

Experiences of Health Care Professionals Enrolled in Mindfulness-Based Medical Practice: A Grounded Theory Model

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Abstract Currently, a relatively small number of studies have employed qualitative methods to rigorously examine the experiences of health care professionals enrolled in mindfulness-based stress reduction (MBSR). This study developed a working model of how participants may experience change during an adapted MBSR program for health care professionals. The model derived from the data demonstrated that participants echoed themes similar to those described by clinical populations engaged in MBSR, such as the salience of the group experience and support, discovery of acceptance as well as the realization that some degree of frustration and/or distress is part of learning and establishing a mindfulness practice. Unique themes highlighted included becoming aware of perfectionism, the automaticity of “other focus” and the “helping or fixing mode”. Findings illustrated the nuanced change processes undertaken by participants and the implications such change held across professional and personal domains.

Keywords Mindfulness · Health care professional · Well-being · Self-care · Mindfulness-based stress reduction · Grounded theory · Negative effects

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Introduction

Mindfulness-based stress reduction (MBSR), an approach pioneered by Kabat-Zinn and colleagues in 1979, continues to grow in popularity; its original focus on chronic pain and illness has been extended to problems such as insomnia, alcohol and drug abuse and eating disorders (Bowen et al. 2009; Kristeller and Hallett 1999; Ong et al. 2008). The program is increasingly being sought out by health care professionals turning to mindfulness for a variety of reasons, and beginning to integrate its principles into training programs (Irving et al. 2009). In his seminal book, *Health Thy Self*, Santorelli (1999) discusses the potential for mindfulness to enrich the lives of clinicians by providing a means of self-reflection, as well as caring for and healing themselves. Anchoring his work in the myth of Chiron, Santorelli outlines the means through which mindfulness can promote reciprocal learning and healing in clinical encounters and encourages health care professionals to face their own vulnerabilities in the process.

Results from outcome research examining the impact of these programs on health care professionals and trainees have been promising, yielding intervention-related outcomes analogous to those found in clinical populations including increases in self-reported positive affect and self-compassion, in addition to decreases in perceived stress, negative affect, anxious symptoms and burnout (Jain et al. 2004; Martin-Asuero and Garcia-Banda 2010; Rosenzweig et al. 2003; Shapiro et al. 1998, 2005, 2007). Research results indicate benefits of the MBSR for patient care, such as an increase in empathy among nurses (Beddoe and Murphy 2004) and higher evaluations from psychotherapy patients (Grepmaier et al. 2007).

Despite the promising results, there are several limitations to these studies. In a systematic review, Escuriex and

Labbe (2011) noted several limitations which have pervaded the literature such as a lack of randomized controlled trials, as well as an over-representation of therapists-in-training, which could confound therapist mindfulness and its impact upon treatment outcomes, with a lack of clinical training. Moreover, analogous to studies on clinical populations, research on mindfulness in health care professionals has largely focused on outcome rather than the process through which change is facilitated. Several open and clinical trials have provided compelling elucidation of mechanisms and their relationship to outcomes (e.g. counsellors' capacity to control their attention mediating the relationship between mindfulness and counselling self-efficacy, Greason and Cashwell 2009; impact of adherence to meditation on caregiver self-efficacy, Oman et al. 2006; relationships between self-compassion and perceived stress, Shapiro et al. 2005). However, these studies have not provided an overarching theory of how such mechanisms may interact. Additionally, there are few published qualitative examinations of MBSR or mindfulness interventions with clinicians or trainees, which may shed light on these process interactions such as those conducted with clinical populations (Abba et al. 2008; Mason and Hargreaves 2001). Lastly, the intention for developing a mindfulness practice has been posited as a relevant factor in understanding the process of learning mindfulness (Shapiro et al. 2006). However, this notion has largely been overlooked within the current research. Intentions for taking the course may vary, and mitigating circumstances may impact how mindfulness facilitates change and wellness.

The Present Study

The present study explores health care professionals' experiences in a modified version of MBSR. Mindfulness-based medical practice (MBMP) is closely modelled after MBSR including the core formal and informal mindfulness practices. Additionally, role-plays and other exercises emphasizing communication skills are embedded in the 8 weeks to help clinicians to integrate mindfulness into working relationships with patients and colleagues. The program was taught by the same two instructors: a PhD level clinical psychologist, and a palliative care physician with a certification in family therapy. Both had completed advanced training through the University of Massachusetts Center for Mindfulness and had piloted the program with a group of 15 physicians prior to making it available to the public. The study explored if and how participation in MBMP was perceived to be beneficial for health care professionals and the processes through which this may have occurred. Challenges or negative side effects attributed to engagement in the program including the home practices and silent retreat were also examined. A qualitative grounded theory methodology was employed to capture these

phenomena from the participants' perspective. A focus group method was selected given the exploratory nature of the study and the goals of the investigation; the group discussion format provided a forum to elicit feedback from a relatively large number of participants on aspects of the program itself as well as the processes at work relative to changes observed by the participants (Krueger and Casey 2009). Collecting the data in a group milieu also provided a unique perspective on group dynamics, creating a forum through which health care professionals from various disciplines could discuss their experiences of the course collectively.

