

A Behavioural Marker System for Mindful Care

by

Jessica Duris

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Abstract

Mindful care is an approach to caregiving that has been observed following staff mindfulness training. While it has been associated with benefits to both the caregiver and the care recipient, the observable behavioural correlates of mindful caregiving remain largely unspecified. The purpose of this study was to identify observable mindful care behaviours and develop a behavioural marker system that can be used to measure them. Eight subject matter experts were interviewed, and a template analysis was carried out on the resulting interview transcripts. In total, 33 observable mindful care behaviours were generated and organized according to a hierarchical framework with two major themes: 1) Attention to immediate experience; and 2) Orientation to challenging experiences. Interviews were recoded using the framework, and adjustments were made until an acceptable level of interrater reliability was achieved. Member checks confirmed the appropriateness of the behaviours that were identified. The behaviours were then modified for use in a behavioural marker system for mindful care, which utilizes momentary time sampling and partial interval recording strategies. The resulting behavioural marker system will not only contribute to the evaluation of caregiver mindfulness training programs but will also promote better caregiving and better quality of life for care recipients.

Keywords: behavioural marker system, mindful care, caregivers, mindfulness training, developmental disabilities.

A Behavioural Marker System for Mindful Care

Developmental Disabilities

A developmental disability is a chronic condition that affects approximately 0.6% of the Canadian population (Statistics Canada, 2012) and 1.03% of the population worldwide (Maulik et al., 2011). Developmental disabilities present as a predominantly physical impairment, an intellectual impairment, or in several cases, a combination of the two (American Association on Intellectual Disabilities, 2013). The condition is further characterized by reduced functioning in social, conceptual, and practical domains (American Psychiatric Association, 2013) with diagnosis typically occurring before the age of 22 (American Association on Intellectual Disabilities, 2013). Depending on the severity of the disability, individuals may need assistance in nearly all facets of everyday life. In extreme cases, 24-hour intensive care is required.

Providing Care to Persons with Developmental Disabilities

For most individuals, regular care is provided by direct support staff and other trained professionals. This can include help with toileting, meal preparation, bathing, transportation and a variety of other daily living activities. Persons with developmental disabilities also rely heavily on the ongoing support of healthcare providers and the healthcare system more generally. Physical impairments and a greater risk for additional health problems (Havercamp & Scott, 2015; Morin et al., 2012; Schieve et al., 2012) lead to an increase in the frequency and duration of hospital visits (Lunsky & Balogh, 2010). These health problems range in degree from mild discomforts to life-long conditions, with heart disease being one of the most serious. Compared to normally developing children, children with a developmental disability are more likely to have seen a medical specialist, an ancillary therapist, or a mental health professional (Schieve et al., 2012).

Caregivers such as nurses, direct support staff, and parents play an integral role in the success and well-being of people with developmental disabilities. Quality of care is therefore critical, yet the majority of individuals with developmental disabilities feel that even their basic everyday needs are not being fully met (Statistics Canada, 2012). In part, this may stem from communication barriers. Individuals with developmental disabilities reliably have difficulties interpreting social cues and using verbal communication (American Psychiatric Association, 2013). At the profound level, speech may be non-existent. Nevertheless, caregivers have a tendency to use communication styles and language that are not matched to the abilities of the people they support (Iacono & Davis, 2003; Martin et al., 2010). Inexperience and lack of familiarity with the individuals in their care and the communication systems that they utilize may exacerbate the issue (Martin et al., 2010). As a result, persons with developmental disabilities are unable to communicate their needs to healthcare staff, potentially putting their overall health at risk (Iacono & Davis, 2003). Frustration due to ineffective communication may even lead to aggression and avoidance of any future communication attempts (Martin et al., 2010).

Difficulties in providing adequate care also arise because of the highly individualized nature of the care that is required. People with developmental disabilities often report having at least one other type of disability (Statistics Canada, 2012), and as was previously mentioned, additional health problems. Furthermore, over and under responsiveness to sensory stimuli are regularly expressed by those with autism spectrum disorders (Ben-Sasson et al., 2009; Tomchek & Dunn, 2007). Where over responsiveness corresponds to experiencing stimuli as more intense or longer in duration, under responsiveness involves a similarly diminished response (Miller et al., 2007). Both can complicate even basic caregiving interactions. For example, physical assistance can be especially unpleasant or distracting when the care recipient is overresponsive to

tactile stimulation. Sensory stimuli, such as bright lights and loud noises can also have comparable negative effects, particularly when the stimulus is unexpected. Under responsivity, although not necessarily an aversive experience, may contribute to problems in maintaining attention during caregiver interactions (Miller et al., 2007).

Finally, caregivers may be too inflexible in the way that they are delivering care. By strictly adhering to predetermined support plans, caregivers may be inadvertently disregarding the changing interests and needs of the people they are supporting (Petner-Arrey & Copeland, 2015). Instead of pursuing current goals, individuals are pressured to complete the activities or tasks outlined by their respective support plans. Consequently, people with developmental disabilities feel as though their autonomy is being compromised rather than facilitated.

Mindful Care

The complexity of the care that is required by people with developmental disabilities highlights the importance of a mindful approach to caregiving. Mindfulness involves paying attention to one's immediate experience, in a nonjudgmental and accepting way (Kabat-Zinn, 2009). This demands moment-to-moment surveillance of changes in one's own behaviour, both overt and covert, as well as the current environment. Overt behaviours are actions that can be observed by another person, while covert behaviours are private and include thoughts, emotions, and sensations. When practicing mindfulness, these behaviours are acknowledged regardless of their desirability. With practice, an openness to such experiences may foster calmness and tolerance of unpleasant situations.

Mindful care may be described as a way of delivering care in which the caregiver is fully engaged, adaptable and calm during care recipient-caregiver interactions, accepting of behaviour and aware of the internal and external stimuli that may be influencing their own behaviour and

that of those being supported. Many of the characteristics believed to contribute to successful caregiving are consistent with mindful care. For example, it has been suggested that the environment in which a care interaction takes place, and thus a caregiver's attention to that environment, is essential (Buntinx & Schalock, 2010; Petry et al., 2007; Sullivan et al., 2011). By paying attention to current sources of sensory stimulation, caregivers can identify and manipulate the environment in such a way as to enable more adaptive functioning in themselves and the people they care for. Furthermore, staff members have indicated that being aware of how their own behaviour influences care recipients during caregiving interactions is important (Petry et al., 2007). Engaging in behaviour that is responsive, rather than emotionally reactive, may lead to more positive exchanges between caregivers and care recipients (Duncan et al., 2009). For example, caregivers should listen to and respond with sensitivity before becoming dismissive or frustrated with the person's behaviour. Caregivers also suggest that patience (Antonsson et al., 2008) and flexibility (Petry et al., 2007) while delivering care help to promote autonomy and skill acquisition in the people they support. Finally, researchers have advocated adjusting behaviour according to the unique ways in which different persons with developmental disabilities communicate. Where inappropriate communication leads to frustration (Iacono & Davis, 2003), appropriate communication may lead to better evaluation of the person's needs and ability to consent (Sullivan et al., 2011).

