Mindfulness-based social work and self-care with social work professionals

Mindfulness-Based Social Work and Self-Care with Social Work Professionals: Replication and Expansion of a Randomised Controlled Trial

Alan Maddock [iD] [1,*], Karen McGuigan [iD] [2] and Pearse McCusker [iD] [3]

[1]*Department of Health Psychology, School of Population Health, RCSI University of Medicine and Health Sciences, Dublin, Ireland*
[2]*School of Social Sciences, Education and Social Work, Queen's University, Belfast, Northern Ireland*
[3]*School of Social and Political Science, The University of Edinburgh, Edinburgh, UK*

*Correspondence to Alan Maddock, Department of Health Psychology, School of Population Health, RCSI University of Medicine and Health Sciences, Dublin, Ireland. E-mail: alanmaddock@rcsi.ie

Abstract

Social workers are at high risk of work stress and burnout, with the Covid-19 reported to have amplified this risk. The Mindfulness-based Social Work and Self-Care programme (MBSWSC) has been found to support cognitive and emotion regulation of social workers, leading to improved stress, burnout, mental health, and well-being. This randomised controlled trial (RCT) aimed to replicate and expand the findings of an earlier RCT of MBSWSC, with a wider group of social work professionals (including managers), by evaluating the effects of MBSWSC ($n = 29$) versus an active control ($n = 31$). Replication of RCTs acts as an important means by which findings can be confirmed, results replicated, generalisability assessed and processes and applicability improved. When compared to an online active control group, MBSWSC (which was also delivered online) was found to improve stress, emotional exhaustion, depersonalisation of service users, anxiety, depression, well-being, along with a range of mindfulness mechanisms of action which support cognitive and emotion self-regulation. The results from this study evidence the acceptability, effectiveness and durability of

MBSWSC, and provide clear guidance that if MBSWSC is implemented across social work services, social workers are likely to experience improvements in these critical social work practice and self-care outcomes.

Introduction

The negative impact of ongoing or unresolved workplace stress has been highlighted at an organisational level, with a lack of staff engagement, poorer work performance, absenteeism and presenteeism consistently reported as a result (Bartlett *et al.*, 2019). Social workers have been identified as individuals who are at increased risk of experiencing the detrimental effects of work stress, including compassion fatigue, secondary traumatisation and burnout (Miller and Grise-Owens, 2022). Given the stressful and demanding nature of social work, it is perhaps unsurprising that social workers are at high risk of work stress and burnout compared to other professions (Kinman *et al.*, 2020). A government survey among social workers in England highlighted that 85 per cent of social workers reported their current work-related stress levels as 'high' (Social Work England, 2020, p. 35). This report also points to the fact that the average working life of a social worker before burnout is seven years. This is in contrast to an average working life of sixteen years for nurses and twenty-five years for doctors (Bowyer and Roe, 2015). Miller and Grise-Owens (2022, p. 674) point to the '*pernicious impact on social work*' that the COVID-19 pandemic has had. Whilst citing exhaustion and reduced well-being as a result of the pandemic, many social workers report that their workload increased as a result and has not yet returned to pre-pandemic levels (British Association of Social Workers, 2022). This is echoed in a recent report that highlights that the pandemic had a negative effect on the psychological and emotional health of social workers, across all sectors, with newly qualified social workers in particular reporting lower morale and poorer mental health (Social Work England, 2022). The COVID-19 pandemic continues to impact currently, with many social workers reporting '*the most important emerging issue facing social work*' in the next two years is related to staff burnout and mental health (UNISON, 2022, p. 20). The high levels of stress and concern over social worker's mental health, although worrying, are not new in social work and have led to calls for new, innovative, and integrated solutions to support and enhance the well-being of social work professionals

([Kinman *et al.*, 2020](#)). This aligns with current NICE quality standards in relation to healthy workplaces (NICE: QS 147), underlining the need for effective structures and solutions to reduce workplace stress and improve employee well-being.

Mindfulness

Mindfulness-based programmes (MBPs) have been highlighted as potential solutions to address workplace stress and improve worker well-being ([Chin *et al.*, 2019](#)). Mindfulness is defined as '*the awareness that emerges through paying attention, on purpose, in the present moment, and non-judgementally to the unfolding of experience moment by moment*' ([Kabat-Zinn, 2003](#), p. 145). There is a growing acceptance that MBPs can improve recovery, resilience, and more adaptive responses to stress ([Craigie *et al.*, 2016](#)). A recent systematic review and meta-analysis on workplace MBPs highlighted reduced stress, anxiety, and psychological distress, and improved mindfulness, sleep and well-being following participation in mindfulness training ([Bartlett *et al.*, 2019](#)). Mindfulness has also been evidenced to improve attention control, increase compassion, reduce rumination, and lower depression and PTSD symptomology ([Whitmoyer *et al.*, 2020](#)). It is argued that the '*embodied and skill-based nature of MBPs, with practices that can be integrated into the activities of daily living*', makes it a potentially good fit for various occupational groups ([Whitmoyer *et al.*, 2020](#)). Indeed, mindfulness has been found to benefit social workers and their practice through improved attention, better self-awareness, greater empathy, compassion, improved psychosocial outcomes, well-being and day-to-day functioning ([Maddock *et al.*, 2023a](#)). Interestingly, there is growing evidence that MBPs may have benefit beyond those for the individual, including enhanced work performance, engagement, working relationships, and work–life balance ([Allen *et al.*, 2015](#)).

