself?

To understand the experience of a person's pain-related distress, it was recommended that physiotherapists adopt a narrative style of assessment in which the lived experience and context of the person's pain and movement-related fears are considered (Caneiro et al., 2022; Caneiro, Bunzli, and O'Sullivan, 2021; De Baets et al., 2023; O'Sullivan et al., 2018; O'Sullivan, Smith, Beales, and Straker, 2017). Similarly, Linton, Flink, and Vlaeyen (2018) emphasized the importance of physiotherapists understanding the person's broader context, as this might shed light on the mechanisms shared by co-occurring problems such as pain and generalized anxiety. Going further, Rabey and Moloney (2022) recommended a thorough assessment of pain-related stressors, including concurrent generalized psychological distress, early-life stress and trauma including

adverse childhood experiences and episodes of extreme stress.

The clinical interview allows in depth exploration regarding potential physical and psychological stressors, their relevance to the individual's presentation, and any management of such stressors undertaken (eg, psychotherapy, sleep hygiene, alterations to training) (Rabey and Moloney, 2022).

In addition, several authors recommended guided behavioral assessments/experiments as part of a movement and activity-related fear assessment conducted by physiotherapists (Caneiro et al., 2022; De Baets et al., 2023; O'Sullivan et al., 2018).

Thorough behavioral assessment is imperative, even for patients who do not self-report high levels of fear of movement as it may highlight within-person discrepancies. An emotional response may only be triggered when one is confronted with the feared activity or when one believes the task needs to be performed (De Baets et al., 2023).

Van Wyngaarden, Noehren, and Archer (2019) recommended an approach for physiotherapists which combined the brief depression screen, and the multidimensional screen and health related distress assessment approach. In this approach, during the first consultation with someone experiencing musculoskeletal pain, the PHQ-2 and OSPRO-YF are administered, with the exception of people with low back pain. If the presentation involves low back pain, the PHQ-2 and SBST are administered, with the OSPRO-YF administered at the second consultation to reduce client burden. If the PHQ-2 is positive, the PHQ-9 is completed.

It is recommended that the PHQ-2 be administered to all physical therapy patients upon initial intake. The PHQ-9 only needs to be administered when a patient scores ≥ 3 on the PHQ-2 (Van Wyngaarden, Noehren, and Archer, 2019).

If high scores are identified on specific subscales of the OSPRO-YF, unidimensional tools which assess pain-related distress are used.

Management of psychological distress

The direct treatment of generalized psychological distress (e.g. depression, anxiety, and post-traumatic stress) and non-pain-related psychological distress (e.g. relationship issues and financial strain) was generally viewed in included articles as outside the scope of physiotherapy practice, for example:

Directly treating depression is not in the scope of practice for physiotherapists; however, a respectable knowledge of the condition contributes to the therapeutic plan of care within the interdisciplinary team (Varela and Melvin, 2023).

However, the management of health-related distress, particularly pain-related distress (e.g. pain-related fear and kinesiophobia) was generally described as within the scope of physiotherapy practice:

Managing the distress that is primarily related to a patient's pain and physical incapacity has to be part of the physiotherapist's responsibility to the patient. In contrast, it is not the physiotherapist's obligation to directly manage distress that is primarily due to other factors (e.g. marriage breakdown and financial worries) (Watson, 1999).

The management of psychosocial factors, including health-related distress, as part of psychologically informed physiotherapy was the topic of most of the recently published literature included in this review. Psychologically informed physiotherapy has been described as follows:

[Psychologically informed physiotherapy] focuses on addressing psychological factors related with rehabilitative outcomes like pain and physical function, rather than on mental illness requiring specialist care (Main et al., 2023).

Several approaches for physiotherapists to managing psychological distress and health-related distress were described in the included articles, these being: 1) education and reassurance; 2) cognitive-behavioral approaches; 3) mindfulness; and 4) case-management including referral. In addition to these approaches, exercise, relaxation, sleep interventions, coping skills training, stress inoculation, problem solving, emotional ventilation, and resilience training were also briefly mentioned as interventions worthy of consideration by physiotherapists (Billek-Sawhney, Wagner, and Braun, 2014; Cancelliere and Mohammed, 2019; Daley et al., 2021; Donnelly, Brockwell, Rankin, and Moore, 2022; Faulkner and Snell, 2023; Harrison, Thorp, and Ritzline, 2014; Hodges, 2019; Rabey and Moloney, 2022), for example:

[In the management of] acute psychological distress . . . provide strategies to assist with the management of these emotional symptoms (ie, relaxation strategies such as diaphragmatic breathing) (Faulkner and Snell, 2023).

Education and reassurance

There was a general consensus across the included articles that physiotherapists should use education

and reassurance to manage client psychological distress (Cancelliere and Mohammed, 2019; Chimenti, Frey-Law, and Sluka, 2018; Delitto et al., 2012; Faulkner and Snell, 2023; Main and Watson, 1999; Smith et al., 2020; Vieira, Brown, and Raue, 2014), for example:

In treating patients with heightened somatic awareness [e.g. concern or fear], it is important for manual therapists to offer repeated explanation and reassurance to the patients about the nature of their pain (Main and Watson, 1999).

The educational and reassurance-based approaches recommended for physiotherapists generally consisted of providing informative resources, de-threatening symptoms, normalizing emotional responses, establishing recovery expectations, and outlining management options. With regard to supporting people experiencing generalized psychological distress such as depression, Vieira, Brown, and Raue (2014) recommended that physiotherapists provide appropriate education to older adults with depression or suspected depression in order to facilitate referral to a mental health professional:

It is critical to use appropriate patient educational materials about depression and the need for a referral for further evaluation (Vieira, Brown, and Raue, 2014).

In comparison to supporting someone with generalized psychological distress, the role of physiotherapists in supporting people experiencing health-related psychological distress was more involved. It was generally recommended that physiotherapists provide condition-specific education and reassurance regarding the client's prognosis and normalize emotional responses to physical health issues (Cancelliere and Mohammed, 2019; Faulkner and Snell, 2023; Smith et al., 2020). For example, Smith et al. (2020) recommended that physiotherapists provide education and reassurance to people with post-intensive care syndrome:

Unique learning needs among people with [post-intensive care syndrome] and their family members include . . . reassurance as they address the fears related with the episode of critical illness and the sequelae of problems; [and] confirmation about their recovery in response to interventions . . . (Smith et al., 2020).

While reassurance and education by physiotherapists was generally recommended, Main et al. (2023) cautioned against providing overly optimistic reassurance and education, as it can create unrealistic client expectations that may lead to further distress (e.g. disappointment, anger, and frustration) which may impede recovery. However, some degree of optimism is needed

as it appears to be associated with improved outcomes (Main et al., 2023). Consequently, Main et al. (2023) and Main et al. (2023) recommended physiotherapists offer education and reassurance that is guarded, yet cautiously optimistic, with a focus on intermediate client-centered goals as a path forward, rather than concentrating on the eventual outcome. Education and reassurance aimed at reducing health-related distress were not perceived as an isolated approach in physiotherapy care. Rather, education and reassurance were seen as fundamental components of management that complement or underpin other interventions aimed at reducing health-related distress. For example, Alappattu and Bishop (2011) recommended that physiotherapists provide education regarding psychological factors such as pain-related fear and anxiety as part of the provision of cognitive coping strategies. Similarly, George and Zeppieri (2009) described how education from physiotherapists can help decrease pain-related fear and support other interventions, such as graded exposure, which are also aimed at decreasing pain-related fear:

Patients receive education that decreases the fear and threat related with [low back pain]. Also, patients receive positive reinforcement for performing fearful activities and utilizing beneficial coping strategies. Therefore, it is impossible to separate the effects of the education and activity implementation components of the graded exposure treatment. In our opinion it is best to view graded exposure as a combined cognitive and behavioral treatment that encourages confrontation of fearful activities during rehabilitation of LBP (George and Zeppieri, 2009).

Cognitive-behavioral approaches

It was recommended in the included literature that cognitive-behavioral approaches aimed at reducing health-related fear, particularly pain-related fear and anxiety, be integrated into physiotherapy practice (Alappattu and Bishop, 2011; George and Zeppieri, 2009; Stearns et al., 2021; Varela and Melvin, 2023). Cognitive-behavioral approaches are characterized by an explicit focus on targeting maladaptive cognitions, emotions, and behaviors to improve clinical outcomes. Cognitive-behavioral approaches were generally described as a part of psychologically informed physiotherapy:

Cognitive-behavioral physical therapy is emerging in physical therapist practice and may be an effective intervention not only for psychological distress but for cognitive influences in older adults . . . Multiple interventions fall within the realm of cognitive-behavioral physical therapy, although a key component is that

Table 5. Screening and assessment instruments.

Instrument	Brief Description	Further information (e.g. interpretation/ psychometrics)	# of Articles
Psychiatric Conditions			
General Health Questionnaire (GHQ-28)	Screening tool for common psychiatric conditions in medical settings.	Sterling (2011)	1
Depression and Anxiety			
Depression Anxiety and Stress Scales (DASS-21 and DASS-42)	Measure of anxiety, depression, and stress	Parkitny and McAuley (2010)	4
Hospital Anxiety and Depression Scale (HADS)	Measure of anxiety and depression.	Beekman and Verhagen (2018)	4
Patient Health Questionnaire Anxiety and Depression Scale (PHQ-ADS)	Screening tool for anxiety and depression that combines the PHQ-9 and GAD-7 scores.	Kroenke et al. (2016)	1
Depression			
Patient Health Questionnaire (PHQ-2)	Screening tool for depression.	Kroenke, Spitzer, and Williams (2003)	8
Patient Health Questionnaire (PHQ-9)	Screening tool for depression	Kroenke, Spitzer, and Williams (1999)	7
Beck Depression Inventory (BDI, BDI-II, BDI-PC)	Measure of depression	Beck et al. (1961; BDI), Beck, Steer, and Brown (1996; BDI-II), and Beck, Guth, Steer, and Ball (1997; BDI-PC)	4
Center for Epidemiological Studies Depression (CES-D)	Measure of depression	Radloff (1977)	3
Zung Self-Rating Depression Scale (ZSDS)	Measure of depression	Hunter and Murphy (2011)	3
Geriatric Depression Scale (GDS)	Measure of depression among older adults	Yesavage et al. (1983)	3
Edinburgh Postnatal Depression Scale (EPDS)	Screening tool for perinatal depression.	Shrestha et al. (2016)	2
Patient-Reported Outcome Measurement Information System Depression (PROMIS Depression)	Measure of depression	Pilkonis et al. (2011)	2
Anxiety			
State-Trait Anxiety Inventory (STAI)	Measure of state and trait anxiety	Julian (2011)	5
General Anxiety Disorder-7 (GAD-7)	Measure of generalized anxiety	Spitzer, Kroenke, Williams, and Löwe (2006)	2
Post-Traumatic Stress			
Impact of Event Scale (IES or IES-R)	Measure of post-traumatic stress symptoms	Horowitz, Wilner, and Alvarez (1979; IES) and Motlagh (2010)	3
Clinician-Administered PTSD Scale for DSM-5 (CAPS-5)	Measure of post-traumatic stress disorder symptoms	Weathers et al. (2017)	1
Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5)	Measure of post-traumatic stress disorder symptoms	Blevins et al. (2015)	1
Anger and Perceived Injustice			
Patient-Reported Outcome Measurement Information System Anger (PROMIS Anger)	Measure of anger	Pilkonis et al. (2011)	1
Injustice Experience Questionnaire (IEQ)	Measure of perceive injustice associated with injury.	Sullivan et al. (2008)	1
Health-Related Distress			
Pain Catastrophizing Scale (PCS)	Measure of pain-related worrying (i.e. pain catastrophizing)	Sullivan, Bishop, and Pivik (1995) and Crombez et al. (2020)	13
Fear-Avoidance Beliefs Questionnaire (FABQ)	Measure of fear and avoidance beliefs about physical activity and work in people with low back pain	Waddell et al. (1993)	12
Örebro Musculoskeletal Pain Question (ÖMPSQ or ÖMPSQ-SF)	Screening tool for early identification of yellow flags in with pain	Linton and Boersma (2003) and Linton, Nicholas, and MacDonald (2011)	11
Tampa Scale for Kinesiophobia (TSK)	Measure of fear of movement-related pain in patients with musculoskeletal pain	Weermeijer, Meulders, and Meulders (2018)	10
STarT Back Screening Tool (SBST)	Screening to for physical and psychosocial factors (e.g. depression fear, anxiety, and catastrophizing) in people with low back pain	Traeger and McAuley (2013)	8
Optimal Screening for Prediction of Referral and Outcome Yellow Flag (OSPRO-YF)	Screening and assessment tool for pain-associated psychological distress	Lentz et al. (2016) and Butera, George, and Lentz (2020)	4
Distress and Risk Assessment Method (DRAM)	Screening tool for psychological distress in people with pain	Main et al. (1992)	3
Illness Perception Questionnaire (Brief IPQ and IPR-R)	Measure of cognitive and emotional representations of illness	Ng (2012) and Hill (2010)	3
Fear of Pain Questionnaire (FPQ)	Measure of pain-related fear	McNeil and Rainwater (1998)	2