Mindfulness Training

As with any other skill, mindfulness can be taught and practiced (Bishop et al., 2004; Kabat-Zinn, 2009). Mindfulness training can improve the well-being of caregivers who support persons with developmental disabilities, and can have positive effects on the clients they support. (Chapman et al., 2013). Clients (Brady et al., 2012), their parents (Singh et al., 2006, 2007), and

their caregivers (Singh et al., 2007) all report greater satisfaction with care. Objective measures believed to be related to client happiness (e.g. smiling and laughing) have also been shown to improve by 146 – 437% when staff members are trained in mindfulness (Singh et al., 2004). Comparatively smaller increases of 1-11% were observed when staff members did not receive mindfulness training. In addition, caregivers were more confident in their ability to provide support (Singh et al., 2006) and experience decreases of up to 48% in self-perceived stress (Singh et al., 2007, 2014, 2015, 2016). Even when levels of self-perceived stress were found to increase, caregivers who underwent mindfulness training felt that they were better able to cope (Brooker et al., 2013).

Caregiver mindfulness training has also produced positive changes in care recipient behaviour. Following caregiver mindfulness training, there have been reductions in the frequency of aggressive incidents, disruptive behaviours, and negative social interactions with siblings (Singh et al., 2007, 2014). Fewer patient safety events, including less staff and peer injuries, have also been reported (Singh et al., 2009, 2015, 2016). Additionally, individuals with developmental disabilities were significantly more likely to comply with requests (Singh et al., 2014), a behaviour that is crucial for skills development. In terms of education, caregiver mindfulness training has even been associated with an increase in the number of learning objectives mastered each week by clients with developmental disabilities (Singh et al., 2006).

In order for caregiver mindfulness training to have resulted in positive client outcomes, a change in the way in which care was being delivered must have occurred. Yet, few studies have directly measured caregiver behaviour. An exception has been the application of restraints to individuals engaging in challenging behaviour. Despite never having been directly addressed by any of the mindfulness training programs, significant reductions in staff usage of restraints have

been found (Chapman et al., 2013). Both 12-week mindfulness training programs (Singh et al., 2009), and shorter 8-week programs (Brooker et al., 2014) have resulted in fewer staff administered chemical restraints, the latter study finding reductions as large as 48.2% (Brooker et al., 2014). The use of physical restraints has also been reduced with the introduction of condensed 7-day intensive mindfulness programs (Singh et al., 2015, 2016). Furthermore, mindfulness training has produced greater decreases in their usage than behavioural training (Singh et al., 2006, 2009). Due to the intrusive and aversive nature of restraints, a reduction in their use is desirable for both staff members and their clients.

Reports from a recent study also indicate that caregiver mindfulness training leads to an increase in the total number of positive staff-initiated client interactions (Chancey et al., 2018). A positive non-verbal interaction was considered to be any client-directed positive physical contact, such as hugs or pats. Positive verbal interactions were client-directed statements given in a neutral, excited, or positive tone of voice. However, statements that took the form of a request were not scored. After having completed a series of 15-minute workshops, all three staff members enrolled in the study initiated an average of over twice as many positive client-directed interactions. These results suggest that the effects of mindfulness training on caregiver behaviour are not confined to undesirable behaviours but include desirable behaviours as well.

To the author's knowledge, the only other observable caregiver behaviours associated with caregiver mindfulness training that have been measured are "verbal redirections" and "observations". When a verbal exchange could potentially lead to aggression, verbal redirections are a way for staff members to interrupt and hopefully prevent an aggressive incident from occurring (Singh et al., 2009, 2015). This is done by verbally redirecting the target individual to engage in an alternative interaction or activity. Observations then, are instances where staff

members observe such verbal exchanges but do not respond in any way. Two studies have measured such behaviour, both of which reported that staff members used fewer verbal redirections after receiving instruction in mindfulness (Singh et al., 2009, 2015). While staff members continued to observe verbal exchanges that could occasion aggression, they were less likely to intervene (Singh et al., 2009).

Based on the aforementioned studies, changes in caregiver behaviour following mindfulness training are largely unspecified. Informal observations suggest that after mindfulness training, caregivers are more patient, adaptable, and responsive. Caregivers are also more attentive to the people that they care for and fully invested in their interactions with them (Singh et al., 2004). Furthermore, caregivers appear to be accepting of negative behaviour, responding in a consistently calm and positive manner (Singh et al., 2006, 2007, 2009, 2015). These behaviours however, have not been explicitly measured.

Behavioural Marker Systems

One way in which mindful care could be measured is by using a behavioural marker system. Originally, behavioural marker systems were designed to evaluate the non-technical skills of aviation teams (Flin & Martin, 2001), but they have recently been adopted within the healthcare domain (Fletcher et al., 2004; Mazzocco et al., 2009; Rutherford et al., 2015; Thomas et al., 2004; Yule et al., 2006; Yule et al., 2006). Non-technical skills consist of cognitive, social, and personal skills that are not directly related to or mandatory for task completion, but improve safety and performance (Flin, Crichton, & O'Connor, 2008). Given this definition, providing mindful care is an example of a non-technical skill set that is relevant to caregivers.

In healthcare, behavioural marker systems have assisted in both education and evaluation. For example, courses founded on established behavioural marker systems have been

administered to surgeons (Sharma et al., 2011) and anaesthetists (Flin et al., 2010) as a way of familiarizing them with domain specific non-technical skills. Reference to individual behavioural markers can further enhance the concreteness of each non-technical skill and aid in understanding. For assessment purposes, behavioural marker systems can be used during simulation based training programs to monitor progress (Flin et al., 2010; Yee et al., 2005). Furthermore, behavioural marker systems have been used for debriefing after routine operations and adverse surgical events (Yule et al., 2007). By using a behavioural marker system, it is possible to compare changes in behaviour and examine non-technical skills in need of improvement. Investigations regarding the relationship between non-technical skills and patient outcomes have also benefitted from behavioural marker systems. Mazzocco et al. (2009) found that poor surgical team performance, as indicated by a relevant behavioural marker system, was associated with a higher risk for patient complications or death. A separate group of researchers have suggested that approximately 50% of adverse events in intensive care units are related to behaviours outlined by the Anaesthetist's Non-technical Skills (ANTS) behavioural marker system. With proper implementation, behavioural marker systems seem to be an effective way of measuring the non-technical skills of healthcare providers.