Method

Participants

Individuals in this study were recruited from participants who took part in the MBMP program offered to health care professionals in a large, multiculturally and linguistically diverse metropolitan area over two consecutive years. A series of six focus group interviews were conducted for 1.5 h, each with three to six participants per group. Of the participants who provided demographic information ($N=26$), the mean age reported was 51 (range=23–82; $SD=12.2$ years); 81 % were female and 19 % male. All participants spoke English; however, 36 % identified French as their first language, 40 % English, 4 % Polish and 4 % Japanese. Twelve percent identified as being fully bilingual from early childhood. Twenty-seven percent were physicians, 15 % were psychologists, 15 % were nurses, 8 % were social workers, 8 % counsellors and 27 % identified as being complementary health care providers (e.g. naturopathic doctor or massage therapist). Of the participants who provided information surrounding goals for engaging in the program ($n=19$), 68 % indicated that they hoped to be able to learn skills that would enhance their clinical skills with patients and/or clients.

Procedures

Data were gathered from a series of six focus group interviews from two cohorts of MBMP participants in the 3-week period following completion of the course. Three were completed in June 2007 and three in June 2008. The focus group method provides a unique opportunity for members to prompt one another, as well as to explore and expand upon themes as they arise in discussion, which was thought to be particularly appropriate given that the intervention was also delivered in a group format. However, this format can present the drawback of introducing pressure to conform or achieve consensus, or for more introverted participants to express opinions less frequently or fully. In light of these

constraints, the researcher explicitly named such challenges at the outset of the session, encouraged participants to express divergent opinions and called upon quieter members, when appropriate.

Once consent had been obtained, participants were invited by e-mail to sign up for one of the scheduled focus group discussions led by the first author at their convenience. The researcher followed a 2-day training program in focus group moderation with an expert in the field prior to conducting the interviews, and followed the framework provided by Krueger (1998) to guide discussion through the use of probes, pauses and questions. Participants were given the focus group questions orally and in a written handout, both in English and French. Participants were invited to respond to questions in whichever language they felt most comfortable. Of the 35 participants who consented to take part in the focus groups, 27 attended focus group interview sessions. Data collection was terminated, and no further interview sessions were scheduled when repetitiveness of themes in the data became apparent, indicating an appropriate saturation point (Creswell 2007).

Data Analysis

Digital audio recordings of the focus group sessions were transcribed verbatim by a research assistant who had observed the sessions and were then checked by the first author for accuracy. French segments of the transcripts were translated by a professional translator and reviewed for accuracy by a bilingual Francophone colleague. Data analysis included (a) reading the transcripts in their entirety and searching for important general themes (open coding); (b) looking for emerging themes question-by-question, and through the transcript as a whole; (c) developing coding categories and applying them to the transcripts, line-by-line; (d) creating diagrams to illustrate themes and inter-relatedness or processes; (e) revisiting and reviewing sections of data which have been omitted and (f) systematically reporting the results in relation to the research questions (Krueger 1998).

Integral to examining the inter-relatedness of themes, the grounded theory method of coding included axial and selective coding (Corbin and Strauss 2008; Creswell 1998; Fassinger 2005). Axial coding involves the continuous comparison of data segments across groups, and searching for similar ideas or themes, until the smaller categories are achieved exploring the causal relationships between categories. Consistent with the constant comparative analysis suggested by Strauss and Corbin (1990), a number of prompts were made to focus group questions in the second cohort based upon responses and themes derived from data analyses of the first round of three focus groups. Once saturated categories had been identified, the relationships between them were hypothesized with the aid of illustrative diagrams. Selective coding was employed to create

a coherent narrative, which entailed selection of a core category and detailing the relationships of other categories derived from other levels of analysis to the core category and to one another. The researcher also revisited the data to select illustrative segments, as well as negative cases, to further examine the structure of the proposed theory. Data were coded and reported “in ways which preserve the participants’ own words” (Smith 2003, p. 187). As such, embedded quotes are included in the reported results to illustrate categories and proposed phenomena.

Credibility of Data

Several steps were taken to ensure the credibility of data to counterbalance potential challenges posed by the qualitative method. These included member checking, bracketing and auditing.

Member checking Given the limited transferability associated with a small size of a focus group and self-selection process, member checking is particularly important when working with data gathered from focus group interviews (Carey and Smith 1994). Summaries of responses to each research question were provided, allowing participants to reflect upon, supplement and clarify the content, and the transcriber who was present during sessions took process notes of the participant interactions. Two participants with differing backgrounds were asked to provide feedback on the quality of transcriptions, open, axial and selective codes represented in the visual model: a male Francophone physician with a well-established career, and a female Anglophone psychologist relatively new to the field.

Auditing Auditing is a two-level process, involving peer debriefing and inquiry auditing (Fassinger 2005). An independent peer reviewer with limited knowledge of the literature on MBSR was enlisted to survey the initial open coding of the data. Consensus meetings were held by the first author and the peer reviewer for the initial open codes, which were adapted and refined accordingly. When divergent coding themes arose in the auditing, results were discussed until consensus was achieved (Creswell 1998). Inquiry auditing monitors the overall process and products of the grounded theory approach. The second author acted as inquiry auditor, closely monitoring the overall process of data analysis at each stage. Discrepancies between the first author and inquiry auditor led to refinement or elaboration of codes.

