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RESEARCH ARTICLE

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Systematic review of therapeutic interventions for psychological adjustment to physical health diagnoses in adults

Charlotte R. Stoner[a,b], Alexandra Perkins[b], Helen Durgante[c], Linda Birt[d] and Aimee Spector[e]

[a]The Geller Institute of Ageing and Memory (GIAM), University of West London, Ealing, London, UK; [b]Research and Development, North East London NHS Foundation Trust, Ilford, Essex, UK; [c]Faculty of Medicine, Psychology, and Occupational Therapy, Federal University of Pelotas, Brazil; [d]School of Healthcare, University of Leicester, Ilford, Essex, UK; [e]Research Department of Clinical, Educational and Health Psychology, University College London (UCL), Ilford, Essex, UK

ABSTRACT

Receiving a diagnosis of a physical health condition can present significant psychological challenges. Despite this, structured post-diagnostic support aimed at fostering psychological adjustment remains limited in many clinical settings. This systematic review aimed to identify and synthesise evidence on interventions designed specifically to promote psychological adjustment following such diagnoses, with a focus on evaluating their effectiveness and feasibility. A systematic review of MEDLINE, PsycINFO, Scopus and CINAHL from inception until May 2024. Studies were assessed for quality using the CASP and MMAT, and the impact of the intervention on outcomes of psychological adjustment, emotional adjustment, coping or similar were extracted. This review was PROSPERO registered (CRD42023452369). Forty-five articles were evaluated ($n = 4{,}848$). Most reported interventions in cancer (28/45), but other populations were represented including neurodegenerative disease, and neurological brain trauma. Interventions were heterogenous, but Cognitive Behavioural Therapy (CBT) or a Cognitive based psychotherapy were most common ($n = 20$) and improved psychological adaptation across clinical groups. Examples of other interventions included general psychotherapy ($n = 3$), Acceptance and Commitment Therapy (ACT; $n = 2$), and stress management ($n = 3$). Interventions that incorporated mindfulness were largely successful and were highly acceptable to participants. Multiple evidence-based interventions were identified that promote psychological adjustment. Further research is needed to explore the sustainability, scalability, and economic impact of these interventions across clinical settings.

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Therapeutic intervention; psychological adjustment; coping; chronic illness

Introduction

When someone is unable to adapt to a chronic health condition, they may experience psychological distress, which has been associated with reduced health-

CONTACT Charlotte R. Stoner c.r.stoner@gre.ac.uk The Geller Institute of Ageing and Memory (GIAM), University of West London, St Mary's Road, Ealing, London W5 5RF, UK

related quality of life (Keles et al., 2007; Stanton et al., 2015), greater outpatient care use (Bouchard et al., 2023) and more frequent hospitalisation (Longman et al., 2012). As such, interventions designed to promote psychological adjustment to chronic disease are of vital importance for patient outcomes (Akyirem et al., 2022).

The goal of psychological adjustment is to return to an emotional equilibrium that was disrupted by the onset of the condition (Dekker, 2024; Moss-Morris, 2013). Numerous theories and frameworks have been used to better understand psychological adjustment including stress and coping models (Lazarus & Folkman, 1984), but more recently, efforts have been made to develop comprehensive frameworks that account for processes which influence how well a person is able to psychologically adapt to a chronic disease (Dekker & de Groot, 2018; Moss-Morris, 2013).

Despite growing awareness of the impact a diagnosis of a chronic illness or disease can have, access to evidence-based interventions that promote psychological adjustment can be inconsistent. Whilst some healthcare services, such as oncology services in the United Kingdom, employ dedicated counselling services (e.g. Kingston Hospital NHS Foundation Trust, 2021), this is not standardised across diagnostic pathways. Moreover interventions can vary widely in content, delivery format, and underlying theory, making it difficult to identify best practices across clinical populations.

Existing reviews in this area are often limited to studies in a specific population or specific intervention areas. For example, Burke et al. (2024) evaluated psychoeducation interventions for adults living with chronic communicable diseases and Nkhoma et al. (2022) synthesised person-centred interventions for serious physical illnesses. Whilst these reviews offer valuable insights, their focused nature means that the broader context of psychological adjustment and health remains fragmented. Given the well-established link between psychological adjustment and health-related outcomes, there was a clear need to integrate evidence across diverse clinical populations and intervention types.

To respond to this, current evidence for interventions aimed at promoting psychological adjustment following the diagnosis of a physical or mental health condition was synthesised for this review. Examining the effectiveness and efficacy of such interventions ensures that common effective components can be identified and may highlight promising approaches for future intervention development and clinical service delivery across diverse diagnostic groups.

Aims

To identify and synthesise existing interventions where the primary or secondary outcome is psychological adjustment to a mental or physical health. Review questions were:

(1) How feasible are post-diagnostic interventions for psychological adjustment to a diagnosis of a physical health condition?
(2) Which interventions for promoting psychological adjustment to a physical health diagnosis have evidence of effectiveness?
(3) How might existing interventions inform the development of a novel post-diagnostic intervention for other clinical populations?

Methods

PRISMA guidelines were used for searching, screening and appraising all results (Moher et al., 2009). The systematic review was pre-registered on PROSPERO (CRD42023452369).

Search strategy

MEDLINE, PsycINFO, Scopus and CINAHL were used to identify interventions where the primary focus was to provide psychological support to someone adjusting to a medical diagnosis of a physical or mental health condition published in adult populations. Search terms were developed iteratively using scoping reviews of the literature. Searches were initially run in April 2023, and re-run in May 2024 and April 2025 to ensure all articles were captured. An additional 91 results were identified when searches were re-run for 2024–2025 in April 2025, but no further articles met the inclusion criteria.

Search terms were: 'psychological adjustment' or 'emotional adjustment' or 'psycholog* process*' AND 'diagnosis' or 'post-diagnos*' or patient or 'service user' AND 'intervention' or 'psychological therapy' or 'psychological support' or 'psychosocial therapy' or counsel* or CBT or 'Cognitive Behavioural Therapy' or CFT or 'Compassion Focused Therapy' or ACT or 'Acceptance and Commitment Therapy'.

Inclusion criteria

- An intervention where the primary focus was to provide post-diagnostic support focused on psychological adjustment.
- A study population comprised solely of adults aged 18 and over, who were the recipients of the diagnosis and intervention.
- Evaluated using qualitative or quantitative research.
- For quantitative or mixed-methods studies, the primary outcome measure was psychological adjustment, emotional adjustment, a reduction in emotional distress, or similar.

Exclusion criteria

— A pharmacological, invasive intervention, or the stated aim of the intervention was to improve physical health.
— Protocol, reviews, meta-analyses, or case studies.
— Not published in a peer-reviewed journal
— The intervention was delivered to a caregiver, or the family of the person diagnosed
— Outcomes were proxy or clinician rated.
— Published in a language other than English.

Screening and selection

All search results were exported to Rayyan where duplicates were resolved. Screening followed Population, Intervention, Comparison and Outcome methods (PICO). In the first stage, all titles were screened for the correct population. In ambiguous cases, titles were retained until later stages. Titles that explicitly mentioned the design as an excluded criterion (e.g. systematic reviews) were also excluded at title stage. All abstracts were screened for the correct population and use of a therapeutic intervention. An intervention was defined as a discrete programme of activities delivered proactively to a patient or service user.

At full-text stage, studies were exported to Excel and further screened for the use of appropriate outcomes. This could be a quantitative evaluation, or qualitative evaluation to maximise inclusion. Full-text studies were screened by two authors independently (CS and AP) and disagreements discussed until consensus was reached. Reference lists of all included full-text articles were reviewed for further studies.

Two reviewers independently extracted data from full texts (CS and AP). Synthesis focused on providing evidence for a post-diagnostic intervention or elements of successful post-diagnostic interventions.

Quality assessment

The heterogenous nature of studies included necessitated the use of two quality appraisal tools. The Critical Appraisal Skills Programme (CASP) checklist was used to assess study quality in randomised controlled trials (RCTs) and qualitative studies (Critical Appraisal Skills Programme, 2018, 2023). For non-randomised trials and mixed methods studies, the Mixed Methods Appraisal Tool (MMAT) was used to assess quality (Hong et al., 2018). Two authors (CS and AP) independently rated the quality of all included studies and discussed any discrepancies during a consensus meeting. Included studies were grouped by quality criteria and tabulated.

Results

After duplicates were removed, 2,742 articles were retrieved from MEDLINE, PsycINFO, Scopus and CINAHL. Title screening resulted in the inclusion of 1,892 articles (850 excluded). Of the 1,891 abstracts screened, 264 were included for full-text screening. From these, 33 full-text articles were included, with an additional 12 identified and included from reference lists (Figure 1). Included articles reported on 4,848 participants in total.