According to Klampfer et al. (2001), behavioural marker systems are usually comprised of two components: a list of behavioural markers, or observable behaviours that depict a particular non-technical skill, and a rating system. Multiple sources are used to derive the behavioural markers themselves, including literature reviews, interviews with subject matter experts, direct observation and critical incident reports. The appropriateness of each behavioural marker depends on the context in which the system will be used. The entire list should fit on a single page and include only the minimum number of behavioural markers necessary to

adequately capture each non-technical skill. To facilitate ease of use and comprehensive evaluation, the behavioural markers are organized into a skills taxonomy.

Since their initial development, behavioural marker systems have employed a variety of techniques for performance assessment. Four-point rating scales (poor, marginal, average, good) with an option for 'not applicable' are commonly used (Fletcher et al., 2004; Flin & Martin, 2001; Mazzocco et al., 2009; Rutherford et al., 2015; Yule et al., 2006). While Likert scales allow users breadth and specificity when evaluating non-technical skills (Fletcher et al., 2004), extensive user training is required before acceptable levels of inter-rater reliability can be achieved (Flin et al., 2010). A minimum of two full days of training has been suggested (Flin et al., 2010). As an alternative, assessment formats that only require users to indicate whether or not the behaviours were present have been used to limit qualitative judgements and user interpretation (Nixon et al., 2015). By choosing less complex assessment formats, fewer training hours are necessary and inter-rater reliability can be improved. Simple formats are also likely to increase user confidence, a lack of which has been reported as the primary cause for discontinued use of behavioural marker systems (Flin & Martin, 2001). When it is suitable to include standards of performance, consultation with experts and observation of those considered to demonstrate superior performance in the area or skill of interest can inform decisions. Once the rating system has been chosen and all other relevant decisions made, the behavioural marker system must be rigorously tested to ensure that it is both valid and reliable (Klampfer et al., 2001).

Proposed Research

The purpose of this research was therefore to develop a behavioural marker system for mindful care. This involved generating a list of observable behaviours that represent mindful

care and devising a system to assess those mindful care behaviours. Because the provision of mindful care is especially relevant to persons with developmental disabilities, the behavioural marker system was designed for the assessment of caregivers who work with this population.

Research Paradigm

Radical Behaviourism

Although the current study utilizes qualitative methods, it is largely informed by radical behaviourism. According to B.F. Skinner, the founder of radical behaviourism, science should aim to identify lawful relations among events in nature (Skinner, 1953, p.13). Radical behaviourism is concerned with identifying lawful relations between environmental variables and behaviour (p.35). Through the experimental analysis of behaviour, one can identify the environmental variables of which a certain behaviour is a function. Once achieved, that behaviour can be effectively predicted and controlled. Radical behaviourism then, shares the pragmatic view that the most valuable knowledge is that which promotes effective action (Moore, 2011). For a radical behaviourist, the use of empirical evidence to support knowledge claims and clear operationalization of terms is critical in that endeavor. Without clearly articulated operational definitions of environmental variables and behaviours, the existence and strength of a functional relationship between the two cannot be reliably determined.

The influence of radical behaviourism in the current research can be seen in its purpose and interpretation. Behaviour, in this case observable behaviour indicative of mindful care, remains the subject matter of interest. By observable I mean that it could be readily observed by more than one person without the use of special instrumentation. Skinner would refer to such behaviour as “public” (Skinner, 1953, p. 259). A common misconception is that radical behaviourists are only interested in public events, thereby disregarding private events (e.g.,

thoughts, feelings, and sensations). However, private events are treated no differently and are no less important than public events (Skinner, 1974, p. 24). The tendency to study public events is simply a consequence of them being comparatively easy to operationalize and observe.

Consistent with radical behaviourism, the behaviours identified in this research are operationally defined and considered with respect to environmental variables. I do not believe behaviour is executed by an internal agent nor do I think that it is scientifically useful to explain behaviour using mentalistic concepts. This creates a bias in terms of what aspects of the data I attended to and how I interpreted it. I believe that viewing this research through the lens of a radical behaviourist offers a unique perspective with many practical benefits.

Methods

Participants

A total of nine individuals were interviewed, but only eight met my inclusion criteria (Male = 2; Females = 6). To be considered a mindfulness expert and be included in my study individuals had to meet one or more of the following criteria: a) had been certified as a mindfulness trainer; b) had been employed as a mindfulness trainer; and/or c) had published an article in a peer reviewed journal that relates to caregiver mindfulness training. There were no restrictions based on age or geographical residence. All participants had received formal training in mindfulness that they then applied within the context of caregiving. This was done by providing presentations, workshops, or training to individuals in both formal (e.g. direct support providers) and informal caregiving positions (e.g. parents), or being involved in research that supplied these resources. Table 1 provides a more comprehensive description of individual participant characteristics.

Due to the nature of the selection criteria, the subject pool from which to draw from was relatively limited and I was unable to reach my initial goal of 20 participants. However, when the research topic is narrowly focused and subject matter experts are utilized, smaller sample sizes are permitted (Malterud et al., 2016).

Recruitment

To maximize response rate and variability in the sample, a multifaceted approach to recruitment was carried out. Mindfulness experts known to the researchers were contacted via email and invited to participate in the first round of interviews. An informal Google search was used to identify mindfulness trainers who had offered or were scheduled to offer programs related to mindful caregiving specifically. Potential participants were also identified via an informal search of the research literature using Google Scholar. Terms related to the concepts of mindfulness training, caregivers, and developmental disabilities were combined using a Boolean ‘AND’. Additional participants were recruited using a snowball sampling approach, which involved asking recruited participants to identify other individuals who could serve as potential subjects. Emphasis was placed on identifying individuals who met my inclusion criteria and had applied mindfulness training in the context of caregiving and direct health support. Each person was sent a Recruitment Letter (Appendix A), a Project Description and Consent Form (Appendix B), and an Interview Release Form (Appendix C) to sign and return. The researchers’ contact information was made available to all individuals who wished to learn more about the project or were interested in participating in the study.

Interview Procedure

Semi-structured interviews are an established approach when generating items for a behavioural marker system (Fletcher et al., 2004; Nixon et al., 2015). They ensure that important

topic areas are covered, while simultaneously allowing flexibility within the discussion. Information gathered in previous interviews can thereby be used to inform future interviews, resulting in a more thorough investigation of the research topic. The interview protocol for this study was designed to capture information about mindfulness, mindful caregiving and its behavioural indicators, and the participant's background in mindfulness (See Appendix D).

I conducted semi-structured interviews with individual participants, each approximately one hour in length. The first two interviews were carried out in-person, but due to the COVID-19 pandemic the remaining interviews were carried out virtually using Zoom. At the start of each interview, participants were given a description of the research and, for in-person interviews, the consent form was reviewed and signed. For those who participated via Zoom, the consent forms were signed and returned prior to commencement of the interview. With permission, I recorded the audio of each interview. During the interviews, participants were encouraged to supply specific examples of observable caregiver behaviours, if possible. All interviews were de-identified and transcribed verbatim from the recordings.