(Continued)

Table 5. (Continued).

Instrument	Brief Description	Further information (e.g. interpretation/ psychometrics)	# of Articles
Cumulative Prognostic Factor Index (CPFI)	Measure of fear of movement, depression, and pain catastrophizing based on the BDI-II, TSK, and PCS	Wideman and Sullivan (2012)	1
Fear Of Daily Activities Questionnaire (FADQ)	Measure for fear of activities in people with low back pain	George, Valencia, Zeppieri, and Robinson (2009)	1
Pain Anxiety Symptom Scale (PASS-20)	Measure of pain-related anxiety	Coons, Hadjistavropoulos, and Asmundson (2004)	1
STarT MSK tool	Screening tool for physical and psychosocial factors (e.g. depression fear, anxiety, and catastrophizing) back, neck, knee, shoulder, or multisite pain	Dunn et al. (2021)	1
Psychological Inflexibility in Pain Scale (PIPS)	Measure of pain avoidance and cognitive fusion with pain	Wicksell et al. (2008)	1
Cogniphobia Scale (C-scale)	Measure of fear and avoidance of cognitive exertion in headache sufferers	Seng and Klepper (2017)	1
Fear Avoidance Behavior after Traumatic Brain Injury Questionnaire (FAB-TBI)	Measure of fear avoidance behavior in adults after mild traumatic brain injury	Snell et al. (2020)	1
Work and Health Questionnaire (WHQ)	Screening tool for work-related factors and psychosocial variables in injured workers	Wideman and Sullivan (2012)	1
Back Disability Risk Questionnaire (BDRQ)	Screening tool for disability risk factors in people experiencing occupational low back pain.	Shaw, Pransky, Patterson, and Winters (2005)	1
Psychosocial Risk for Occupational Disability Instrument (PRODI)	Screening for psychosocial risk for disability in injured workers with low back pain	Schultz et al. (2005)	1
Plan of Action for a Case (PACE Tool)	Tool intended to connect risk identification with interventions in injured workers.	Iles, Sheehan, Munk, and Gosling (2020)	1
Acute Concussion Evaluation symptom checklist (ACE)	Symptom checklist (physical, cognitive, emotional, and sleep) in people with mild traumatic brain injury	Gioia, Collins, and Isquith (2008)	1
General Health and Wellbeing			
36-Item Short Form Survey (SF-36)	Measure of physical functioning, role limitations (physical), bodily pain, general health, vitality, social functioning, role limitations (emotional), mental health, and reported health transition	Ware, Snow, Kosinski, and Gandek (1993) and Ware (2000)	2

The PHQ-2 category includes the 2-item screening test for depression taken from the Primary Care Evaluation of Mental Disorders Procedure (2-item PRIME-MD), although the instruments vary slightly (Haggman, Maher, and Refshauge, 2004). The EPDS has also been used to screen for perinatal anxiety (Shrestha et al., 2016).

symptoms of a patient's condition (e.g. pain) are a central tenet of treatment (Simon and Hicks, 2018).

The recommended cognitive-behavioral approaches for use by physiotherapists are aimed at addressing maladaptive thoughts and behaviors which perpetuate pain, pain-related disability, and pain-related distress:

Psychologically informed physical therapy [interventions may include] . . . behavioral therapies (to modify behaviors), cognitive behavioral therapies (to address cognitions about pain), or acceptance-based therapies that encourage return to function despite pain (Hodges, 2019).

The recommended cognitive-behavioral approaches incorporate a diverse range of interventions and techniques that may be used by physiotherapists, such as graded exposure, graded activity, and acceptance and commitment-based approaches.

Treatment considerations for those who screen positive in the fear avoidance domain include graded exposure and cognitive behavioral strategies (Stearns et al., 2021).

Varela and Melvin (2023) suggested that physiotherapists consider functional behavioral interventions designed to facilitate problem solving skills, cognitive restructuring, and coping mechanisms reinforcing self-awareness, mastery and efficacy. The interdependent relationship between physical health issues such as pain and psychological distress means that while physiotherapists are not directly treating depression or other mental disorders (Varela and Melvin, 2023) these cognitive-behavioral interventions reduce health-related distress and allostatic load which are underlying transdiagnostic factors (Faulkner and Snell, 2023; Linton, Flink, and Vlaeyen, 2018; Rabey and Moloney, 2022).

Vandyken and Hilton (2017) recommended physiotherapists consider implementing cognitive functional therapy, cognitive behavioral therapy, and graded exposure to address pain-related fear. Cognitive functional therapy draws on components of cognitive behavioral approaches such as cognitive restructuring and graded exposure in vivo to reduce pain and movement-related fear (O'Sullivan et al., 2018). Several authors of included articles described

cognitive-behavioral approaches to the treatment by physiotherapists of pain-related fear, which have been informed by the Common-Sense model (Bunzli et al., 2017; Caneiro et al., 2022; Caneiro, Bunzli, and O’Sullivan, 2021). According to Bunzli et al. (2017) a Common-Sense Model informed approach to treating pain-related fear involves motivational, reflective, and validating communication techniques. It also incorporates exposure control, which involves gradually exposing the person to the tasks they fear, as an approach to challenging unhelpful cognitions (Caneiro et al., 2022). This was further described as follows:

Identified processes should be targeted in treatment, ie, graduated exposure to address avoidance that is maintaining anxiety and low mood (Faulkner and Snell, 2023).

Behavioral exposure specifically targets pain-related fear and avoidance by gradually exposing the person to the tasks they fear or avoid while challenging unhelpful cognitions and disconfirming threat expectations (Caneiro et al., 2022).

However, as previously mentioned by Rabey and Moloney (2022), while management of some psychological factors may be within the scope of the physiotherapy profession, a particular management approach may not be within the scope of an individual physiotherapist. In the context of cognitive-behavioral interventions, Alappattu and Bishop (2011) recommended that physiotherapists consider using cognitive-behavioral interventions they are competent to use:

The presence of psychological variables may require cognitive behavioral interventions . . . Physical therapists trained in musculoskeletal dysfunction of the pelvic floor may include certain cognitive-behavioral interventions within their scope of practice (Alappattu and Bishop, 2011).

Mindfulness

Mindfulness was recommended by several authors as an approach to managing psychological distress that could be employed by physiotherapists (Billek-Sawhney, Wagner, and Braun, 2014; Donnelly, Brockwell, Rankin, and Moore, 2022; Simon and Hicks, 2018; Vandyken and Hilton, 2017). Rabey and Moloney (2022) suggested that mindfulness was particularly useful as it influences a broad range of allostatic load biomarkers which underpin distress. Consistent with the broad effects of mindfulness, the approach was recommended for physiotherapists managing a variety of different forms of distress, including depression, anxiety, stress, pain

catastrophizing, and pain-related fear (Simon and Hicks, 2018; Vandyken and Hilton, 2017; Varela and Melvin, 2023).

Researchers have also shown antidepressant benefits for individuals engaged in yoga and mindfulness practices (Billek-Sawhney, Wagner, and Braun, 2014).

While the management of depression and anxiety with mindfulness was mentioned, the form of psychological distress primarily discussed in this context was pain-related distress. Bunzli et al. (2017) highlighted the potential benefits of mindfulness, stating that it can help regulate pain-related emotional responses. However, given the broad effects of mindfulness, Simon and Hicks (2018) noted that the focus of mindfulness is largely global, rather than specific to pain:

However, mindfulness-based stress reduction is unique to cognitive-behavioral therapy in that the focus is more global (i.e. not specific to pain) (Simon and Hicks, 2018).

Several authors suggested that mindfulness can be incorporated with movement, such as Tai Chi and yoga, as part of “mindful movement” (Billek-Sawhney, Wagner, and Braun, 2014; Simon and Hicks, 2018; Vandyken and Hilton, 2017).

Case-management including referral

While the included literature suggested that physiotherapists have a role in the direct management of psychological distress, particularly health-related distress, there was a general consensus that a multidisciplinary approach to management of psychological distress was preferred when the distress is persistent, or preexisting (Alappattu and Bishop, 2011; Caneiro, Bunzli, and O’Sullivan, 2021; Daley et al., 2021; Faulkner and Snell, 2023; Linton and Shaw, 2011; Simonds, Abraham, and Spitznagle, 2022; Stearns et al., 2021; Sterling, 2009; Varela and Melvin, 2023; Vieira, Brown, and Raue, 2014; Watson, 1999):

Physiotherapists do not have the experience or training to manage [psychological distress] . . . not directly attributable to the pain condition . . . and need to refer on to specialist practitioners or develop a working relationship with mental health practitioners to facilitate joint management of these patients (Watson, 1999).

Physiotherapists must also collaborate and rely on specialists once a mental health concern is independently recognized (Varela and Melvin, 2023).

Consider referral/engagement in other services to address and manage preinjury mental health difficulties (Faulkner and Snell, 2023).