Gaps in knowledge

The dominance of two prominent MBPs, namely Mindfulness-Based Stress Reduction (MBSR: [Kabat-Zinn, 1990](#)) and Mindfulness-Based Cognitive Therapy (MBCT: [Segal *et al.*, 2002](#)) has seen the majority of MBPs delivered in an eight-week format to allow for the development and refinement of mindfulness techniques and practice ([Isbel *et al.*, 2020](#)). MBSR, described as the 'cornerstone' of MBPs ([Trowbridge and Mische Lawson, 2016](#), p. 103), comprises eight, weekly 2–2.5-hour sessions and 1 full day session totalling approximately twenty-six hours in class; and forty-five minutes home practice for six of seven weekdays across programme duration ([Trowbridge and Mische Lawson, 2016](#)). Given the

intensity of MBSR and MBCT it is perhaps unsurprising that these have been considered to be less accessible for busy professionals (Craigie *et al.*, 2016). However, there remains a lack of evidence on the effectiveness of briefer MBPs (Hosseinzadeh Asl, 2022), which may be more suitable for workplace settings with busy professionals, such as social work, due to reduced time commitments for participants (Craigie *et al.*, 2016; Isbel *et al.*, 2020). Recent literature has looked to explore the trajectory of developing mindfulness practice across an eight-week MBP, with findings indicating four weeks mindfulness training, with thirty minutes of daily home practice, allows for proficiency in mindfulness practice to develop, with the final four weeks offering opportunity for refinement of mindfulness practice (Isbel *et al.*, 2020). More research is required to understand the dose–response relationship in mindfulness interventions (Thomas, 2017); with a lack of certainty existing around whether longer or briefer MBPs are more effective (Dharmawardene *et al.*, 2015). The effectiveness of MBPs require more in-depth research, particularly within the area of social work to explore their ability to mitigate the effects of workplace stress and feelings of burnout (Bartlett *et al.*, 2019). Although MBPs have shown promise within different populations, existing research warns against the transfer of existing MBPs into settings for which they have not been designed, for example: MBSR was developed for clinical populations and therefore related programme protocols may not reflect needs of professionals in a workplace setting (Craigie *et al.*, 2016). Indeed there is evidence to suggest that social workers are more likely to engage with MBPs when they are tailored specifically to the needs of social workers, are supportive of their practice, and are promoted and endorsed by their organisation (Maddock *et al.*, 2023b).

The literature highlights a gap in our understanding due to the paucity of studies which explore the impact of MBPs in relation to an active control group, with many MBP studies to date utilising a waitlist control group or a *'non-equivalent comparison group'* (Chin *et al.*, 2019, p. 628). Inspite of the growing body of evidence to support the benefits of mindfulness for employees, the field lacks well-designed and replicable RCTs (Chin *et al.*, 2019). There are insufficient good-quality, replicated RCTs which have been conducted to draw firm conclusions about the effectiveness of specific MBPs of support, and there are none in social work (Maddock and Blair, 2023). The literature points to replication studies as a means to confirm findings, replicate results, assess generalisability, improve processes and expand conclusions in a range of cohorts and across various sectors/conditions (Yusainy and Wicaksono, 2019). Hsiao *et al.* (2019) suggest there are growing concerns around the lack of replication of mindfulness studies casting doubt on the ability to reproduce similar findings and effects; reflecting growing calls for increased rigour and replication in the field (Van Dam *et al.*, 2018). Linked to this, limited replicated knowledge exists about the mechanisms of action of MBPs,

particularly those focussing on social work stress, burnout, mental health and well-being (Maddock and Blair, 2023). Replication studies are also needed to accurately advise social work service providers, service commissioners, and funding agencies about the optimal forms of self-care and support programmes to invest in (Ougrin *et al.*, 2015). Replicated RCTs which examine the effectiveness of MBPs on relevant mindfulness mechanisms of action, which have identified as being important cognitive and emotional regulation strategies of stress, burnout, anxiety, depression and well-being (Maddock and Blair, 2023), are also needed in order to improve the methodological rigor of this evidence base.