Analysis

Codebook Approach

Thematic analysis is a term used to describe a set of approaches where the objective is to organize and interpret the dataset according to different themes that are generated during the analytic process (Braun & Clarke, 2020). Braun & Clarke (2020) suggest that there are three general approaches to thematic analysis. The approaches differ not only in their procedures, but in the paradigmatic and philosophical underpinnings that are considered appropriate for each. The approaches include: 1) coding reliability approaches; 2) codebook approaches; and 3) reflexive approaches. Given the purpose of this project, a codebook approach was adopted.

Indeed, codebook approaches are often used when practical applications of the research findings are intended (Braun & Clarke, 2020).

A reflexive approach, which is strongly tied to interpretivism, was considered inappropriate for this study (Braun & Clarke, 2020). Reflexive approaches stress that themes represent shared patterns of meaning across the data and demand researcher interpretation, while codebook approaches permit topic or domain summaries as themes (Braun & Clarke, 2019, 2020; Brooks et al., 2015). Though all thematic analyses do involve some degree of interpretation, topic and domain summaries are more descriptive and tend to focus on the semantic content of the data. The primary goal of this study was to identify specific observable behaviours that could be used as indicators of mindful care. I was, therefore, less concerned with an in-depth analysis of whether and how those behaviours relate to one another to reveal conceptually rich information.

Coding reliability approaches were also rejected because they predominantly use deductive coding and rigid codebooks, which are ill-suited to exploratory research such as this. Codebook approaches are more flexible. While previous research may inform the development of the initial codebook, it is expected that the codebook will be modified as new data is encountered. This lends itself to using both inductive and deductive coding strategies. Unlike coding reliability approaches, codebook approaches are not necessarily driven by positivism (Braun & Clarke, 2020). Codebook approaches do not require the use of multiple coders and the value of the analysis does not depend on demonstrating objective and reliable coding. Statistical analyses are not an inherent part of the analytic process.

Template Analysis

Template analysis, a specific type of codebook approach, was chosen for this study. A key feature of template analysis is the development of a hierarchical coding structure, or template (Brooks et al., 2015). There are no requirements on the number of coding levels; rather, the structure is dictated by the level of detail supplied by the data set and interpretations made by the researcher. An initial template is created, but modifications are made following continued engagement with new data. When finalized, the template is applied to the entire data set and, for this study, served as the basis for the behavioural marker system. The general procedures for template analysis have been outlined by King and Brooks (2017), and were adapted for this study. A description of each step is provided below, including guidelines from King and Brooks (2017) and any deviations from those guidelines made in the current study. A description of the quality checks utilized throughout the analysis are also provided, where applicable. While there are no prescribed sets of rules to ensure the quality of a template analysis, King and Brooks (2017) advise using quality checks that are consistent with the specific goals of the study and the paradigmatic and philosophical positions of the researcher(s). I chose to include memos, a measure of inter-rater reliability, and member checks.

Step 1: Familiarization with the data

Becoming familiar with the data involves listening to and reading any audio recordings and textual data, respectively (King & Brooks, 2017). To promote familiarization with the data, I conducted and transcribed all interviews, and read through the transcripts twice: once to get a general idea of the content and a second time to remove any identifying information.

Step 2: Preliminary coding

Preliminary coding is achieved by highlighting or otherwise indicating portions of the data that might be relevant to research question(s) or a priori themes and providing brief explanatory comments. The preliminary codes and comments serve as the basis for defining potential themes (King & Brooks, 2017). For this study I used NVivo, a qualitative data analysis computer software package, to facilitate the coding process. Any statement that referenced a mindful care behaviour, regardless of the level of abstraction, was highlighted. Each statement was then assigned a meaningful code; that is, a description of the mindful care behaviour that was clear and concise. Portions of the interviews that could inform higher level theme development (e.g., descriptions of categories or subcategories of behaviour relevant to mindful care) were also coded. This was done without the use of a pre-determined set of codes, or codebook, to help ensure that potentially relevant information was not excluded. Inductive coding procedures, such as the one used here, have been recommended for research with similar system development goals (Fletcher et al., 2004). It is worth noting that preliminary coding is typically carried out on a subset of the data, but due to a smaller than anticipated sample size, it was carried out on the entire data set. There is, however, nothing in King and Brooks (2017)'s guidelines that prohibit this. It is up to the researcher(s) to determine when it is appropriate to begin preliminary coding.

Preliminary coding resulted in a total of 48 codes that depicted both positive and negative indicators of mindful care. Under the code "orientation", for example, respondents suggested that caregivers should be oriented towards the care recipient rather than away from them. The former being associated with mindful care, the latter with less mindful care.

Step 3: Clustering

During clustering, a priori themes (if applicable) and themes generated from the preliminary analysis are clustered and ordered hierarchically. The hierarchy should reflect relationships within and between the clusters and duplicates at any level are amalgamated (King & Brooks, 2017). As an example from my study, all codes that appeared to be related to how a caregiver positions their body in relation to the care recipient were included in one cluster. In total, 11 clusters were created (See Figure 1).

Two options were then proposed for the hierarchical structuring of the codes. Option 1 involved mapping the codes onto the two-component model of mindfulness proposed by Bishop et al. (2004). According to the model, the first component of mindfulness is “the self-regulation of attention so that it is maintained on immediate experience” (p.232) and the second component can be summarized as adopting a particular orientation toward one’s experiences, characterized by curiosity, openness, and acceptance. Option 2 involved organizing and ordering the codes with respect to categories of behaviour where each member in a category shares a common feature. A combination of the two options appeared to be the most informative.

Step 4: Producing an initial template

Based on the clustering of themes, an initial version of the coding template is created and represented graphically. The hierarchy and any relationships among the themes should be clearly represented (King & Brooks, 2017). In this study, the two components of Bishop et al. (2004)’s model served as themes at the superordinate level across all versions of the coding template. Each additional level represents increasingly specific characterizations of behaviour, moving from categories of behaviour to subcategories, and ultimately behavioural markers. The interpretation required for operationalization of each behavioural marker varied according to the

degree to which respondents themselves described the behaviour in observable terms. For example “listening” is not a clear description of an observable behaviour. A less ambiguous description would be “waiting until the care recipient is done trying to communicate before responding”. If the descriptions provided by respondents did not, in my opinion, represent an observable behaviour or could not be operationalized as such, they were coded under higher order levels.