Overview of included studies

Included studies spanned from 1985 – 2021 (Table 1), with most reporting interventions designed to promote psychological adjustment to cancer ($n = 28$). Of these, a majority were solely breast cancer studies ($n = 14$). Six included various cancers, and the remaining studies included populations adjusting to prostate cancer ($n = 2$), breast or colorectal cancer ($n = 1$), lung cancer ($n = 1$), testicular cancer ($n = 1$), gynaecological cancer ($n = 1$), melanoma ($n = 1$) and ovarian cancer ($n = 1$). Other included populations consisted of Multiple Sclerosis (MS; $n = 6$), Human Immunodeficiency Virus (HIV; $n = 2$), Spinal Cord Injury (TSCI; $n = 2$), Acquired Brain Injury (ABI; $n = 1$), Type 1 Diabetes ($n = 1$), end-stage renal failure (ESRF; $n = 1$), Irritable Bowel Syndrome (IBS; $n = 1$), Parkinson's

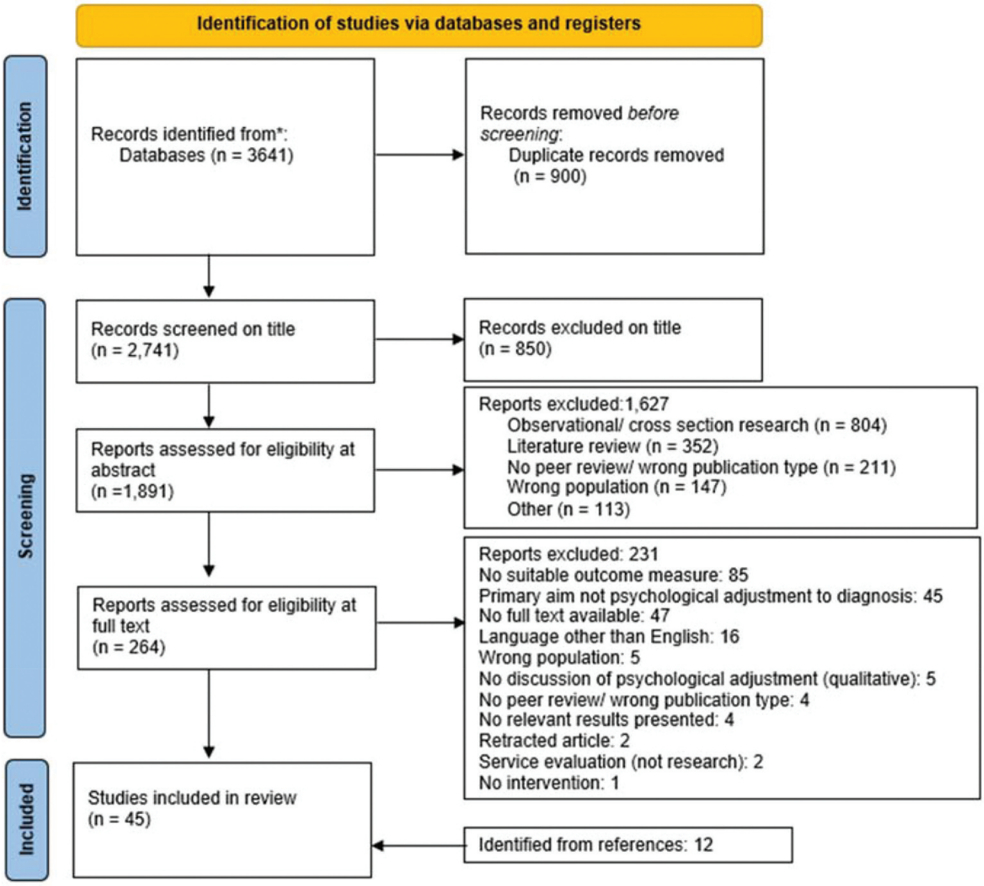

Figure 1. PRISMA flow diagram.

Disease ($n = 1$), Spinocerebellar Degeneration ($n = 1$), and Traumatic Brain Injury (TBI; $n = 1$). Whilst mental health conditions were included as a search term, no included results pertained to mental health conditions. As such, the focus of this review was on adjustment to physical health conditions.

Interventions were heterogenous. However, Cognitive Behavioural Therapy (CBT) or a Cognitive based psychotherapy were most common ($n = 20$; 37% of included interventions) and delivered across the included populations. Psychoeducation was delivered in six studies (11% of included interventions), including interventions where psychoeducation was one of multiple treatment conditions. Where there were multiple treatment conditions ($n = 3$), psychoeducation was delivered in isolation and combined telephone counselling ($n = 1$), was compared to telephone counselling ($n = 1$) and was one of four treatment conditions and was delivered alongside a disease management intervention and/or telephone counselling ($n = 1$).

Other interventions consisted of general psychotherapy or counselling including group and individual modalities ($n = 3$; 5%), stress management or inoculation ($n = 3$;

Table 1. Included studies.

	Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
Cognitive Behavioural Therapy (CBT) and Cognitive based interventions	Dennison et al. (2013)	Multiple Sclerosis (MS)	CBT versus Supportive Listening (SL) delivered by nurses who had been trained in both. Eight sessions (50 – 60 minutes). Session one and four were face to face but the rest were conducted by telephone. CBT package included accomplishing day-to-day functioning within confines of disease, managing symptoms, tackling negative/ unhelpful thoughts, setting goals, problem solving, managing social relationships and managing stress. In SL, participants talked freely about experiences.	Nested qualitive interviews ($n = 30$) within RCT of CBT and SL.	Qualitative	Themes of 'tuning in and sharing thoughts and feelings' described in both CBT and SL. 'Learning and enacting explicit strategies for living with MS' present for CBT group.	Participants reported high levels of interest and enjoyment in sessions. Participants who did not like their allocated approach tended to disengage or not find benefit.
	Goldsmith et al. (2020)	MS	Eight session CBT programme including psychoeducation, strengths and weaknesses, setting goals and problem solving, managing symptoms, improving sleep, managing stress, managing social relationships and preparing for the future.	RCT design ($n = 94$) assigned to either CBT or supportive listening.	ACHC	Effect of CBT on distress was mediated by acceptance and embarrassment.	Manual-based intervention

(*Continued*)

Table 1. (Continued).

Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
Hughes et al. (2020)	Irritable Bowel Syndrome (IBS)	Telephone or web-based Cognitive Behavioural Therapy (TCBT or WCBT). TBCT group received six one-hour TCBT sessions over nine weeks, a manual, and two 60 phone calls. WCBT received a digital self-management programme, consisting of eight web-based sessions to complete on a weekly basis, three 30-minute telephone support sessions and two booster 30-minute phone calls.	Nested longitudinal qualitative study. Participants ($n = 58$) were assigned to either TCBT or WCBT groups.	Qualitative	Reported changes in understanding of and attitude toward IBS, and a newfound ability to recognise IBS patterns. This was associated with an increased sense of control over IBS.	CBT perceived as well structured. Some noted the need for self-motivation, and sometimes struggled to do homework.
Moss-Morris et al (2013)	MS	Nurse-led CBT delivered over eight sessions with homework sheets. Content included psychoeducation around MS, adapting to living with MS, setting goals and problem solving, managing symptoms, tackling negative and unhelpful thoughts, improving sleep quality, managing stress, social relationships and preparing for the future.	RCT of CBT ($n = 48$) andsupportive listening (SL; $n = 46$).	ACHC	Mean acceptance scores were higher in CBT than SL not statistically significant.	84.8% ($n = 39$) in the CBT group and 57.2% ($n =$ 24) in the SL group reported being very, moderately, or slightly satisfied with therapy.

(*Continued*)

Table 1. (Continued).

Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
Onyedibe et al. (2021)	Cancer (breast)	Group CBT – 12-week 90-min sessions focused on cognitive restructuring, behavioural strategies and self-expression. The control group received a booklet with information about cancer and how to cope	RCT of CBT ($n = 16$) and control ($n = 15$).	CERQ	GCBT has significantly higher CERQ scores post-treatment compared to control ($p < .001$). CERQ continued to improve at 2 months follow up ($p < .001$).	90% of women completed GCBT.
Cruess et al. (2002)	HIV	Cognitive-Behavioural Stress Management (CBSM): 10-week group intervention. Groups consisted of four – nine participants and two group leaders. Groups were weekly for 2.5 hours. Led by graduate students. Sessions included teaching on stress-reduction techniques, and group discussions. Taught deep-breathing exercises, meditation, and given homework focused on self-reflection.	RCT ($n = 100$) of CBSM ($n = 62$) and control ($n = 38$).	COPE	Significant Condition ×Time effect (F(13, 76) = 3:52, $p < .001$) for COPE. Subscales positive reinterpretation and growth and seeking emotional support also significant.	25/125 participants withdrew over the course of the study.

(*Continued*)

Table 1. (Continued).

Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
Edmonds et al. (1999)	Cancer (breast)	Group Psychotherapy: 35 two-hour weekly group meetings of eight participants. Included themes of mutual support, problem solving, mortality confrontation. Second component involved a 20-week course of cognitive behavioural assignments to be completed at home. Third component consisted of an intensive coping skills course (14 hours) during the first two – four months of therapy.	RCT of Group Therapy ($n = 30$) and control ($n = 36$).	MAC	Significant effect of group on MAC but not time. When controlling for fighting spirit pre-sores, there was a time effect for fighting spirit across four time points ($p < .027$).	High initial refusal rate (116/246). Not all participants engaged in each component e.g. 19/30 participants engaged in intensive coping skills training programme.
Fukui et al. (2000)	Cancer (breast)	Psychosocial group intervention Groups of 6–10 patients met for six 1.5 hours weekly sessions. Each session was delivered by two therapists including a clinical psychologist and a psychiatrist. The model comprised of four components: 1) health education; 2) coping skills training; 3) stress management; and 4) psychosocial support.	RCT of intervention ($n = 25$) and wait-list group ($n = 25$).	MAC	At six weeks, fighting spirit scores in the experimental group were significantly higher than in the control group ($p = .003$).	73 women declined participation due to social barriers such as work ($n = 31$), childcare ($n = 14$) and location of intervention ($n = 14$).

(*Continued*)

Table 1. (Continued).

Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
Greer et al. (1991)	Cancer (various)	Adjuvant psychological therapy (APT) focussed on personal meaning of the disease and patient's coping ability. Number of sessions varied, but typically six one hour sessions. Techniques included labelling and recording automatic thoughts, thought challenging and replacement with adaptive coping responses.	Pre-post design ($n = 44$)	MAC	Significant differences in all subscales of the MAC post-intervention, with increases in fighting spirit ($p < .001$), and reductions in helplessness ($p < .001$), anxious preoccupation ($p = .0012$) and fatalism ($p = .04$).	At the eight-week final assessment, 48% of patients had received all eight sessions and were discharged, 52% went on to receive more sessions.
Greer et al. (1992)	Cancer (various)	APT (description above)	RCT of APT ($n = 85$) and control ($n = 89$).	PAIS and MAC	At eight weeks, there was a significant improvement in MAC subscales for the APT group including fighting spirit ($p = .035$), helplessness ($p = .009$), anxious preoccupation ($p = 0.036$), and fatalism ($p = .004$). There was a significant increase in health care orientation ($p = .033$) on the PAIS, but this was not maintained at four months. Both intervention and control groups demonstrated improved psychological adjustment over time ($p < .02$).	31% had received six or more sessions by eight weeks, 26% had received two or fewer and 39% had received additional sessions between eight weeks and four months.

(*Continued*)

Table 1. (Continued).

	Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
	Kennedy et al. (2003)	Spinal Cord Injury	Group Cognitive Behavioural consisting of seven, 60–75-minute sessions, running twice a week in groups of six to nine people. Session topics included concept of stress and normalising stress reactions, appraisal skills, problem solving, and connections and distinctions between thoughts, feelings and behaviour	Matched groups. Intervention compared ($n = 45$) with historical control ($n = 40$).	COPE	Suppression of competing activities decreased with time in both groups ($p = .001$). Alcohol use coping was significantly lower in the intervention group for the duration of the study ($p = .003$).	Patients were satisfied with the group with a mean satisfaction score of 6.6 (out of 10). Participants found sharing views and the discussion of 'real life' scenarios most helpful.
	King and Kennedy (1999)	Spinal Cord Injury	Coping Effectiveness Training (CET) consisted of seven 60–75 minutes sessions twice a week in groups of six to nine participants. Content included current identifiable problems as well as the psychological and social difficulties after hospital discharge. Homework was provided after each session.	Matched groups. Intervention ($n = 19$) compared with historical controls ($n = 19$).	COPE and Qualitative	No significant differences between the CET and control groups in total COPE score.	Qualitative data indicated that reappraisal and normalisation of experience was viewed as beneficial. Normalisation was achieved through discussion with other participants.

(*Continued*)

Table 1. (Continued).

Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
Kissane et al. (2003)	Cancer (breast)	Cognitive-existential group psychotherapy comprised of 20 weekly 90-minute sessions for six to eight patients with two therapists. Sessions covered patient narratives, grief, existential concerns, cognitive work, and various illness and life themes. Relaxation classes focused on progressive muscle relaxation with guided imagery.	RCT of intervention (n = 154) or three relaxation classes only (control; n = 149).	MAC and Qualitative	No significant differences More positive qualitative feedback noted in intervention arm, including improved coping ($p < .001$), greater knowledge ($p < .001$) and personal growth ($p < .001$).	Women in group therapy felt significantly more satisfied with psychological care ($p < .001$).

(*Continued*)

Table 1. (Continued).

	Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
	(McKiernan et al., 2010)	Cancer (breast)	Time to Adjust Programme – group based manualised cognitive behavioural treatment. Six group sessions with four to seven women which last 90 minutes. Facilitators and group members discuss strategies for coping with cancer; consider interrelations between feelings, thoughts and behaviours associated with the experience of cancer; and practice relaxation techniques. It also comprises of effective communication, the role of negative automatic thinking, the impact of assumptions and core beliefs on informing perceptions of cancer, approaches to problem solving and participants' values and goals for the future.	Non-randomised trial. Allocated to intervention ($n = 36$) or control ($n = 33$).	Brief COPE	Significant improvement in coping ability from pre-treatment to post-treatment ($p < .05$) in intervention group, but not maintained at follow up.	High attrition (61% and 6 month follow up)

(Continued)

Table 1. (Continued).

Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
Molton et al. (2019)	MS	Designed by authors. Focused on understanding the difference between knowable aspects of MS and unknowable; developing knowledge on what aspects can and cannot be controlled. Includes setting personal goals for acceptance, and mindfulness.	RCT of intervention ($n =$ 23) and control ($n =$ 25).	ACHC-MS version	Increase in acceptance for intervention group ($p < .001$). At post-assessment the intervention and TAU were significantly different in MS acceptance ($p < .001$).	86% of participants reported at least 'some benefit'. Participants liked the length and flexibility of the intervention.
Moorey et al. (1998)	Cancer (various)	APT	RCT of APT ($n = 25$) or counselling ($n = 22$).	Cancer Coping Questionnaire and MAC	APT resulted in a greater change from baseline to 8 weeks than counselling for fighting spirit ($p = .001$) and hopelessness ($p = .004$) subscales on the MAC, and the overall Cancer Coping Questionnaire score ($p = .001$). These effects on remained at 4 months for fighting spirit ($p = .0004$) and the Cancer Coping Questionnaire ($p = .01$).	Majority of participants completed therapy within eight sessions however, some required more.
Moynihan et al. (1998)	Cancer (testicular)	APT	RCT of APT ($n = 36$) or control ($n = 37$).	PAIS and MAC	No significant improvement on MAC. Vocational environment subscale of the PAIS improved at 1 year post-test for APT group.	High refusal, with 40% of eligible patients agreeing to participate.

(*Continued*)

Table 1. (Continued).

	Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
	Wassem and Dudley (2003)	MS	Nurse led intervention (MS-REHAB) over four weeks. Used four forms of behaviour acquisition: verbal persuasion, role modelling, performance accomplishment, and vicarious experience. Sessions lasted two hours and participants met once a week. The study also included education around MS, MS management, progressive muscle relaxation, energy conservation techniques, lessons on best communication and the role of a support network.	RCT ($n = 27$) Sample size for each group not reported.	PAIS	No significant differences between groups.	Small sample and attrition rates were 22% for the treatment group and 23% for control.

(*Continued*)

Table 1. (Continued).

	Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
Acceptance and Commitment Therapy (ACT)	Han et al. (2019)	Cancer (breast)	Group-based ACT consisting of four 60-min sessions over four weeks. Sessions covered living with breast cancer, living with mindfulness, accepting what breast cancer brings and growing with breast cancer.	Quasi-experimental 'time-block' design. Allocated to ACT (n = 42) or health education (HE; $n = 42$).	ICQ	There was a significant time ($p < .001$) and time ×group interaction ($p < .001$) for psychological flexibility. Significant time ($p < .001$) and time ×group interaction ($p < .001$) effects for acceptance.	95% of participants attended all four sessions.
	Rost et al. (2012)	Cancer (ovarian – Stage III or IV)	Manualised (ACT) protocol which comprised of 12 face-to-face sessions. Sessions covered acceptance, values and mindfulness.	RCT of ACT ($n = 15$) compared to control ($n = 16$).	COPE	Significant effect of treatment condition ($p = .006$) and a Condition ×Time interaction ($p < .001$) for acceptance.	Manualised intervention. Nurses engaged in ongoing supervision for fidelity.

(*Continued*)

Table 1. (Continued).

	Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
Psychoeducation and Psychoeducational Counselling	Budin et al. (2008)	Cancer (breast)	Four groups: 1) disease management (control); 2) disease management and four coping videos; 3) disease management and nurse-led telephone counselling; and 4) disease management, coping videos, and telephone counselling. Counselling included reducing anxiety, improving reality based appraisals, facilitating coping strategies, attaining support and promoting functional communication.	Randomised block design (*n* = 249 patient-partner dyads) with 3 intervention groups and 1 control group.	PAIS and PAL-C	Improvements over time only significant for patients in group 3. Improvement from T2 to T3 ($p = .002$), following by significant decrease at T4 ($p = .008$).	

(*Continued*)

Table 1. (Continued).

Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
Chambers et al. (2013)	Cancer (prostate)	Psychoeducational Telephone Counselling. Five sessions led by nurse counsellors. Included decision support, challenging unhelpful cognitions, psychoeducation, stress-reduction techniques, and problem solving skills for side effects of prostate cancer treatment.	RCT of intervention (n = 310) and TAU (n = 335).	Constructed Meaning Scale (Fife, 1995)	No significant effects. Subgroup analysis suggested that younger and lower education males exhibited decreases in adjustment over time ($p = .006$).	Structured counselling protocols were used for fidelity.
Fawzy et al. (1996)	Cancer (melanoma)	Psychoeducational Intervention delivered in groups or individually. Groups were facilitated by a psychiatrist, a lay leader and a nurse, and met weekly for 1.5 hours across six weeks. Individuals received three hours of teaching on two occasions from a nurse. Included health education, problem solving, stress management and psychological support.	Two RCTs of individual (n = 16) and control (n = 22), and group ($n = 38$) and control ($n = 28$)	Dealing with Illness – Coping Inventory	Group intervention showed significantly greater use of active-behavioural coping methods and avoidance coping methods ($p < .05$). Those in the individual intervention used more effective active-positive strategies ($p < .05$), and more ineffective cognitive-passive strategies	Studies were conducted five years apart. Authors noted that a maturational effect could have occurred for those delivering the intervention.

(*Continued*)

Table 1. (Continued).

	Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
	Lally et al. (2019)	Cancer (breast)	CaringGuidance intervention. A web-based psychoeducational, self-management program, including content on managing social constraints. The intervention included psychoeducational written and audio/visual content covering cognitive-behavioural, coping, problem solving, communication strategies, validation and relaxation.	RCT of intervention (*n* = 57) and control (*n* = 43).	Brief-COPE	Perceived coping was significantly and negatively related to spouse/partner and family/friends constraints at all time points, Active coping was not related to social constraints.	Variability in adherence with 17% engaging in the program within the recommended 480–1080 minute range. One subject exceeded that range (1265 minutes).
	Navarta-Sánchez et al. (2020)	Parkinson's disease (PD)	Psychoeducational intervention which asked participants to think about how they coped with PD and discuss as a group. The control group attended a five-week educational program.	Non-randomised trial of intervention (PD *n* = 51; informal carers *n* = 37) compared with control (PD *n* = 59, carers *n* = 53).	PAIS and Brief-COPE	Significant decrease in PAIS score post-intervention ($p = .001$) but not at six months. No significant differences between adjustment in the intervention and control group ($p = .868$). No significant change in coping skills after the intervention ($p = .047$).	Sessions were delivered by multidisciplinary staff across participating centres successfully.

(*Continued*)

Table 1. (Continued).

Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
Sherman et al. (2012)	Cancer (breast)	Psychoeducation and telephone counselling intervention. Psychoeducation consisted of four videos: coping with your diagnosis, recovering from surgery, understanding adjuvant therapy, and your ongoing recovery. Telephone counselling sessions included: reducing anxiety, shaping reality-based appraisals, facilitating attainment of support, processing information, encouraging adaptive behavioural change, promoting functional communication, and promoting reintegration of a holistic concepts of self.	RCT ($n = 249$) with four groups: a) usual care, b) usual care plus psychoeducational videos, c) usual care and telephone counselling, and d) usual care plus psychoeducational videos and telephone counselling.	PAIS and PAL-C	Significant main effect of time ($p = .033$) for psychological well-being across all groups Telephone counselling showed an improvement from baseline to adjuvant therapy, followed by a decrease in psychological well-being from the adjuvant phase to the recovery phase ($p = .002$). Other groups did not exhibit the same effect ($p = .063$). No Group ×Time effects for domestic, social or vocational environment. There was a significant main effect for time, with vocational well-being improving as time went on ($p = .024$).	Homogenous sample with 70% of participants reported as Caucasian women in their 50s). Poor ethnic diversity in sample despite diverse population from which they were recruited from.

(*Continued*)

Table 1. (Continued).

	Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
General Psychotherapy and Counselling	Cain et al. (1986)	Cancer (gynaecological)	Three counselling styles: standard, thematic individual, and thematic group. Thematic individual counselling sessions, structured as eight-week programmes, were conducted by social workers. Group sessions were administered over eight weeks, facilitated by social workers and attended by four to six women. The eight sessions covered: psychoeducation, impact of treatment on body image and sexuality, relaxation, diet and exercise, relating to caregivers, talking with friends and family and goal setting.	RCT ($n = 80$) of standardised control ($n = 31$), thematic individual ($n = 21$), and thematic group ($n = 28$).	PAIS	Significant improvement on the PAIS Health subscale for individual and group thematic counselling immediately after intervention ($p = 0.05$). Significant improvement on Leisure ($p = 0.014$) and Psychological Distress ($p = 0.024$) subscales of PAIS at 12 months.	High completion rate with 72 of 80 women completing the counselling phase of the study.

(*Continued*)

Table 1. (Continued).

Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
Hofer et al. (2010)	Acquired Brain Injury (ABI)	General Individualised Psychotherapeutic Intervention delivered by a psychologist. Sessions focused on coping mechanisms for emotional responses to ABI. Coping mechanisms discussed were acceptance of loss, adjustment to a changed life, redefinition of daily routines.	Pre-post design. Unselective clinical sample of 11 participants.	TCS	Significant improvement for rumination ($p =$ 0.05), search for social support ($p < .001$) and cognitive coping scale ($p < .001$) subscales.	Intervention was not manualised, and number of sessions varied across participants. Excluded people with a neurodegenerative disease/disorder.
Tsamparli and Siousioura (2009)	Diabetes (Type 1)	Conjunctive Group Therapy focused on: acceptance of disease, modification of knowledge, attitude and behaviour of self-care, resolution of psychological conflicts to obtain control of the disease, and rendering the disease as part of 'unified self'.	Pre-post qualitative ($n =$ 32). Interviews were conducted before and after each group intervention and analysed using grounded theory methodology.	Qualitative	There was an increase in the number of participants that accepted diabetes, obtained faith in self, felt self-awareness and emotional autonomy, felt supported. There was a decrease in participants who noted they faced stigma, denied diabetes or had a negative attitude towards the disease.	Small non-random sample.

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Table 1. (Continued).

	Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
Stress Management or Inoculation	Heinrich and Schag (1985)	Cancer (various)	Stress and activity management treatment programme (SAM) – Six week, structured, small-group programme led by researchers. Included components on education, relaxation exercises, problem solving, walking exercise. Each group lasted two hours, and utilised slides, discussions, lectures, in-group practices and homework assignments. Participants also received audio tapes for relaxation training.	Non-randomised trial with control group ($n = 51$).	PAIS	Both intervention and control groups demonstrated improved psychological adjustment over time ($p < .02$).	Unblinded follow ups.
	Tacón et al. (2004)	Cancer (breast)	Mindfulness-Based Stress Reduction (MBSR) – 1.5-hour session per week over eight weeks. Activities consisted of body scan, sitting mediation and hatha yoga.	Pre-post ($n = 27$).	MAC	Helplessness-hopelessness ($p < .01$) and anxious preoccupation ($p < .01$) subscales significantly reduced from baseline to after implementation at eight weeks.	Yoga (51%) and body scan (42%) widely selected, with only 7.4% of participants choosing sitting meditation.

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Table 1. (Continued).

	Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
	Tavakkoli et al. (2021)	MS	Stress Inoculation Training (SIT). Consisted of consists of information provision, cognitive restructuring, problem-solving, relaxation, behavioural training, self-monitoring, self-learning, self-improvement and changing environmental situations.	RCT of SIT ($n = 20$) and control group ($n = 20$).	Bell Adjustment Inventory	Significant effects of SIT on occupational ($p = .038$) and emotional ($p = .001$) dimensions of adjustment.	Manualised intervention, with training for facilitators provided by the research team to improve adherence.

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Table 1. (Continued).

	Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
Coaching	Brown et al. (1999)	Cancer (various)	Evaluation of a 'Question Prompt Street', consisting of 17 questions commonly asked by patients to an oncologist to optimise time taken with a doctor. One group of participants were given the Question Prompt Sheet plus coaching session with a research psychologist. Coaching covered thinking of questions to ask, exploring benefits/ barriers to question asking, rehearsing asking difficult questions.	RCT of TAU ($n = 20$), Question Prompt Sheet ($n = 20$) and Question Prompt Sheet plus coaching session ($n = 20$).	MAC	Two subscales of MAC assessed. No significant differences on fighting spirit and helpless/hopeless subscales ($p = .882$; $p = .658$)	Participants asked more questions in prompt sheet and prompt sheet plus coaching conditions (Med = 15, Med = 13) versus TAU (Med = 8.5), but this was not related to adjustment.