This study looked to address existing gaps in knowledge, first by assessing the effectiveness of an innovative, bespoke six-week, six-session, online Mindfulness-Based Social Work and Self-Care (MBSWSC) programme among social work staff in Northern Ireland, and secondly by replicating the results of a previous RCT of this MBP (Maddock *et al.*, 2023a). The previous RCT highlighted the need for the results of the study to be replicated in future studies with social workers (Maddock *et al.*, 2023a). MBSWSC has been developed specifically for social work professionals, responding to the need for tailored, accessible MBPs for social workers; reflecting the demands of the profession, and targeting prevalent symptoms of stress and burnout (Maddock *et al.*, 2022). This programme distinguishes itself from other MBPs due to its foundations in the clinically modified Buddhist psychological model (CBPM; Maddock, 2023). The CBPM is an evidence-informed theory focused on how MBPs, enriched with psychoeducation and applied reflective learning exercises, can alleviate stress, burnout, anxiety, depression and address challenges to well-being often encountered in social work. CBPM differs from other mindfulness models due to the concentration on six mindfulness mechanisms of action, referred to as CBPM domains: mindfulness, acceptance, attention regulation/decentering, self-compassion, non-attachment, non-aversion. The MBSWSC programme cultivates each of these domains through mindfulness techniques, psychoeducation, and reflective practices. The theory suggests these domains can act to empower social workers to adopt more positive, approach-oriented, stress coping strategies. CBPM demonstrates how the enhancement of these domains and a shift towards approach-oriented stress coping strategies contribute to a reduction in negative thinking patterns like worry and rumination. This, in turn, results in improvements in stress levels, reduced burnout, decreased anxiety, and depression, and enhanced well-being for social workers (Maddock *et al.*, 2023b). The MBSWSC programme has evidenced positive psychosocial outcomes among social work students in Northern Ireland and Scotland, and social workers in Northern Ireland, with increased mindfulness, acceptance, self-compassion, non-attachment and reduced stress, emotional exhaustion, depression, and anxiety experienced among these cohorts

([Maddock *et al.*, 2022](); [Maddock *et al.*, 2023a]()). The previous RCT evidenced MBSWSC programme as a 'useful therapeutic programme, which has the capacity to improve a range of important mental health and well-being outcomes for social workers' ([Maddock *et al.*, 2023a](), p. 9170). The MBSWSC programme has also evidenced acceptability and efficacy as a self-care and reflective practice intervention for social workers ([Maddock *et al.*, 2023a]()).

Aims and hypotheses

The study will assess the impact of the MBSWSC programme against an active control. In light of the literature around the 'replication crisis', highlighting the need for scientific integrity and ability to reproduce empirical results in mindfulness studies ([Van Dam *et al.*, 2018](), p. 42), this current study looks to replicate, and expand, the findings of an earlier trial that examined the effectiveness of two MBPs, MBSWSC and the Mindfulness and Self-Compassion (MSC) programme ([Maddock *et al.*, 2023a]()) The current study expands the social work cohort beyond those in the original trial ([Maddock *et al.*, 2023a]()) to include social workers, senior social workers, social work managers, and service managers who have service user interaction. More specifically, this study will use an RCT methodology, with an aim to:

1. Assess and confirm the effectiveness of the MBSWSC programme at improving primary outcomes of stress, burnout, anxiety, depression, and well-being among an expanded cohort of social work professionals.
2. Assess and confirm the effectiveness of the MBSWSC programme at improving secondary outcomes of mindfulness, attention regulation/decentering, acceptance, self-compassion, non-attachment, non-aversion, worry, and rumination among an expanded cohort of social work professionals.
3. Assess and confirm differences between MBSWSC and the MSC (active control group) programmes.
4. Provide rigour, through replication, strengthening the findings for the impact of social work-related MBPs.

It is hypothesised that:

a. participants in the MBSWSC group will report improvements in the assessed primary and secondary outcomes.
b. participants in the MBSWSC group will report greater, significant changes in assessed outcomes when compared to MSC.
c. findings will support/confirm, through replication, the efficacy of the MBSWSC programme among practicing social workers in Northern Ireland.

Methods

Design

A parallel groups RCT with repeated measures (pre-post intervention) was conducted to assess and confirm the effects of a 6-week, six-session, online MBSWSC programme against a 6-week, three-session online MSC programme. The active control condition was included in response to related calls in the literature but also to ensure the study controlled for extraneous variables which may lead to improved outcomes such as participating in an intervention programme, receiving attention, or group-related benefits. To control for any potential positive effects due to higher levels of home practice, the duration of homework set for the MBSWSC and MSC group was the same, as current evidence suggests that greater levels of mindfulness home or self-practice are indicative of more positive outcomes. The MBSWSC and MBC group received a three-minute breathing exercise and a range of body scans to be completed over a six-week period. The home practice activities were designed to last approximately twenty-thirty minutes per day, for six out of seven days each week (Maddock *et al.*, 2023a).

Ethical approval

This research study was approved by the Research Ethics Committee, School of Social Sciences, Education and Social Work at Queen's University Belfast (REF_167_2122). Social work staff who participated in the study provided written, informed consent prior to randomisation. The trial was registered on Clinicaltrials.gov registry, with a unique identifier assigned: NCT05538650. CONSORT checklist (Schulz *et al.*, 2010) is included for this RCT (Supplementary Materials B).

