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Group and Common Factors in Mindfulness-Based Programs: A selective review and implications for teachers

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JH initially conceptualised, researched and wrote the paper. FJ and GG critically revised and edited the manuscript. All authors approved the final version of the manuscript for submission.

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Abstract

Objectives

Change factors common across psychosocial interventions, including those relating to group treatments, are often not addressed within research into mindfulness-based programmes (MBPs). Here we present how consideration of these factors can be beneficial for both mindfulness teachers and researchers.

Methods

This article is a selective review of relevant common factors and small group treatment research and practitioner literature, using the framework of Burlingame et al.'s (2013) small group treatment model. This model encompasses emergent and imposed structure, formal change theory, foundational social processes and emergent process, as well as teacher and client effects. Extant qualitative and quantitative research and key practitioner literature into MBPs is included, and implications for mindfulness teachers both from the wider framework of common and group factors, as well as from MBP research itself, are outlined.

Results

Participant expectations and preferences may play a role in supporting good outcomes and course continuation in MBPs, but more research is needed. Participants and practitioners describe the importance of the group crucible, including the experience of common humanity and connection, and group composition may impact this. Group size is under researched and it is unclear what influence this may have on effectiveness. Surprisingly, research thus far has not found a reliable link between participant outcome and teacher competence, though embodiment is considered key by practitioners, trainers and participants.

Conclusions

Future research should focus on the role of expectations, alliance, the group context and group size as well as finding innovative ways to further understand MBP teacher competence.

Much research concerning mindfulness-based programmes (MBPs), defined as the key secular, mainstream programmes such as Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy (MBCT) or close adaptations (Crane et al. 2017a; 2017b), has focused on model factors – namely the specific mechanisms proposed by theories of mindfulness that create change (Alsubaie et al. 2017; Gu et al. 2015; van der Velden et al. 2015). Parallel to MBP research, in the individual therapy field, there has been significant interest in common or non-specific factors that are pan-theoretical and may also be key in change processes in MBPs (Wampold 2015). These factors may include relationship factors, therapist and client effects, and expectancy or placebo effects (Wampold 2001). Where the intervention is delivered within a group, group factors, such as relationships within the group, group norms and group development, may also be significant (Burlingame et al. 2013). Despite evidence that these common factors are important in individual therapy (Wampold 2015), and group factors may play a role within group interventions (Burlingame et al. 2013), relatively little attention has been paid to these factors within the MBP field (Day et al. 2016).

MBCT and MBSR were developed to be delivered in a group setting, and MBCT in particular as a small group treatment of usually around 10-12 participants initially developed for those with recurrent major depression (Segal et al. 2013). Both MBSR and MBCT are framed within an educational paradigm, as a “class” or “training” (Kabat-Zinn 2013) and it could be argued that group processes may not therefore be relevant. Moreover, practitioner literature demonstrates that MBP teachers have a rich

understanding of the importance of the group crucible and how to work with this (McCown, 2013; Santorelli, 1999). “We learn mindfulness together... a relational achievement” (McCown et al. 2016, p 11). However, the construction of an MBP as a class, as well as research conventions that are more focused on individual outcome, may have resulted in the group aspects of MBPs being under investigated (Griffith et al. 2019; McCown et al. 2016). Even within the pedagogy of mindfulness teaching, despite practitioners considering the group context important, it has also been “barely visible: under-researched, under-theorized, and under-taught” (McCown et al. 2010 p29). Key teacher training resources are now paying considerable attention to the group context (Crane et al. 2017b; McCown 2016; Santorelli 2016). Furthermore, research can offer findings that are not immediately apparent, which can provide excellent support to practitioners. Within individual therapy, for example, research found that clients and therapist’s perceptions of the therapeutic alliance tended to be somewhat divergent, with the level of divergence predicting poorer outcomes. This has led to efforts to encourage therapists to pay more attention to client perspective on the process of treatment (Norcross & Lambert 2011).

In addition, there is emergent research evidence that group processes may be common factors that influence participant outcome in MBPs (Hornsey et al. 2007). Initial research with MBPs has suggested that group effects may vary depending on which group participants attend (Imel et al. 2008). Findings indicated that group effects accounted for approximately 7% of the variance in MBSR outcomes with psychological symptoms, though no significant effects were found for medical symptoms (Imel et al. 2008). Interestingly, the size of the groups ranged from 4-26 participants and it is possible this may partly account for the variance. Moreover, in one meta-analysis, the amount of face-to face contact and greater intensity (frequency of sessions) within the MBP seemed to predict increased mindfulness, more than the amount of home practice,

with the author suggesting this may be due to relationship factors within the group and with the facilitator (Strohmaier 2020). This echoes suggestions that it is not the duration of home practice that is the key factor to increased mindfulness, but rather “the co-creation – the pedagogy, the being in the space – is the signal accomplishment, whether it ‘goes home’ with participants or not” (McCown 2013, p123). A closer look at what actually happens within an MBP class illustrates this. As well as leading mindfulness practice(s), the teacher will facilitate post-practice inquiry where participants may disclose private, and sometimes challenging, internal experience and be encouraged to explore this as it is happening. In these moments, the participant may be emotionally vulnerable, and the other group members may be seeing this, and perhaps experiencing this vulnerability themselves. How this is managed within the group and by the facilitator is considered key within mindfulness pedagogy—it is mindfulness in action—with the facilitator in particular modelling a kind, respectful, and also curious and approach-oriented response. Challenging teaching moments that are badly managed may mean the participant does not return.

Burlingame et al. (2013) have developed a transtheoretical model of small group treatments to aid research into group effects, built upon previous theory and research (e.g. Tuckman 1965; Yalom & Leszcz 2005). Burlingame et al. (2013) proposed that unexplained variance in RCT’s may be due to group factors. Recent reviews of mechanisms of mindfulness concur that a lack of active controls (Gu et al. 2015) or exploration into moderating and mediating variables (van der Velden et al. 2015) means there is much about the impact of MBP group, teacher, and participant effects that remains unclear. Researchers are being encouraged to think about design and methodology in the light of lack of differences between mindfulness interventions and active control groups, which may suggest that common factors may be playing an unseen role in participant outcomes (MacCoon et al. 2012; Rosenkranz et al. 2019).

