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BMJ Open Mindfulness-based programmes and 'bigger than self' issues: protocol for a scoping review

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ABSTRACT

Introduction Mindfulness-based programmes (MBPs) have an established, growing evidence base as interventions to optimise health, well-being and performance of individual participants. Emerging evidence suggests that MBPs also enhance prosociality, encouraging individuals to contribute to positive social change. This study focuses on the potential of MBPs to facilitate development of participants' inner resources that support prosocial shifts. The review seeks to detect shifts in MBP benefit from individual toward 'bigger than self', informing and empowering individual and collective responses to complex societal and global issues. The review aims to map current literature on MBPs and social change, into a descriptive overview with commentary on quality, trends, theoretical models and gaps, and on how training in MBPs potentially enables individual and collective responses to societal and global issues. Recommendations for future directions for researchers seeking to advance this evidence base, and practitioners developing innovative MBPs for this purpose will be provided.

Methods and analysis A scoping review of peer-reviewed literature will be undertaken and reported on according to the Joanna Briggs Institute (JBI) Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews guidance. Systematic searches of four scientific databases will be undertaken to identify potentially eligible articles published from all time to current date. Data will be extracted using an extraction template and analysed descriptively using narrative synthesis.

Ethics and dissemination This scoping review involves no human participants, so ethics is not required. Findings will be shared through professional networks, conference presentations and journal publication.

BACKGROUND

Mindfulness-based programmes (MBPs) engage participants in systematic training in meditative/contemplative practice oriented towards the cultivation of mindfulness and/or compassion. They have historically been studied primarily as interventions to optimise individual health and well-being.^{1–6} Research has tended to focus on capturing outcomes related to individual and mainstream concerns such as pain management, stress,

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ Rigorous adherence to Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews guidance including conducting abstract screening, and full-text screening independently by two authors.
- ⇒ A quality assessment of the peer-reviewed literature will be conducted using a modified version of the Critical Appraisal Skills Programme tool to assess methodological quality of the most recent (2018–2023) research articles selected.
- ⇒ The analysis will highlight research-related themes including quality, methods, measures and outcomes reported; and practice-related themes such as mindfulness-based programme models, theoretical underpinnings, target populations and delivery contexts.
- ⇒ Study limitations are that only studies written in English will be included; no risk of bias assessment will be undertaken; and assessment of the quality of evidence will be limited to included papers from 2018 to 2023.

anxiety and depression.^{7–10} These endeavours have led to MBPs being successfully implemented in mainstream contexts through skillful tailoring to a range of populations (including staff and leaders in workplaces, children and adults in schools and colleges, and diverse clinical groups), and for a range of contexts (including health, education, workplaces and the justice system).^{11–13} Recently, there has been growing interest in the potential of expanding research and practice to the ways MBPs could support the development of inner resources including interpersonal competencies such as emotional intelligence, empathy and compassion,^{14–18} and collective, prosocial action responding to complex social challenges such as social inequity, and the climate and nature emergencies.^{19–23} This shift in focus from outcomes relating to the individual and self towards 'bigger than self' issues is what this review seeks to explore and examine.²⁴ Throughout the paper, we

use the term ‘MBP’ as shorthand for programmes that include systematic training in meditative practices used to cultivate attention regulation, mindfulness, empathy, compassion and psychological insight, and that integrate these with teachings about mindful and compassionate approaches to life, and psychoeducational content related to the programme’s aims.

While mainstream mindfulness interventions have brought the individual benefit of MBPs to many people, there are many live questions about their societal impact and inequitable gaps in provision. Some critiques focus on how the MBP field has tended to prioritise addressing individualistic goals, such as the alleviation of stress, depression and physical symptoms, and that through this has become embedded within, and inadvertently reinforcing of, the very systems that are part of the problem that need addressing (ie, the individualistically oriented ideology driving current economic and social models that cause harm to human and environmental well-being).^{25 26} In this context, how might MBP training enable a shift away from the predominant Western individualistic orientation, facilitating a shift in perspective from ‘me to we’?^{27 28} This relational perspective encourages an expanded scope of inquiry into influences on and interconnections between personal and collective well-being. An associated critique highlights that the benefits of MBPs delivered within mainstream settings are not evenly available, accessible or culturally appropriate for the breadth of the demographics of our societies. This of course is not unique to the MBP field, but it needs attention if the sector is explicitly aiming to mobilise MBPs to support addressing social inequity and sustainable behaviour change at scale.