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Table 1. (Continued).

Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
Izumi et al. (2007)	Spinocerebellar Degeneration	Coaching intervention. Coaches telephoned participants for 15–30 minutes in 10 weekly sessions over three months. Coaching followed six steps: set-up, goal-setting, evaluation of present status, acknowledgement of the gap between the goal and the present status, action-planning to reduce gap, and follow-up.	Wait-list RCT ($n = 24$) of coaching ($n = 12$) and wait-list control group ($n = 12$)	NAS	No significant differences.	Low attrition with 24/26 participants completing the study

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Table 1. (Continued).

	Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
Other	Anson and Ponsford (2006)	Traumatic Brain Injury	Coping Skills Group (CSG). Ten group sessions of 90 minutes, twice a week for five weeks. Sessions were facilitated by two clinical neuropsychologists. Content included structured problem-solving, how to recognise and change maladaptive thoughts, pleasant events scheduling and relaxation training. Homework included practicing coping strategies in day-to-day situations. Written handouts were provided including checklists for structured problem solving and adaptive coping strategies.	Wait-list RCT ($N = 31$) of CSG ($n = 15$) or wait-list control ($n = 16$).	Coping Scale for Adults	Significant time by group interaction effect for adaptive coping ($p < 0.01$). Significant decrease in adapting coping at 5-week post-test.	Open ended feedback suggested high satisfaction levels from participants.

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Table 1. (Continued).

Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
Cameron et al. (2007)	Cancer (breast)	Group 'Healing Journey' Psychosocial Support Programme: 12-week programme of weekly, two hour sessions led by two therapists. Provided education about emotion and cancer, training in relaxation, imagery, meditation, priorities and goal setting, emotional disclosure, anger management and group discussion. Participants received manuals and tapes for home practice.	Prospective design with 10 alternating phases of intervention ($n =$ 149) and TAU ($n = 65$). Each phase lasted until 8 – 11 participants recruited.	Benefit-Finding Scale and Coping Efficacy	No significant effect on benefit finding. Significant increase in coping efficacy for intervention participants ($p < .001$).	Therapists supervised by researchers for fidelity. Manualised and cross-culturally adapted from a previous program.
Chamberlain Wilmoth et al. (2006)	Cancer (breast)	Nurse delivered telephone support and education intervention. Social support was delivered weekly, fortnightly and then monthly over 13 months. Education consisted of a mailed resource kit including audiotapes, videotapes and leaflets.	Qualitative interviews from RCT ($n = 77$).	Qualitative	Women who were in the intervention arm ($n =$ 35) more commonly reported an improvement in attitude (54%) toward their diagnosis compared to the control group (43%).	15 out of 35 women in the group said they benefited from talking to the oncology nurses involved in the intervention.

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Table 1. (Continued).

Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
Huang et al. (2019)	Cancer (lung)	Individual or Group Computer Magnanimous Therapy (CMT). CMT aimed at achieving a ‘magnanimous’, open-minded, peaceful and relaxed state. Participants viewed a therapy video and received interpretations of the video from the therapist. They were then asked to apply the learning in a different area of life. Both individualised and grouped formats received eight 40-minute sessions over two weeks.	Matched case-control trial of Individualised CMT ($n = 50$), Group CMT ($n = 45$) or control ($n = 50$).	PAS and CCM	Small increases in self-perception and relationship with others subscales of PAS for both individualised and group CMT from baseline to post-test ($p < .001$). Increases in confrontation and resignation subscales of CCM in individual and group CMT when compared to control group ($p < .001$).	Outcome measures were previously created by the study authors. Unclear if widely used. Intervention was delivered by research students, but it was unclear if these students also acted as therapists.
John et al. (2016)	HIV	Provided information, motivation and counselling to young people with HIV via mobile phone. Dependant on participants’ preferences, this was provided via weekly voice calls, short text messages and WhatsApp messages over three months.	Pre-post ($n = 19$)	PAIS	Significant improvement at post test 1 ($p < .001$) and 2 ($p < .001$)	Intervention informed by behaviour change model (Trans-theoretical Model)

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Table 1. (Continued).

Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
Johnson et al. (2015)	Cancer (various)	Shared Care Model (SCM) intervention. Participants given access to patient-held records (PHR), project coordinator to support with patient care and information, and a primary care physician (PCP) educational resource.	RCT of SCM ($n = 51$) or standard care ($n = 46$).	Mini-MAC	No difference between intervention and control group mean scores at any of the three timepoints.	One in five cancer specialists in the exit survey found the PHR useful, but all had reservations about other SCM components. 88% of PCPs in the intervention found the PHR useful.
Krespi et al. (2009)	End-stage renal failure	Visual imagery intervention. Consisted of an audiotape on relaxation training, special place imagery, descent imagery, auto-relaxation and specific visual imagery.	RCT of intervention ($n = 38$); active control ($n = 25$); and standard care ($n = 40$).	COPE	No significant difference for coping or acceptance.	Approximately 50% of the patients who received specific or general imagery rated the audiotapes as helpful.
Lee et al. (2006)	Cancer (breast and colorectal)	Meaning-Making Interventions (MMI) – Developed using three theories: 1) patients are motivated to engage in self-discovery and exploration, 2) transition theory, and 3) cognitive processing theory. Intervention delivered by a nurse researcher but limited description of activities.	Pre-post ($n = 18$).	PAIS and Qualitative	PAIS not reported due to missing data. Patients valued having a space to openly discuss the emotional and social impacts of cancer. Many participants felt more secure and less fearful about the future.	Limited description of the intervention activities. Variable frequency and length, with participants engaging in three to eight sessions, ranging from 10 minutes to three hours on a daily, weekly, or monthly basis.

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Table 1. (Continued).

Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
Northouse et al. (2005)	Cancer (breast)	FOCUS programme. Covers five core areas: family involvement, optimistic attitude, coping effectiveness, uncertainty reduction, and symptom management. Three monthly home visits with the participant and supporter (90 minutes/visit) and two scheduled 30-minute booster telephone sessions (30 mins/call) over four months.	RCT of FOCUS ($n = 94$) versus control ($n = 88$)	Brief-COPE	No significant differences.	Standardised the implementation through a protocol manual with a built-in checklist. This enabled nurses to document the five core content areas delivered to dyads.
Northouse et al. (2007)	Cancer (prostate)	FOCUS Programme with participants and their spouse/partner.	RCT of FOCUS ($n = 112$) and standard care ($n = 123$).	Brief-COPE	No significant differences for participants Spouses demonstrated significantly more active coping at 12 months compared to the control group ($p < .05$)	High fidelity. Intervention nurses completed a fidelity checklist. Random home visits were audiotaped and reviewed by the investigators for protocol consistency.

(*Continued*)

Table 1. (Continued).

Citation	Population	Intervention	Methods	Outcome Measure*/ Qualitative	Results	Feasibility/Acceptability
Northouse et al. (2013)	Cancer (breast) – advanced	Two versions of the FOCUS programme (brief versus extensive). Brief FOCUS consisted of two 90-minute home visits and one 30-minute phone call. Extensive FOCUS consisted of six contacts (four 90-minute home visits and two 30-minute phone phone sessions.	RCT of brief ($n = 99$), extensive ($n = 99$) and control ($n = 104$).	Brief-COPE	Participants in brief and extensive conditions decreased in avoidant coping at 3 months ($p = .033$ and $p = .001$). This effect was maintained at six months in the brief condition($p = .045$).	Drop out rate of 38% after 6 months. Fidelity was monitored in the same manner as Northouse et al. (2007).

*Psychosocial Adjustment to Illness Scale (PAIS; $n = 10$; Derogatis & Derogatis, 1990), Mental Adjustment to Cancer and Mini-Adjustment to Cancer scale ($n = 9$; MAC; Watson et al., 1988), the COPE ($n = 5$; Carver et al., 1989), the Brief-COPE ($n = 4$; Carver, 1997). Acceptance of Chronic Health Conditions (ACHC; $n = 3$; Stuifbergen et al., 2008), Profile of Adaptation to Life – Clinical Scale ($n = 2$; PAL-C; Ellsworth, 1981), Bell Adjustment Inventory ($n = 1$; Bell, 1934), Benefit Finding Scale ($n = 1$; Antoni et al., 2009), Cancer Coping Modes (CCM; $n = 1$; Huang et al., 2007), Cancer Coping Questionnaire ($n = 1$; Moorey et al., 2003), Constructed Meaning Scale ($n = 1$; Fife, 1995), Coping Efficacy Scale ($n = 1$; Lawler & Cameron, 2006), Coping Scale for Adults (Frydenberg & Lewis, 1993), Nottingham Adjustment Scale (NAS; $n = 1$; Dodds et al., 1993), Psychological Adjustment Scale (PAS; $n = 1$; Huang et al., 2002), Cognitive Emotion Regulation Questionnaire (CERQ; $n = 1$; Garnefski et al., 2009), Illness Cognition Questionnaire (ICQ; $n = 1$; Evers et al., 2001), Dealing with Illness- Coping Inventory (Namir et al., 1987) and Trier Coping Scales (TCS; $n = 1$; Klauer & Filipp, 1993).