We have chosen a selective review here as our intention is to be broad in our reach in order to make links between different fields of research and practice using the Burlingame et al. (2013) model as a frame. This model has been chosen because it is based on empirical evidence and designed to further research into group factors. It is utilised here as a pan-theoretical model which may help to investigate the role of group, teacher, and participant, and to explore which aspects and processes of MBPs are similar to other closed, time-limited groups with comparable aims. The selected research comes from four sources. First, we have drawn from SGT research primarily from meta-analyses and reviews. Second, where there is a dearth of SGT research, we have looked to reviews and meta-analyses from common factors research (from individual therapy). Third, the current research base around common factors in MBPs is described with tentative implications of this for MBP teachers. Fourth, we have included practitioner literature from the MBPs within this review due to the scarcity of relevant research, and the richness of this pedagogical thinking.

Methods

We searched electronic databases (PsycInfo, Google Scholar, American Mindfulness Research Association database) for a range of terms from Burlingame et al.'s (2013) model (such as cohesion, alliance, norms) as well as other terms suggested by the literature (such as attrition, screening, competence) and followed up citations where relevant. We included empirical research, reviews, meta-analyses or meta-syntheses, and pedagogical literature on MBP's with adults relevant to the research question.

Results

Possible change factors in Small Group Treatments

Burlingame et al.'s model (2013) of SGTs is shown in Figure 1. There are two main elements: the structure or "anatomy" of the group and the processes or "physiology" Structure (both imposed and emergent), formal change theory (specific factors),

foundational social processes (such as power), emergent processes, and patient and therapist factors are all proposed to impact on the group properties and processes, including the change process. Each element of the model will be discussed in turn, except formal change theory as this is reviewed elsewhere in depth and is not the focus of this paper (see Alsubaie et al. 2017; Gu et al. 2015; van der Velden et al. 2015 for recent summaries). An additional references section (Appendix A), with references categorised according to each element of the model, can be found in the supplementary materials.

Fig 1 Organizational scheme of small group process and structure domains (Burlingame et al. 2013)

Imposed Structure

According to this model, structure is imposed by the facilitator/context and this relates to aspects such as participant screening, selection and composition, size of group, how the participants are prepared for the group (for MBPs this can range from an in-depth individual interview to brief written information) and the early set-up of the group (such as the group agreement between participants and teachers about how they will work together). Within SGT research, how hetero- or homogenous groups are in terms of gender, diagnosis, or problem behaviour has been an area of enquiry (Burlingame et al. 2013). Heterogenous groups may offer participants more opportunities for interpersonal learning, for example, that even participants who are quite different to each other may suffer in similar ways. However, if participants are too different, or the difference is threatening in some way, in case of gender and domestic abuse for instance, the group may find it hard to achieve a working relationship. Group size may also impact participants, group process and potentially outcomes. A recent conceptual review of SGTs suggests groups of more than 20 may be subject to different group processes, for

example, more participants may become marginal in discussions, social power dynamics may operate differently, and the attrition rate may be higher. More research is needed as empirical evidence for this is minimal (Borek & Abraham, 2018).

Imposed structure within MBPs.

Within the MBP field there has been little research on the impact of imposed structure variables. Although MBPs have been adapted to a wide range of populations, contexts, and disorders, there is no research that guides us as to whether, for example, it is more effective to deliver MBCT to a mixed group of patients who have been diagnosed with anxiety and depression, often the case within the UK National Health Service, or exclusively to those with recurrent depression. The pedagogical literature offers some guidance for practitioners around composition, especially around screening out those who may not be able to make use of the programme due to current suicidality, substance misuse, in the midst of a significant crisis (Segal et al. 2013). A surprising recent finding is that gender composition moderated outcome in Mindfulness-Based Relapse Prevention (MBRP). Individuals who attended groups in which least one-third of fellow participants were women reported increased abstinence from substance misuse (Roos et al. 2019). Individual gender was not itself a predictor, but the authors suggested that groups with more women encouraged group cohesion, which could have then impacted, for example, the effectiveness of group inquiry. A recent qualitative study found some evidence for caution around heterogeneity in composition (Schellekens et al. 2016). Some women who had participated in MBSR for those with breast cancer felt different, for example, due to being in palliative rather than curative care, resulting in them feeling disconnected from the others in the group. These themes offer ways forward for group selection and preparation that can help build connection rather than disconnection for participants.

Group size and set-up is potentially a key variable but often unreported. There is no research, qualitative or quantitative about the impact of the group size in MBPs, or

the impact of whether participants are seated in a circle, or in rows in a more traditional class set-up. The MBP pedagogical literature strongly suggests the circle would be beneficial, the structure of which promotes the non-hierarchical mutuality of the mindfulness gathering (Bartley, 2012; McCown, 2013). MBSR traditionally has larger groups of more than 20 people, compared to MBCT where groups are usually limited to 12 (Segal et al. 2013), and SGT theory suggests differential processes and effects may operate with larger groups, as described earlier (Borek & Abraham 2018). It is unknown how these may relate specifically to an MBP. Recently, many groups have gone online as a response to the pandemic and it is unclear what impact this structural element may have (Segal et al. 2019). Practical guidance for teachers has been quickly forthcoming (Sansom et al. 2020) but as yet there is no research on how this impacts relationships and processes within mindfulness groups.

Implications for teachers of MBPs.

Research from SGTs suggests that groups should be heterogenous (gender, problem severity, diagnoses) where possible. However, there are serious challenges to this, not least the paucity of research within the mindfulness field which is characterised both by a proliferation of courses adapted to different populations, as well as different populations attending the same courses (MBSR in particular). Nevertheless, there is some evidence of benefit if groups include a good proportion of women, though this is based upon a single study of MBRP. The teacher needs to give careful consideration to balance both adaptation and heterogeneity (which may offer participants opportunities to learn from those different to themselves) and adhere to homogenous groups where indicated (such as women only groups for women who have experienced domestic violence; people at similar stages of a disease progression). Some differences can potentially hold opportunities for interpersonal learning, whilst others can be disconnecting and potentially threatening. The impact of group size or online groups is under-researched

but pedagogical literature suggests particular ways of managing these imposed structural elements (eg Sansom et al. 2020).