Traditional ways of delivering psychological therapies, including many MBPs, have largely focused on the individual by understanding the intrapersonal mechanisms that drive depression or other challenges.^{29 30} They provide therapeutic interventions to enable individuals to function in their immediate social context. These approaches have generally ignored the role that the structural systems individuals are embedded within play, and how they systemically cause advantage and disadvantage.³¹ For example, mindfulness-based cognitive therapy (MBCT) for depression prevention does not acknowledge the social factors that can cause depression to be more prevalent in some communities or settings, and instead emphasises the ways in which individuals can learn to manage their vulnerability better.³² Going forward, it may be that a ‘both-and’ approach would be of benefit. One that integrates the traditional curriculum elements addressing the intrapersonal drivers for depression recurrence with new elements that develop awareness and skills in the domains of interpersonal mindfulness and ‘social mindfulness’. Mindfulness practice enables a deeply personal relational engagement with the immediacy of experience, which can then be expanded into the interpersonal domain, and then to the lived experience of family and community-living in everyday life.³³ Indeed, Bihari

and Mullan propose ‘that (the) interpersonal change processes associated with MBCT play an important role in staying well and preventing depressive relapse, with implications for further research, clinical practice and community level interventions (Bihari and Mullan, ³³ p.57).’ In *Depression as a disease of modernity: explanations for increasing prevalence*, Hidaka concludes that, ‘humans have dragged a body with a long hominid history into an overfed, malnourished, sedentary, sunlight-deficient, sleep-deprived, competitive, inequitable and socially isolating environment with dire consequences (Hidaka, ³⁴ p.211).’

There are voices in the MBP field calling for an expansion of perspective. Through a sociological lens, Lee considered the possibility of organisations overcoming ‘their fundamental selfishness’ and being organised in ways that enable them ‘to better perceive and act in accordance with the fundamental reality of interconnect-edness,’ and within this shift, ‘for individuals to become more mindful, not just in a narrow sense of attending to their moment-to-moment awareness, but also in more macro and sociological ways (Lee, ³⁵ p.294).’ Sutcliffe *et al.*,³⁶ p.75 state, ‘an organisational perspective on mindfulness holds promise for developing an integrated multi-level theory of mindfulness by fully depicting the varied ways in which individual mindfulness, collective mindfulness and organisational context are mutually constitutive.’ Sajjad and Shahbaz suggested, ‘studies could investigate empirically how mindfulness practice could help in building human capital, supporting an ethical climate in the workplace, improving corporate citizenship behaviour and developing an occupational health and safety culture,’ and establishing ‘the role of mindfulness in addressing societal sustainability issues,’ towards ‘a clearer understanding of how mindfulness can contribute to addressing community well-being, human rights, social justice and other pertinent societal issues (Sajjad and Shahbaz, ³⁷ p.88).’ Thus, it may be that the time is right to reclaim a bigger vision for established MBPs, as well as to develop and research tailored MBPs that explicitly aim to cultivate holistic awareness and responsivity to the breadth of conditions influencing personal and collective well-being.³⁸

The potential for mindfulness to inform paradigm shifts at both individual and collective levels has been articulated by Meili and Kabat-Zinn throughout his four decades of engagement in this field.¹ His early focus was on the potential for mindfulness to catalyse new perspectives on health and healing at both individual participant and systems levels in the context of medicine and healthcare. Indeed, the Mindfulness-Based Stress Reduction programme, which Kabat-Zinn created, has significantly contributed to the development of the fields of integrative and participatory healthcare which are now recognised as mainstream. He included a whole section in his first book ‘Full Catastrophe Living (first published in 1990) entitled ‘The Paradigm: A new way of thinking about health and illness.’ ‘We try to stimulate people to learn more about

their own bodies and about the role of the mind in health and illness as a fundamental part of their adventure in growth and healing,' and doing this through 'touching on the ways in which new scientific research and thinking are transforming the practice of medicine itself, and by exploring the direct relevance of these new developments to our lives.'¹ p.150 Kabat-Zinn expanded his scope in other writings and talks to include how mindfulness can inform new perspectives and 'healing' on the levels of democracy and politics, on social justice and on the ecological crisis.^{39 40}