Sample

The sample comprised active social workers, senior social workers, social work managers, and service managers in Northern Ireland who were still engaging with service users as part of their role. Inclusion criteria were: social work professional with service user contact; working in Northern Ireland; aged eighteen years and over. Qualified social workers who were no longer practicing (active); those in strategic social work roles with no service user contact; and those working outside of Northern Ireland were excluded from the study.

The participant flow diagram (Supplementary Materials C) provides an overview of the participant flow in the study from recruitment to

completion. There were 124 expressions of interest received, with 75 providing informed consent to participate in the study. From these, seventy-three were eligible to participate, with thirty-seven allocated to the experimental group and thirty-six to the active control group. Sixty participants completed baseline assessment. The sample's demographics are outlined in Table 1. In line with the gender profile of social workers in Northern Ireland (Hughes, 2022), the study comprised fifty-four females (90.0 per cent) and six males (10.0 per cent) aged from twenty-four to sixty-nine years (M = 48.75; SD = 9.46). Across both groups, there were thirty-seven social workers, ten senior social workers/senior practitioners, and thirteen Managers/Team leads. No difficulties, unintended effects or complaints were reported by study participants.

Procedure

The study sought to replicate the procedure from an earlier RCT (Maddock *et al.*, 2023a). The Northern Ireland Social Care Council facilitated contact and recruitment of social workers to the study, sending an initial and follow-up email to notify all registered social workers on their database about this research study. Recruitment to the study took place across September–October 2022. Social workers interested in the study provided an 'expression of interest' via email to the study researcher (K.M.G.). These individuals were provided with participant information sheets and appropriate consent forms by return email. They were also encouraged to contact the study researcher if they had any questions about the study or their potential involvement. Written informed consent was provided by those wishing to participate in the study. Participants meeting the study inclusion criteria were randomised, using a list of computer-generated random numbers (generated by A.M.), to the experimental (MBSWSC) or active control (MSC) group. Quantitative measures were completed, pre- and post- intervention, by participants in each group, online, using MS Forms.

Table 1. Sample demographics.

	MBSWSC (*n* = 29)	MSC (Control) (*n* = 31)
Age, years, mean (SD) [min–max]	48.86 (9.85) [28–69]	48.65 (9.25) [24–60]
Female, *n* (%)	25 (86.2)	29 (93.5)
Male, *n* (%)	4 (13.8)	2 (6.5)
Social worker, *n* (%)	18 (62.1)	19 (61.3)
Senior practitioner/senior SW, *n* (%)	7 (24.1)	3 (9.7)
Manager/team lead	4 (13.8)	9 (29.0)

Experimental group (MBSWSC)

The details of the MBSWSC programme, it's theoretical basis, and structure, have been described in detail elsewhere (Maddock *et al.*, 2023a). Briefly, MBSWSC is a six-session, six-week, online MBP developed specifically for use among social work students and professionals. The programme is guided by the MBSWSC protocol ensuring standards and consistency in delivery. The fidelity to the MBSWSC protocol was assessed after each session by the facilitators using a treatment fidelity tool based on Kechter *et al.* (2019) recommendations for reporting treatment fidelity in MBP trials. The six MBSWSC sessions were delivered on a weekly basis, with sessions facilitated by two trained mindfulness facilitators. Both facilitators have been trained in the delivery of MBSR and MBCT and have several years of social work practice experience. They both have a number of years of experience as social work academics, giving them a unique insight into the stresses that can manifest during social work practice in different settings. One facilitator (A.M.) developed the MBSWSC programme, with the other facilitator (P.Mc.C.) informing this process. The weekly sessions were delivered online using Microsoft Teams, with each session lasting 1.5 h. The sessions covered topics which included: introducing mindfulness, theory, stress and coping, attention regulation (decentering), non-attachment, experiential avoidance (aversion), acceptance and self-compassion; mindfulness as a support to anti-oppressive social work practice; embedding mindfulness in daily life and working practice. A breakdown of the weekly topics is included in Supplementary materials D. Weekly home practice activities were prescribed for participants comprising: (i) general body scan meditation, (ii) decentering/attention regulation body scan meditation, (iii) aversion and non-attachment body scan meditation, (iv) acceptance body scan meditation and (v) self-compassion body scan meditation. The home practice activities aimed to help participants develop, refine and practice mindfulness skills/techniques. As indicated, participants were asked to complete these activities, six days per week, with practice lasting approximately twenty to thirty minutes. Overall, the six-week programme comprised nine hours of online training, with supplementary home practice on six out of seven days each week lasting no more than thirty minutes per day, making a total commitment of twenty-seven hours.