Emergent Structure

Group Structure can also emerge as the class progresses. Group development theory (e.g. Tuckman 1965) proposed that small closed groups develop through a series of stages which affect their climate and functioning (forming, storming, norming, performing, adjourning); this is captured within the emergent structure section of the SGTs model, along with norms and sub-groups. Burlingame et al. (2013) concluded that diagnosis, therapeutic approach, inpatient vs. outpatient setting and culture may all affect how the group develops. However, research around group development and norms has been minimal, despite the wide acceptance of these ideas (Borek & Abraham 2018).

Emergent structure within MBPs.

Bartley (2012) echoed Tuckman's model of group development in her model of how the teacher can support the group's developmental process. The group is again conceptualised as a "Circle" which moves through forming, holding and "moving out beyond" (p342), and she described skills and ideas the teacher can draw on within these stages. There is no extant quantitative research though one qualitative analysis concluded the group seemed to progress through distinct stages (Cormack et al. 2018). However, they conceptualised the "storming" stage, roughly occurring at the halfway point, as the participant's individual struggle with turning towards difficulty and cultivating acceptance, a key teaching in MBPs, in contrast to the traditional description of interpersonal struggle between participants or the participants and the leader. Group norms as well as leader interventions may affect this process, though meta-syntheses tend to suggest that the group can be an important support in persisting in the face of such challenges (Malpass et al. 2012; Cairns and Murray 2015). Attrition may impact on others in the group, encouraging a norm around absence rather than attendance and

leaving participants feeling angry or worried about those who are not there (McHale et al. 2018).

Implications for teachers.

Group norms and development may affect outcomes for participants, and although this is well-established conceptually, there is limited research conducted specifically with MBPs. However, lack of evidence does not mean that established norm and development processes do not apply to MBPs, and the practitioner literature generally supports these concepts. Teachers may wish to pay attention to norm development in groups that may be helpful or unhelpful in supporting good outcomes, norms around absence/presence, around home practice, or around self-disclosure. Knowledge of core theoretical group processes, and an understanding that they are a normal part of groupwork and can be responded to skilfully, may be helpful (Bartley 2012). Difficulty arising midway in the course may be akin to “storming” and it is suggested that the teacher responds to this in ways that encourage norms around persistence and self-compassion in the face of challenge. The limited extant research (Cormack et al. 2018; Malpass et al. 2012) does not contradict mindfulness pedagogy and teachers may find this helpful in reflecting on group development (Griffith et al. 2019; McCown et al. 2010).

Foundational Social Processes

The “foundational social psychological processes” arm of group physiology within the Burlingame et al. (2013) model includes elements such as conformity, power, conflict management, and leadership style that impact clinical groups. These have been extensively researched by social and organisational psychologists and are relevant but are beyond the scope of this paper (see Hornsey et al. 2007, for a summary of clinical relevance). This is due both to the extensive nature of this research field, and also the lack of research translating the relevance of these processes to group clinical

interventions. However, culturally adapting MBPs is one way of addressing issues around power and this is a particularly crucial question within MBPs, which have been criticised for the centrality of white, middle-class values and a lack of diversity both of teachers and participants (Proulx et al. 2018). Within psychotherapy and other mental health interventions, culturally adapting treatments has a modest to moderate association with outcome (Wampold 2015) especially when teaching is delivered in participants native language or with same-race groups (Griner and Smith 2006).

Culture and power within MBPs.

Humans are relational beings who evolve and develop within relationships, with brain anatomy and neurobiology that can be defined as “interpersonal” (Siegel 2007). We are highly attuned to subtle social messages which can be different within and between various cultural groups and within the field there has been recent pedagogical literature about differences in delivering mindfulness to different populations (McCown 2016). Each group happens within a learning context which includes a particular social context (Griffith et al. 2019). Bringing awareness as teachers to our relationship with different protected characteristics including race can assist us in noticing our own biases, and also in identifying any participants who may be in a minority and therefore feel “at the margins” in the group. A knowledge of the history of oppression, of key social psychological concepts/research around power, race, stereotypes, and reflection and enquiry of our own lived experience in this area has been proposed to support teachers develop (Magee 2016). Although there is considerable dialogue as to the dilemma of adaptation to different contexts and populations versus fidelity/integrity (Crane et al. 2017b), research into the effectiveness (rather than acceptability and feasibility) of cultural adaptations of MBPs is limited (DeLuca et al. 2018; Watson-Singleton et al. 2019). One finding did suggest that MBRP had better outcomes for minority groups than traditional Relapse Prevention, with the authors suggesting the present-centred frame

of mindfulness may fit better with the world views of some ethnic minorities (Greenfield et al. 2018). In terms of the acceptability of MBPs amongst different cultural groups, one study interviewing African Americans suggested that connecting mindfulness to cultural and spiritual practices, increasing the representation of African Americans amongst teachers and participants, and supplementing the reading with African American writers would improve accessibility (Woods-Giscombé and Gaylord 2014). Indeed, an MBRP study found participants had improved substance use outcomes when in groups in which their ethnicity was in the majority, which the authors suggested may be due to a greater sense of trust and cohesion (Greenfield et al. 2018).

Within the practitioner literature, the foregrounding of the personhood of the teacher has included a focus on the teacher as a “wounded healer” who, as well as the participant, is exploring their wounds and healing within the relational frame of the group (Santorelli 1999). Thus, the relationships within the group are framed as non-hierarchical, emphasising mutuality rather than the power differential that a teacher-student relationship might typically indicate (McCown 2013). However, teachers are advised to not mistake the mutuality and non-hierarchical aspects of learning mindfulness as permission to step out of offering structure and expertise (Brandsma 2017).

Implications for teachers.