Despite this early vision for the wider potential of MBPs, research has predominantly focused on capturing individual outcomes of participation. It may be that there are wider social gains from MBP practice and participation that have not been successfully captured by research to date. The complexity of measuring wider impacts may well have been a factor steering the research agenda towards the focus on the individual. Our preliminary search strategy for this review has revealed that this trend is changing, with as few as six publications in 2011 examining wider impacts, and over 85 in 2021. Abstracts show a mix of traditional and bespoke MBP models, with studies on how interpersonal mindfulness skills can positively contribute to marital conflict, long-term care giving, racism and intergroup biases, and studies examining wider links to prosocial behaviours such as responsiveness to the climate crisis. Measures of wider impact on 'bigger than self' issues and prosocial change are thus being included more in current research, and MBPs that target these issues as a primary outcome are being developed, implemented and researched. This trend is gaining traction at a policy level. The Intergovernmental Panel on Climate Change report,⁴¹ Climate Change 2022: Mitigation of Climate Change, explicitly mentioned meditation for the first time in relation to values and beliefs and suggested that a key element of human response will be 'inner' transitions.⁴¹ Bristow *et al*,⁴² p.7 stated in their 2022 document, 'Reconnection: Meeting the Climate Crisis Inside Out', informed by in-depth interviews with 25 national and transnational politicians and policy-makers: 'if we go on treating climate change purely as an external, technical challenge, solutions will continue to elude us,' and they called for the integration of, 'external approaches with inner work.' There is also a trend of emerging literature suggesting that MBPs benefiting the individual can also bring benefit to others.^{19 43}

Society is facing multiple intersecting crises, with the Millennium Project noting that sustainable development and climate change are among the 15 global challenges in their 2022 document.⁴⁴ With change, and responses to change, needed across so many human domains, and with helpful emergent technologies becoming available yet not facilitating the urgent shift in human behaviour needed, there is increasing attention being given around how to support change through the development of inner qualities and capacities.^{42 45 46} MBPs are one option being considered as an enabler to this prosocial shift from 'me'

to 'we'.^{27 28 37 47} While there is an upsurge of research and practice activity in the area of mindfulness and compassion and their contribution to social disruption, threat and change, there is a lack of clear understanding about these developments as a body of literature. We aim to conduct a scoping review and synthesis of peer-reviewed literature focused on or mentioning MBPs in a social change context. Reviewing how MBPs are currently used in the context of social change within existing literature will facilitate innovation by identifying the quality and characteristics of both established and emergent models and trends, as well as identifying gaps and potential future directions for research and practice.

Our approach is grounded in the understanding that societal 'ruptures' are occurring, and that we are amidst a climate and biodiversity crisis.⁴⁸ We seek to explore the potential of MBPs in contributing to a certain form of social change that includes the challenges of social inequality, unsustainability, polarisation, prejudice and discrimination, and addresses these through the development of agency and volition, promoting compassionate, empathetic, altruistic and prosocial actions, linked to values, meaning and collective purpose.

METHODS/DESIGN

Our aim is to provide a descriptive overview with a commentary on quality, trends, theoretical models, gaps and on how MBPs build prosocial interpersonal competencies and enable individual and collective responses to societal and environmental challenges. Through early team discussions on review approaches available, a scoping review was chosen as the best means of mapping this field, because it has a recognised methodology and rigour, but also broader inclusion parameters enabling gathering of a body of diverse literature.^{49 50} In designing the protocol for this scoping review, we drew on Arksey and O'Malley's five stage approach.⁵¹ This article outlines the protocol using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) guidance, ensuring rigour and facilitating replication.⁵² The review is scheduled to be conducted between March 2023 and May 2023.

Stage 1: identification of the research questions

We followed Arksey and O'Malley's suggestion of an iterative approach to developing research questions, which enabled them to evolve as we built familiarity with the literature. Through this process, we identified eight research questions to guide the scoping review (see [box 1](#)).

Stage 2: identifying relevant literature

Eligibility criteria

Eligibility criteria were established via an iterative approach to preliminary searches followed by team discussion. We sought to strike a balance between ensuring we captured the breadth of practice in our area of interest, and that we had boundaries in place to enable a meaningful focus.