5%), coaching interventions (*n* = 2; 3%), a family-based psychosocial intervention (*n* = 3; 5%), coping skills training (*n* = 1), magnanimous therapy (*n* = 1), a Meaning-Making Intervention (MMI; *n* = 1), psychosocial 'healing journey' intervention (*n* = 1), shared care (*n* = 1), messaging-based health promotion (*n* = 1), visual imagery (*n* = 1), and telephone social support (*n* = 1; all 1%).

Quality of included studies

Authors of the CASP and the MMAT suggest that overall quality scores should not be used (Critical Appraisal Skills Programme, 2018, 2023; Hong et al., 2018). Briefly, studies consisted of Randomised Controlled Trials (RCT; *n* = 30), non-randomised trials (*n* = 9), qualitative studies (*n* = 4) and mixed-methods studies (*n* = 2). RCT quality was often high but multiple RCTs failed to report whether researchers collecting outcomes were blinded to intervention group. Notably a minority of RCTs reported confidence intervals for treatment effects (Goldsmith et al., 2020; Greer et al., 1992; Johnson et al., 2015; Moorey et al., 1998; Moss-Morris et al., 2013; Moynihan et al., 1998; Northouse et al., 2007; Onyedibe et al., 2021; Rost et al., 2012). For non-randomised studies, quality was generally high. However, for some, confounding variables were not accounted for in the analysis (Hofer et al., 2010; John et al., 2016; Tacón et al., 2004). Of the qualitative studies, two had conducted a rigorous qualitative analysis (Dennison et al., 2013; Hughes et al., 2020). However, methodology used to group participants in one study was felt to be under-reported (Tsamparli & Siousioura, 2009). The final qualitative study lacked key details for the quality appraisal (Chamberlain Wilmoth et al., 2006). Reporting of the qualitative element in one mixed-methods study was limited (King & Kennedy, 1999) and neither study reported quality criteria for the qualitative methods used (King & Kennedy, 1999; Lee et al., 2006).

Measurement of psychological adjustment or coping

Outcomes used to measure psychological adjustment were heterogeneous. Frequently the Psychosocial Adjustment to Illness Scale (PAIS; Derogatis & Derogatis, 1990) was used (*n* = 10 but examples of other outcomes included the Mental Adjustment to Cancer and Mini-Adjustment to Cancer scale (*n* = 9; MAC; Watson et al., 1988), the COPE (*n* = 5; Carver et al., 1989), and the Brief-COPE (*n* = 4; Carver, 1997).

Cognitive behavioural therapy and cognitive theory interventions

Cognitive-based interventions were delivered to people with cancer (*n* = 11), MS (*n* = 5), Spinal Cord Injury (*n* = 2), IBS (*n* = 1) and HIV (*n* = 1), demonstrating its adaptability across patient populations. Most interventions consisted of an adapted version of CBT specifically for the condition. Goldsmith et al. (2020) and Moss-Morris et al. (2013), reported an adapted, nurse-led CBT for MS. Using the Acceptance of Chronic Health Conditions Scale (Stuifbergen et al., 2008), Goldsmith et al. (2020) reported that acceptance of MS mediated the effect CBT had on levels of distress, and Moss-Morris et al. (2013) reported no significant findings. A second qualitative study of CBT for MS had positive results (Dennison et al., 2013). Participants reported themes of 'tuning in' and 'sharing thoughts and feelings' in both the CBT group and a supportive listening arm. However, participants in the CBT group discussed learning and enacting explicit strategies for living with MS, with this theme specific to the CBT group. A nested qualitative study of web or telephone-based CBT for people with IBS resulted in participants reporting a change in their understanding and attitude toward IBS (Hughes et al., 2020). However, participants in this trial noted the need for high levels of self-motivation to engage with the intervention, and they struggled to complete 'homework' tasks. For people with breast cancer, group-based CBT was associated with a significant reduction in maladaptive cognitive emotion regulation (Onyedibe et al., 2021), as measured by the Cognitive Emotion Regulation Questionnaire (Garnefski & Kraaij, 2007). This reduction was maintained at a two-month follow-up.

Other interventions included in this category (Cognitive Behavioural Therapy and Cognitive Theory Interventions) were developed using cognitive behavioural theory or principles. A pilot RCT of a cognitive-based intervention designed to improve the ability to tolerate uncertainty for people with MS (Molton et al., 2019) resulted in greater acceptance of MS as measured by the Acceptance of Chronic Health Conditions, MS Version (ACHC-MS; Stuifbergen et al., 2008). Findings also suggest this study was feasible with 83% of participants completing all six sessions, and acceptable to participants, with 86% reporting they had derided at least 'some benefit' from the intervention. Wassem and Dudley (2003) developed a four-week group-based workshop intervention using social cognitive and self-efficacy theory (Bandura, 1994) for people adjusting to a diagnosis of MS. This study was notable for an extended follow-up period, where participants completed assessments every six months over a four-year period. However, whilst psychological adjustment increased for the intervention group, it also increased for the control group and was not significant in either (PAIS; Derogatis & Derogatis, 1990).

For men with HIV, a Cognitive Behavioural Stress Management (CBSM) intervention was trialled (Cruess et al., 2002). A significant condition by time effect for the COPE (Carver et al., 1989) suggested CBSM was associated with positive coping strategies. However, there was a high attrition rate, with 25 participants (20%) withdrawing over the course of the study. Reasons for withdrawal were not reported.

Three RCTs all used the MAC to evaluate group cognitive-based psychotherapy interventions. However, results indicated that these interventions were largely unsuccessful in promoting psychological adjustment. Edmonds et al. (1999) used group-based psychotherapy that was described as including themes of problem solving and mortality confrontation for women with breast cancer. Results from this small scale RCT indicated there was a significant effect of group on the MAC, but not time. In addition, there was a high initial refusal rate and fidelity was poor, with only 19/30 participants completing the cognitive behavioural assignments and participants noting the sessions could be anxiety provoking. Also for women with breast cancer, Kissane et al. (2003) reported on an RCT of cognitive-existential group psychotherapy but no significant differences were found for the MAC. However, a qualitative evaluation indicated that women in the intervention group gave more positive feedback, including emphasising the benefits of peer-support and improved coping as a result of the intervention. A psychosocial group programme aimed to support women with breast cancer was evaluated in a RCT (Fukui et al., 2000) and, at six weeks, fighting spirit subscale scores (MAC) were significantly higher in the intervention group. Feasibility data suggests that the intervention may not have been accessible for the patient group, with 73 women refusing to take part due to barriers such as work, childcare and location of the intervention.

Five studies reported using Adjuvant Psychological Therapy (APT) (Edmonds et al., 1999; Greer et al., 1991, 1992; Moorey et al., 1998; Moynihan et al., 1998) for people adjusting to a diagnosis of cancer. APT was described as a cognitive therapy and usually consisted of six one-hour sessions. In two RCTs (Greer et al., 1992; Moynihan et al., 1998), both using the MAC and PAIS measures, results indicated that both the intervention and control group improved in psychological adjustment. However, at four months, there was a significant improvement in the psychological distress subscale of the PAIS in the intervention group in one study (Greer et al., 1992). One further RCT (Moorey et al., 1998) used the MAC and noted APT resulted in a greater change to fighting spirit and hopelessness subscales of the MAC than counselling. The former was maintained at a four month follow up. In a pre-post study of the same intervention, there was a significant improvement on the MAC (Greer et al., 1991). However, all trials of APT reported issues with feasibility, for example, only 39% of participants received the full intervention in one trial (Greer et al., 1992) and the length of the intervention differed amongst participants (Moorey et al., 1998)

A more recent cognitive-based intervention for cancer was the 'Time to Adjust Programme' (McKiernan et al., 2010). However, results for psychological adjustment as measured by the brief COPE (Carver, 1997) were not significant.

Two included studies described a cognitive theory-based Coping Effectiveness Training (CET) intervention for people adjusting to spinal cord injury (Kennedy et al., 2003; King & Kennedy, 1999). Both studies assessed psychological adjustment using the COPE (Carver et al., 1989), but had minimally significant findings. In the Kennedy et al. (2003) trial, participants had significantly lower alcohol-based coping in the intervention group compared to the control group. Feasibility findings suggested that working as a group was beneficial, but participants felt they would have benefited from being grouped by age or specific needs for the intervention

Acceptance and Commitment Therapy (ACT)

ACT is a sub-disciple of CBT and was delivered in two studies for people with cancer. The first was delivered to people with breast cancer (Han et al., 2019) and the second to people with late-stage ovarian cancer (Rost et al., 2012). Both ACT interventions included sessions on living with cancer, mindfulness, and accepting cancer. In Rost et al. (2012) there was a significant improvement for acceptance as measured by the COPE (Carver et al., 1989) for both the intervention and the treatment as usual group. However, authors noted improvements in the ACT group were greater than those in the control group. In the Han et al. (2019) trial, there was a significant improvement in acceptance (Illness Cognition Questionnaire [ICQ]; Evers et al., 2001), for both the ACT group and a Health Education control group.