Teachers should familiarise themselves with basic literature and research around social processes within groups and be aware of issues around power, difference, bias and conformity, for example. Adapting MBPs to different cultural groups, whilst maintaining fidelity, may increase their effectiveness and parallel mental health intervention research would support this. Some qualitative research suggests increasing cultural relevance may support accessibility. Group composition seems likely to be relevant too and teachers should consider the impact of, for example, a participant being in a

minority. Those teachers working with minority groups are well placed to evaluate their groups both qualitatively and quantitatively, to disseminate initial findings, and to experiment with ideas from current practitioner literature (see Magee 2016). The pedagogical literature emphasises mutuality as a key frame for the teacher-participant relationship; this may support a decreased power differential but is unlikely to act as a counter to unconscious bias, power and indeed, lack of diversity, in MBPs, without specific focused thinking and practice in this area.

Emergent Processes

The second main element of group physiology describes the processes which emerge as the group develops, of which cohesion (a sense of belonging to the group and believing the group is key to outcome) has generated the most research interest in SGTs. Meta-analyses of cohesion have demonstrated a significant correlation of a moderate effect size between participant reported cohesion and outcome, across orientation and diagnoses (Burlingame et al. 2018). The strength of the cohesion-outcome relationship seems to be moderated by size of group (5 to 9 members optimal), number of sessions (more than 12 sessions had a stronger relationship), and whether group member interaction is encouraged and a positive group climate fostered (this being associated with a stronger cohesion-outcome relationship) (Burlingame et al. 2011; Burlingame et al. 2018). The alliance, defined as the collaborative and affective bond between participant and therapist, is another emergent relationship process which is related to cohesion but under-researched within SGT (Víslá et al. 2018). In individual therapy, reported alliance is positively correlated with outcome – this finding is reliable across therapeutic orientations and of medium effect size (Horvath et al. 2011; Wampold 2015). The alliance has been operationalised most consistently as having three components: the bond itself; the agreement about the goals of therapy; and the agreement of the tasks of therapy – i.e. how to reach those goals (Horvath et al. 2011). Despite challenges

concerning methodology (around definition, measurement and the correlational nature of many studies) the alliance is considered a powerful common factor due to the overall strength of the evidence (Wampold 2015).

Emergent processes within MBPs.

Within MBPs, Bowen and Kurz (2012) found that MBRP participants' ratings of alliance were positively associated with higher mindfulness scores at the end of the course and at two months follow up, though not at four months. Thus, the alliance might be especially important in the beginning stages of developing mindfulness, although the correlational design did not address causality and there was some attrition. Results from an RCT on smoking cessation using an adapted MBSR program found that alliance measured mid-programme was associated with increased home practice, mindfulness and emotional regulation, and decreased negative affect, though not with smoking cessation (Goldberg et al. 2013). A study investigating the role of the alliance in Cognitive Behavioural Group Therapy (CBGT) and MBSR indicated that alliance was significantly predictive of outcome within the MBSR condition but not the CBGT condition (Jazaieri et al. 2018). The authors hypothesised that this may be due to MBSR being less manualised than CBGT, so relationship factors are more important, at least for this participant group who suffered from social anxiety. Bisseling et al. (2019) investigated alliance, group cohesion and teacher competence (using the MBI:TAC) and their relationship to psychological distress pre- and post- MBCT for cancer. Only the therapeutic alliance significantly predicted decreased psychological distress, and this association was mainly within the goal subscale (rather than the bond or the task). That is, mutual agreement about goals seemed important to outcome.

Three recent meta-syntheses of qualitative studies of the experience of participants in mindfulness groups go some way to illuminating potential group effects, including emergent processes. Eleven of the 14 papers reviewed by Malpass et al. (2012)

pointed to the importance of the group in the change process, even though the group was not the focus of the investigation, and they concluded that the group did indeed reduce stigma and isolation for participants and was experienced as normalising. Understanding that we share many of our experiences, including difficult ones, was one of the therapeutic factors described by Yalom and Leszcz (2005) as universality, but often discussed within mindfulness fields as common humanity. In addition, MBP participants' accounts suggested that group process aided learning of new skills, encouraged persistence and normalised the (challenges of) the practices taught (Malpass et al. 2012) Although the group was often seen as a safe place, this was not universal, and some participants within an MBCT group reported that the group space itself could heighten their anxiety (Finucane and Mercer 2006). Wyatt et al. (2014) found that the group was an important aid to de-stigmatizing, and that connection with others with similar experiences enabled people to deal with their own challenges with less distress, and greater acceptance. This is potentially an example of how a group effect might interact with a model effect. A further meta-synthesis (Cairns and Murray 2015) also reflected the themes around normalising, de-stigmatisation, encouraging perseverance, and cultivating changes towards others, such as increased empathy and emotional closeness (Allen et al. 2009; Griffith et al. 2009). There may be some crossover with the therapeutic factors literature, which includes the instillation of hope, altruism, interpersonal learning, and imitative behaviour, but the differing conceptual frameworks and definitions make comparisons complex. It is worth noting that the similar themes presented here may reflect the inclusion of the same original papers across these three meta-syntheses. More recent qualitative studies have echoed the importance of universality and the experience of cohesion within the group (Cormack et al. 2018).

The pedagogical literature strongly supports the relationality of the MBP group as vital: the teacher's "stewardship is the tending of relationships to ensure that the

atmosphere teaches” (McCown, 2016, p13). Two aspects emerge as key from the pedagogical literature that overlap with the concept of cohesion: belonging, the sense of mutual influence, responsibility and care; and “resonance” (McCown et al. 2010).

Resonance is a concept that is built on intra- and inter- subjective neurobiology and polyvagal theory (Porges 2017). Resonance circuitry is hard-wired into the brain and thus into our relationships, allowing us to learn experientially, to attune, to feel “felt” and to be part of something bigger than ourselves (see Siegal 2007). A well-stewarded MBP may offer participants the opportunity to build both intra- and inter-subjective resonance pathways with mindfulness practice as the method (McCown et al. 2010). For example, a participants’ self-disclosure of difficulty, handled skilfully, safely, with friendliness and supported by mindfulness, may allow the participant to drop into intra-subjective resonance. Those witnessing, and perhaps internally participating in the dialogue, may also resonate: the outward communication of this through facial expressions etc, may also help the group resonate with friendliness and safety perhaps allowing others to share difficulty also.