Box 1 Research questions

- ⇒ What are the links between mindfulness-based programmes (MBPs) and social change?
- ⇒ What research and practice are happening related to MBPs and social change?
- ⇒ What are the outcomes and how do they compare/contrast across research studies?
- ⇒ What are the mechanisms that potentially enable MBPs to influence social change?
- ⇒ What are the research study characteristics (eg, quality, design, tools for measuring outcomes)?
- ⇒ What are the population/participant characteristics in relation to equity?
- ⇒ What are the practice characteristics (eg, programme type, theoretical model underpinning programme delivery, participant population, delivery context, types of social change being addressed)?
- ⇒ What are the implications for future research and practice developments?

Inclusion of grey literature was discussed from the outset and consideration was given to including this body of work. However, preliminary search work in this area led to the decision to exclude the grey literature because it is a large and diverse body of work that has significant variations in quality. Likewise, we initially sought to include all the peer-reviewed literature related to mindfulness and social change. However, this resulted in an unwieldy volume of literature, so we made the decision to narrow down to only mindfulness research on curriculums that we could define as MBPs. This resulted in us excluding research on mindfulness inductions (ie, research on the impacts of engaging in a single mindfulness practice in lab conditions), and research on trait mindfulness.

In order to create clear definitions of what constitutes an MBP, we drew on work by Crane *et al*,¹¹ 'What defines MBPs? The warp and the weft,' which outlines criteria delineating what an MBP is and is not.¹¹ We are thus including in our scoping review research on programmes that:

1. Are informed by theories and practices that draw from a confluence of contemplative traditions, science and the major disciplines of medicine, psychology and education.
2. Are underpinned by a model of human experience which addresses the causes of human distress and the pathways to relieving it.
3. Develop a new relationship with experience characterised by present moment focus, decentring and an approach orientation.
4. Support the development of greater attentional, emotional and behavioural self-regulation, as well as positive qualities such as compassion, wisdom, equanimity.
5. Engage the participant in a sustained intensive training in mindfulness meditation practice, in an experiential inquiry-based learning process and in exercises to develop insight and understanding.

Further definition of the criterion in point five, to discriminate which papers to include and exclude are outlined in online supplemental table 1. We apply the broad definition of 'mindfulness' that the warp and weft paper points to, which includes meditative practice oriented towards mindfulness and/or compassion. In practice, there is significant overlap between mindfulness and compassion-based practices in MBP delivery, with many programmes including both, while some lean more towards one or the other. Our data extraction template also captures the primary emphasis of the programme so that we can discriminate between programmes that prioritise the cultivation of compassion and those that prioritise the cultivation of mindfulness in the analysis.

We included the PRISM-ScR⁵³ focused on health equity, because our review examines how MBPs might contribute to social change, including equity and anti-oppression issues, and we are, therefore, interested in the degree to which current delivery and research takes these issues into account.⁵³ Not all the items on the checklist apply to our data because our focus goes beyond health interventions, but we will include those that apply. We used the PROGRESS-Plus primary population framework to inform our data extraction categories.⁵⁴

Databases

Literature searches will take place in PubMed Central, CINAHL Plus with Full Text, Web of Science (WOS) and ProQuest Core Databases, with database-specific Boolean operators applied where possible and will aim to capture all the data within the search criteria.

Search strategy and terms

Using an iterative and gradually refined approach, a search strategy was developed, through three rounds of preliminary, unconstrained searches, in three databases, WOS, Science Direct and Google Scholar, with database-specific Boolean operators applied. Further research was undertaken, with a broad field of terms including mindfulness, awareness, meditation, compassion, well-being, emotional capacity, agency, behaviour, prosocial, sustainability, social change. Subsequent meetings with the research team led to a refinement of databases and search terms, and a narrowing to English language papers. Using our paper's specific search criteria to capture research that specifically asks questions about 'bigger than self' issues, we generated a return of 5198 papers within WOS.