Bracketing The identity of the primary researcher and the auditor may have potentially impacted data collection and analysis and influence the way in which she moderated the focus groups. Creswell (1998) suggests the use of “bracketing”, in which the researcher clearly states potential biases and assumptions relative to the phenomena being explored.

For the purpose of this study, bracketing included reflections of the researcher's own personal experiences as a participant in and teacher of MBSR and the benefits and challenges which she encountered in this process. At the time, the primary researcher was a 30-year-old Caucasian, bilingual, female doctoral student in counselling psychology. She had practiced yoga and meditation practice for approximately 8 years, had undergone formal training in MBSR and MBCT and had acted as a co-facilitator of an MBSR intervention for individuals with chronic illness. She noted that the development of her clinical work had been significantly impacted by her experience with mindfulness, enhancing her ability to tolerate strong emotions within herself and her clients. She expected that research participants would report the same. The auditor was a 40-year-old female Korean counselling psychologist and a faculty member in a counselling psychology program. She held a regular meditation practice for over 7 years and had participated in an 8-week MBSR program in the community. The auditor noted that these practices helped her to be more attuned to her experiences and enhanced her ability to acknowledge and stay with difficult emotions in her personal life and in her clinical work. The auditor expected that similar experiences would be reported by participants of the study.

Results

Eighty-eight concepts arose from the interview data in the open coding phase of the analysis. Through axial coding procedures, open codes were grouped into 35 subcategories which fell into six overarching categories: the core category enhancement of awareness, mindfulness practices (informal and formal), internal and external context, group experience, mindful strategies and consequences for self and others. Table 1 summarizes the frequency of these categories and subcategories expressed by each of the participants in the study. A conceptual model, illustrated in Fig. 1, outlines the process of change characterized by the navigation of challenges largely facilitated through support stemming from the group experience. Selective coding procedures elucidated the relationships and interrelationships of categories and subcategories. Thematic elements of the major categories and subcategories are described below, as well as convergence and divergence of participant experiences. Rich descriptions are provided with participant quotes to exemplify themes. Any potentially identifying information was omitted to ensure participants' anonymity.

Central Experience—Enhancement of Awareness

The core category or central experience discussed by *all* participants who had taken part in the course was the *enhancement of awareness*. Aspects of awareness identified

were multifaceted ranging from cognitions, sensations and emotions to interpersonal patterns and dynamics. Many participants discussed how awareness of their own tendency towards inattention or “mind wandering” had provided a starting or entry point for refocusing and noticing other aspects of themselves and their environment as illustrated in the following quote:

I can watch my mind go off and go “Oh my mind is going off” and just bring it back, especially in emotional situations. I can watch my emotions and notice that if I'm talking, if I'm, If I'm engaged in them then I'm not in the present—I'm in my emotions. And when you realize that you just come right back (Participant 13)

Participants typically described becoming aware of a range of cognitions. As Participant 24 shared, one of the recurrent themes was related to awareness and insight into self-critical or judgmental attitudes:

Since health care workers seek perfection...I wouldn't allow myself any mistake while meditating. I had to repeat to myself that I didn't have to be perfect.

Participant 6 echoed a similar sentiment, explaining that the course had helped her to become aware of her difficulty being compassionate towards herself, and her tendency to judge her own feelings and behaviours. Many participants expressed a new awareness of their own lack of self-care compounded by poor attitudes towards taking care of themselves. Some participants described becoming aware that they felt guilty when taking time for themselves, a requirement of the daily home practice of the MBSR program. In addition, several participants also noted that they became aware of behavioural tendencies linked to taking care of others and focusing on others first. For example, Participant 17 became more aware of how a function of “not talking” and keeping her mind from thinking of a difficult situation.

Causal Conditions—Mindfulness Practices

The establishment of a regular *mindfulness practice* was identified as necessary (a causal condition) to set the stage for enhanced awareness. The majority of individuals reported that this was their first experience of working to establish a regular, daily mindfulness practice. For others, mindfulness was not something new to them; they either had read about or practiced some form of meditation in the past. Nonetheless, as Participant 5 pointed out, the program was a “reinforcement”, motivating him to re-connect with, deepen and continue his mindfulness practice long after the program ended. Generally, formal and informal practices were differentiated in the descriptions given by participants. Formal practice refers to structured meditation exercises such as