In version 1 of the template, the first component of mindfulness (Level 1) was divided into four categories of behaviour (Level 2; See Figure 2). The behaviours within each category demonstrate the caregiver’s attention to four different aspects of their immediate experience. When possible, the categories were broken down further (Level 3 = 12 items; Level 4 = 4 items) and behavioural markers included (Level 5 = 28 items). Similarly, the second component of mindfulness (Level 1) was divided into 12 categories of behaviour (Level 2), each associated with a different facet of a mindful orientation to one’s immediate experience (See Figure 3). Further breakdown of the categories was only achieved in so far as behavioural markers were identified (Level 5 = 14 items). Note that some of the behavioural categories/subcategories do not have any corresponding behavioural markers. This is because the information provided in the interviews was insufficient to characterize an observable behaviour. In total, there were 42 behavioural makers included in the coding template, 28 positive indicators (component 1 = 21 items; component 2 = 7 items) and 14 negative indicators (component 1 = 7 items; component 2 = 7 items).

Step 5: Developing the template

The initial coding template is applied to additional data items and modified as necessary to best accommodate data relevant to answering the research question(s). These modifications

may include inserting, redefining, merging, changing the scope of, or deleting themes to produce successive iterations of the coding template (King & Brooks, 2017). While there is no standard number of iterations, my criteria specified that modifications would cease when my supervisor and I decided that any further revisions: 1) would not produce a better fit of the data; and 2) would not assist with the useability of the measurement tool produced from the template. Because preliminary coding occurred on the entire data set, each iteration of the template was also applied to the entire data set.

Quality checks are a valuable addition to the analytic process, but there are no prescribed sets of rules to ensure the quality of a template analysis. King and Brooks (2017) advise using quality checks that are consistent with the specific goals of the study and the paradigmatic and philosophical positions of the researcher(s). I chose to include memos, as well as a measure of inter-rater reliability and member checks to inform the final version of the coding template.

Template Version 2. Previous level 2 items were modified in the second version of the template, and new ones introduced. Under the first component of mindfulness, the item “Physical Environment” was changed to “Ambient Environment” to clarify that only features of the caregiver’s external environment are included here. Features of their internal environment are captured elsewhere. “Engagement” was also replaced with “Social Interaction with Care Recipient” since all the items contained within it were associated with social interactions. “Distraction” became a class of behaviour in its own right and included any behaviour that indicates that the caregiver is not under the control of the relevant features of their immediate experience. The subcategory “Quality of Touch” was revised and more appropriately represented as a behavioural marker. Regarding the second component of mindfulness, all the codes were reorganized according to whether they described behaviours or categories of behaviour that were

consistent (i.e. “Positive Indicators”) or inconsistent (i.e. “Negative Indicators”) with a mindful orientation to one’s immediate experience.

Further engagement with the data resulted in moving items amongst or between the first component and second component of mindfulness, and minor revisions to item definitions. Following revisions, the first component of mindfulness contained 5, 6, 4, and 29 items at levels 2, 3, 4, and 5, respectively. The second component contained 2, 3, 1 and 14 items at levels 2, 3, 4, and 5, respectively. Overall, 43 behavioural markers were included in the second version of the coding template, 29 positive indicators (component 1 = 23 items; component 2 = 6 items) and 14 negative indicators (component 1 = 6 items; component 2 = 8 items).

Template Version 3. Additional refinement involved the elimination of any redundancies in the coding template and exclusion of codes that described material that was not applicable to the provision of direct support. Within the first component of mindfulness, any behavioural markers that were negative indicators of mindful care were placed in the “Distraction” category and the term “adjusting” was replaced with “appropriate”, wherever possible. For the second component of mindfulness, the behaviour category “Negative Indicators” was changed to “Indicators of a less mindful orientation” and “Positive Indicators” to “Indicators of a more mindful orientation”. At this point, any categories or subcategories of behaviour for which a behavioural marker could not be identified were subsumed under the relevant superordinate theme, either the first or second component of mindfulness. Consequently, the number of items in levels 3, 4, and 5 of the coding template were substantially reduced. The first component of mindfulness now only contained two items at level 3, two at level 4, and 21 at level 5. The second component was reduced to only two items at level 3 and 11 at level 5. This left 32

behavioural markers in total, 22 positive indicators (component 1 = 17 items; component 2 = 5 items) and 10 negative indicators (component 1 = 4 items; component 2 = 6 items).

Final Version. The final version of the coding template was informed by a measure of interrater reliability and member checks.

Interrater reliability. To help ensure that all of the behaviours described in the interviews were sufficiently captured by the codes that I assigned to them, I incorporated a measure of interrater reliability. Cohen's Kappa was chosen because it has been used in a similar manner for previous behavioural marker system development (O'Connor & Long, 2011). To calculate Cohen's Kappa, at least one naïve research assistant was required to independently code the interviews using the coding template produced from my template analysis. Our codes could then be compared, and Cohen's Kappa determined. A high level of interrater reliability suggests that the codes (and associated definitions) I assigned to the interview statements were appropriate.

Research assistants for the interrater reliability task were two graduate students, one male and one female, in the Applied Behaviour Analysis program at the University of Manitoba. Each research assistant independently received one training session via Zoom, lasting approximately 30 minutes. During the session, I reviewed the training materials with the research assistants and gave them the opportunity to ask questions. The training materials used for the task are supplied in Appendix E.

Once revisions to the third version of the template concluded, I retrieved all the statements from the interview transcripts that, in my judgment, referenced mindful care behaviours. Statements that only informed higher order themes, categories, or subcategories were not included. The first research assistant was then randomly assigned half of the statements and asked to independently use the template to code each statement. This involved assigning each

statement to a behavioural marker (the lowest level of the coding template). Definitions of each of the behavioural markers were provided. An option for ‘not applicable’ was also available. The research assistant was to use this option only when an item did not appear to be consistent with any of the other available options. Interrater reliability was then calculated. I discussed any points of disagreement with the research assistant and adjusted the template accordingly. Adjustments could include adding, deleting, or changing the name of the code or its definition. Any disagreements that resulted from the research assistant coding ‘not applicable’ were especially important because they indicate that those interview statements were not at all captured by my coding template. The research assistant was then given the remaining half of the statements and the process was repeated. If an ‘almost perfect’ level (i.e. $\kappa \geq 0.81$) of interrater reliability was not achieved, additional research assistants were recruited (Landis & Koch, 1977).

Using the third version of the coding template, the first research assistant assigned half of the interview statements ($n = 93$). Interrater reliability was deemed insufficient ($\kappa = 0.725$) and of the 24 disagreements, 14 were due to the research assistant’s use of the “not applicable” option. After discussing and making modifications, assignment of the second half of the statements ($n = 91$) resulted in 21 disagreements, none of which were from the use of “not applicable”. Again, interrater reliability was insufficient ($\kappa = 0.753$). After modifying the template, a second research assistant assigned half of the interview statements ($n = 89$) and an acceptable level of interrater reliability was achieved ($\kappa = 0.856$). The “not applicable” option accounted for only two of the 12 disagreements. The entire task resulted in minor revisions to the behavioural marker definitions and changing the behavioural markers “Appropriate facial expressions”, “Appropriate tone of voice” and “Appropriate volume of voice” to “Neutral or positive facial expressions”, “Neutral or positive tone of voice”, and “Low voice” respectively.