While persistent psychological distress, distress unrelated to the physical health issue, and preexisting psychological distress were suggested as indicators of a need for referral by physiotherapists, there was no consensus on the level of psychological distress necessitating referral. Delitto et al. (2012) highlighted this issue in their low back pain clinical practice guideline for physiotherapists:

The authors of these clinical guidelines acknowledge that this is a general description for a rather important process. However, there are no absolute guidelines for the levels of psychological symptoms that indicate referral (Delitto et al., 2012).

Some authors of included articles provided recommendations for physiotherapists based on scores from psychological questionnaires, while others provided general guidance on the timing of referral. As health-related distress was considered a common and normal response to physical health conditions, Sterling and Kenardy (2008) recommended referral to mental health care only if whiplash-related distress persisted beyond 3–4 weeks. Similarly, Daley et al. (2021) recommended referral when the client's complaint is not improving and there are psychological factors involved:

For patients with multiple psychosocial risk factors who are not progressing or participating in treatment, referral to a psychologist may be beneficial. Discussion with stakeholders regarding psychologist referral is encouraged (Daley et al., 2021).

Main and Watson (1999) cautioned that the unnecessary referral of non-psychopathological distress could be harmful:

Patients presenting with painful conditions and related loss of function are very rarely psychiatrically ill, and inappropriate referral may simply magnify their distress (Main and Watson, 1999).

In determining the need for referral Wijma, van Wilgen CP, Meeus, and Nijs (2016) recommended that physiotherapists consider their own skills alongside those of their clients by asking themselves: “is this patient in the right place here with me, or should he/she be treated in a multidisciplinary setting or referred to another provider?”

Referral options generally included the client's primary medical practitioner and psychologist. However, other professionals such as social workers, counselors, and spiritual care practitioners were also mentioned. For example, Alappattu and Bishop (2011) highlighted

that pain-related distress among women with chronic pelvic pain can be associated with sexual dysfunction, and loss of partner intimacy. They proposed that a referral from the physiotherapist to a sex counselor or therapist should be considered for women who report sexual dysfunction or intimacy issues due to pelvic pain, indicating the necessity for an interdisciplinary approach to care:

The consequences of pain-related psychological variables in musculoskeletal pain include disuse and disability. In women with CPP, the sequelae likely include sexual dysfunction and loss of partner intimacy . . . [A] referral to a sex counselor or therapist is recommended [for these] women (Alappattu and Bishop, 2011).

Caneiro, Bunzli, and O'Sullivan (2021) emphasized the need for a multidisciplinary approach involving physiotherapists should operate within a shared framework, providing consistent messages to the individual, and thereby reducing care fragmentation and client anxiety.

Clinicians should refer patients for co-care in the presence of comorbid mental (e.g. emotional distress, depression, eating disorders) and physical health conditions (e.g. type 2 diabetes, heart disease, morbid obesity). We contend that multi-disciplinary care including psychologist, pain physician, medical doctor and physiotherapist needs to be integrated, so the team shares a common framework and delivers consistent messages that prevents care fragmentation and patient distress (Caneiro, Bunzli, and O'Sullivan, 2021).

As part of this process, Vieira, Brown, and Raue (2014) recommended that physiotherapists working with older adults approach the discussion of depression sensitively. Vieira, Brown, and Raue (2014) made this recommendation as clients may have concerns related to the stigmatization of mental illness and barriers such as financial barriers to accessing mental health care:

Patients often need a great deal of encouragement and support to follow through with appointments for mental issues that they may not feel are essential . . . A good approach to increase the acceptability of further evaluation is to use the language of the patient (e.g. “feeling low or down” instead of “depressed”) and discuss mental health referral in the context of other medical conditions [such as] . . . poststroke depression.

Of the authors who discussed management of clients experiencing suicidal thoughts and behaviors (Harrison, Thorp, and Ritzline, 2014; Simonds, Abraham, and Spitznagle, 2022; Stearns et al., 2021; Varela and Melvin, 2023), the recommended approach was generally an immediate referral to emergency care or another appropriate mental health service. For example:

If a patient verbalizes suicidal ideation, then immediate referral to an appropriate health care practitioner is warranted (Harrison, Thorp, and Ritzline, 2014).

Delitto et al. (2012) and Billek-Sawhney, Wagner, and Braun (2014) recommended that physiotherapists refer any client with an intent and a plan for suicide for an immediate suicide risk assessment by mental health and medical professionals. Stearns et al. (2021) recommended physiotherapists proactively establish a referral network, including crisis line services, to ensure they are well prepared to support a client experiencing suicidal thoughts.

Discussion

This systematic mapping review of recommended approaches for physiotherapists to the identification, assessment, and management of clients experiencing psychological distress mapped recommendations from 40 secondary or tertiary scholarly articles. Most of the included articles were published in the past decade and were written by physiotherapists and psychologists. The majority of included articles focused on the identification, assessment and management of health-related distress, with a particular emphasis on pain-related distress. There was attention given to depression screening and referral, while other forms of psychological distress, such as generalized anxiety and post-traumatic stress disorder, were not discussed as frequently. Three recommended approaches to detecting and assessing psychological distress were identified: 1) brief depression screen; 2) integrated suicide/non-suicidal self-harm and depression screen; and 3) multi-dimensional screen and health-related distress assessment approach. As for the management of psychological distress, the main recommended approaches identified were: 1) education and reassurance; 2) cognitive-behavioral; 3) mindfulness; and 4) case management (including referral).

Given physiotherapists across all clinical areas of practice encounter clients experiencing psychological distress (Lucas and Parker, 2022; McGrath, Verdon, Parnell, and Pope, 2023) the identification, assessment and management of psychological distress should be of clinical and research interest to all physiotherapy sub-disciplines. According to the IOPTMH, mental health physiotherapists possess the “knowledge, skills and attitudes to assess [but not diagnose], support, treat and refer people with mental illnesses” (Probst et al., 2019, 2020). Although the subdiscipline of mental health physiotherapy is well positioned to provide leadership in this area, the subdiscipline is relatively new and small in

comparison to other established physiotherapy research and practice areas such as musculoskeletal and pain physiotherapy (Heywood et al., 2022). The holistic approach commonly advocated by musculoskeletal and pain physiotherapy researchers incorporates mental health, although there tends to be a stronger emphasis on cognitive and behavioral factors, and when emotional factors are considered it is typically limited to pain-related distress (Daluiso-King and Hebron, 2020; Dillon et al., 2023). Consequently, the articles included in this systematic mapping review largely pertained to the assessment and management of pain-related distress and were typically authored by researchers with expertise in musculoskeletal pain assessment and management. Since the turn of the millennium, there has been considerable development in psychological screening, risk identification, pain-related distress assessment, and pain-related distress management relevant to musculoskeletal and pain physiotherapy settings (Alvarez et al., 2022; Lentz et al., 2016; Main et al., 2023; Stearns et al., 2021; Stewart, Kempenaar, and Lauchlan, 2011). There has also been considerable interest in the intersection of depression and chronic pain in the field of physiotherapy (Carballo-Costa, Quintela-Del-Río, Vivas-Costa, and Costas, 2023). These developments are evident in this review. In contrast, the few articles identified which provide recommendations for the identification, assessment, and management of generalized psychological distress, non-health-related distress, and psychopathology may be explained by the relative lack of development in mental health physiotherapy and psychologically informed physiotherapy in other research subdisciplines, such as neurological physiotherapy (Lucas and Parker, 2022).

The three recommended approaches to detecting and assessing psychological distress identified in this review suggest that screening for all forms of psychological distress is within the scope of physiotherapy practice. However, when all articles were considered together, only the assessment of health-related distress, particularly pain-related distress, was perceived to fall within the scope of the profession, with the formal assessment of non-health-related distress and psychopathology positioned outside of scope. This interpretation is consistent with the ‘Flags’ framework developed by the Decade of the Flags Working Group (Nicholas, Linton, Watson, and Main, 2011). According to the Decade of the Flags Working Group, ‘orange flags’ are psychiatric symptoms that meet criteria for psychopathology that requires referral to a specialist mental health professional for assessment and management. In comparison, ‘yellow flags’ are normal but unhelpful psychological reactions, such as distress not meeting criteria for

diagnosis of a mental disorder that may be addressed by suitably trained health professionals such as physiotherapists (Nicholas, Linton, Watson, and Main, 2011). However, given that many physiotherapists report a lack of confidence in assessing psychological factors, such as pain-related distress (Henning and Smith, 2022; Synnott et al., 2015) and that few have received training in psychological assessment (Driver, Lovell, and Oprescu, 2021; Simpson et al., 2021) currently the assessment of pain-related distress is best described as an advanced area of physiotherapy practice that is beyond the individual scope of most physiotherapists.

The four primary management approaches for psychological distress identified in this review: 1) education and reassurance; 2) cognitive-behavioral approaches; 3) mindfulness; and 4) case management including referral span the continuum of traditional (standard) physiotherapy practice and merge into that of psychologically informed physiotherapy. Although physiotherapists' provision of education and case management is likely to be improved with training (Edgar and Connaughton, 2021; Synnott et al., 2016) the activities are considered to be within the remit of all physiotherapists by the Physiotherapy Board of Australia, Physiotherapy Board of New Zealand (2015). In contrast, management approaches such as cognitive-behavioral and mindfulness-based approaches are likely to require additional training beyond that provided in qualifying physiotherapy programs (Alvarez et al., 2022; Coronado et al., 2020; Tatta, 2022). The finding of the review that the direct treatment of psychopathology is generally viewed as beyond the scope of physiotherapy is incongruent with the position of the IOPTMH. According to the IOPTMH, interventions such as exercise, and cognitive and behavioral physiotherapy approaches, intended to directly reduce psychological symptoms, fall within the scope of specialist mental health physiotherapists working within a multidisciplinary team (Probst et al., 2020). Working within a multidisciplinary team allows physiotherapists to collaborate with other mental health professionals to ensure that their approach is safe and high-quality (Probst et al., 2020). In addition, the use of cognitive-behavioral approaches and mindfulness-based interventions in the management of pain-related distress lie within the scope of specialist pain physiotherapists (Alvarez et al., 2022; Coronado et al., 2020; Keefe, Main, and George, 2018; Tatta, Willgens, and Palombaro, 2022). Safe and effective delivery of cognitive-behavioral approaches and mindfulness-based interventions by physiotherapists requires training, which may include competency assessment, supervision

and feedback (Alexanders and Douglas, 2016; Driver, Lovell, and Oprescu, 2021; Linton and Shaw, 2011; Simpson et al., 2021). Several studies of physiotherapist-delivered psychological interventions included supervision by psychologists as part of training (Alvarez et al., 2022). However, due to the emerging and evolving nature of this aspect of physiotherapy practice, there is no widely accepted standard for training, assessment and supervision (Coronado et al., 2020). Therefore, it is suggested that the management of pain-related distress is within the profession's scope, but it is beyond the individual scope of many physiotherapists. This interpretation is consistent with the Low Back Pain Clinical Care Standard's Quick Guide for Physiotherapists (Maher and O'Sullivan, 2023) which recommends non-specialist physiotherapists refer to specialist physiotherapists where clients are experiencing high levels of pain-related fear and distress, and to psychologists where clients are exhibiting high levels of anxiety, distress, depression, social stress, and unresolved trauma.