Table 1 Categories, subcategories and themes

| Categories | Subcategories | Themes | |
|------------------------------------|-------------------------------|--|--|
| Mindfulness practice | Informal practice | Mindfulness in every day experience ($N=7$; 5, 6, 7, 12, 15, 16, 27) | |
| | Formal practices | Specific home practices ($N=9$; 1, 2, 4, 9, 14, 19, 23, 26, 27) Importance regular practice ($N=7$; 1, 2, 8, 9, 7, 23, 24) Mindfulness as ongoing process ($N=13$; 1, 2, 3, 5, 6, 7, 8, 9, 20, 22, 23, 25, 26) | |
| Internal and external landscape | Internal challenges | Strong/unpleasant emotion ($N=7$, 7, 8, 16, 17, 23, 25) Pain/discomfort ($N=7$; 1, 6, 10, 14, 15, 16, 25) Boredom ($N=4$; 1, 2, 3, 7) | |
| | External challenges | Time and schedule issues ($N=13$; 1, 2, 3, 5, 6, 7, 9, 10, 13, 15, 16, 17, 24) Mindless workplace and colleague stress ($N=4$; 6, 15, 16, 26) | |
| Culture | Program structure | Facilitates commitment and motivation ($N=6$; 5, 6, 8, 10, 14, 16) Negative cases—size ($N=3$; 8, 15, 17) | |
| | Group universality | Commonality ($N=13$; 1, 3, 4, 6, 7, 14, 15, 16, 20, 21, 22, 24, 26) | |
| | Peer support | Support and safety ($N=8$; 2, 6, 7, 8, 15, 19, 20, 21) | |
| | Instructor qualities | Direct instruction ($N=2$; 1, 2) Modelling ($N=2$; 21, 19) | |
| Awareness | Cognitive | Non-specific awareness of thoughts ($N=14$; 3, 4, 5, 6, 9, 11, 13, 14, 15, 16, 18, 19, 20, 22) Self-criticism ($N=7$; 3, 5, 6, 8, 9, 16, 18) Perfectionism ($N=5$; 2, 15, 24, 25, 27) Attitudes towards self-care ($N=10$; 6, 8, 9, 11, 14, 15, 16, 17, 21, 27) | |
| | | Affective | Negative ($N=18$; 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 18, 17, 20, 25) Positive ($N=6$, 9, 11, 12, 16, 22) |
| | | Attention/inattention | Awareness inattention and/or mind wandering ($N=8$; 1, 4, 12, 13, 15, 22, 26, 27) |
| | Body | Pain/discomfort ($N=6$; 7, 8, 14, 16, 19, 22) | |
| | Interpersonal and behavioural | Reaction to strong emotion ($N=9$; 2, 5, 13, 17, 18, 19, 20, 21, 22) Self-care (or lack thereof) ($N=4$; 9, 13, 15, 16) Overdoing ($N=5$; 5, 7, 8, 9, 27) Helping/fixing mode ($N=4$; 3, 14, 20, 22) Other focus ($N=4$; 17, 18, 19, 21) | |
| | | Acceptance | Self ($N=8$; 5, 18, 19, 20, 21, 25, 27) Surroundings (others and environment) ($N=3$; 2, 5, 11) |
| Detached observation | | | Taking a step back ($N=9$; 2, 4, 10, 12, 13, 15, 16, 17, 24) |
| Focus, observe, acceptance, change | Change | Turn towards challenge ($N=7$; 6, 8, 11, 14, 17, 24, 27) Change behaviour (set boundaries) ($N=4$; 3, 4, 7, 8) Shifting away from other focus ($N=4$; 2, 10, 16, 25) | |
| | | Focusing | Breath ($N=9$; 2, 4, 7, 8, 9, 10, 11, 15, 16) Focusing on senses ($N=3$; 4, 16, 20) |
| | Self and others | Mindful communication | Family ($N=4$; 1, 10, 11, 13) Patients and clients ($N=21$; 1, 5, 7, 8, 9, 10, 11, 12, 15, 16, 17, 19, 22, 23, 24, 25, 27) Colleagues ($N=2$; 15, 16) |
| Self-compassion and self-care | | | Self-care priority/importance ($N=7$; 3, 6, 9, 11, 14, 15, 25) Kindness towards self ($N=8$; 6, 7, 9, 11, 12, 13, 15, 25) Other compassion ($N=2$; 16, 19) |
| | | | Choice |
| Pleasure | | Noticing beauty ($N=3$; 12, 22, 26) | |
| Discomfort or distress | | Living with awareness ($N=13$; 1, 2, 4, 5, 6, 8, 10, 11, 12, 13, 15, 16, 20) | |