These items were thus reflected in both components of mindfulness. Of the total disagreements, just over half were due to one person assigning a statement to the behavioural marker “Responding to stimuli presented by the care recipient” when the other did not.

Member Checks. Member checks give respondents (i.e. members) the opportunity to check, or provide feedback about, particular stages of the research analysis (Carlson, 2014). This can increase the credibility of the researcher’s interpretations and, consequently, the results of the study. For this study, it was important that the observable mindful care behaviours that I extracted from the interviews were accurate representations of what respondents described. Therefore, I conducted member checks whereby each participant was sent a follow-up letter with a list of the observable mindful care behaviours and associated definitions that had been extracted from their interview. Respondents were asked to provide feedback on the accuracy of my interpretations and appropriateness of including the behaviours as indicators of mindful care. See Appendix F for an example of a follow-up letter. They were encouraged to include suggestions, where applicable, and were given two weeks to respond, after which, it could not be guaranteed that their feedback would be incorporated in the MA thesis. Five respondents provided feedback regarding the behavioural markers identified in their interviews. As a result, the definitions of seven behavioural markers were revised and two behavioural markers were added.

The final version of the coding template includes all of the previous revisions up to and including those based on the interrater reliability task and member checks (See Figure 4). A decision was also made to change “Social Interaction” from a category to a subcategory and place it along with its associated items under the category “Care Recipient”, as an interaction with a care recipient necessarily involves paying attention to features of the care recipient.

Definitions for each of the items are provided in Table 2. In total, component one contained four level 2 items, four level 3 items, and two level 4 items. The second component contained two level 2 items and two level 3 items. 36 behavioural markers were included, 24 positive indicators (component 1 = 18 items; component 2 = 6 items) and 12 negative indicators (component 1 = 6 items; component 2 = 6 items). Of the 36 behavioural markers, 33 of them were unique.

Step 6: Applying the final template

Once revisions have concluded, the final version of the coding template is applied to the entire data set (King & Brooks, 2017).

Step 7: Writing up

Typically, the final template is not considered a product of template analysis, but rather a tool for interpretation. The final template provides a framework for presenting the results of the analysis and can help illuminate relationships amongst themes, the relative importance of different themes, and consistencies/inconsistencies with previous research (King & Brooks, 2017). For this study, it formed the basis of my preliminary behavioural marker system for mindful care.

Memos

Memo writing is a way to map the thoughts and activities of the researcher (Birks et al., 2008). Memos can be used as a record of the researcher's understanding and interpretation of the research as it evolves, and of the decision-making process. In template analysis, this is a practical way to document discussions and explanations for each iteration of the template. To begin with, I recorded the respondent's attitude towards me and the interview, any unusual circumstances and/or events that had any bearing on the interview (e.g., interruptions, language difficulty, etc.), anything else that happened during the interview that had any bearing on the study's objectives,

and any additional comments that I had following the interview. This was done immediately after each interview. Later, I read through each interview transcription and recorded any thoughts about the content of each interview and how it might inform my analysis. During preliminary coding and development of the template, I took notes about preliminary codes, themes, and template structure. Furthermore, I kept notes on all topics discussed and decisions made during weekly meetings with my supervisor. Examples of topics discussed include operationalization of observable mindful care behaviours, theme development, coding template modifications, difficulties encountered, progress updates, etc. These memos were integral to synthesizing the results.

Results

Thematic Summary

Attention

Consistent with Bishop et al. (2004)'s first component of mindfulness, respondents discussed the critical role that attention to one's immediate experience plays in mindful caregiving. Mindful caregivers were depicted as caregivers who continually seek information that is relevant to the current support experience so that adjustments may be made on a moment-by-moment basis. As one respondent stated about mindful caregiving:

It's the commitment or intent to be present enough to see all of the little things that they [caregivers] can be aware of and all of the little communications that come to us verbally and nonverbally that allow us to adjust what we're doing.

"Being responsive" was a common way in which other mindfulness experts described this concept, adding that responsivity contributes to more flexible and effective support provision. In the absence of a present-centered focus, caregivers run the risk of providing care in accordance

with well-established routines that do not account for the inevitable changes in the needs, preferences, and feelings of the care recipient. One respondent likened this to operating on automatic pilot:

Are you just on automatic pilot because you're so used to always moving on to the next thing, and always asking the next question or have you sat and you're observing what's going on...?

There is, however, an infinite number of possible stimuli and events that a caregiver may attend and respond to. These are captured by three broad and interconnected categories: 1) features of the ambient environment; 2) features of the care recipient's experience; and 3) features of the caregiver's experience.

Ambient Environment. Features of the ambient environment can significantly alter the support experience for both the caregiver and the care recipient. By noticing those details of the ambient environment that are having a positive or negative impact, caregivers have an opportunity to improve the support experience:

... if we notice that someone struggles with bright lights and we create a directive in their care plan that says, 'when we go to wake them up in the morning we do it in as much darkness as possible, we don't flip on the light when we enter the room'. All of a sudden, support providers are leaving the light out when they're going to wake the person. That to me is a practice of mindfulness.

This particular example demonstrates an awareness of stimuli that may affect the care recipient's level of comfort or discomfort. While respondents often spoke about adjusting stimuli of this nature, reducing or eliminating distracting stimuli was also seen as an indicator of mindful care that directly impacts both the caregiver and the care recipient's experience. Concrete examples of

stimuli in the ambient environment that positively affect the support experience were scarcely mentioned.

Care recipient. It was evident across all interviews that mindful caregiving necessarily involves paying attention to features of the care recipient. One respondent explained:

Mindful caregiving is that same practice of being present, but the focus of our attention is rooted in the experience of the other. We have the great privilege and responsibility in a caregiving or support role to support someone in creating a life experience. Mindfulness allows us to see into the subtle elements of their experience. The little things that may make a big difference in contributing to their quality of life. And so, we practice being present in care and support so that we may be the most person-centered support provider possible.

The needs, preferences, struggles, and challenges are unique for every individual. Mindfulness promotes an awareness of these things and the different ways in which they may be expressed so that caregivers can engender a more meaningful support experience. Respondents emphasized a caregiver's ability to notice the nonverbal cues of the individuals they support since the recipients of direct support are often unable to communicate verbally. This was highlighted by a respondent who provides mindfulness training for caregivers who work with individuals with developmental disabilities and autism:

You can watch and see, or you can ask questions, but people who maybe are nonverbal, or limited communication, or limited movement, are not able to, sort of, intervene with that experience. So, I think it is really important in any care scenario. I think it's especially important when people are as vulnerable as the ones we support, but that includes a lot of

really elderly, frail people, who, for a variety of reasons might not be able to communicate their needs or feel uncomfortable, sort of, challenging a care provider.