While not every included study explicitly referred to the revised flags framework (Nicholas, Linton, Watson, and Main, 2011) recommended approaches reviewed generally assumed that psychological distress can be divided into: yellow (i.e. subclinical and health-related distress); orange (i.e. symptoms of psychopathology); and red flags (i.e. severe depression and/or suicidality). However, differentiating normal distress from symptoms of psychopathology, as well as pain-related distress from depression, anxiety, and post-traumatic stress, is both conceptually and clinically challenging (Kirsh, 2010; Rusu, Santos, and Pincus, 2016; Stein and Nesse, 2015; Young, Lareau, and Pierre, 2014). Although a full discussion of the psychiatric nosology is beyond the scope of this review, there is strong evidence that psychological distress and psychopathological depression and anxiety lie on a continuum, with the boundaries between normal and abnormal being an artificial dichotomization (Ruscio, 2019). Furthermore, there is some debate regarding whether pain-related distress and depression/anxiety in the context of chronic pain are distinct constructs or just strongly related ones (Beesdo et al., 2009; Rusu, Santos, and Pincus, 2016). Consequently, it might be more appropriate to conceptualize yellow flags, orange flags, and red flags on a continuum.

Similar criticisms have been made by Stewart, Kempenaar, and Lauchlan (2011) who argued that the flags framework misses the complexity of the psychological and social world of the individual. Main and George (2011) acknowledged the importance of this criticism of the flags framework, but questioned whether such debate would advance clinical practice in

the “real” world. Although screening tools and awareness of common forms can assist with identification of psychopathology, Kirsh (2010) posited that they are not necessarily sufficient in differentiating normal distress from psychopathology among people experiencing persistent pain. To understand a person’s experience of distress requires an understanding of their context and the meaning of their distress (Johnstone and Dallos, 2014). However, most physiotherapists are not currently trained to obtain this. Physiotherapists, particularly physiotherapists assessing and managing pain-related distress, may benefit from mental health training to assist them to discern whether the psychological distress is generalized or specific to pain. This training is particularly important for physiotherapists, such as those working in rural areas, who may not be able to engage in timely co-care with mental health professionals due to significant workforce shortages (Cleary, Thomas, and Boyle, 2020). There are also concerns that universal depression and anxiety screening in primary care settings may lead to overdiagnosis and overtreatment (Thombs et al., 2023). Thombs et al. (2023) suggested that a more effective approach might be to provide people experiencing mental health concerns with timely access to caring health professionals with time to talk through their concerns, understand them as a person, and work with them to identify the best way forward. Mental health training may help physiotherapists discern when screening is warranted in their specific context. Beyond that, mental health training would equip them to support people experiencing psychological distress, making it possible to connect them with mental health services in a manner that is considerate, compassionate, and understanding.

Limitations

The reviewers’ clinical and research background may have influenced the articles included in the review. The two reviewers RLM and SS who screened, assessed, and extracted the papers practice clinically in the area of pain. Therefore, papers discussing the identification, assessment, and management of pain-related distress may have been more easily identifiable to the reviewers. Furthermore, although the approach to searching the literature was systematic, the heterogeneity of the article topics and article types may mean some eligible articles may not have been included. Additionally, while full-text review involved a double review approach, a single screen approach to screening the titles and abstracts of records was adopted due to the large number of records returned from the database search. Consequently, the risk of eligible articles being incorrectly excluded during

title and abstract screening higher is than with a double screening approach (Waffenschmidt et al., 2019). Another limitation of this review was that it was not designed to evaluate the evidence which formed the basis of the identified recommended approaches. Therefore, physiotherapists should exercise caution when using the results of this review to inform their practice if they have not evaluated the individual included articles and the original research on which they are based. However, physiotherapists may find this review helpful as a directory of literature that describes approaches recommended for physiotherapy practice.

Recommendations for physiotherapy research

More research is needed to further inform the scope and role of physiotherapists in psychological assessment, including providing further clarity around the roles of physiotherapists in general, pain physiotherapists, mental health physiotherapists, and physiotherapists from other specialized areas in psychological assessment. Furthermore, given physiotherapists work in a range of clinical settings and with varying levels of isolation, ranging from sole primary contact physiotherapists working in remote areas to physiotherapists working in multidisciplinary teams alongside psychologists, further research is needed to understand the training required for physiotherapists in this area of practice to facilitate optimal client care. Future research should include evaluation of the evidence behind each of the approaches identified in the review, including investigations of client experiences of physiotherapist-initiated psychological assessment.

Conclusion

This systematic mapping review mapped approaches recommended for physiotherapists to identify, assess, and manage clients experiencing psychological distress and published in the scholarly literature. Current recommendations largely emphasize the role of physiotherapists in assessing and managing health-related distress, particularly pain-related distress. In regard to depression and suicide, physiotherapists were advised to screen for this using questionnaires such as the PHQ-9 and refer onwards to a mental health professional for further assessment. Management of psychological distress was largely focused on reducing health-related distress, with case management including co-care and referral recommended for generalized and non-health-related psychological distress. Given the inseparability of physical and mental health and the

high frequency of encounters with psychological distress in physiotherapy practice, physiotherapists may benefit from specific mental health training to assist them to understand the nature of the distress being experienced by their clients and to enable effective person-centered care.

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ORCID

Ryan L. McGrath BPhysio(Hons), PT  <http://orcid.org/0000-0002-6779-7486>

Sophie Shephard MScMed PT  <http://orcid.org/0000-0002-5810-9784>

Tracey Parnell PhD, OT  <http://orcid.org/0000-0002-7434-1268>

Sarah Verdon PhD, SLP  <http://orcid.org/0000-0002-7503-5860>

Rodney Pope PhD, PT  <http://orcid.org/0000-0002-1320-5801>

References

- Alappattu MJ, Bishop MD 2011 Psychological factors in chronic pelvic pain in women: Relevance and application of the fear-avoidance model of pain. *Physical Therapy* 91: 1542–1550. [10.2522/ptj.20100368](https://doi.org/10.2522/ptj.20100368)
- Alexanders J, Douglas C 2016 The role of psychological skills within physiotherapy: A narrative review of the profession and training. *Physical Therapy Reviews* 21: 222–227. [10.1080/10833196.2016.1274352](https://doi.org/10.1080/10833196.2016.1274352)
- Almond A, Zou Y, Forbes R 2021 Navigating diagnostic uncertainty in musculoskeletal practice: The perspectives and experiences of new graduate physiotherapists. *Musculoskeletal Science and Practice* 52: 102354. [10.1016/j.msksp.2021.102354](https://doi.org/10.1016/j.msksp.2021.102354)
- Alvarez E, Garvin A, Germaine N, Guidoni L, Schnurr M 2022 Use of mental health interventions by physiotherapists to treat individuals with chronic conditions: A systematic scoping review. *Physiotherapy Canada* 74: 35–43. [10.3138/ptc-2020-0066](https://doi.org/10.3138/ptc-2020-0066)
- American Physical Therapy Association 2023 APTA practice advisory: Screening patients for anxiety. <https://www.apta.org/patient-care/interventions/patient-screenings/practice-advisory-screening-for-anxiety>.
- American Psychological Association, American Psychological Association Practice Organization Work Group 2014 Distinguishing between screening and assessment for mental and behavioral health problems. <https://www.apaservices.org/practice/reimbursement/billing/assessment-screening>.
- Aromataris E, Fernandez R, Godfrey CM, Holly C, Khalil H, Tungpunkom P 2015 Summarizing systematic reviews: Methodological development, conduct and reporting of an umbrella review approach. *International Journal of Evidence-Based Healthcare* 13: 132–140. [10.1097/XEB.0000000000000055](https://doi.org/10.1097/XEB.0000000000000055)
- Beck AT, Guth D, Steer RA, Ball R 1997 Beck depression Inventory for primary care (BDI-PC). *APA PsycTests*. [10.1037/t07153-000](https://doi.org/10.1037/t07153-000)
- Beck AT, Steer RA, Brown G 1996 Beck depression Inventory-II (BDI-II). *APA PsycTests*. [10.1037/t00742-000](https://doi.org/10.1037/t00742-000)
- Beck AT, Ward CH, Mendelson M, Mock J, Erbauch J 1961 Beck depression Inventory (BDI). *APA PsycTests*. [10.1037/t00742-000](https://doi.org/10.1037/t00742-000)
- Beekman E, Verhagen A 2018 Clinimetrics: Hospital anxiety and depression scale. *Journal of Physiotherapy* 64: 198. [10.1016/j.jphys.2018.04.003](https://doi.org/10.1016/j.jphys.2018.04.003)
- Beesdo K, Hoyer J, Jacobi F, Low NC, Höfler M, Wittchen HU 2009 Association between generalized anxiety levels and pain in a community sample: Evidence for diagnostic specificity. *Journal of Anxiety Disorders* 23: 684–693. [10.1016/j.janxdis.2009.02.007](https://doi.org/10.1016/j.janxdis.2009.02.007)
- Billek-Sawhney B, Wagner A, Braun J 2014 Depression: Implications for the acute care therapist. *Journal of Acute Care Physical Therapy* 5: 77–88. [10.1097/01.JAT.0000453142.16547.86](https://doi.org/10.1097/01.JAT.0000453142.16547.86)
- Blevins CA, Weathers FW, Davis MT, Witte TK, Domino JL 2015 The posttraumatic stress disorder checklist for DSM-5 (PCL-5): Development and initial psychometric evaluation. *Journal of Traumatic Stress* 28: 489–498. [10.1002/jts.22059](https://doi.org/10.1002/jts.22059)
- Bunzli S, Smith A, Schütze R, Lin I, O'Sullivan P 2017 Making sense of low back pain and pain-related fear. *Journal of Orthopaedic and Sports Physical Therapy* 47: 628–636. [10.2519/jospt.2017.7434](https://doi.org/10.2519/jospt.2017.7434)
- Butera KA, George SZ, Lentz TA 2020 Psychometric evaluation of the optimal screening for prediction of referral and outcome yellow flag (OSPRO-YF) tool: Factor structure, reliability, and validity. *The Journal of Pain* 21: 557–569. [10.1016/j.jpain.2019.09.003](https://doi.org/10.1016/j.jpain.2019.09.003)
- Cancelliere C, Mohammed RJ 2019 Brain drain: Psychosocial factors influence recovery following mild traumatic brain injury - 3 recommendations for clinicians assessing psychosocial factors. *Journal of Orthopaedic and Sports Physical Therapy* 49: 842–844. [10.2519/jospt.2019.8849](https://doi.org/10.2519/jospt.2019.8849)
- Caneiro JP, Bunzli S, O'Sullivan P 2021 Beliefs about the body and pain: The critical role in musculoskeletal pain management. *Brazilian Journal of Physical Therapy* 25: 17–29. [10.1016/j.bjpt.2020.06.003](https://doi.org/10.1016/j.bjpt.2020.06.003)
- Caneiro JP, Smith A, Bunzli S, Linton S, Moseley GL, O'Sullivan P, O'Sullivan P 2022 From fear to safety: A roadmap to recovery from musculoskeletal pain. *Physical Therapy* 102: zab271. [10.1093/ptj/pzab271](https://doi.org/10.1093/ptj/pzab271)