Psychoeducation and psychoeducational counselling

Five of the six included studies in this section reported on the effectiveness of a psychoeducation intervention for people adjusting to a diagnosis of cancer (breast cancer = 3, prostate cancer = 1, melanoma = 1). Whilst a majority were facilitated, one study reported the effects of a self-guided 'Caring Guidance' intervention (Lally et al., 2019). This was described as a web-based, psychoeducational, self-management programme. However, there were no significant findings for psychological adjustment as measured by the Brief COPE (Carver, 1997), and relatively few participants (17%) engaged in the programme for the recommended timespan.

Two studies used combinations of psychoeducation and psychoeducational counselling by telephone for adjusting to cancer. The first consisted of five sessions delivered by nurse counsellors (Chambers et al., 2013). However, this study had no significant effect on psychological adjustment using the Constructed Meaning Scale (Fife, 1995). The second study had four arms, with psychoeducation and psychoeducational counselling delivered in isolation and together (Sherman et al., 2012). In this RCT, emotional adjustment as measured by the psychological wellbeing subscale of the Profile of Adaptation Life Clinical scale (PAL-C; Ellsworth, 1981), improved for participants who began the intervention with psychoeducational counselling. However, this then decreased in the ongoing recovery phase. Adjustment was also measured using the PAIS (Derogatis & Derogatis, 1990), for which there was a significant main effect for time in the domains of vocational environment and social environment.

One study for breast cancer patients and their partners used a total of four conditions: 1) disease management (control group), 2) disease management and standard psychoeducation, 3) disease management and telephone counselling, and 4) disease management, standardised psychoeducation, and telephone counselling (Budin et al., 2008). Counselling was provided by a trained nurse and adjustment was measured using the PAIS (Derogatis & Derogatis, 1990) and PAL-C (Ellsworth, 1981). On the PAL-C, significant improvements were noted for the telephone counselling group during the intervention, but these decreased by follow up. On the PAIS, there were no significant effects for vocational environment, but social environment scores increased across the intervention groups before decreasing to near baseline levels following the intervention. Initial refusal rate for participation was high (262/655) suggesting the intervention may not have been acceptable to some of the target population.

Fawzy et al. (1996) reported two RCTs comparing a group psychoeducational intervention to control and an individual psychoeducational intervention versus control. Findings were mixed across both interventions, but at one year the group intervention participants used more effective coping strategies (Dealing with Illness-Coping Inventory; Namir et al., 1987). However, they also used slightly more avoidance coping methods. The individual psychoeducation group were subject to high attrition (38/63 retained for analysis), and taken with results, it suggests the group intervention was more successful.

Finally, Navarta-Sánchez et al. (2020) conducted a psychoeducational intervention for people with Parkinson's Disease. This intervention was developed using the Chronic Care Model, and aimed to help participants better understand and cope with Parkinson's disease. Using the PAIS (Derogatis & Derogatis, 1990), a significant improvement was found at post-intervention, but this was not maintained at six months. Further, there were no significant differences between groups for coping using the Brief COPE (Carver, 1997).

General psychotherapy and counselling

Three interventions were described as psychotherapy, with participant samples of people with Acquired Brain Injury (ABI) (Hofer et al., 2010), people with Type 1 Diabetes (Tsamparli & Siousioura, 2009) and people with gynaecological cancer (Cain et al., 1986). The first intervention was described as an individualised psychotherapy, with a focus on coping mechanisms for emotional responses to ABI (Hofer et al., 2010). Results suggested a significant improvement in rumination, search for support and cognitive coping on the Trier Coping Scales (TCS; Klauer & Filipp, 1993). However, the intervention was not randomised and the number of sessions varied across participants, limiting its replicability. The second study was a qualitative evaluation of a Conjunctive Group Therapy model, which included sessions on acceptance of Diabetes and modification of knowledge, attitudes, and behaviour (Tsamparli & Siousioura, 2009). Authors reported an increase in the number of participants describing their acceptance of diabetes and who felt confident to disclose their diagnosis in their social circles. Cain et al. (1986) conducted an RCT where women with gynaecological cancer were randomly allocated to either standard counselling, individual thematic counselling, or group thematic counselling. All groups demonstrated an improvement in psychological adjustment on the PAIS (Derogatis & Derogatis, 1990) immediately following the intervention, however, women in the individual and group thematic counselling demonstrated greater adjustment. Feasibility data suggested the intervention was positively received, with 72 of 80 women completing all counselling sessions and reporting a more positive attitude to their healthcare providers.

Stress management or inoculation

Interventions categorised as stress management or inoculation consisted of an Activity Management and Treatment Programme (SAM) for people with cancer (Heinrich & Schag, 1985), Stress Inoculation Training (SIT) for people with MS (Tavakkoli et al., 2021), and Mindfulness-Based Stress Reduction (MBSR) for people with breast cancer (Tacón et al., 2004). SAM was described by authors as a six-week, structured small-group programme. In a non-randomised trial, both the intervention and control group demonstrated improved psychological adjustment over time, as measured by the PAIS (Derogatis & Derogatis, 1990). Results also suggested that participants had a greater knowledge of cancer at follow up, but this was not related to psychological adjustment (Heinrich & Schag, 1985). The SIT intervention for MS was associated with a significant improvement on occupational and emotional adjustment (Bell Adjustment Inventory; Bell, 1934). Finally, the MSBR programme consisted of 1.5-hour sessions over a period of eight weeks. Using the Mental Adjustment to Cancer scale (MAC; Watson et al., 1988), participants in a pre and post-trial documented significant reductions in helpless-hopelessness and anxious preoccupation (Tacón et al., 2004). Adherence data from this trial suggested that the techniques were popular with women with breast cancer, with 88% of women reporting to be continuing with mindfulness techniques at three months post-intervention.

Coaching interventions

Two interventions were derived from coaching theory. First, people with cancer were provided with a question prompt sheet for commonly asked questions about cancer and received a coaching session with a research psychologist (Brown et al., 1999). In an RCT, participants in the intervention group did ask more questions of their consultant but this was not related to psychological adjustment, which was non-significant (MAC; Watson et al., 1988). The second coaching intervention was more generalised, consisting of 15 – 30-minute, 10 weekly sessions with a physician. However, as with the first intervention, no significant differences were found for psychological adjustment (Nottingham Adjustment Scale [NAS]; Dodds et al., 1993) at post-test in a wait-list RCT (Izumi et al., 2007).

Other interventions

The remaining 11 interventions were bespoke interventions that could not be grouped or were distinct from the aforementioned categories.

A coping skills group intervention was developed for people with Traumatic Brain Injury (TBI) and consisted of 10 group sessions, twice a week for five weeks (Anson & Ponsford, 2006). In a wait-list controlled trial and measured using the Coping Scale for Adults (Frydenberg & Lewis, 1993), there was a significant increase in coping immediately following the intervention, but this decreased at a five-week post-test assessment. However, open-ended feedback indicated participants found the group enjoyable and helpful, suggesting the intervention was acceptable.

A messaging-based intervention to promote adjustment to HIV in young people was reported by John et al. (2016). The intervention utilised mobile phones to provide information, motivation, and counselling to participants. In a quasi-experimental research study, there was a significant increase in psychological adjustment using a modified version of the PAIS (Derogatis & Derogatis, 1990) following the intervention. However, whilst authors report the intervention was low cost, no cost analysis was presented to support this.

For people in end-stage renal failure (ESRF), Krespi et al. (2009) developed a visual imagery intervention. Acceptability data suggested that the intervention may not be widely acceptable, with only 50% of the sample rating the techniques as useful. This may have contributed to results, with no significant effects found for coping in an RCT (COPE; Carver et al., 1989).

Three studies reported RCTs of the FOCUS programme, described as a family-based intervention covering five core areas: family involvement, coping effectiveness, uncertainty reduction, and symptom management (Northouse et al., 2005, 2007, 2013). Study populations consisted of breast cancer, prostate cancer and advanced breast cancer and all used the Brief COPE (Carver, 1997) to evaluate psychological adjustment. No significant differences between the intervention and control group were found in two studies, but a brief and extensive version of FOCUS in one study (Northouse et al., 2013) was reported to be associated with lower avoidant coping at three and six months.