Working Model of Health Care Experiences in MBMP

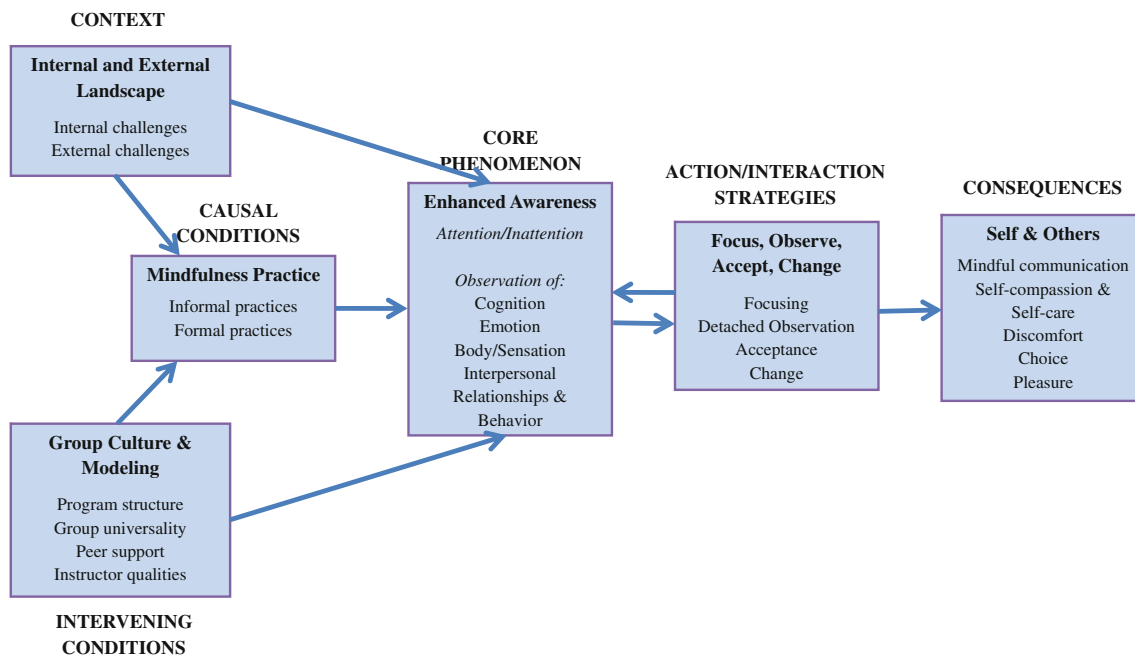


Fig. 1 Working model of health care experiences in MBMP

sitting and walking meditation, or mindful yoga. Informal practices refer to instances wherein mindfulness is woven into everyday activities. Participants discussed how formal practice made it easier to engage in informal practice. Some participants also discussed frustration and moments of self-criticisms when they were not able to complete formal home practice as assigned. A number of participants discussed how they adopted strategies over the weeks of the course to flexibly work mindfulness practices into their weekly schedules, such as shortening the time required for sitting meditation.

Context—Internal and External Landscape

Participants discussed at length the context within which mindfulness practices occurred: the internal landscape of their own minds and bodies, and the external landscape of their daily environments (home and work life). Internal landscapes were characterized by affective experiences, cognitions and physical sensations. External landscapes were related to the structure and climate of home and work environments. While describing these internal and external backdrops within which a mindfulness practice developed, participants tended to speak about the challenges and barriers they experienced. Internal challenges ranged from discomfort, pain and inattention to internal affective states such as anxiety or sadness, and boredom, frustration and irritation, while other challenges were related to the transition of adjusting to a new practice or self-care strategy. For

example, Participant 25 discussed her struggle adjusting to sitting meditation, which she experienced as passive, compared to other self-care activities such as exercise. External barriers included busy schedules and home environments wherein it was difficult to find time alone. Also, a work environment that required acting in a manner identified as “counter to mindfulness” such as constant rushing from patient to the next and requisite multitasking were named as impediments.

Intervening Conditions—Group Experience

The group experience was an intervening condition between the context and core phenomena of awareness. Many participants referred to the scaffolding provided by the group structure and experience as facilitating their persistence, and ways to navigate challenges inherent to practice, and awareness of challenging cognitive and affective content. A sense of support and mutuality appeared to be central to the facilitative aspect of the group experience. Also, internal challenges such as distractibility, boredom and irritation were mitigated through group dialogues in which experiences were normalized by instructors and other participants. At the same time, the group context was described as problematic because of its size. Some participants noted that they would have preferred to have more group discussion in a smaller sized group. Nonetheless, participants spoke about the supportive and encouraging tone and culture of the group sessions, as well as the importance of a sense of

connection because they were with other health care professionals. Participant 22 discussed his experience of the context:

To hear somebody in my professional sphere say “have compassion towards yourself” in one way or another, is very unusual. I’m used to hearing that from the Dalai Lama, or in the theoretical sense, and it doesn’t hit home. To hear it in this context, it’s a very powerful facilitator of the message and it’s probably the deepest message I can think of...I had the sense that this is a group of people who know what it’s like to be taking care of other people for a living and therefore there was a degree of a pre-existing understanding there.

Other participants also discussed the impact of having a multidisciplinary group composition, noting that this led them to feel less isolated in their professions, and to have more empathy for individuals in related professions other than their own.

Other participants discussed their sense that the group had provided an opportunity to see that other health care professionals also struggled and suffered due to job-related challenges. This is reflected in a quote by participant 26:

What I found particularly useful for my work is the realization that we share all the same issue. There is no space in our profession to actually do that, and that sort of breaks boundaries between different disciplines...I felt a lot of connection, a connection I didn’t have before with my colleagues. I felt it was very important in terms of my relations with the others to have that, that interdisciplinary team, and seeing the difficulties that I feel that I project on to myself, like “Oh my God it’s just me that feels this way”.

Action and Interaction Strategies: Attention, Observation, Acceptance and Change

Participants described a number of action and interaction strategies that arose from increased awareness, and were used to enhance communication, regulate emotions and navigate awareness of both positive and negative aspects of the self, others and the environment. Some of these strategies were recursive and led to further increased awareness. The breath was consistently cited as a transportable tool which could serve as an entry point that could be used to contain intense emotions such as anger or anxiety. A focus on breathing could also serve as a means of tapping into other strategies such as observation or shifting focus, which in turn could lead to enhanced awareness.