Active control group (MSC)

As above, the details of the MSC programme have been described in detail elsewhere (Maddock *et al.*, 2023a). Briefly, the MSC programme has a focus on MSC, introducing and refining the theory, concepts and practices in which these are embedded. The MSC is evidenced-based, drawing on

theory from an eight-week Mindfulness-Based Living Course (Choden and Regan-Addis, 2018); but expanding on the aspect of self-compassion to make this a focus for the MSC programme. The MSC programme is guided by a programme protocol which reflected the structure of each session, namely to introduce the concept; learn the practice; and reflect together. The three MSC sessions were delivered on a fortnightly basis, over a six-week period, with sessions facilitated by two trained mindfulness facilitators. The sessions were delivered online using Microsoft Teams, with each session lasting 1 hour. The sessions covered topics which included: introducing mindfulness, emotion regulation, intention, self-compassion, personal reflection, reflexivity and self-compassion, with practices selected due to their applicability to social work practice. The MSC programme saw weekly home practice activities prescribed for participants. Mirroring the MBSWSC home practice these also comprised: (i) general body scan meditation, (ii) self-compassion body scan meditation, and (iii) acceptance body scan meditation. Participants were also asked to complete these activities, six days per week, with practice lasting approximately twenty to thirty minutes. Overall, this six-week programme comprised three hours of online training, with supplementary home practice on six out of seven days each week lasting no more than thirty minutes per day, making a total commitment of twenty-one hours.

Measures

To assess the effectiveness of the MBPs, reliable and valid self-report measures were completed by participants pre-and-post intervention. Demographic information on participant sex, age, and social work role was gathered at baseline. Baseline data were also used to confirm reliability of the scales used among this sample.

Perceived Stress Scale

The Perceived Stress Scale (PSS) (Cohen *et al.*, 1983) is widely used to assess an individual's perception of stress. It comprised ten items developed to assess how unpredictable or uncontrollable participants feel their lives are (Cohen, 1994). The scale is scored on a five-point Likert scale ($0 =$ never; $4 =$ very often), with higher scores indicative of greater levels of stress. The reliability of the scores on the PSS among this sample was found to be acceptable (Cronbach's $\alpha = 0.86$).

Maslach Burnout Inventory

The Maslach Burnout Inventory (MBP) (Maslach *et al.*, 1996) is a measure of work-related burnout which has been used to assess burnout

among social workers and a range of other occupational groups (Crowder and Sears, 2017). It comprises twenty-two items, with three subscales which assess: (1) Emotional exhaustion, (2) Depersonalisation of service users, (3) Personal achievement. The scale is scored on a seven-point Likert scale (0 = never; 6 = everyday). The subscales highlight levels of burnout, with differing cut-off points specified for each subscale. The emotional exhaustion subscale ranges from low levels of burnout (seventeen or less), through moderate levels of burnout (eighteen to twenty-nine), to high levels of burnout (thirty or more). The depersonalisation of service users subscale ranges from low-level burnout (five or less), through moderate burnout (six to eleven), to high-level burnout (twelve or more). Lastly, the personal achievement subscale, ranges from low-level burnout (forty or more), through moderate burnout (thirty-four to thirty-nine), to high-level burnout (thirty-three or less). Subscale reliability was found to acceptable among this sample (Cronbach's $\alpha = 0.92$, 0.81 and 0.84 for emotional exhaustion, depersonalisation of service users and personal achievement respectively).

Hospital Anxiety and Depression Scale

The Hospital Anxiety and Depression Scale (HADS) (Zigmond and Snaith, 1983) is a widely used measure for the assessment of anxiety and depression across a diverse range of populations, including in occupational groups. It comprises fourteen items, with two subscales comprising seven items each to assess anxiety (HADS-A) and depression (HADS-D). The scale is scored on a four-point Likert scale (0–3), with subscale scores ranging from 0 to 21. Higher scores on the anxiety or depression subscale is indicative of more severe levels of anxiety or depression. Cut-off points of 0–7 are indicative of normal levels, scores between 8 and 10 indicate the presence of a mild anxiety or depressive disorder, and scores of eleven or greater indicative of moderate-severe levels of anxiety or depression. Scale reliability was found to acceptable among this sample (Cronbach's $\alpha = 0.89$, 0.86 and 0.77 for HADS, HADS-A and HADS-D respectively).

Warwick–Edinburgh Mental Well-being Scale

The Warwick–Edinburgh Mental Well-being Scale (WEMWBS) (Tennant *et al.*, 2007) is a measure of mental well-being comprising fourteen items. The scale is scored on a five–point Likert scale with lower scores indicative of worse mental well-being. Scale reliability was found to acceptable among this sample (Cronbach's $\alpha = 0.89$).