Searching specifically for 'social change' within these 5198 papers, we produced just eight papers with these words found together in the title and/or abstract. A further search for peer-reviewed papers was performed in four databases, PubMed Central, CINAHL Plus with Full Text, WOS and ProQuest Core Databases, with database-specific Boolean operators applied where possible. Search terms included: mindfulness, meditation, contemplative, compassion and prosocial, sustainability, altruistic, equity, justice, prejudice, discrimination, poverty, deprivation, equality, polarisation, agency, volition,

Box 2 Search string for Web Of Science

Title “mindfulness*” OR “meditat*” OR “contemplat*” OR “mindfulness* AND compassion*” OR “meditat* AND compassion*” OR “contemplat* AND compassion*”
 AND Author Keywords “responding*” OR “response*” OR “action*” OR “relationship*” OR “connectedness*” OR “interpersonal*” OR “anger*” OR “out-group*” OR “thankfulness*” OR “forgiveness*” OR “lov*” OR “sympath*” OR “antisocial*” OR “aggression*” OR “retaliation*” OR “gratitude*” OR “kind*” OR “caring*” OR “awe*” OR “social*” OR “compassion*” OR “efficac*” OR “together*” OR “collective*” OR “help*” OR “prosocial*” OR “sustainab*” OR “altruis*” OR “equit*” OR “justice*” OR “prejudice*” OR “discrimin*” OR “poverty*” OR “deprivation*” OR “equality*” OR “polar*” OR “agency*” OR “volition*” OR “social change*” OR “personal bias*” OR “intergroup bias*” OR “empath*”
 AND Topic “theor*” OR “protocol*” OR “project*” OR “procedure*” OR “course*” OR “group*” OR “class*” OR “model*” OR “program*” OR “interven*” OR “practi*” OR “mechanism*” OR “training*”
 NOT Topic “trait*” OR “obsessive*” OR “treatment*” OR “disorder*” OR “disposit*” OR “brief*” OR “induced*” OR “induction*” OR “anxiety*” OR “depression*” OR “schizoph*” OR “trauma*” OR “clinical*” OR “disorders*” OR “religious*” OR “non-secular*” OR “disturbance*” OR “symptoms*” OR “psychosis*” OR “mental illness*” OR “mental health*” OR “treatment*” OR “compassionate community*” OR “contemplate*” OR “compassion satisfaction*” OR “compassion fatigue*” OR “compassionate basis*” OR “compassionate use*” OR “mindful*” OR “individual wellbeingwell-being*” OR “self-compassion*” OR “prayer*” OR “personal development*” OR “personal wellbeingwell-being*” OR “compassion burnout*” OR “self-help”
 Refined by—English (Languages) and Article or Review Article or Early Access or Proceeding Paper or Editorial Material (Document Types) and: Not—Book Chapters or Retracted Publication (Exclude—Document Types) and:
 Without date restrictions

sustainable, ‘social change’, ‘personal bias’, ‘intergroup bias’, prejudice, empathy, gratitude, kindness, caring, awe. Through further discussion, and refinement, which included additional search terms located within meta-analysis papers^{19 21 55 56} from our broad area of interest, we arrived at our search terms and strategy for this review.

At this stage, the research team were satisfied that the search strategy was appropriate for peer-reviewed papers.

The search terms included two distinct concepts:

- ▶ “mindfulness*” OR “meditat*” OR “contemplat*” OR “mindfulness* AND compassion*” OR “meditat* AND compassion*” OR “contemplat* AND compassion*”
- ▶ “social change” (and types or associations with).

Search terms were adapted for each database, for example, see [box 2](#) for the search string for WOS. The search terms for each database are available from the first author.

Stage 3: study selection

We have designed a two-step study selection process. First, a single reviewer will review titles, determining eligibility based on inclusion and exclusion criteria. For instance, outcomes that relate solely to personal well-being, development or health issues will be removed. Any study with no clarity about whether inclusion criteria are being

met will be passed through to the next step. In step 2, titles and abstracts will be independently reviewed by two members of the team using our eligibility criteria. Differences or discrepancies in inclusion or exclusion decisions will be resolved through discussion with a third member of the team. If consensus is not gained, the articles will be included in our review.

Methodologies for scoping reviews do not always include quality assessment. However, to improve rigour, transparency and credibility, we aim to include a systematic quality assessment approach to selected literature.⁴⁹ A modified version of the Critical Appraisal Skills Program⁵⁷ tool will enable assessment of methodological quality of the peer-reviewed empirical literature, ([table 1](#)) and will be conducted on all papers published from 2018 onward. Our reason for this restriction is the recognition that while wanting to add quality assessment, there is a need to balance this against team capacity.