“Taking a step back” was also a strategy which was associated with moderating emotions, or circumventing impulses or “automatic” patterns or ways of responding to emotions. Participant 10 described how this had an impact on her capacity to notice and tolerate strong affect.

I feel them faster and before they really start eating me up. What really helped me during the course is to kind of pull it out, look at it and think that it’s going to pass. Not to feed it...the breathing when you step out of it. It just takes a few minutes.

Participant 12 discussed a similar sentiment and elaborated how the act of observing emotions enabled her emotions to subside much faster.

The strategy subcategories *attention* and *observation* were sometimes spoken of as a means to an end in themselves. For other participants, attention and observation were pathways to new ways of being. The strategies of *acceptance* or *change* were possible responses to specific types of new or enhanced awareness. For example, awareness of a tendency to focus on others led to shifting focus to the self for some participants. Awareness of cognitive or behavioural avoidance led to turning towards challenge for others. Additionally, many participants described the experience of “taking a step back”, which led to a sense of having more choices, including the options accepting or changing. Participant 2 described her thoughts surrounding the options of observing or making changes:

It’s really delicate...It’s because sometimes there’s the step back, but that doesn’t mean that there is any action to take...and that action might not systematically be accepting what is. Sometimes there’s an action to be taken in the way of change too.

Consequences—Self and Others

Participants described wide-ranging consequences linked to their participation in the course, and the establishment of a regular meditation practice. These included speaking with awareness in relationships with family members, colleagues and in clinical encounters with patients. Some consequences were broad and general, while others were related to specific action and interaction strategies which arose from awareness. A broadly reported phenomenon was an expanded sense of freedom or “having choices”, or a freedom or flexibility from previous patterns of behaviour which had become “automatic” as described by Participant 16. For example, many participants differentiated between the practice of *doing/fixing* vs. *being* when working with patients, and how they had shifted to see both as viable possibilities as illustrated in the following quote:

Yes, certainly...I had always, had a hard time seeing what my role was, even though I was told we weren't fixing anything. I always felt that...my patients were coming to me to have something fixed, and that my expectation of myself was that I was supposed to *do* something...if they are not getting better then I'm not doing something. And I think I came to realize...part of my job, was to *be* there with patients, and that even though that sounds simple...I think that's what this kind of confirmed for me just being there in the present moment and with their experience is, is very powerful (Participant 3)

Outcomes for the health care professionals beyond the clinical context included increased self-compassion, changes in attitudes toward self-care and an increase in self-care practices. For some participants, engagement in self-care changed their functioning in the workplace.

It will always have an impact because when I can't take care of myself I cannot take care of others. So when I'm tired, not listening, it's not very helpful and sometimes we just push ourselves...but a few times I just decided I'm going for a massage and that way I know next week I'll feel better. In the past, I would say "O.K. I don't have time for this". Now I think that if I'm feeling good I can be more attentive and I can really do my job much better, as simple as that (Participant 2).

Participants also described how the strategy of focusing on sensations led to enhanced awareness of pleasure and enjoyment in familiar activities such as a walk to work.

I've discovered surprising emotions. Like the joy that comes from walking down the street, observing the trees, looking at the clouds. I've rediscovered beauty also. The present moment is like a song being sung (Participant 12).

A number of participants discussed their experiences of distress during the 8 weeks which they directly attributed to either the intensity of the course structure or the amount of requisite meditation home practice. It is important to note that this distress was felt on a continuum ranging from mild discomfort to more intense anxiety. Participant 1 discussed how awareness of difficulties could initially increase distress.

In fact, it's what comes just before progress, being more conscious of to what extent something's not working. So, you can then say oh I feel more distressed than before, but it's most probably the first step towards..."Oh, I'm not where I should be", professionally or in your relationship, or whatever. Then

the reaction that comes after might not be a piece of cake, you know...(Participant 1).

Participant 16 discussed his experience of feeling overwhelmed during and for a few hours following the "retreat day". For him, meditating for a long period was challenging because of an awareness of "tension", "jitteriness" and "nerves", which he found difficult to stay with for an extended amount of time. The intensity of his discomfort led him to seek support by discussing this experience with a fellow group member. Participants also discussed how vicarious learning opportunities provided by the group format normalized their emotions and facilitated their growth. Finally, many participants discussed how dealing with difficult emotions that arose during individual meditation practice and during group sessions led to a shift in how they thought about strong emotions in themselves and others. In a group, participants were instructed to drop into silence and observe their thoughts and feelings, as well as any urges to help or intervene, when strong emotions emerge. Several members discussed this incident together in one of the focus group sessions.

I also found it very effective in the sense that normalizing that emotions, strong emotions, intense emotions, are real they are going to happen. And like waves, they pass. Living it in the moment and the experience of it took something I know intellectually made it even more very powerful (Participant 18).

Yes, as opposed to trying to analyze it, or say how we feel about the other person reacting. Because then it is not about that person anymore (Participant 20).

It also sort of happened in a totally supportive and totally reinforcing environment, being embraced, it was a very special moment (Participant 22).

There was that sense in the group that no matter what happened it was going to be O.K. (Participant 19).