- Cano A, Goubert L 2017 What's in a name? The case of emotional disclosure of pain-related distress. *The Journal of Pain* 18: 881–888. [10.1016/j.jpain.2017.01.008](https://doi.org/10.1016/j.jpain.2017.01.008)
- Carballo-Costa L, Quintela-Del-Río A, Vivas-Costa J, Costas R 2023 Mapping the field of physical therapy and identification of the leading active producers. A bibliometric analysis of the period 2000–2018. *Physiotherapy Theory and Practice* 39: 2407–2419. [10.1080/09593985.2022.2073927](https://doi.org/10.1080/09593985.2022.2073927)
- Chimenti RL, Frey-Law LA, Sluka KA 2018 A mechanism-based approach to physical therapist management of pain. *Physical Therapy* 98: 302–314. [10.1093/ptj/pzy030](https://doi.org/10.1093/ptj/pzy030)
- Cleary A, Thomas N, Boyle F 2020 National mental health workforce strategy. https://www.health.gov.au/sites/default/files/documents/2021/08/national-mental-health-workforce-strategy-a-literature-review_0.docx
- Connaughton J 2018 Working in general practice treating people with comorbid mental health problems. In: Probst M, Skjaerven L (Eds) *Physiotherapy in mental health and psychiatry: A scientific and clinical based approach*, pp. 200–205. Edinburgh, United Kingdom: Elsevier.
- Coons MJ, Hadjistavropoulos HD, Asmundson GJ 2004 Factor structure and psychometric properties of the pain anxiety symptoms Scale-20 in a community physiotherapy clinic sample. *European Journal of Pain* 8: 511–516. [10.1016/j.ejpain.2003.11.018](https://doi.org/10.1016/j.ejpain.2003.11.018)
- Coronado RA, Brintz CE, McKernan LC, Master H, Motzny N, Silva FM, Goyal PM, Wegener ST, Archer KR 2020 Psychologically informed physical therapy for musculoskeletal pain: Current approaches, implications, and future directions from recent randomized trials. *Pain Reports* 5: e847. [10.1097/PR9.0000000000000847](https://doi.org/10.1097/PR9.0000000000000847)
- Crombez G, De Paepe AL, Veirman E, Eccleston C, Verleysen G, Van Ryckeghem DML 2020 Let's talk about pain catastrophizing measures: An item content analysis. *PeerJ* 8: e8643. [10.7717/peerj.8643](https://doi.org/10.7717/peerj.8643)
- Cupler ZA, Alrwaily M, Polakowski E, Mathers KS, Schneider MJ 2020 Taping for conditions of the musculoskeletal system: An evidence map review. *Chiropractic and Manual Therapies* 28: 52. [10.1186/s12998-020-00337-2](https://doi.org/10.1186/s12998-020-00337-2)
- Daley D, Payne LP, Galper J, Cheung A, Deal L, Despres M, Garcia JD, Kistner F, Mackenzie N, Perry T et al. 2021 Clinical guidance to optimize work participation after injury or illness: The role of physical therapists. *Journal of Orthopaedic and Sports Physical Therapy* 51: CPG1–CPG102. [10.2519/jospt.2021.0303](https://doi.org/10.2519/jospt.2021.0303)
- Daluiso-King G, Hebron C 2020 Is the biopsychosocial model in musculoskeletal physiotherapy adequate? An evolutionary concept analysis. *Physiotherapy Theory and Practice* 38: 373–389. [10.1080/09593985.2020.1765440](https://doi.org/10.1080/09593985.2020.1765440)
- De Baets L, Meulders A, Van Damme S, Caneiro JP, Matheve T 2023 Understanding discrepancies in a person's fear of movement and avoidance behavior: A guide for musculoskeletal rehabilitation clinicians who support people with chronic musculoskeletal pain. *Journal of Orthopaedic and Sports Physical Therapy* 53: 307–316. [10.2519/jospt.2023.11420](https://doi.org/10.2519/jospt.2023.11420)
- Delitto A, George SZ, Dillen LV, Whitman JM, Sowa G, Shekelle P, Denninger TR, Godges JJ 2012 Low back pain: Clinical practice guidelines linked to the international classification of functioning, disability, and health from the orthopaedic section of the American Physical Therapy Association. *Journal of Orthopaedic and Sports Physical Therapy* 42: A1–A57. [10.2519/jospt.2012.42.4.A1](https://doi.org/10.2519/jospt.2012.42.4.A1)
- DePrince AP, Chu AT, Pineda AS 2011 Links between specific posttrauma appraisals and three forms of trauma-related distress. *Psychological Trauma: Theory, Research, Practice, & Policy* 3: 430–441. [10.1037/a0021576](https://doi.org/10.1037/a0021576)
- Dillon M, Olson R, Mescouto K, Costa N, Setchell J 2023 How physiotherapists attend to the human aspects of care when working with people with low back pain: A thematic analysis. *Health Sociology Review* 32: 277–293. [10.1080/14461242.2022.2161927](https://doi.org/10.1080/14461242.2022.2161927)
- Djulgovic B, Hozo I, Greenland S 2011 Uncertainty in clinical medicine. In: Gifford F (Ed) *Philosophy of medicine*, pp. 299–356. Amsterdam, the Netherlands: North-Holland.
- Donnelly GM, Brockwell E, Rankin A, Moore IS 2022 Beyond the musculoskeletal system: Considering whole-systems readiness for running postpartum. *Journal of Women's Health Physical Therapy* 46: 48–56. [10.1097/JWH.0000000000000218](https://doi.org/10.1097/JWH.0000000000000218)
- Drapeau A, Marchand A, Beaulieu-Prévost D 2012 Epidemiology of psychological distress. In: L'Abate L (Ed) *Mental illnesses: Understanding, prediction and control*, pp. 105–134. London, United Kingdom: IntechOpen.
- Driver C, Kean B, Oprescu F, Lovell GP 2017 Knowledge, behaviors, attitudes and beliefs of physiotherapists towards the use of psychological interventions in physiotherapy practice: A systematic review. *Disability and Rehabilitation* 39: 2237–2249. [10.1080/09638288.2016.1223176](https://doi.org/10.1080/09638288.2016.1223176)
- Driver C, Lovell GP, Oprescu F 2021 Psychosocial strategies for physiotherapy: A qualitative examination of physiotherapists' reported training preferences. *Nursing and Health Sciences* 23: 136–147. [10.1111/nhs.12771](https://doi.org/10.1111/nhs.12771)
- Dunn KM, Campbell P, Lewis M, Hill JC, van der Windt DA, Afolabi E, Protheroe J, Wathall S, Jowett S, Oppong R, et al. 2021 Refinement and validation of a tool for stratifying patients with musculoskeletal pain. *European Journal of Pain* 25: 2081–2093. [10.1002/ejp.1821](https://doi.org/10.1002/ejp.1821)
- Edgar S, Connaughton J 2021 Using mental health first aid training to improve the mental health literacy of physiotherapy students. *Physiotherapy Canada* 73: 188–193. [10.3138/ptc-2019-0036](https://doi.org/10.3138/ptc-2019-0036)
- Edgerton K, Hall J, Bland MK, Marshall B, Hulla R, Gatchel RJ 2019 A physical therapist's role in pain management: A biopsychosocial perspective. *Journal of Applied Biobehavioral Research* 24: e12170. [10.1111/jabr.12170](https://doi.org/10.1111/jabr.12170)
- Faulkner JW, Snell DL 2023 A framework for understanding the contribution of psychosocial factors in biopsychosocial explanatory models of persistent postconcussion symptoms. *Physical Therapy* 103: zac156. [10.1093/ptj/pzac156](https://doi.org/10.1093/ptj/pzac156)
- Franzen MD 2003 Psychological assessment in medical settings. In: Cohen L, McChargue D, Collins F (Eds) *The health psychology handbook: Practical issues for the behavioral medicine specialist*, pp. 17–27. Thousand Oaks, United States: SAGE Publications.
- George SZ, Valencia C, Zeppieri G, Robinson ME 2009 Development of a self-report measure of fearful activities for patients with low back pain: The fear of daily activities questionnaire. *Physical Therapy* 89: 969–979. [10.2522/ptj.20090032](https://doi.org/10.2522/ptj.20090032)