Engaging in social interactions with care recipients was also believed to contribute to mindful caregiving. The people being supported should feel noticed and engaged. Attention is not only being paid to the caregiving task, but to the person and how to enrich their experience. An example of how this can be achieved during conversations initiated by a coworker or someone other than the care recipient was given:

A really mindful approach would be that they [the caregiver] introduce the person [the care recipient] and say, ‘Oh, this is Bob! He’s just... we’re just going to this event, and you love music don’t you Bob?’” or whatever. Like engaging that person. And it sometimes, I think, there’s probably lots of cues that that’s a really good experience for someone, that they uhm, that they do feel engaged and I see it. Like when I stop and talk to someone in the hallway and they just like break out in a huge smile and they might not be able to say anything, but everybody wants to be noticed, and acknowledged, and accepted, and broadened to the fold. Uhm and to be seen. And that is the difference that occurs when people are being supported in a way that is truly mindful.

Caregiver. The reciprocity between a caregiver and a care recipient is apparent in all caregiving interactions. Stimuli presented by the care recipient influence the caregiver and vice versa. As the interaction unfolds, the mindful action is to observe one’s own private events (i.e. thoughts, feelings, and sensations) and public behaviour, as well as how they impact the other person, and then adjust appropriately. One respondent summarized this as follows:

So, it’s our being present and noticing as best we can, their experience. Our awareness for their preferences, for their communication, verbal or nonverbal, for their responses to what

we are doing. And then, being able to look at what we are doing and adjust. And the best, what best way we can do that is to be fully present with our experience to see into theirs and to notice what it is in us that they are responding to. And then as a result, our mindfulness becomes both of their experience and our actions. And a connectedness between the two. Our actions are going to have a response or an impact within the other person and so to know both, I think is the most important.

While an awareness of one's own private events is difficult to observe, a caregiver's awareness of their own public behaviour was easier for mindfulness experts to operationalize. They suggested that how one positions and moves their body relative to the person being supported can be an indicator of mindful care:

I think positioning yourself in a way that is gonna [sic] be accessible for the person that's receiving support. So, in my scenario, I'm imagining a person's laying flat in their bed. So, you should have an idea, if you're supporting somebody, what they're like, how far they can see, and you might get within a certain distance of their face to talk to them so that they can see your face, right? It would be difficult for them to see you from the other side of the room, so you might need to go kind of close first. Just be like, "Hey, how are ya doin?" Then you might back up and provide your support. If possible, getting to eye level. That can be a little tricky if somebody's lying in bed, right? But you can get down and to the side.

Respondents also noted that specific body positions and ways of moving can increase the likelihood that relevant cues from the care recipient will not be missed and that negative stimuli are not unnecessarily introduced. For example:

Yeah, so when I talk about presence, I think our movements are important. The way we move around someone in their support experience. Again, I think that comes down to reducing startle, so moving with a rhythm that is gentle. Not bumping into their chair, not moving other furniture. Creating noise.

Similarly, increasing the predictability of caregiving via an awareness of one's own public behaviour can limit negative reactions from the care recipient. By intentionally narrating or otherwise indicating what they are doing or are about to do, caregivers can help the people they support to feel more prepared for what may have otherwise been a startling experience. The following description of a personal care scenario was given as an example:

Knowing that the extremities can be more sensitive, before we take someone's foot into our hand, we may let them know we are going to place a hand on their hip and lift their leg a bit with their knee, lift their lower leg, and make our way to their foot, which creates a little bit of predictability before we take their foot into ours hands. So, we're speaking to them with words, but also we're doing exactly what we're saying we're going to do.

Distraction. Distraction, or inattention, is in opposition with mindful caregiving. As one respondent posited:

When we are not mindful one would say, true to the definition, our mind, our focus, our awareness, our eyes, our ears, our senses, are not fully present in that they are somewhere else. And for most of us they can't be, our eyes can't be in two places at once.

When prompted about the kinds of behaviours that might demonstrate that a caregiver is distracted, the following characterization was made:

The less mindful kinds of behaviours would be anything that would indicate that the person isn't really being present at the time. So, if they are looking at their watch or they

are talking about what they need to do next, or they're giving instruction to somebody else who is not in the room. Right? If they are kind of on the next step of whatever the sequence of steps is in the care provision before they actually get there. Those would all be things that would suggest to me that the person is being less mindful.

Orientation to Experience

A key component of mindful caregiving is to be an observer of one's experience without assigning value to it. The stimuli and events that enter awareness are neither good nor bad.

Mindfulness experts phrased this as an ability to provide support that is free from judgement:

Being aware of what the caregiving experience brings up for you emotionally, cognitively, physically, and sitting with whatever that is without judgment and deliberately sitting with it.

Viewing oneself, the care recipient, and any other aspect of the support experience nonjudgmentally was regularly discussed in relation to challenging experiences. That is, experiences that include, or typically give rise to, negative emotional responses in the caregiver or care recipient. For example:

I need to notice my thoughts [and] if I'm going in with judgment. If I'm thinking 'Oh yeah, she's always upset when I brush her teeth'. That's a really important thing to notice 'cause if I'm assuming this person is going to get upset then I'm already going in tensed up and ready to deal with someone who's stressed.

With mindfulness training, caregivers appear to exhibit a greater openness to experience. Rather than actively avoiding those aspects of experience that may be challenging, caregivers are believed to have an improved capacity to engage with them:

These [mindfulness] practices help us to take a look at our defenses and create some safety for ourselves. Like a safe environment in which we can unravel and open a little bit, like where you're not so afraid of the pain. You're not so afraid of the suffering. You can let yourself feel. It's okay to feel. It's okay to have the emotions. The emotions aren't the enemy. They're here to inform us. If you're sad, it's okay, you won't die.

This statement is also one of many to suggest that acceptance is major component of a mindful orientation to one's experience. For mindfulness experts in this study, acceptance involves recognizing that difficult or challenging experiences are an inevitable part of caregiving and that the appropriate action is not always to reduce or eliminate them:

Well, one parent of ours, from the mindful parenting programs said 'Now that I have mindfulness, I think back over the years with my autistic son and I really wish that I had not hen pecked, nagged, and tried to make him different. Now with mindfulness, I know that the spirit is really in being present and being compassionate' and, yeah, that parent talk[ed] about regretting all those years of struggling and trying to make him different and get him to behave in a more socially acceptable way. And mindfulness worked by changing them [the parent] to just simply be with what is and accept.