To enable visual representation of the data, we will use a traffic light system to indicate whether the criteria have been met (ie, high quality, criteria fully met (green); medium quality, criteria partially met (orange); low quality, criteria not met (red); not applicable (black)). A mean composite score of the quality of each piece of literature will also be created by creating a mean score from all applicable items (scores: high quality (2), medium quality (1) and low quality (0)). Papers that score low in quality will not be excluded from the scoping review, as they are still likely to include information that informs our research. The quality assessment of included papers from 2018 to 2023 will involve two reviewers, working independently, resolving discrepancies through discussion.⁴⁹

Stage 4: charting the data

We will extract key information from selected articles that address our research questions. We developed a priori categories to guide the extraction and charting of data from the papers (see online supplemental table 2).⁵⁴ Categories in the intervention detail are informed by good practice guidelines.⁵⁸

As part of our framework, we will extract as qualitative data the sentence that encapsulates the concept ‘mindfulness’ or ‘meditation’ or ‘contemplative’ or ‘mindfulness and compassion’ or ‘meditation and compassion’ or ‘contemplation and compassion’ and ‘social change’ (and types or associations with) and if the concept is mentioned more than once, the sentence that best defines this in the context of our research questions. Additional categories may emerge through team consultation while we are in process with data collection. The data extraction framework will be piloted by two reviewers on a sample of studies, and if necessary, adapted to ensure its effectiveness and alignment to our research questions. One reviewer will perform the analysis, and a second will independently check a randomly selected sample to assess accuracy. We aim to extract all peer-reviewed literature meeting our criteria, to get an accurate picture of the current status of this area.

Table 1 Assessment of methodological quality of peer-reviewed empirical literature

Question no	1	2	3	4	5	6	7	8	9	10	Composite mean score*
Paper											
Paper 1											
Paper 2											
Paper 3, etc											
Fully met=green, 2; partially met=orange, 1; not met=red, 0; not applicable=black.											
Section A—Are the results valid?											
1. Is there a clear statement of aims?											
2. Is the methodology appropriate?											
3. Is the design appropriate to address the aims?											
4. Is the recruitment strategy appropriate to the aims?											
5. Is the data collected in a way that addressed the issue?											
6. Has the relationship between researcher and participants been adequately considered?											
Section B—What are the results?											
7. Have ethical issues been taken into consideration?											
8. Was the data analysis sufficiently rigorous?											
9. Is there a clear statement of findings?											
Section C—Will the results help?											
10. Is the research of value?											
*Derived by creating a mean from all applicable items.											

Stage 5: collating, summarising and reporting the results

Our aim for this scoping review is to present an overview of the literature on MBPs and social change. In this stage, data will be analysed and summarised descriptively. Study and practice characteristics will be presented in table and/or graph form and summarised using a narrative synthesis approach.

Research trends and gaps will be identified through comparative analysis. Data capturing the authors' reference to MBPs, underpinning models and social change will be thematically analysed to identify themes and common usage for further research study.

We plan to use the JBI PRISMA-ScR⁵² guidance to accurately report the review search results and analysis summary.

In the context of the acceleration of intersecting global social and environmental crises, the development of inner qualities such as attention regulation, compassion and wise discernment have the potential to be vital ingredients in a necessary collective response. It is important that practice in this area is evidence informed. This scoping review aims to map and critically analyse the emerging body of practice, research and scholarship in the field of MBPs and their potential contribution to social change. There is widespread interest in this theme in the MBP research, teaching and training community but currently little to guide innovation, practice and research. Our results will provide unique insights that could offer pointers to researchers on research priorities, and on methodologies that meaningfully capture wider outcomes; and guidance to practitioners on evidence-informed innovation in this area.

ETHICS AND DISSEMINATION

The scoping review involves no human participants nor any unpublished data so approval from a human research ethics committee is not required. Data deposition and curation via Bangor University computer system. Findings will be shared through professional networks, conference presentations and journal publication.

Patient and public involvement

This review involves no patients or members of the public as it will draw on existing research studies. There will be public involvement at the consultation stage of the review process.

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Contributors All authors were involved in drafting, developing and editing the protocol for the scoping review. RJC-D drafted the initial protocol manuscript. JB, GMG and RSC guided the protocol development and made conceptual and editing contributions. TG contributed specifically to the data extraction and quality review elements of the protocol. YN contributed specifically to database suggestions and refining search criteria. All authors contributed to drafts of the manuscript and will be involved when the scoping review commences.

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