- George SZ, Zeppieri G 2009 Physical therapy utilization of graded exposure for patients with low back pain. *Journal of Orthopaedic and Sports Physical Therapy* 39: 496–505. [10.2519/jospt.2009.2983](https://doi.org/10.2519/jospt.2009.2983)
- Gioia GA, Collins M, Isquith PK 2008 Improving identification and diagnosis of mild traumatic brain injury with evidence: Psychometric support for the acute concussion evaluation. *Journal of Head Trauma Rehabilitation* 23: 230–242. [10.1097/01.HTR.0000327255.38881.ca](https://doi.org/10.1097/01.HTR.0000327255.38881.ca)
- Grant MJ, Booth A 2009 A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal* 26: 91–108. [10.1111/j.1471-1842.2009.00848.x](https://doi.org/10.1111/j.1471-1842.2009.00848.x)
- Haddaway NR, Page MJ, Pritchard CC, McGuinness LA 2022 Prisma2020: An R package and shiny app for producing PRISMA 2020-compliant flow diagrams, with interactivity for optimised digital transparency and open synthesis. *Campbell Systematic Reviews* 18: e1230. [10.1002/cl2.1230](https://doi.org/10.1002/cl2.1230)
- Haggman S, Maher C, Refshauge K 2004 Screening for symptoms of depression by physical therapists managing low back pain. *Physical Therapy* 84: 1157–1166. [10.1093/ptj/84.12.1157](https://doi.org/10.1093/ptj/84.12.1157)
- Hansen LS, Præstegaard J, Lehn-Christiansen S 2021 Patient-centeredness in physiotherapy - a literature mapping review. *Physiotherapy Theory and Practice* 38: 1843–1856. [10.1080/09593985.2021.1923095](https://doi.org/10.1080/09593985.2021.1923095)
- Harland N, Lavallee D 2003 Biopsychosocial management of chronic low back pain patients with psychological assessment and management tools: Overview. *Physiotherapy* 89: 305–312. [10.1016/S0031-9406\(05\)60043-0](https://doi.org/10.1016/S0031-9406(05)60043-0)
- Harrison AL, Thorp JN, Ritzline PD 2014 A proposed diagnostic classification of patients with temporomandibular disorders: Implications for physical therapists. *Journal of Orthopaedic and Sports Physical Therapy* 44: 182–197. [10.2519/jospt.2014.4847](https://doi.org/10.2519/jospt.2014.4847)
- Henning M, Smith M 2022 The ability of physiotherapists to identify psychosocial factors in patients with musculoskeletal pain: A scoping review. *Musculoskeletal Care* 21: 502–515. [10.1002/msc.1725](https://doi.org/10.1002/msc.1725)
- Heywood SE, Connaughton J, Kinsella R, Black S, Bicchì N, Setchell J 2022 Physical Therapy and mental health: A scoping review. *Physical Therapy* 102: zac102. [10.1093/ptj/pzac102](https://doi.org/10.1093/ptj/pzac102)
- Hill S 2010 The illness perceptions questionnaire-revised (IPQ-R). *Journal of Physiotherapy* 56: 280. [10.1016/S1836-9553\(10\)70062-X](https://doi.org/10.1016/S1836-9553(10)70062-X)
- Hodges PW 2019 Hybrid approach to treatment tailoring for low back pain: A proposed model of care. *Journal of Orthopaedic and Sports Physical Therapy* 49: 453–463. [10.2519/jospt.2019.8774](https://doi.org/10.2519/jospt.2019.8774)
- Horowitz MJ, Wilner N, Alvarez W 1979 Impact of Event Scale (IES). APA PsycTests. [10.1037/t00303-000](https://doi.org/10.1037/t00303-000)
- Howlett B, Rogo E 2021 What evidence-based practice is and why it matters. In: Howlett B, Shelton T Rogo E (Eds) *Evidence based practice for health professionals*, pp. 1–24. Burlington, United States: Jones and Bartlett Learning.
- Hunter EE, Murphy M 2011 Zung self-rating depression scale. In: Kreutzer J, DeLuca J Caplan B (Eds) *Encyclopedia of clinical neuropsychology*, pp. 2746–2747. New York, United States: Springer.
- Iles R, Sheehan L, Munk K, Gosling C 2020 Development and pilot assessment of the pace tool: Helping case managers identify and respond to risk factors in workers' compensation case management. *Journal of Occupational Rehabilitation* 30: 167–182. [10.1007/s10926-019-09858-x](https://doi.org/10.1007/s10926-019-09858-x)
- Jamison JR 2006 *Differential diagnosis for primary care, a handbook for health care practitioners*. Philadelphia: Elsevier (Churchill Livingstone)
- Johnstone L, Dallos R 2014 Introduction to formulation. In: Johnstone L Dallos R (Eds) *Formulation in psychology and psychotherapy: Making sense of people's problems (2nd)*, pp. 1–17. United Kingdom: East SussexRoutledge.
- Julian LJ 2011 Measures of anxiety: State-Trait anxiety Inventory (STAI), Beck anxiety Inventory (BAI), and Hospital anxiety and depression Scale-anxiety (HADS-A). *Arthritis Care and Research* 63: S467–S472. [10.1002/acr.20561](https://doi.org/10.1002/acr.20561)
- Keefe FJ, Main CJ, George SZ 2018 Advancing psychologically informed practice for patients with persistent musculoskeletal pain: Promise, pitfalls, and solutions. *Physical Therapy* 98: 398–407. [10.1093/ptj/pzy024](https://doi.org/10.1093/ptj/pzy024)
- Kirsh KL 2010 Differentiating and managing common psychiatric comorbidities seen in chronic pain patients. *Journal of Pain and Palliative Care Pharmacotherapy* 24: 39–47. [10.3109/15360280903583123](https://doi.org/10.3109/15360280903583123)
- Kroenke K, Spitzer RL, Williams JB 1999 Patient Health Questionnaire-9 (PHQ-9). APA PsycTests. [10.1037/t06165-000](https://doi.org/10.1037/t06165-000)
- Kroenke K, Spitzer RL, Williams JB 2003 The patient health questionnaire-2: Validity of a two-item depression screener. *Medical Care* 41: 1284–1292. [10.1097/01.MLR.0000093487.78664.3C](https://doi.org/10.1097/01.MLR.0000093487.78664.3C)
- Kroenke K, Wu J, Yu Z, Bair MJ, Kean J, Stump T, Monahan PO 2016 Patient health Questionnaire anxiety and depression Scale (PHQ-ADS). APA PsycTests. [10.1037/t55980-000](https://doi.org/10.1037/t55980-000)
- Laporte G, Aita M 2021 Psychological distress as a unique concept: A response to Molgora et al. (2020). *Journal of Affective Disorders* 278: 13–14. [10.1016/j.jad.2020.09.050](https://doi.org/10.1016/j.jad.2020.09.050)
- Lennon O, Ryan C, Helm M, Moore K, Sheridan A, Probst M, Cunningham C 2020 Psychological distress among patients attending physiotherapy: A survey-based investigation of Irish physiotherapists' current practice and opinions. *Physiotherapy Canada* 72: 239–248. [10.3138/ptc-2019-0010](https://doi.org/10.3138/ptc-2019-0010)
- Lentz TA, Beneciuk JM, Bialosky JE, Zeppieri G, Dai Y, Wu SS, George SZ, George SZ 2016 Development of a yellow flag assessment tool for orthopaedic physical therapists: Results from the optimal screening for prediction of referral and outcome (OSPRO) cohort. *Journal of Orthopaedic and Sports Physical Therapy* 46: 327–343. [10.2519/jospt.2016.6487](https://doi.org/10.2519/jospt.2016.6487)
- Linton SJ, Boersma K 2003 Early identification of patients at risk of developing a persistent back problem: The predictive validity of the Örebro musculoskeletal pain questionnaire. *The Clinical Journal of Pain* 19: 80–86. [10.1097/00002508-200303000-00002](https://doi.org/10.1097/00002508-200303000-00002)
- Linton SJ, Flink IK, Vlaeyen JW 2018 Understanding the etiology of chronic pain from a psychological perspective. *Physical Therapy* 98: 315–324. [10.1093/ptj/pzy027](https://doi.org/10.1093/ptj/pzy027)
- Linton SJ, Nicholas M, MacDonald S 2011 Development of a short form of the Örebro musculoskeletal pain screening

- questionnaire. *Spine* 36: 1891–1895. [10.1097/BRS.0b013e3181f8f775](https://doi.org/10.1097/BRS.0b013e3181f8f775)
- Linton SJ, Shaw WS 2011 Impact of psychological factors in the experience of pain. *Physical Therapy* 91: 700–711. [10.2522/ptj.20100330](https://doi.org/10.2522/ptj.20100330)
- Lo C, Hales S, Zimmermann C, Gagliese L, Rydall A, Rodin G 2011 Measuring death-related anxiety in advanced cancer: Preliminary psychometrics of the death and dying distress scale. *Journal of Pediatric Hematology/Oncology* 33: S140–S145. [10.1097/MPH.0b013e318230e1fd](https://doi.org/10.1097/MPH.0b013e318230e1fd)
- Lord S 2018 Perceptions of Physiotherapists Regarding Their Role in the Management of Patients with Mental Health Disorders. Doctoral Dissertation, University of the Witwatersrand.
- Lucas L, Parker J 2022 Physiotherapists perceived role in managing anxiety in patients with relapsing-remitting multiple sclerosis: A mixed-methods study. *Archives of Physiotherapy* 12: 2. [10.1186/s40945-021-00124-z](https://doi.org/10.1186/s40945-021-00124-z)
- Maher C, O’Sullivan P 2023 Low back pain standard an opportunity for physios. *InMotion May*: 33–39. <https://australian.physio/inmotion/low-back-pain-standard-opportunity-physios>.
- Main CJ, Ballengee LA, George SZ, Beneciuk JM, Greco CM, Simon CB 2023 Psychologically informed practice (PIP): The importance of communication in clinical implementation. *Physical Therapy* 103: zad047. [10.1093/ptj/pzad047](https://doi.org/10.1093/ptj/pzad047)
- Main CJ, George SZ 2011 Psychologically informed practice for management of low back pain: Future directions in practice and research. *Physical Therapy* 91: 820–824. [10.2522/ptj.20110060](https://doi.org/10.2522/ptj.20110060)
- Main CJ, Simon CB, Beneciuk JM, Greco CM, George SZ, Ballengee LA 2023 The psychologically informed practice (PIP) consultation roadmap: A clinical implementation strategy. *Physical Therapy* 103: zad048. [10.1093/ptj/pzad048](https://doi.org/10.1093/ptj/pzad048)
- Main CJ, Watson PJ 1999 Psychological aspects of pain. *Manual Therapy* 4: 203–215. [10.1054/math.1999.0208](https://doi.org/10.1054/math.1999.0208)
- Main CJ, Wood PL, Hollis S, Spanswick CC, Waddell G 1992 The distress and risk assessment method: A simple patient classification to identify distress and evaluate the risk of poor outcome. *Spine* 17: 42–52. [10.1097/00007632-199201000-00007](https://doi.org/10.1097/00007632-199201000-00007)
- McGrath RL, Parnell T, Verdon S, Pope R 2022 “People suffer and we see this”: A qualitative study of the forms of patient psychological distress encountered by physiotherapists. *Physiotherapy Theory and Practice Online* ahead of print. [10.1080/09593985.2022.2141085](https://doi.org/10.1080/09593985.2022.2141085)
- McGrath RL, Pope R, Parnell T, Verdon S 2022 Assessing and managing physiotherapy clients experiencing psychological distress: A scoping review protocol. *Open Science Framework* [10.17605/OSF.IO/MJB6N](https://doi.org/10.17605/OSF.IO/MJB6N)
- McGrath RL, Verdon S, Parnell T, Pope R 2023 Australian physiotherapists’ perceived frequency of contact with clients experiencing distress: A cross-sectional survey. *Physiotherapy Theory and Practice* 1–18 Online ahead of print. [10.1080/09593985.2023.2204962](https://doi.org/10.1080/09593985.2023.2204962)
- McNeil DW, Rainwater AJ 1998 Development of the fear of pain questionnaire-III. *Journal of Behavioral Medicine* 21: 389–410. [10.1023/A:1018782831217](https://doi.org/10.1023/A:1018782831217)
- Mirowsky J, Ross CE 2003 Social causes of psychological distress. 2nd New York, United States: Transaction Publishers.
- Mitchell T, Beales D, Slater H, O’Sullivan PB 2018 Musculoskeletal clinical translation framework: From knowing to doing. Perth: Curtin University.
- Morgan DL, Nica A 2020 Iterative thematic inquiry: A new method for analyzing qualitative data. *International Journal of Qualitative Methods* 19: 1–11. [10.1177/1609406920955118](https://doi.org/10.1177/1609406920955118)
- Motlagh H 2010 Impact of event scale-revised. *Journal of Physiotherapy* 56: 203. [10.1016/S1836-9553\(10\)70029-1](https://doi.org/10.1016/S1836-9553(10)70029-1)
- Ng TS 2012 Brief illness perception questionnaire (brief IPQ). *Journal of Physiotherapy* 58: 202. [10.1016/S1836-9553\(12\)70116-9](https://doi.org/10.1016/S1836-9553(12)70116-9)
- Nicholas MK, Linton SJ, Watson PJ, Main CJ 2011 The “Decade of the flags” working group 2011 early identification and management of psychological risk factors (“yellow flags”) in patients with low back pain: A reappraisal. *Physical Therapy* 91: 737–753. [10.2522/ptj.20100224](https://doi.org/10.2522/ptj.20100224)
- Nijs J, Wijma AJ, Leysen L, Pas R, Willaert W, Hoelen W, Ickmans K, van Wilgen CP 2019 Explaining pain following cancer: A practical guide for clinicians. *Brazilian Journal of Physical Therapy* 23: 367–377. [10.1016/j.bjpt.2018.12.003](https://doi.org/10.1016/j.bjpt.2018.12.003)
- O’Sullivan PB, Caneiro JP, O’Keeffe M, Smith A, Dankaerts W, Fersum K, O’Sullivan K 2018 Cognitive functional therapy: An integrated behavioral approach for the targeted management of disabling low back pain. *Physical Therapy* 98: 408–423. [10.1093/ptj/pzy022](https://doi.org/10.1093/ptj/pzy022)
- O’Sullivan PB, Smith A, Beales D, Straker L 2017 Understanding adolescent low back pain from a multidimensional perspective: Implications for management. *Journal of Orthopaedic and Sports Physical Therapy* 47: 741–751. [10.2519/jospt.2017.7376](https://doi.org/10.2519/jospt.2017.7376)
- Paolo FP, Joaquim R 2018 Ten simple rules for conducting umbrella reviews. *Evidence-Based Mental Health* 21: 95–100. [10.1136/ebmental-2018-300014](https://doi.org/10.1136/ebmental-2018-300014)
- Parkitny L, McAuley J 2010 The depression anxiety stress scale (DASS). *Journal of Physiotherapy* 56: 204. [10.1016/S1836-9553\(10\)70030-8](https://doi.org/10.1016/S1836-9553(10)70030-8)
- Payton AR 2009 Mental health, mental illness, and psychological distress: Same continuum or distinct phenomena? *Journal of Health and Social Behavior* 50: 2 213–227. [10.1177/002214650905000207](https://doi.org/10.1177/002214650905000207)
- Peters MD, Godfrey C, McInerney P, Munn Z, Tricco AC, Khalil H 2020 Scoping reviews (2020 version). In: Aromataris E Munn Z (Eds) *JBIM manual for evidence synthesis*, Adelaide, Australia: Joanna Briggs Institute.
- Pham MT, Rajić A, Greig JD, Sargeant JM, Papadopoulos A, McEwen SA 2014 A scoping review of scoping reviews: Advancing the approach and enhancing the consistency. *Research Synthesis Methods* 5: 371–385. [10.1002/jrsm.1123](https://doi.org/10.1002/jrsm.1123)
- Phillips MR 2009 Is distress a symptom of mental disorders, a marker of impairment, both or neither? *World Psychiatry* 8: 91–92.
- Physiotherapy Board of Australia, Physiotherapy Board of New Zealand 2015. *Physiotherapy practice thresholds in Australia and Aotearoa New Zealand*. <https://physiocouncil.com.au/wp-content/uploads/2017/10/Physiotherapy->