There is also agreement within the pedagogical literature that a key teacher skill is how the teacher manages and relates to the group. This “stewardship” is described in detail both by McCown (2016) and the MBI-TAC (Crane et al. 2017b), the latter assigned “holding the group learning environment” as one of six key teaching skill domains. The Inside-Out Group Model describes the embodied teacher as ‘reading’ the group, including any group processes, “holding” the group, including attention to boundaries and safety, as well as “befriending” the group - relating to what is arising within themselves, participants and the group as a whole with warmth and compassion (Griffith et al. 2019). The centrality of “holding”, a Winnicottian term, is also emphasised by other practitioners (Bartley 2012; Santorelli 2016) and echoes the concept of attachment with the group and the teacher in particular as a secure base from which to explore (Bowlby

2008). *If the base is insecure, then exploration and learning are much more difficult. Insecurity may be fuelled by the participant (see social anxiety below), the group (Finucane and Mercer 2006), the teacher, the curriculum, or an interaction between them. Recent attention within the pedagogical literature to trauma-informed mindfulness has pointed to the importance of recognising many participants bring with them nervous systems that have been impacted by trauma, and safety in relationship is key to healing (Treleaven 2018).*

Implications for teachers.

There is general agreement within the pedagogical literature that it is important for the teacher to skilfully cultivate a fertile, but safe, learning container for the MBP group. Research evidence suggests that alliance is important for effective MBPs. It is unclear whether cohesion is as important within an MBP, perhaps because the programmes are usually limited to 8/9 sessions, and there may be more than nine participants, as well as the more teacher-led interaction within the group. These factors have been found within small group research to moderate cohesion. However, qualitative research shows group members do consistently talk about the importance of the group, especially in terms of normalising/universality/common humanity and feeling greater empathy towards others, and also as a support in persisting in the face of challenge. The pedagogical literature also underlines the importance of the relational context of the group, with related concepts around belonging and resonance. Therefore, teacher-participant and participant-participant relationships throughout the programme are likely to need attention in order to create a safe space. Small group and pair work may be helpful, not just at the forming stages of the programme to encourage cohesion and belonging, but in the middle stages, particularly if the group is "storming". Collaborating to create clear expectations around goals and tasks may be key, and will be revisited later in this article.

Therapist Effects

There is a dearth of research on therapist effects within group psychotherapy, but therapist effects in individual therapy are increasingly seen as an important area of investigation, with studies showing significant therapist effects on client outcomes (Baldwin and Imel 2013). This body of research may be a useful lens with which to view therapist effects within MBPs. There seems to be considerable variation between therapists, with top-performing therapists having significantly increased levels of treatment gain, and fewer clients who deteriorate (Okiishi et al. 2003). A review and meta-analysis concluded that therapist effects accounted for 3-7% of the variance in outcome (Baldwin and Imel 2013). It is unsurprising that researchers have examined therapist competence to explain this variability, but this has proved to be a thorny issue. Therapist competence has been conceptualised as the skill with which the therapist delivers the intervention, particularly amongst more manualised approaches. A related concept is adherence, how much the therapist adheres to delivering the techniques and methods of the particular therapy. However, a meta-analytic review found no overall effect for either competence or adherence to the model with alliance accounting for a significant proportion of the variance between groups (Webb et al. 2010). A further meta-analysis concluded that therapist skills or actions are the major contributor to the alliance and significantly predictive of outcome (Del Re et al. 2012). That is, how the therapist contributes to the development of a positive alliance is important rather than their technical competence in delivering the intervention. It has also been suggested that therapist responsiveness might be key – the ability of therapist to adapt to the context and the client rather than simply adhering to the manual (Webb et al. 2010). In contrast, length of training has proved to be a possible red herring (Miller et al. 2018), although others disagree (Shafran et al. 2009). More recent studies suggest that those therapists who apply the principles of deliberate practice get the best results. This includes routine

monitoring of effectiveness through feedback from the client and systematic attempts to improve performance (Miller et al. 2018). In summary, within individual therapy, competence has proved a slippery concept, although therapist skill in building a working alliance and responsiveness may be important.

Therapist (mindfulness teacher) effects within MBPs.

Within MBPs, therapist effects have been considered through the framework of teacher competence, although the definition of competence within MBPs is wider than above. Teachers are expected to have both foundational competences related to their clinical or other training and professional practice, as well as specific competencies in teaching MBPs which includes the ability to embody the “qualities of mindfulness” (Crane et al. 2012 p. 80). This embodiment is a reflection of the centrality of mindfulness in the personhood of the teacher and, as such, is quite different to other professional competencies. There is pedagogical agreement that teacher embodiment is key, and cultivated through regular personal practice, retreat attendance and an “existential commitment” to bringing mindfulness fully into daily life (McCown 2013). Defined as “the arising of non-judgmental, present moment awareness within the teacher” it is at the heart of the Inside Out Group Model (Griffith et al. 2019 p4). There has been considerable energy invested in developing tools for training and assessing competence, including embodiment, in mindfulness teachers including the MBI-TAC (Crane et al. 2017a). The amount of mindfulness practice a MBP teacher engages in is one way of assessing the level of commitment teachers have, although there is no research on whether or how this impacts embodiment. The initial empirical research is so far mixed, with one small study finding no significant predictive effects of years of mindfulness practice or time on retreat (Ruijgrok et al. 2018) though a metanalysis did find “experience” with mindfulness predictive of outcomes (Khoury et al. 2013). This latter study was of mindfulness-based therapies more broadly rather than MBPs. Evidence

from a well-designed study with psychotherapists-in-training found that when those psychotherapists were practising an hour of meditation every morning (led by a Zen Buddhist), this predicted better outcomes for clients in comparison to a control group (Grepmaier et al. 2017)

Within MBPs, one study that found significant group effects failed to find teacher effects, that is, it mattered which group you were in, but not which teacher taught you (Imel et al. 2008). However, this may have been because there was insufficient variation in teacher skill, as all the teachers were all highly trained and supervised (Imel et al. 2008). The few studies into teacher competence so far have failed to find any effect of teacher competence (as measured by the MBI-TAC, including relational skills and embodiment) on participant outcomes, group cohesion or alliance (Bisseling et al. 2019), or on possible mediators of outcomes, namely mindfulness, self-compassion, rumination and cognitive reactivity (Huijbers et al. 2017).