Southampton Mindfulness Questionnaire

The Southampton Mindfulness Questionnaire (SMQ) (Chadwick *et al.*, 2008) is a measure which assesses aspects of individual mindfulness resulting from unpleasant thoughts and images comprising of sixteen items. It is scored on a seven-point Likert scale (0 = Disagree totally; 6 = Agree totally), with higher scores indicative of greater mindfulness. The scale comprises four, four-item, subscales assessing (i) Mindful observation (SMQ-MO); (ii) Non-attachment (SMQ-NA); (iii) Aversion (SMQ-Av); (iv) Non-judgement (SMQ-NJ). Scale reliability was found to acceptable among this sample (Cronbach's $\alpha = 0.87$), with subscale reliability also acceptable (Cronbach's $\alpha = 0.63$; 0.71; 0.70; 0.77 for the SMQ-MO, SMQ-NA, SMQ-Av and SMQ-NJ respectively).

Experiences Questionnaire—Decentering

The Experiences Questionnaire—Decentering (EQ-D) (Fresco *et al.*, 2007) is a measure which assesses decentering, or the ability to see our thoughts or emotions in a detached, or unemotional manner. It comprises eleven items and is scored on a five-point Likert scale (1 = never; 5 = always). Higher scores are indicative of greater levels of decentering. Scale reliability was found to acceptable among this sample (Cronbach's $\alpha = 0.90$).

Philadelphia Mindfulness—Acceptance Subscale

The Philadelphia Mindfulness—Acceptance Subscale (PHLMS-A) (Cardaciotto *et al.*, 2008) is a measure which assesses the construct of acceptance. It comprises ten items and is scored on a five-point Likert scale (1 = never; 5 = very often). Lower scores are indicative of higher levels of acceptance. Scale reliability was found to acceptable among this sample (Cronbach's $\alpha = 0.88$).

Self-Compassion Scale—Short Form

The Self-Compassion Scale—Short Form (SCS-SF) (Raes *et al.*, 2011) is a measure which assesses an individual's self-compassion. It comprises twelve items and is scored on a five-point Likert scale (1 = almost never; 5 = almost always). Higher scores are indicative of greater levels of self-compassion. Scale reliability was found to acceptable among this sample (Cronbach's $\alpha = 0.81$).

Penn State Worry Questionnaire

The Penn State Worry Questionnaire (PSWQ) (Meyer *et al.*, 1990) is a measure which assesses the intense and uncontrollable nature of worry. It

comprises sixteen items and is scored on a five-point Likert scale ($1 =$ not at all typical of me; $5 =$ very typical of me). Higher scores are indicative of a greater degree of pathological worry (Startup and Erickson, 2006). Scale reliability was found to acceptable among this sample (Cronbach's $\alpha = 0.73$).

Rumination Reflection Questionnaire – Rumination subscale

The Rumination Reflection Questionnaire – Rumination subscale (RRQ) (Trapnell and Campbell, 1999) is a 12-item measure of rumination which assesses the level to which a person engages in repetitive thoughts about past experience. It comprises twelve items and is scored on a five-point Likert scale ($1 =$ strongly disagree; $5 =$ strongly agree). Higher scores are indicative of greater levels of rumination. Scale reliability was found to acceptable among this sample (Cronbach's $\alpha = 0.91$).

Data analysis

Data were analysed in IBM SPSS Statistics (Version 27: 2020), with analysis of covariance used to assess differences between group post-intervention outcomes, whilst controlling for any baseline differences. Paired-sample *t*-tests were used to assess changes in outcomes for MBSWSC participants.

Results

Differences between MBSWSC and MSC group outcomes

Findings (displayed in Table 2—Supplementary Material A) show significant differences between MBSWSC and MSC outcomes across sixteen of the seventeen outcomes assessed. The MBSWSC group reported a large significant reduction in stress scores compared to the MSC group when baseline scores were controlled for a follow-up $F(1,58) = 9.24$, $p = 0.004$, $\eta^2 = 0.14$. This also held true for other outcomes, with MBSWSC group reporting a large significant reduction in burnout (emotional exhaustion) $F(1,58) = 9.77$, $p = 0.003$, $\eta^2 = 0.15$, and worry $F(1,58) = 11.93$, $p = 0.001$, $\eta^2 = 0.17$ when compared to MSC group whilst controlling for baseline differences. The MBSWSC group also reported large significant improvements in mental well-being $F(1,58) = 18.32$, $p < 0.001$, $\eta^2 = 0.24$; attention regulation/decentering $F(1,58) = 14.12$, $p < 0.001$, $\eta^2 = 0.20$; mindfulness $F(1,58) = 13.15$, $p < 0.001$, $\eta^2 = 0.19$; self-compassion $F(1,58) = 21.2$, $p < 0.001$, $\eta^2 = 0.27$; and mindful observation $F(1,58) =$

13.3, $p < 0.001$, $\eta^2 = 0.19$; when compared to MSC group whilst controlling for baseline differences.