- Board-Physiotherapy-practice-thresholds-in-Australia-and-Aotearoa-New-Zealand.pdf.
- Pilkonis PA, Choi SW, Reise SP, Stover AM, Riley WT, Cella D 2011 Item banks for measuring emotional distress from the patient-reported outcomes measurement information system (PROMIS®): Depression, anxiety, and anger. *Assessment* 18: 263–283. [10.1177/1073191111411667](https://doi.org/10.1177/1073191111411667)
- Probst M, Brunner E, Connaughton J, Sallinen M, Skjaerven L 2020 Educational standards: Describing Minimal Requirements of mental health Courses in physiotherapy education. https://www.ioptmh.org/_files/ugd/9f5f61_0c2220d67fbc47ecb3ed41567d262b03.pdf.
- Probst M, Skjaerven L, Connaughton J, Brunner E, Sallinen M, Sloomweg L, Van Damme T, Stubbs B, Vancampfort D, Staub C, et al. 2019. Policy statement: The role of Physical therapists within mental health and psychiatry. https://www.ioptmh.org/_files/ugd/9f5f61_43fe2b1bad6a42939129e588e7aa30e1.pdf.
- Rabey M, Moloney N 2022 “I don’t know why I’ve got this pain!” Allostatic as a possible explanatory model. *Physical Therapy* 102: zac017. [10.1093/ptj/pzac017](https://doi.org/10.1093/ptj/pzac017)
- Radloff LS 1977 Center for Epidemiological studies depression Scale. *APA PsycTests*. [10.1037/t02942-000](https://doi.org/10.1037/t02942-000)
- Raphael B 1975 Crisis and the physiotherapist. *Australian Journal of Physiotherapy* 21: 51–56. [10.1016/S0004-9514\(14\)61207-1](https://doi.org/10.1016/S0004-9514(14)61207-1)
- Rebbeck T 2017 The role of exercise and patient education in the noninvasive management of whiplash. *Journal of Orthopaedic and Sports Physical Therapy* 47: 481–491. [10.2519/jospt.2017.7138](https://doi.org/10.2519/jospt.2017.7138)
- Ribeiro C, Tsang L, Lin B, Kemp-Smith K, Phillips J, Furness J 2022 Physiotherapists’ perceptions of their role in treating and managing people with depression and anxiety disorders: A systematic review. *Online ahead of print*. [10.1080/09593985.2022.2122915](https://doi.org/10.1080/09593985.2022.2122915)
- Ridner SH 2004 Psychological distress: Concept analysis. *Journal of Advanced Nursing* 45: 536–545. [10.1046/j.1365-2648.2003.02938.x](https://doi.org/10.1046/j.1365-2648.2003.02938.x)
- Ruscio AM 2019 Normal versus pathological mood: Implications for diagnosis. *Annual Review of Clinical Psychology* 15: 179–205. [10.1146/annurev-clinpsy-050718-095644](https://doi.org/10.1146/annurev-clinpsy-050718-095644)
- Rusu AC, Santos R, Pincus T 2016 Pain-related distress and clinical depression in chronic pain: A comparison between two measures. *Scandinavian Journal of Pain* 12: 62–67. [10.1016/j.sjpain.2016.04.001](https://doi.org/10.1016/j.sjpain.2016.04.001)
- Schultz IZ, Crook J, Berkowitz J, Milner R, Meloche GR 2005 Predicting return to work after low back injury using the psychosocial risk for occupational disability instrument: A validation study. *Journal of Occupational Rehabilitation* 15: 365–376. [10.1007/s10926-005-5943-9](https://doi.org/10.1007/s10926-005-5943-9)
- Scurlock-Evans L, Upton P, Upton D 2014 Evidence-based practice in physiotherapy: A systematic review of barriers, enablers and interventions. *Physiotherapy* 100: 208–219. [10.1016/j.physio.2014.03.001](https://doi.org/10.1016/j.physio.2014.03.001)
- Seng EK, Klepper JE 2017 Cogniphobia Scale for headache disorders (CS-HD). *APA PsycTests*. [10.1037/t64748-000](https://doi.org/10.1037/t64748-000)
- Sharkey CM, Bakula DM, Baraldi AN, Perez MN, Suorsa KI, Chaney JM, Mullins LL 2018 Grit, illness-related distress, and psychosocial outcomes in college students with a chronic medical condition: A path analysis. *Journal of Pediatric Psychology* 43: 552–560. [10.1093/jpepsy/jsx145](https://doi.org/10.1093/jpepsy/jsx145)
- Shaw WS, Pransky G, Patterson W, Winters T 2005 Early disability risk factors for low back pain assessed at outpatient occupational health clinics. *Spine* 30: 572–580. [10.1097/01.brs.0000154628.37515.ef](https://doi.org/10.1097/01.brs.0000154628.37515.ef)
- Shrestha SD, Pradhan R, Tran TD, Gualano RC, Fisher JR 2016 Reliability and validity of the Edinburgh Postnatal Depression Scale (EPDS) for detecting Perinatal Common Mental Disorders (PCMDs) among women in low-and lower-middle-income countries: A systematic review. *BMC Pregnancy and Childbirth* 16: 72. [10.1186/s12884-016-0859-2](https://doi.org/10.1186/s12884-016-0859-2)
- Simonds AH, Abraham K, Spitznagle T 2022 Clinical practice guidelines for pelvic girdle pain in the postpartum population. *Journal of Women’s and Pelvic Health Physical Therapy* 46: E1–E38. [10.1097/JWH.0000000000000236](https://doi.org/10.1097/JWH.0000000000000236)
- Simon CB, Hicks GE 2018 Paradigm shift in geriatric low back pain management: Integrating influences, experiences, and consequences. *Physical Therapy* 98: 434–446. [10.1093/ptj/pzy028](https://doi.org/10.1093/ptj/pzy028)
- Simpson P, Holopainen R, Schütze R, O’Sullivan P, Smith A, Linton SJ, Nicholas M, Kent P 2021 Training of physical therapists to deliver individualized biopsychosocial interventions to treat musculoskeletal pain conditions: A scoping review. *Physical Therapy* 101: zab188. [10.1093/ptj/pzab188](https://doi.org/10.1093/ptj/pzab188)
- Singla M, Jones M, Edwards I, Kumar S 2015 Physiotherapists’ assessment of patients’ psychosocial status: Are we standing on thin ice? A qualitative descriptive study. *Manual Therapy* 20: 328–334. [10.1016/j.math.2014.10.004](https://doi.org/10.1016/j.math.2014.10.004)
- Smith JM, Lee AC, Zeleznik H, Coffey Scott JP, Fatima A, Needham DM, Ohtake PJ 2020 Home and community-based physical therapist management of adults with post-intensive care syndrome. *Physical Therapy* 100: 1062–1073. [10.1093/ptj/pzaa059](https://doi.org/10.1093/ptj/pzaa059)
- Snell DL, Siegert RJ, Debert C, Cairncross M, Silverberg ND 2020 Fear avoidance behavior after traumatic brain injury Questionnaire (FAB-TBI). *APA PsycTests*. [10.1037/t82263-000](https://doi.org/10.1037/t82263-000)
- Spearing R, Bailey J 2012 Depression and chronic physical illness: Its prevalence and diagnosis, and implications for therapeutic practice. *International Journal of Therapy and Rehabilitation* 19: 394–403. [10.12968/ijtr.2012.19.7.394](https://doi.org/10.12968/ijtr.2012.19.7.394)
- Spitzer RL, Kroenke K, Williams JBW, Löwe B 2006 A brief measure for assessing generalized anxiety disorder: The GAD-7. *Archives of Internal Medicine* 166: 1092–1097. [10.1001/archinte.166.10.1092](https://doi.org/10.1001/archinte.166.10.1092)
- Stearns ZR, Carvalho ML, Beneciuk JM, Lentz TA, Lentz TA 2021 Screening for yellow flags in orthopaedic physical therapy: A clinical framework. *Journal of Orthopaedic and Sports Physical Therapy* 51: 459–469. [10.2519/jospt.2021.10570](https://doi.org/10.2519/jospt.2021.10570)
- Stein DJ, Nesse RM 2015 Normal and abnormal anxiety in the age of DSM-5 and ICD-11. *Emotion Review* 7: 223–229. [10.1177/1754073915575407](https://doi.org/10.1177/1754073915575407)
- Sterling M 2009 Physical and psychological aspects of whiplash: Important considerations for primary care assessment, part 2 - case studies. *Manual Therapy* 14: e8–e12. [10.1016/j.math.2008.03.004](https://doi.org/10.1016/j.math.2008.03.004)