It has been suggested that perhaps the nature of MBCT, that is, the highly structured program and emphasis on responsibility for self, means that teacher competence is not so important (Huijbers et al. 2017). Alternatively, what participants perceive as important in their teacher is not necessarily the same as what teachers/assessors believe (Bisseling et al. 2019). In addition, within the literature on therapist effects in individual psychotherapy, there has been a movement away from expert or supervisor rating of therapist competence to identifying effective therapists through tracking client outcomes (Baldwin and Imel 2013), but this has not yet translated across to MBPs.

Length of post-graduate mindfulness-teacher training has been shown to predict participant outcomes (Ruijgrok et al. 2018). Those with more advanced training (three rather than two years) had participants with better outcomes, on measures of well-being and perceived stress, and higher satisfaction levels. The third year of training in this

sample involved feedback on a complete videotaped course and it may be that this type of feedback is key. In contrast, teaching or meditation experience did not seem to be related to outcome/satisfaction. However, this was a feasibility study with a small (self-selected) sample of participants (N=31) and the small sample size meant the group of teachers with the least training (of 1 year) was excluded. McCown suggests it is the absorption in the pedagogy that is key for teachers, not just time spent practising, but immersion in other co-created spaces of teaching/learning and relationships including their own courses (2013). This enables the embodiment of authority and authenticity that the teacher can then offer the group (McCown et al. 2010).

There has been limited qualitative research investigating teacher effects. An MBCT study investigating the teacher-participant relationship described four themes: embodiment, empowerment, non-reactivity and peer support (van Aalderen et al. 2014). Participants perceived peer support as more important than the teachers, and empowerment and non-reactivity were seen differently by teacher and participant, echoing Bisseling et al. (2019).

Implications for teachers.

It is not yet clear that there are reliable teacher effects within MBPs. Lack of teacher effects/competence found within some RCT's may be due to high levels of teacher training and experience resulting in little between-teacher variation. Indeed, the evidence base for the efficacy of MBPs has been established largely based on teaching by highly trained teachers. Therefore, while research is ongoing into the impact of teacher competency, in order to be able to confidently generalise from this evidence base, good teacher training remains advisable. Embodiment seems key to how teaching competency is perceived, by participants as well as by teachers. What helps teachers to be embodied is less clear from the research. There may be differences in outcomes for participants who have had teachers with longer training, but this finding would benefit from

replication with a larger sample. However, there may be other ways in which teachers are immersing themselves within mindfulness contexts, or a combination of these, which may be important. In addition, it might be helpful to look to the individual therapy field in terms of assessing teacher competency through individual participant outcomes. Although the practitioner literature has rich offerings around how teachers can cultivate embodiment, we cannot yet say from a research perspective that practice, training, support/supervision/co-constructed mindfulness spaces with peers and/or more experienced teachers, or retreat. There is initial support for the importance of the alliance and teachers would be wise to pay attention to this, and perhaps especially to the fit between participants' goals and how these will be reached, with that of the teacher's/the MBP.

Participant Effects

Within common factors research, client factors, such as readiness to change, expectations about treatment, and attachment style, have been estimated to contribute about 30% of the variance in outcome (Norcross and Lambert 2011), suggesting that clients are at the centre of the change process (Bohart and Wade 2013). In a narrative review of client contribution to psychotherapy, Bohart and Wade (2013) concluded that client demographics have little effect on outcome, but that some characteristics, such as attachment style, do have an impact, and attachment also seems to be significant within SGT. (Tasca et al. 2013). Clients' readiness to change likewise seems an important factor, with a meta-analysis of 39 psychotherapy studies finding a medium effect size in terms of its association with outcome (Norcross et al. 2011). Client preferences (preferences about therapist, treatment approach and activities within therapy) may also be relevant, predicting both outcome and attrition (Swift et al. 2011; Swift et al. 2018).

Expectancy is another common factor that has been found within psychotherapy to be related to outcome (Zilcha-Mano et al. 2018). Expectancy includes both what

clients expect from the activity of therapy (role expectations) and its expected impact (outcome expectations). Bohart and Wade (2013) found some support for a positive correlation between both role and outcome expectations and actual outcome, including encouragement for the idea that clients with moderate expectations have better outcomes than clients with very low or very high expectations (Constantino et al. 2011). Inducting clients into therapy appears to have had some success in changing role expectations and thus improving outcomes (Constantino et al. 2011). In addition, clients and therapists who match well in terms of their theory of change tend to demonstrate better outcomes (Bohart and Wade 2013).

Client effects within MBPs.

Although MBPs have demonstrated effectiveness with a wide range of participant groups it is less clear if particular participant characteristics impact outcomes. Not all participants who take MBPs improve (Norton et al. 2015), as is true across psychotherapy (Lambert 2011), but there is little attention or information kept on those participants who do not improve, deteriorate, or drop-out (Nam and Toneatto 2016). A recent review suggests that RCTs in MBPs have high rates of attrition, with a mean of 29%, which challenges the effectiveness of MBPs (Nam and Toneatto 2016). Where information on attrition is recorded, mainly practical reasons are given, but it is possible that participants' perceptions of treatment may be under emphasised (Nam and Toneatto 2016). Crane and Williams (2010) argue that a focus on fluid psychological factors may be more beneficial to the field than focusing on fixed factors such as demographics or clinical history, as the latter, by definition, are immutable. Understanding what psychological factors make people less likely to benefit from MBPs could enable greater clarity in any pre-group preparation (screening, pre-group interview or orientation) around the rationale for the approach, and support helpful and realistic expectations, including the challenges of mindfulness and how these might be worked

with. Higher levels of rumination and cognitive reactivity were found to be significantly predictive of drop-out in MBCT, to address this Crane and Williams (2010) developed an extended pre-course "treatment engagement" interview. This included highlighting how MBCT could help address the particular problems the participant presented with, an exploration of difficulties which could arise during the MBP, encouragement to contact the therapist/teacher if difficulties were experienced, as well as active following up of missed sessions during the MBP. Interestingly, much lower attrition rates were reported during this trial (Williams et al. 2014). Higher levels of participant rumination also negatively predicted physical and psychological engagement in a short online mindfulness programme, suggesting this is a predictive factor in online adaptations also (Banerjee et al. 2018)