MBSWSC reported medium, or moderate, significant reductions in anxiety $F(1,58) = 4.47$, $p = 0.039$, $\eta^2 = 0.07$; depression $F(1,58) = 6.24$, $p = 0.015$, $\eta^2 = 0.10$; burnout (depersonalisation) $F(1,58) = 7.71$, $p = 0.007$, $\eta^2 = 0.12$; and rumination $F(1,58) = 7.40$, $p = 0.009$, $\eta^2 = 0.12$ compared to the MSC group post-intervention. The MBSWSC also reported medium, or moderate, significant improvements in acceptance $F(1,58) = 5.46$, $p = 0.023$, $\eta^2 = 0.09$; non-attachment $F(1,58) = 6.21$, $p = 0.016$, $\eta^2 = 0.10$; absence of aversion $F(1,58) = 7.65$, $p = 0.008$, $\eta^2 = 0.12$; and non-judgement $F(1,58) = 5.21$, $p = 0.026$, $\eta^2 = 0.08$ compared to the MSC group post-intervention.

Changes in MBSWSC post-intervention outcomes

Significant changes, across pre-post assessment, were found across a range of outcomes in this group. MBSWSC participants reported lower mean levels of stress post programme, when compared to pre-programme levels. This mean difference (MD $= -5.44$) was statistically significant $t(28) = -4.83$, $p = 0.000$.

MBSWSC participants reported lower levels of emotional exhaustion post-intervention, with this difference (MD $= -6.07$) again found to be statistically significant: $t(28) = -6.15$, $p = 0.000$. A significant mean reduction (MD $= -4.52$) was also found in burnout depersonalisation scores: $t(28) = -3.44$, $p = 0.002$; whilst a significant increase (MD $= 4.59$) was evidenced in personal achievement $t(28) = 2.39$, $p = 0.024$. Improvements were reported post-intervention in anxiety and depression, with a significant decrease (MD $= -2.21$) $t(28) = -4.10$, $p = 0.000$ in anxiety; and a significant decrease (MD $= -2.03$) $t(28) = -5.41$, $p = 0.000$ in depression.

Well-being among MBSWSC participants increased post-intervention, (MD $= 6.24$), with this improvement found to be statistically significant: $t(28) = 6.49$, $p = 0.000$. MBSWSC participants had higher mean levels of mindfulness post-intervention. This difference (MD $= 15.69$) was also statistically significant $t(28) = 8.63$, $p = 0.000$.

Significant post-intervention improvements were also noted in attentional regulation/decentering $t(28) = 6.66$, $p = 0.000$, self-compassion $t(28) = 3.96$, $p = 0.000$, acceptance $t(28) = 3.04$, $p = 0.005$, mindful observation $t(28) = 6.92$, $p = 0.000$, non-attachment $t(28) = 6.97$, $p = 0.000$, absence of aversion $t(28) = 5.54$, $p = 0.000$, and non-judgement $t(28) = 3.82$, $p = 0.001$. Significant post-intervention reductions in worry and rumination were also reported: $t(28) = -5.47$, $p = 0.000$ and $t(28) = -5.81$, $p = 0.000$ respectively.

Discussion

This RCT study examined the effectiveness of MBSWSC at reducing social worker stress, burnout, depression, and anxiety, and increasing well-being, along with a range of potentially important mindfulness-based mechanisms of action. It had the added aim of confirming, through replication with a different cohort of social work professionals in Northern Ireland, the findings of an earlier RCT of MBSWSC with social workers in Northern Ireland (Maddock *et al.*, 2023a). Our results are consistent with this study's hypotheses and replicate the independent results of the previously published RCT of MBSWSC with social workers in Northern Ireland (Maddock *et al.*, 2023a). In line with Maddock *et al.* (2023a), we also found that MBSWSC reduced social worker stress, emotional exhaustion, anxiety, depression, worry and also increased mindfulness, attention regulation/decentering and non-attachment versus MSC. As Maddock *et al.* (2023a) did, we also found that though the burnout (personal achievement) moved in the hypothesised direction, MBSWSC did not significantly improve this outcome versus MSC. The current study not only replicated these original main findings with an independent sample of social workers, but also extended these findings to senior social workers, social work managers, and service managers who have service user interaction. The attrition rates in MBSWSC (12 per cent) versus MSC (38 per cent) in this RCT were nearly identical to those in Maddock *et al.* (2023a) (12 per cent and 34 per cent, respectively), with the attrition rate in MBSWSC much lower than the mean average attrition rate (29 per cent) in other RCTs including MBPs (29 per cent; Nam and Toneatto, 2016). These results are encouraging and highlight the acceptability, effectiveness, and durability of MBSWSC at improving stress, emotional exhaustion, anxiety, depression and a range of potentially important mindfulness-based protective factors of these important social work practice and self-care outcomes. It also appears that social workers are more likely to engage and remain compliant with MBSWSC, rather than other MBPs, for example, MBSR or MBCT, due to its shorter duration, and focus on social work practice. It is clear, based on these results, that at least in a Northern Irish social work context, MBSWSC should be rolled out to all social workers who are experiencing difficulties with, or are at higher risk of, stress, feelings of emotional exhaustion, anxiety and/or depression. This could be achieved by increasing the number of MBSWSC programme facilitators available through 'train the trainer' programmes to support implementation of the programme across Northern Ireland.