An intervention referred to as Magnanimous Therapy was delivered to people with advanced lung cancer in a matched case-controlled trial (Huang et al., 2019). Results indicated a small increase in self-perception and relationship with others on the subscales of the PAIS (Derogatis & Derogatis, 1990) for both individual and group-based therapy. However, there was also an increase in confrontation and resignation subscales of the Cancer Coping Modes Scale (Huang et al., 2007) when compared to a control group suggesting some ill effects of the intervention. Further the intervention was reported as being delivered by research students, but it was not clear if these students were also the therapists reported to have interpreted the videos participants watched.

Lee et al. (2006) developed a meaning-making intervention for people with breast and colorectal cancer, that was derived from an existing trauma intervention. Formal analysis of the psychological adjustment using the PAIS (Derogatis & Derogatis, 1990) was not reported due to large amounts of missing data. As such, evidence for this intervention for promoting psychological adjustment is lacking.

The 'Healing Journey' intervention was described as a group support programme for women adjusting to a diagnosis of breast cancer and was led by two therapists (Cameron et al., 2007). Using a prospective design with 10 alternating phases of treatment as usual and the intervention, authors reported no significant effect of the intervention on benefit finding (Benefit Finding for Breast Cancer; Antoni et al., 2009). However, there was a significant effect for Coping Efficacy (Lawler & Cameron, 2006) for participants in the intervention group.

Developed for people with hematologic, breast, ovarian, or colorectal cancer, Johnson et al. (2015) described a Shared Care Model intervention. However, in an RCT, there were no significant effects on the Mini Adjustment to Cancer scale (Watson et al., 1994) for either the intervention or control group across the three time points collected.

Telephone social support and education materials were delivered for 13 months to women with breast cancer as part of a randomised controlled trial in one study (Chamberlain Wilmoth et al., 2006). In a qualitative evaluation, adjustments in attitude toward cancer were more commonly reported for women in the intervention group. However, only 15 out of 35 women said they benefited from the social support provided, with benefits arising from participants being asked to reflect on their emotional and physical health, and their relationship status.

Discussion

Forty-five articles described an intervention where the primary outcome was psychological adjustment to a mental or physical health condition. Most of these articles had study populations of cancer. CBT and cognitive-based approaches were most populous and often resulted in significant outcomes. Further, these interventions appeared to be feasible across patient populations, suggesting it may hold utility for further clinical groups. However, acceptability data from some of these trials suggest that the homework elements of CBT may be too intensive. This review represents the first effort to bring together all available evidence for therapeutic interventions where the primary outcome is a measure of psychological adjustment. The cross-diagnostic nature of this review allows for a more holistic comparison of interventions that support adjustment and may be used to facilitate the development of new interventions that can be applied across health conditions.

Of note, the MBSR programme for women adjusting to breast cancer was highly acceptable (Tacón et al., 2004), with a majority enjoying and continuing the techniques used after the trial ended. This evidence, combined with the effectiveness of the MBSR trial and the two ACT trials (Han et al., 2019; Rost et al., 2012) which include some elements of mindfulness, suggests that interventions that incorporate mindfulness techniques may be particularly important for psychological adjustment. These approaches may also be particularly valuable in promoting acceptance and emotional regulation in progressive conditions where there is no cure, but quality of life can be meaningfully enhanced. For example, mindfulness interventions have been associated with increases in quality of life for people with dementia (Churcher Clarke et al., 2017). Further, whilst ACT is usually delivered to people experiencing clinically significant anxiety or depression, it may be relevant for people adjusting to other diagnoses which have been described as 'traumatic' (Bunn et al., 2012, p. 5). Thus, incorporating ACT and mindfulness techniques in an intervention to help promote psychological adjustment to other diagnoses may be appropriate.

There were mixed findings for psychoeducation and psychoeducational counselling interventions. Of those that produced significant findings, these appeared to be short-term, with effects often disappearing at later follow ups (Navarta-Sánchez et al., 2020). Psychoeducational counselling appeared to be more effective than the provision of psychoeducation materials. This is consistent with wider literature which suggests psychoeducation is most effective when combined with other approaches (e.g. Proudfoot et al., 2012).

General counselling or psychotherapy interventions were often small scale, but with largely positive findings. Both individual and group interventions often resulted in psychological adjustment, suggesting both modalities could be an effective intervention. Further, interventions were delivered across diagnoses including ABI, diabetes and cancer, demonstrating its versatility. However, findings for self-management psychotherapy and telephone-based counselling were more mixed, with less evidence of psychological adjustment. It is therefore possible that an in-person facilitator may be particularly important for promoting psychological adjustment. There is a large evidence base for the efficacy of individual counselling across diagnostic groups (Hill & Brettle, 2005), particularly for reducing anxiety in people living with chronic illnesses (Salari et al., 2023). This, combined with evidence from this review, suggests that in-person facilitated counselling may hold utility for further interventions designed specifically to promote psychological adaptation to a significant mental or physical health diagnosis.

Stress management interventions included components of education, problem solving and relaxation. However, only one trial resulted in a significant improvement over and above the control group (Tavakkoli et al., 2021). Whilst mindfulness-based stress reduction programmes have a long history of use in chronic illness (Kabat-Zinn, 1982), stress management interventions are less common and largely focused improving quality of life or symptom reduction (Abe & Abe, 2019). As such, stress management interventions cannot currently be recommended for use in future interventions designed to promote psychological adjustment to a diagnosis.

Only two coaching interventions were identified as part of this review and neither produced a significant effect on psychological adjustment. Interventions within the 'other interventions' section were variable in quality, feasibility, and effectiveness. Many here were bespoke and multimodal interventions that failed to improve psychological adjustment in their target populations. Of those that did produce a significant effect (Cameron et al., 2007; Huang et al., 2016; John et al., 2016; Northouse et al., 2013), many were subject to limitations such as small sample sizes or limited feasibility findings. As such, interventions in these research studies cannot currently be recommended for use in other clinical populations.

Methodological problems and limitations

Most studies reported on psychological adjustment to cancer. Whilst two studies were for advanced cancer (Huang et al., 2019; Northouse et al., 2013) most interventions were delivered to participants where treatment and remission were the primary focus. Only seven of the included studies were for diagnoses where there was a progressive, neurodegenerative element and no cure. Receiving a diagnosis such as this can be a very different experience, resulting in very different emotions (Bunn et al., 2012). As such, comparisons between these clinical groups and application of the results here to such groups should be treated with caution. Nevertheless, this review's inclusion criteria were purposefully wide to ensure that degenerative conditions such as MS and Parkinson's Disease were represented in the results.

An inclusion criterion here was that studies had to include a primary or secondary outcome measure of psychological adjustment, coping or similar. This was necessary to ensure that included studies were as relevant as possible for the review question, but it led to many studies being excluded from the review as they did not include a suitable outcome measure for synthesis. Whilst our inclusion criteria for clinical groups was purposefully wide, it is possible that interventions incorporating aspects of psychological adjustment, but not measuring this as an outcome were missed. Future researchers may wish to expand this inclusion criterion to capture studies where combined outcomes such as reductions in depression, anxiety and distress may suggest theoretical psychological adjustment.

Implications for practice and future Research

The initial period after a diagnosis of a significant mental or physical health diagnosis can be fundamental in helping people psychologically process and adapt to the living with the condition (de Ridder et al., 2008). Evidence here suggests that post-diagnostic interventions have the potential to improve psychological adjustment in diverse populations. In particular CBT approaches and interventions that incorporated mindfulness techniques seemed to be particularly effective and were largely acceptable to participants across a wide range of diagnoses. However, individual preference for these interventions is likely to vary, with homework elements of CBT being described as intensive for some participants. As such, clinicians should work with service users to identify preferences for post-diagnostic support and signpost to relevant services that may be beneficial for the person affected and their wider networks.

As mentioned, very few studies here explored psychological adaptation to a progressive degenerative disease such as Alzheimer's disease or other dementias. For conditions such as these where there is no cure, receiving the diagnosis is likely to be a very different experience, necessitating different approaches or underlying frameworks. This is an important area of future research and may yield a broader understanding of how people adjust in different clinical contexts.

Costs associated with delivering the intervention were not reported in any included studies. As such, it was not possible to discuss the cost-effectiveness of included interventions. Cost is a key component of feasibility and can influence the implementation of research-based interventions for clinical practice (Krebs & Nosyk, 2021). Whilst it is possible that cost-analyses were reported in other journal articles not identified as part of this review, it is recommended that researchers include a preliminary consideration of costs when reporting the effects of an intervention.

Conclusion

A total of 45 interventions with primary or secondary aims of improving psychological adjustment or coping for people receiving a significant diagnosis were identified. CBT approaches were most commonly identified and evidence here suggested that these approaches were largely successful and feasible. However, interventions that incorporated mindfulness techniques were also largely successful, and evidence suggested these to be highly acceptable to participants across diagnostic groups.

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ORCID

Charlotte R. Stoner http://orcid.org/0000-0002-1536-4347
Aimee Spector http://orcid.org/0000-0003-4448-8143

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