The incident took place for me. At the beginning, because of my nature, I felt very apologetic that I had taken time from everybody and this kind of stuff. But afterwards, (Instructors) just handled it as a normal thing, so "that's how you are feeling, it was really intense". And I'm glad that everybody else kind of you know benefited from that...So it was a very good experience for me in that respect. Although it didn't maybe seem like it (laugh) I know. I learned from it a lot. I thought about it a lot and I learned from it afterwards (Participant 21).

A Model of Participants' Experiences

Axial coding procedures garnered categories that illustrated participants' experiences and their perceptions of the impact of the course. Through selective coding, these categories

were theorized as the central or core phenomena, causal conditions, the context, which was moderated by intervening conditions, action/interaction strategies and outcomes. Figure 1 depicts the relationships among these overarching theoretical categories.

Establishing a regular practice of informal and formal meditation brought about the central phenomena of enhanced awareness, which was identified by all participants in the study. The participants discussed experiencing an expanded and/or new awareness of aspects of their inner lives including thoughts (including self-criticism and expectations of perfection), emotions, perceptual experiences (pleasure and pain/discomfort) and capacity for attention (or lack thereof). They also identified enhanced capacity to take stock of behavioural and interpersonal patterns linked to caring for and focusing on others, to the detriment of themselves. For example, Participant 6 explained how a newfound awareness of her own “need to fix” led to a change in her clinical work.

It’s a new territory for me in my everyday practice that, and I think I am able to listen better to what people have to say because I am trying to really just *be* there as oppose to “o.k. I have a role to play, I’m here to listen but I *have* to fix you”...And I noticed that when I have this experience that even if something difficult has happened there is a very empathetic interaction. I think I don’t have a plan that I came in with and I just...I just was present and that worked, by itself.

Participants discussed challenges to establishing and maintaining a consistent meditation practice, particularly formal practices. These were described as being related to the pre-existing nature of their minds and bodies, as well as the structure and climate of their everyday routines. The group experience was conceived as an intervening condition, which provided important opportunities for modelling from other participants and instructors, as well as support, normalization and a sense of shared struggle and commonality due to the homogeneous nature of the group. This 8-week group experience, although temporary, was described as mitigating many of the challenges associated with the establishment of a regular meditation practice, which in turn encouraged participants to persist in the face of challenges, and to accept and tolerate some of the difficulties inherent to mindful inner work. Newfound or heightened awareness of both positive and negative phenomena resulted in utilization of skills and strategies such as anchoring in the breath, focusing, detached observation, turning towards challenges, allowing focus on the self and acceptance. Consequences stemming from the course were elaborated for the participants themselves, as well

as family members, colleagues and the patients whom they served. The experience of some distress (mild to intense) was described by some participants.

Discussion

The process of change illustrated through the grounded theory analysis represents a model generally consistent with other scholars’ conceptions of how positive outcomes come about through participation in MBSR. Notably, the model generated from this study is congruent with the axiom model of mindfulness posited by Shapiro et al. (2006), which comprises three interacting facets of attention, intention and attitude that collectively underpin mindfulness. However, this foundational model does not include a temporal path for these interacting axioms. Participants in this study spoke at length about their experience of enhanced attention and awareness which was brought about through mindfulness practice, as well as the cultivation of an increasingly open and self-compassionate attitude towards themselves. To this end, there was some overlap observed when coding the data; it was at times challenging to tease apart specific data chunks due to the relatedness of the core category of awareness with action and interaction strategies such as *detached observation*; occasionally, this led to necessary double-coding of data segments. This finding is consistent with the assertion of Shapiro et al. (2006) that complementary elements of mindfulness intersect.

Participants also discussed how specific types of awareness could lead to particular action and interaction strategies. For example, *awareness of inattention* led to focusing on senses for one participant. For another participant, awareness of a behavioural tendency to engage in focusing on others as a way to avoid focusing on the self led to the strategy of *observe*, when this occurred. There was a recursive quality illustrated between a number of the action and interaction strategies and the core concept of awareness. For example, the strategies of observation and focusing could feed back and lead to more enhanced awareness. In addition, participants’ descriptions of the *observe* action and interaction strategy appeared to overlap with the meta-mechanism of *reperceiving*, wherein a new, decentred relationship towards cognitive and affective content becomes possible (Fresco et al. 2007; Kerr et al. 2010; Shapiro et al. 2006). Furthermore, results from the grounded theory model shared major themes with other qualitative investigations of participants’ experiences in MBSR. For example, the centrality and importance of the group experience, a sense of universality, as well as the salience of acceptance, and a sense of having options in the face of challenges were evident herein (Dobkin 2008; McKenzie et al. 2007). Participants also identified that some degree of frustration was

inherent to learning meditation which has been reported previously (Kerr et al. 2010; Moss et al. 2008; Mason and Hargreaves 2001).

Notably, some experiences of intense emotional distress were reported by participants in this study. This finding is important to consider given the tendency of some health care professionals to be *less* likely to seek help and support from professionals when severely distressed. Center et al. (2003) note that physicians tend to shy away from reaching out when experiencing depression and suicidal ideation as they worry about discrimination relative to medical licensing and hospital privileges. Additionally, our analyses yielded the finding that many participants experienced feelings of guilt when making efforts to engage in basic self-care. For this reason, MBSR instructors may wish to be particularly explicit about the potential for distress while learning mindfulness. They may choose to reassure participants about safeguards to confidentiality, should they require additional support, and openly model and discuss appropriate help-seeking behaviours as an integral part of self-care.