This study differs from Maddock *et al.* (2023a) in finding that MBSWSC also improved well-being, burnout (depersonalisation of service users), self-compassion, acceptance, non-aversion and rumination versus MSC. The baseline scores across these variables were similar to

Maddock *et al.* (2023a), with the well-being (0.67 points), self-compassion (2.29 points), non-aversion (0.03 points) being slightly higher in this study, and burnout (depersonalisation of service users) (0.46 points), acceptance (2.78 points) and rumination (2.05 points) being slightly lower at baseline. This means that it is unlikely that ceiling or floor effects explain the differences between the two studies, as the sample in this study did not score significantly higher or lower on these variables at baseline, and thus MBSWSC in this study did not have more room to have an effect when compared to Maddock *et al.* (2023a). As the MBSWSC programme was delivered following the same protocol, by the same facilitators, the differences in MBSWSC's effectiveness in this study versus Maddock *et al.* (2023a) may be due to increased facilitator confidence, due the facilitators' greater experience of facilitating MBSWSC, having delivered it previously as part of the RCT in Maddock *et al.* (2023a). This is line with Khoury *et al.* (2013), who in a meta-analysis of 209 studies on MBP effectiveness, found that greater facilitator experience of mindfulness might have an indirect effect on the clinical outcomes of participants. MBSWSC is a complex intervention programme, based on Maddock's (2023) CBPM, which supports participants to develop a range of approach-oriented stress coping, and cognitive and emotion self-regulation strategies, including self-compassion, acceptance, and non-aversion with a view to reducing rumination (and negative thinking more generally). Facilitator comfort and increased experience of facilitating MBSWSC may have allowed the facilitators to be clearer on the best ways with which to develop these key CBPM domains (self-compassion, acceptance, non-aversion, and rumination), through the psychoeducation, applied reflective learning exercises, and mindfulness practices contained within the MBSWSC programme, supporting improved social worker well-being and feelings of burnout (depersonalisation of service users).

Limitations

The limitations of this study should be considered when assessing the results. Common methods bias may have been introduced to the study through the use of self-report measures (Podsakoff *et al.*, 2003). Due to the nature of the programmes being delivered, the programme facilitators could not be blinded to which programme was being delivered. We attempted to reduce any potential bias by ensuring that the facilitators were blinded during the data collection and analyses processes; however, facilitator awareness of which programme was being delivered may have introduced potential bias (Higgins *et al.*, 2011). In order to provide a comprehensive understanding of the effects of MBSWSC, we used a range of variables, and though we used robust statistical techniques and

reporting standards, we conducted a number of analyses, which means that Type I error cannot be ruled out. The study design was appropriate to test the study hypotheses; however, this study relied on an active control group, rather than the use of a no-intervention comparison. This study replicated a previous RCT (Maddock *et al.*, 2023a) whose aim was to address an identified need in the profession during the COVID-19 pandemic, and as such a supportive control intervention, rather than a no-control intervention was used. MSC also had a lower programme commitment than MBSWSC (twenty-one versus twenty-seven hours over a six-week period), which may have impacted the study's findings.

Future research

MBSWSC is a bespoke MBP for social work students, social workers, senior social workers, social work managers and service managers who have service user contact. Future research should focus on the effectiveness of MBSWSC in other jurisdictions. Furthermore, it would be important to examine the longer-term effects of MBSWSC to confirm the sustainability of programme effects across time. Future research should also focus on the effectiveness of MBSWSC, through multi-site, randomised controlled trials of MBSWSC within specific areas of social work practice, which may lead to a higher risk of increased stress, burnout, mental health and well-being deficits, for example, working with adults with physical disabilities, mental health social work, working with children with disabilities, older people, and child protection social work (McFadden, 2015).

Conclusion

This study is the only RCT which has replicated previous RCT findings of the effectiveness of a bespoke MBSWSC for social work professionals. The results from this study evidence the acceptability, effectiveness, and durability of MBSWSC at improving stress, emotional exhaustion, burnout (depersonalisation of service users), anxiety, depression, and well-being of social work professionals, along with a range of mindfulness-based protective factors for these outcomes. Though further research is needed in other jurisdictions, the results from this study provide clear guidance that if social work service providers, service commissioners, and funding agencies deliver MBSWSC within their services, the social workers in their organisation will likely experience improvements in these critical social work practice and self-care outcomes.

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Competing interests statement

The authors have no competing interests to declare that are relevant to the content of this article.

Ethical approval

This study was performed in line with the principles of the Declaration of Helsinki. Approval was granted by the Research Ethics Committee, School of Social Sciences, Education and Social Work at Queen's University Belfast (REF_167_2122).

Consent to participate

Informed consent was obtained from all individual participants included in the study.

Conflict of interest statement. None declared.

Supplementary material

Supplementary material is available at *British Journal of Social Work Journal* online.

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