Preferences and expectations may impact outcomes in MBPs (Farb 2012). Whether participants preferred a program they were assigned to (MBCT for Cancer or Supportive-expressive therapy) was more predictive of benefit than assessed personality (Carlson et al. 2014). In addition, in an MBCT intervention for headache pain, pre-course positive outcome expectations were correlated significantly with decreased pain interference, though it was unclear whether this may have been confounded by higher baseline pain scores as well as by high levels of attrition and a small sample size (Day et al. 2016). In contrast, an RCT of older adults did not find any expectancy effects (measured post first session) for either cognitive or clinical outcomes (Haddad et al. 2019). However, the MBP arm of this trial had greater attrition, which may have skewed the results, as those with lower expectations of beneficial outcomes or lower credibility may have discontinued. Two meta-syntheses of the available qualitative research in MBPs (Cairns and Murray 2015; Wyatt et al. 2014) suggest that expectancy needs to fall into a mid-range in order to be most helpful, in agreement with Constantino et al. (2011). It is possible that helpful expectations may be correlated with goal-building and could help make sense of recent

findings that the goal subscale within an alliance measure is associated with positive change (Bisseling et al. 2019). Having reasonable goals for the intervention and a clear rationale for how those goals can be reached could be important: within MBPs this paradoxically involves a letting go of expectations and the cultivation of non-striving. A recent qualitative study also found that readiness to change may be important in how actively the participants can commit to the programme and suggested exploring whether participants have understood the rationale behind the MBP and their motivation (Hjeltnes et al. 2018).

Further studies suggest that the level of anxiety participants may have around being in the group may predict outcome. For example, insecurely attached participants were 50% more likely to drop-out, although they could also benefit more if they stayed the course (Cordon et al. 2009). Interestingly, both a self-compassion and an attachment security prime resulted in increased willingness to engage in initial mindfulness training for those categorised as insecurely attached (Rowe et al. 2016), suggesting once more a role for good pre-group preparation. A more recent qualitative paper comparing improving and non-improving participants with social anxiety disorder discovered that one key difference participants reported was whether they were able to engage with the group process, despite fear and anxiety, or continued to feel exposed, insecure and avoidant of social interaction within the group (Hjeltnes et al. 2018).

MBCT practitioner literature seems to foreground pre-group preparation more than MBSR, perhaps as initially the focus was on a response to depression in remission, and a careful assessment of this. Segal et al. (2013) include a chapter on the pre-class participant interview in their book, as does Crane (2017) and Williams et al. (2015). Bartley (2012) discusses how early experience of high attrition in running MBCT for cancer shifted the pre-group process from recruitment to preparation, so that participants made an informed choice about joining. She recommends one-to-one pre-

group meetings (rather than group orientations) between participant and teacher for careful assessment and preparation, as well as supporting a developing alliance between the two. The MBSR curriculum suggests a group orientation plus a brief individual screening interview, with intentions around familiarisation, education and screening (Santorelli et al. 2017). However, there is no research as yet on the impact of different types of pre-group preparation (written information, group orientation, individual meetings) on attrition or outcomes.

Implications for teachers.

Expectancy effects and client preference may impact persistence and participation with MBPs. There is contradictory evidence about whether these factors play a role in outcome, possibly because those with unrealistic expectations discontinue. In particular, it may be helpful to give specific guidance to participants with high levels of rumination and cognitive reactivity (for example, how these relate to depression relapse, may mediate outcome in MBCT, and can be worked with) and anxiety and avoidance (for example, the importance of engaging with the group process despite fear). Addressing readiness to change might be beneficial, especially as an MBP requires considerable commitment and investment timewise, and a particular approach of turning towards difficulty which may be unexpected. More generally, encouraging discussion around goals for participating and how those goals are worked towards (paradoxically within MBPs by practising non-striving, and non-attachment), clear explanations about the role of the group, and finding a balance between encouraging hope and discouraging the idea of mindfulness as a miracle cure, may well support persistence or alternatively a decision not to participate in an MBP at this time.

Discussion

This selective review has drawn together relevant research from the small group treatment and common factors fields, as well as the extant research and practitioner

perspectives from MBPs, that might help both practitioners and researchers to reflect upon change factors within MBPs. We structured the evidence using Burlingame et al.'s (2013) model of SGT, looking at both imposed and emergent structure, emergent processes, social processes, and model, therapist and client effects. We have tentatively offered some implications for MBP teachers, with the caveat that there are many gaps within the research.

The SGT model suggests that all the above factors may impact the functioning and effectiveness of an MBP. For example, the heterogeneity of a group in terms of participant composition has been hypothesised to impact outcome with both ethnicity, gender and variables like stage of illness as potentially key (Roos et al. 2019; Schellekens et al. 2016; Woods-Giscombé and Gaylord 2014). There is some evidence that how participants feel about the group they find themselves in is important, that there needs to be a sense of safety within the group for it to be helpful, and that participants often report the group context reduces isolation and stigma (Cairns and Murray 2015; Malpass et al. 2012; Wyatt et al. 2014). This may impact cohesion and encourage participants to stay the course, even when they hit challenges. Too much difference, though, may be perceived as unhelpful or disconnecting (Schellekens et al. 2016). This evidence suggests that teachers need to consider the composition of their groups and cultivate relationships where people can identify with others, especially where differences exist. It is unclear whether the term—cohesion—fits an MBP well-enough and whether a different, if related, construct, captured by pedagogical descriptions of belonging, mutuality and friendship, might be a better fit. Moreover, it is uncertain if mindfulness practice can cultivate inter-and intra-subjective resonance in a way not experienced within non-mindfulness groups.