- Sterling M 2011 General health Questionnaire-28 (GHQ-28). *Journal of Physiotherapy* 57: 259. [10.1016/S1836-9553\(11\)70060-1](https://doi.org/10.1016/S1836-9553(11)70060-1)
- Sterling M 2014 Physiotherapy management of whiplash-associated disorders (WAD). *Journal of Physiotherapy* 60: 5–12. [10.1016/j.jphys.2013.12.004](https://doi.org/10.1016/j.jphys.2013.12.004)
- Sterling M, Kenardy J 2008 Physical and psychological aspects of whiplash: Important considerations for primary care assessment. *Manual Therapy* 13: 93–102. [10.1016/j.math.2007.11.003](https://doi.org/10.1016/j.math.2007.11.003)
- Stewart J, Kempenaar L, Lauchlan D 2011 Rethinking yellow flags. *Manual Therapy* 16: 196–198. [10.1016/j.math.2010.11.005](https://doi.org/10.1016/j.math.2010.11.005)
- Sullivan MJ, Adams H, Horan S, Maher D, Boland D, Gross R 2008 The role of perceived injustice in the experience of chronic pain and disability: Scale development and validation. *Journal of Occupational Rehabilitation* 18: 249–261. [10.1007/s10926-008-9140-5](https://doi.org/10.1007/s10926-008-9140-5)
- Sullivan MJ, Bishop SR, Pivik J 1995 Pain catastrophizing Scale (PCS). *APA PsycTests*. [10.1037/t01304-000](https://doi.org/10.1037/t01304-000)
- Synnott A, O’Keeffe M, Bunzli S, Dankaerts W, O’Sullivan P, O’Sullivan K 2015 Physiotherapists may stigmatise or feel unprepared to treat people with low back pain and psychosocial factors that influence recovery: A systematic review. *Journal of Physiotherapy* 61: 68–76. [10.1016/j.jphys.2015.02.016](https://doi.org/10.1016/j.jphys.2015.02.016)
- Synnott A, O’Keeffe M, Bunzli S, Dankaerts W, O’Sullivan P, Robinson K, O’Sullivan K 2016 Physiotherapists report improved understanding of and attitude toward the cognitive, psychological and social dimensions of chronic low back pain after cognitive functional therapy training: A qualitative study. *Journal of Physiotherapy* 62: 215–221. [10.1016/j.jphys.2016.08.002](https://doi.org/10.1016/j.jphys.2016.08.002)
- Tatta J 2022 Introducing a physical therapist-led acceptance and commitment therapy training for pain: A clinical perspective. *Internet Journal of Allied Health Sciences & Practice* 20: 16. [10.46743/1540-580X/2022.2061](https://doi.org/10.46743/1540-580X/2022.2061)
- Tatta J, Willgens AM, Palombaro KM 2022 Mindfulness and acceptance-based interventions in physical therapist practice: The time is now. *Physical Therapy* 102: zab293. [10.1093/ptj/pzab293](https://doi.org/10.1093/ptj/pzab293)
- Thomas F, Hansford L, Ford J, Wyatt K, McCabe R, Byng R 2018 Moral narratives and mental health: Rethinking understandings of distress and healthcare support in contexts of austerity and welfare reform. *Palgrave Communications* 4: 39. [10.1057/s41599-018-0091-y](https://doi.org/10.1057/s41599-018-0091-y)
- Thombs BD, Markham S, Rice DB, Ziegelstein RC, Ziegelstein RC 2023 Screening for depression and anxiety in general practice. *BMJ* 382: 1615. [10.1136/bmj.p1615](https://doi.org/10.1136/bmj.p1615)
- Timmermans S, Angell A 2001 Evidence-based medicine, clinical uncertainty, and learning to doctor. *Journal of Health and Social Behavior* 42: 342–359. [10.2307/3090183](https://doi.org/10.2307/3090183)
- Traeger A, McAuley JH 2013 STarT back screening tool. *Journal of Physiotherapy* 59: 131. [10.1016/S1836-9553\(13\)70170-X](https://doi.org/10.1016/S1836-9553(13)70170-X)
- Tricco AC, Lillie E, Zarin W, O’Brien KK, Colquhoun H, Levac D, Moher D, Peters MDJ, Horsley T, Weeks L et al. 2018 Prisma extension for scoping reviews (PRISMA-SCR): Checklist and explanation. *Annals of Internal Medicine* 169: 467–473. [10.7326/M18-0850](https://doi.org/10.7326/M18-0850)
- Turner P 2001 Evidence-based practice and physiotherapy in the 1990s. *Physiotherapy Theory and Practice* 17: 107–121. [10.1080/095939801750334185](https://doi.org/10.1080/095939801750334185)
- VandenBos GR 2015 *APA dictionary of Psychology*. 2nd p. 70. Washington DC, United States: American Psychological Association.
- van Dijk H, Köke AJ, Elbers S, Mollema J, Smeets R, Wittink H 2023 Physiotherapists using the biopsychosocial model for chronic pain: Barriers and facilitators - a scoping review. *International Journal of Environmental Research and Public Health* 20: 1634. [10.3390/ijerph20021634](https://doi.org/10.3390/ijerph20021634)
- Vandyken C, Hilton S 2017 Physical therapy in the treatment of central pain mechanisms for female sexual pain. *Sexual Medicine Reviews* 5: 20–30. [10.1016/j.sxmr.2016.06.004](https://doi.org/10.1016/j.sxmr.2016.06.004)
- Van Wyngaarden JJ, Noehren B, Archer KR 2019 Assessing psychosocial profile in the physical therapy setting. *Journal of Applied Biobehavioral Research* 24: e12165. [10.1111/jabr.12165](https://doi.org/10.1111/jabr.12165)
- Varela AJ, Melvin A 2023 The theatre of depression: A role for physical therapy. *Physiotherapy Theory and Practice* 39: 1325–1341. [10.1080/09593985.2022.2041136](https://doi.org/10.1080/09593985.2022.2041136)
- Vieira ER, Brown E, Raue P 2014 Depression in older adults: Screening and referral. *Journal of Geriatric Physical Therapy* 37: 24–30. [10.1519/JPT.0b013e31828df26f](https://doi.org/10.1519/JPT.0b013e31828df26f)
- Waddell G, Newton M, Henderson I, Somerville D, Main CJ 1993 Fear-avoidance beliefs Questionnaire (FABQ). *APA PsycTests*. [10.1037/t11850-000](https://doi.org/10.1037/t11850-000)
- Waffenschmidt S, Knelangen M, Sieben W, Bühn S, Pieper D 2019 Single screening versus conventional double screening for study selection in systematic reviews: A methodological systematic review. *BMC Medical Research Methodology* 19: 132. [10.1186/s12874-019-0782-0](https://doi.org/10.1186/s12874-019-0782-0)
- Ware JE 2000 SF-36 health survey update. *Spine* 25: 3130–3139. [10.1097/00007632-200012150-00008](https://doi.org/10.1097/00007632-200012150-00008)
- Ware JE, Snow KK, Kosinski M, Gandek B 1993 *SF-36 health survey: Manual and interpretation guide*. Boston, United States: The Health Institute, New England Medical Center Hospitals. <https://search.worldcat.org/title/sf-36-health-survey-manual-and-interpretation-guide/oclc/28895942>
- Watson PJ 1999 Psychosocial assessment: The emergence of a new fashion, or a new tool in physiotherapy for musculoskeletal pain? *Physiotherapy* 85: 530–535. [10.1016/S0031-9406\(05\)61246-1](https://doi.org/10.1016/S0031-9406(05)61246-1)
- Watson PJ, Kendall N 2000 The assessment of psychosocial yellow flags in physiotherapy practice. In: Gifford L (Ed) *Topical issues in pain 2. Biopsychosocial assessment. Relationships and pain*, pp. 85–110. Falmouth, United Kingdom: CNS Press.
- Weathers FW, Bovin MJ, Lee DJ, Sloan DM, Schnurr PP, Kaloupek DG, Keane TM, Marx BP 2017 Clinician-administered PTSD Scale for DSM-5. pp. CAPS-5. *APA PsycTests*. [10.1037/t71324-000](https://doi.org/10.1037/t71324-000)
- Weermeijer JD, Meulders A, Meulders, A 2018 Clinimetrics: Tampa scale for kinesiphobia. *Journal of Physiotherapy* 64: 126. [10.1016/j.jphys.2018.01.001](https://doi.org/10.1016/j.jphys.2018.01.001)
- Wicksell RK, Renöfalt J, Olsson GL, Bond FW, Melin L 2008 Psychological Inflexibility in pain Scale (PIPS). *APA PsycTests*. [10.1037/t23288-000](https://doi.org/10.1037/t23288-000)
- Wideman TH, Sullivan MJL 2012 Development of a cumulative psychosocial factor index for problematic

- recovery following work-related musculoskeletal injuries. *Physical Therapy* 92: 58–68. [10.2522/ptj.20110071](https://doi.org/10.2522/ptj.20110071)
- Wijma AJ, van Wilgen CP, Meeus M, Nijs J 2016 Clinical biopsychosocial physiotherapy assessment of patients with chronic pain: The first step in pain neuroscience education. *Physiotherapy Theory and Practice* 32: 368–384. [10.1080/09593985.2016.1194651](https://doi.org/10.1080/09593985.2016.1194651)
- Willy RW, Høglund LT, Barton CJ, Bolgia LA, Scalzitti DA, Logerstedt DS, Lynch AD, Snyder-Mackler L, McDonough CM 2019 Patellofemoral pain: Clinical practice guidelines linked to the international classification of functioning, disability and health from the academy of orthopaedic physical therapy of the American Physical Therapy Association. *Journal of Orthopaedic and Sports Physical Therapy* 49: CPG1–CPG95. [10.2519/jospt.2019.0302](https://doi.org/10.2519/jospt.2019.0302)
- Woolf SH, Grol R, Hutchinson A, Eccles M, Grimshaw J 1999 Clinical guidelines: Potential benefits, limitations, and harms of clinical guidelines. *BMJ* 318: 527–530. [10.1136/bmj.318.7182.527](https://doi.org/10.1136/bmj.318.7182.527)
- Yesavage JA, Brink TL, Rose TL, Lum O, Huang V, Adey M, Leirer O 1983 Geriatric depression Scale (GDS). APA *PsycTests*. [10.1037/t00930-000](https://doi.org/10.1037/t00930-000)
- Young G, Lareau C, Pierre B 2014 One quintillion ways to have PTSD comorbidity: Recommendations for the disordered DSM-5. *Psychological Injury and Law* 7: 61–74. [10.1007/s12207-014-9186-y](https://doi.org/10.1007/s12207-014-9186-y)