Over half of participants in this study discussed the salience of group support, and a number reported that the experience had remedied a sense of professional isolation. Many indicated a wish for some sort of follow-up with other health care professionals. Quinn et al. (2009) identified that 17 % of physicians (across specialties) reported feeling isolated from colleagues. In a similar vein, Krasner et al. (2009) have demonstrated positive mental health outcomes associated with a 10-month “maintenance” mindfulness program for primary care physicians, providing a monthly follow-up meeting after the 8-week program. Based on these results, future research might examine isolation and the impact of MBSR on this experience in physicians and other health care professionals, and programmatic innovations such as drop-in or follow-up classes may be warranted.

Within the overarching model of change, it is important to note that there were considerable variations in participant experiences of change. They engaged in a variety of action and interaction strategies, and reported different outcomes related to these. As this study was exploratory, future research could explore the connections and relationships between type of awareness, strategies such as focus, observe, accept and change, and particular outcomes for self and others.

Limitations

This study carries a number of limitations relative to sampling procedures, participant selection and researcher bias. Only 53 % of participants from the overall sample of research participants engaged in the focus group interviews. It is possible that they may have had a different experience than those who chose not to, or were unable to participate. Participants in the MBMP program were self-selected having elected to pay

for the course; the applicability of the findings is limited to participants who are similarly motivated. Our findings highlight the potential for this type of program, when offered to a mixed group of health care professionals, to lessen professional barriers and cultivate empathy and communication across the helping professions. This finding holds implications for work in settings which require collaboration in multidisciplinary teams. However, it is possible that some health care professionals may have chosen not to enrol in the course due to a preference for more homogenous groups. Notably, the mean age of the participants ($M=51$) in this course was somewhat higher than the mean age in other investigations of MBSR with health care professionals (Shapiro et al. 2005), potentially limiting the applicability of this model to clinicians at a different stage of life or career trajectory. Other limitations concern the identity of the focus group facilitator (the principal investigator) and the use of translated text.

Implications for Theory, Practice and Research

The findings of this study point to a number of implications for building upon existing theories of change mechanisms in MBSR, as well as informing future research design. First, findings support the existence of subtle but important nuances in change processes as experienced by this population. While a number of outcomes associated with the program were parallel to those found in clinical populations, health care professionals emphasized the central nature of awareness of perfectionism, self-criticism, focusing on others and the automaticity of a helping and fixing mode. For many, this awareness led to specific attitudinal and behavioural changes, which were identified as significant and meaningful. Shapiro et al. (2006) have suggested that outcomes may accord with intention. In this population, 68 % of participants indicated that a goal for taking the program was to enhance their clinical practice and to be more present, attentive and compassionate with patients. This desire is aligned with the innovative aspects of MBMP, the emphasis upon mindful communication. To better understand how the changes in attitudes are translated into actual changes in communication, future research employing observer and patient/client ratings of clinical encounters may be of particular interest.

Participant reports surrounding significant behavioural and health-related behaviours also warrant further investigation. To our knowledge, changes in self-care practices have not been investigated as an outcome related to MBSR in other studies. Our data indicate that not only were participants willing to work mindfulness into their repertoire of self-care skills but that they also increased or made changes to other aspects of self-care: making time for breaks during the workday, setting limits in the workplace and prioritizing self-care more generally. Future research might further

investigate how participation in this type of intervention impacts other types of self-care, behavioural correlates and whether such changes persist over time. Additionally, our findings reflected that participants experienced an increase in positive emotions such as joy and increased enjoyment of everyday activities, which is consistent with other recent studies indicating increases in momentary positive emotions following participation in MBCT (Geschwind et al. 2011).

Relative to the phenomena of perfectionism, participants discussed how this tendency was implicated in meditation practice, for some leading to self-criticism and distress when perfection or mastery was untenable in the early phase of learning a new skill set and way of being. This is a new finding relative to health care professionals, but one that has been observed in clinical populations such as individuals recovering from depression (Mason and Hargreaves 2001). The group context appeared to moderate this issue, raising the issue of the importance of the group structure for this population. Moreover, in light of the large number of participants who cited the salience of the group format, future research may also include analyses or measures aimed at examining the impact of group factors such as cohesion, member-to-member interactions and their relationships to outcomes (Imel et al. 2008). Our findings suggest that both group effects related to vicarious learning, member-to-member interactions, as well as support and cohesion may have a particular power for health care professionals. Participants described not only the isolation which they experienced when faced with distress relative to the workplace but they also discussed the sense of stigma related to openly discussing such issues. While MBMP is not a support group, our findings clearly suggest that participants experience it as supportive. Health care professionals may not feel comfortable seeking support or professional help for many reasons such as stigma, perceived consequences relative to reputation or simply because they are accustomed to being in a helping role, rather than being a recipient of care. Participation in MBMP appears to provide a relatively non-threatening means of engaging in self-care in a supportive atmosphere with like-minded peers. Whatever their intentions for enrolling in this course, it appears that participants in this small qualitative investigation benefited from the experience in ways they had not anticipated.

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