As well as cohesion, the alliance may also be an emergent process that has some impact on outcomes for participants. Strong evidence from individual psychotherapy has

been backed up by some tentative evidence from MBPs that the alliance is an important component (for e.g. Bisseling et al. 2019). This early evidence suggests that it is particular component of the alliance, namely, agreement on goals, that is related to participant outcome. Furthermore, preferences about treatment may be associated with better outcomes, and those with reasonable expectations about potential benefits may gain the most out of a course though further studies are needed to explore this (Cairns and Murray 2015; Carlson et al. 2014; Wyatt et al. 2014). Participant expectancies may be particularly relevant within MBPs which cultivate intentions, encourage participants to let go of specific goals for the duration of the programme, and promote a paradoxical stance of non-striving as the method. Clarifying expectations about this process and the nature of the task ahead, especially the challenges that might arise, may well impact attrition, especially as these challenges relate to individual vulnerabilities (Crane and Williams 2010), though factors leading to attrition is under-researched within MBPs.

The impact of teacher competence has so far proven to be difficult to pin down within MBPs as well as within individual psychotherapy, although this may be because most RCT's are conducted with highly trained and supervised teachers (Bisseling et al. 2019; Huijbers et al. 2017). Differential effects in competence may therefore be hard to detect. Within the mindfulness field there are differing levels of training and experience, and it may be that research which is able to capture this diversity will be successful in helping us to understand what a competent mindfulness teacher is, and what level of training is necessary, so that we can continue to have confidence that the extant evidence-base applies to our work. Mindfulness pedagogy, expert trainers and participants are agreed that a level of embodiment is essential. What is less clear is how embodiment is cultivated, although practitioner perspectives suggest that immersion in co-created mindfulness spaces is key (McCown 2013). Within each group, there is a complexity of relationships involving the participants and the teacher and all they bring

with them, including their expectations, intentions and experiences of relationships. This, alongside the curriculum and mindfulness practice itself, is likely to contribute to how the co-created mindfulness space is constructed, and how it supports participant outcomes.

Limitations and Future Research

This review was broad in scope in order to offer links between research into MBPs and SGT and common factors research. Thus, although searching was thorough, it was not systematic, and it may be that some studies were missed. There may be a lack of fit between MBPs and SGTs research especially due to factors like group size, thus drawing parallels may be particularly difficult when group size is not stated in studies. Research from individual psychotherapy has also been used within this paper to give a broad theoretical and empirical frame for reflecting on MBPs. However, we allow that there may be notable differences between individual psychotherapy and MBPs that make translation of concepts complex.

These challenges in translation from SGTs and individual psychotherapy also point the way for future research, such as the impact of group size on the functioning and outcome of MBPs. SGT theory and research suggest that group size, an imposed structural variable, may impact effectiveness through an emergent process like cohesion, or indeed that larger groups may be subject to different processes than smaller groups (Borek and Abraham 2018), but there is no research on group size within MBPs. Indeed, group size is often unstated. However, it is interesting that, where group size was specified in research studies, groups seemed to be smaller (less than 15 or 12) rather than larger, even MBSR groups. As SGT research suggests that group size affects cohesion (Burlingame et al. 2011; 2018) it seems important to investigate whether this is a potentially important variable in MBPs also, especially as research within MBPs around cohesion is inconsistent (Bisseling et al. 2019). Research into whether cohesion is a

construct which fits well with an MBP, or whether a related construct might fit better, may also help to clarify.

Other research could investigate the role of expectancy factors throughout the life of the MBP and how the teacher may best manage these; the relationship expectancy has with emergent processes such as the alliance and cohesion; and what type of pre-group preparation has the best outcome. Teacher competence is a key issue in MBPs and it may be useful to draw from individual psychotherapy research in order to shed more light on this, for example, tracking individual participant outcomes as a way of measuring teacher competence, and investigating what it is that teachers with better outcomes are doing during the MBP, including their stewardship of the group, and their relationships with other co-constructed mindfulness spaces they may be part of in their lives. Qualitative research with MBP participants about what they see as making a “good” teacher may also add depth. Attrition from MBPs could also benefit from being examined more thoroughly, including following-up participants who do not complete the MBP. This may offer a further insight into how group and other common factors may impede or support participant learning.

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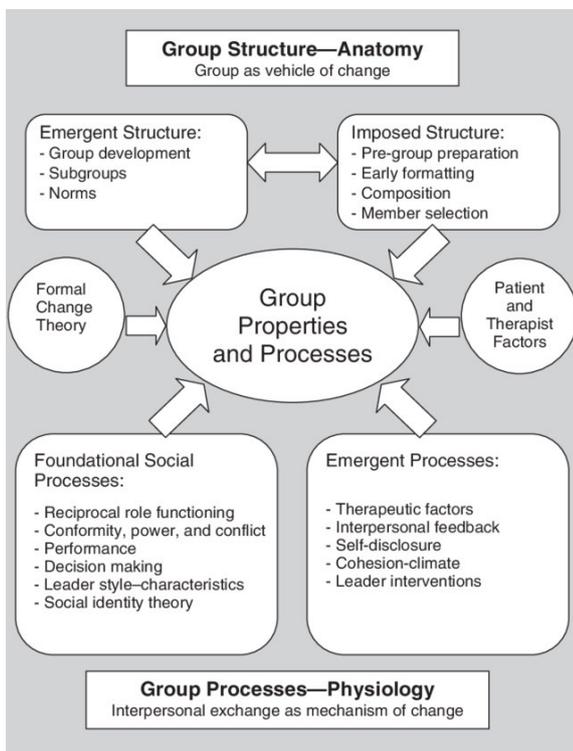


Fig 1 *Organizational scheme of small group process and structure domains (Burlingame et al. 2013). Reproduced with permission. Copyright © 2013 by John Wiley & Sons, Inc. All rights reserved.*

SUPPLEMENTARY MATERIALS
Appendix A – References by Category

Structure/Anatomy of Group

Imposed Structure

Borek, A. J., & Abraham, C. (2018). How do small groups promote behaviour change? An integrative conceptual review of explanatory mechanisms. Applied Psychology: Health and Well-Being, 10(1), 30-61. <https://doi.org/10.1111/aphw.12120>

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Emergent Structure

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