Indicators of a mindful orientation. Responses that demonstrate a mindful orientation to challenging support experiences are largely characterized by calmness:

When someone is struggling and we are choosing to be present with them, I think our practicing a calm presence, taking a breath, inviting them to take a calm breath with us if that's meaningful for them, taking a calm breath says to them without saying a word 'this person next to me looks like a trusting, calm presence'. So, practicing ways that we feel calm so that we are calm next to someone.

The previous statement shows that calmness is both privately experienced (e.g. feeling calm) and publicly displayed (e.g. taking a breath). The effect, in part, is to prevent or decrease a potentially adverse reaction from the care recipient. As one respondent stated, “If I can stay calm in a difficult situation then it’s going to be easier for you to stay calm or address what you need to address, and if I escalate, you’re gonna escalate right with me”.

Furthermore, it helps caregivers to maintain their attention on the relevant features of the support experience, which may have otherwise been missed during a heightened state of arousal. In some cases, remaining calm involves taking the time to make a deliberate decision about the most effective action:

Their [caregiver’s] ability to like stay calm in that moment and not react in that moment to aggression and provide that distance for themselves so that they can make an effective and deliberate decision about how to address the behaviour.

Indicators of a less mindful orientation. When caregivers respond reactively during challenging experiences, they exhibit a less mindful orientation to experience:

So, I think if someone wasn’t being as mindful, they probably would be much more reactive. So, they might respond right away. They might respond with an emotional reaction reflecting their own emotional state. They might respond in a way trying to change the other person’s behaviour. Right? So typically, what I would see, what we’ve seen those particular staff do is come in and sort of become frustrated with the individual or give them some information like, ‘You know, we’re really busy. We can’t respond right away, or you called me in here again to change the TV channel? I just did it five minutes ago. What’s wrong with you?’ and that kind of thing. So that’s what I would expect to see if someone was less mindful.

The descriptions that mindfulness experts gave of reactive responses generally showed an inverse relationship with their descriptions of calm responses. For example, waiting before responding to care recipient behaviour and responding immediately were associated with calm and reactive caregiving responses, respectively. Calm responses were considered emotionally neutral or positive in valence, whereas reactive responses were emotionally negative:

Sort of not necessarily smiling, you might have a concerned look on your face or at least a pleasant kind of look on your face as opposed to furrowing your brows and having an angry look on your face and that kind of thing.

Behavioural Marker System

Data Sheet

The behavioural marker system that I produced is intended to measure the observable behaviours that were identified via interviews with mindfulness experts. It includes positive indicators (i.e. behaviours that are indicative of mindful caregiving) and negative indicators of mindful caregiving (i.e. behaviours that are indicative of less mindful caregiving). Including both positive and negative indicators in a behavioural marker system is common practice (Fletcher et al., 2004; Nixon et al., 2015; Yule et al., 2006). The behavioural marker system was formatted as a data sheet to be used while observing a caregiver provide support to one or more care recipients (See Figure 5). The observation session would consist of alternating observation intervals (duration = 30 seconds) and recording intervals (duration = 15 seconds). During an observation interval, users would observe the caregiver. The following recording interval would be spent recording which behaviours the caregiver engaged in during the preceding observation interval. A 30-second observation interval should be sufficient to capture any of the behaviours listed and, similarly, a 15-second recording interval should be long enough for an observer to

record which behaviours occurred. The entire session would be 9.75 minutes long, though the duration of the session could be tailored to the specific caregiving task being observed. Choosing a short duration, such as 9.75 minutes, helps to minimize observer fatigue. The first section of the data sheet utilizes a momentary time sampling procedure; the second section utilizes a partial interval recording procedure. Momentary time sampling was used for behaviours that are expected to occur throughout the duration of the observation session and are not under the control of specific antecedent events that would limit the number of response opportunities.

Section 1: Momentary time sampling. Behaviours listed under the first section would be scored at three different points in time: 1) the beginning of the session (i.e. the first recording interval); 2) the middle of the session (i.e. the seventh recording interval); and 3) the end of the session (i.e. the thirteenth recording interval). To score the behaviour, users would indicate whether the behaviour was occurring at *exactly* the end of the preceding observation interval. If the behaviour occurred during the interval but was not occurring at exactly the end of the interval it would not be scored.

Section 2: Partial interval recording. Behaviours listed under the second section would be scored during all of the remaining intervals, that is, all intervals *except* those at the beginning, middle, and end of the session. To make this easier, intervals in which behaviours do not need to be scored are grey. To score the behaviour, users would indicate whether the behaviour occurred *at least once* during the preceding observation interval.

Overall, the data sheet would indicate the number of intervals in which each behaviour occurred. This would provide information about which behaviours were performed during the most intervals and would track both positive and negative indicators. Mindful caregiving behaviours, in general, could be evaluated by calculating the percentage of intervals in which at

least one of the positive indicators was observed. Ideally caregivers would achieve a score of 100%, that is, they would demonstrate mindful caregiving behaviours throughout the entire observation session. Similarly, they would score 0% with regards to negative indicators, or behaviours that demonstrate less mindful caregiving. Lastly, scores from the data sheet could be compared to the final version of the coding template to give an approximation of the categories and subcategories of behaviour that caregivers engage in the most/least. It may be that, across the observation session, the occurrence of behaviours falling under one category (e.g. care recipient) may be much higher than the occurrence of behaviours falling under a different category (e.g. caregiver).

Usability

In an attempt to limit potential response biases and subjectivity while users score each behaviour, I chose not to format the behavioural marker system using Likert scales as others have done. Arguably, a decision about whether a behaviour has occurred is a more objective measure than a decision about the overall degree to which the behaviour occurred. By not including Likert scales, I was also able to avoid controversies related to the number of response options (e.g. a 5-point versus a 7-point scale) and whether a symmetric or asymmetric scale would be more appropriate (Joshi et al., 2015). Evaluating mindful care in terms of the frequency or duration of each behavioural marker was also avoided because recording would become too laborious. A checklist would be inappropriate since there is no particular order by which the behaviours should be executed, and many are contingent on events that do not occur regularly or predictably.

It is important to note that the behavioural marker system differs from the final template produced by my template analysis, not only its organization but also in the behaviours and their

phrasing. The final template represents a conceptual framework for mindful caregiving that has been informed by radical behaviourism and Bishop et al. (2004)'s two-component model of mindfulness, while the behavioural marker system is a translation of it designed for assessment purposes. Each level of the template is conceptually meaningful, but as a measurement tool, the structure would be unlikely to help users. It provides more detail than is required and would not easily fit on a single page, both of which contradict the recommendations for behavioural marker systems made by Klampfer et al. (2001). Instead, the behaviours were organized around specific events. User behaviour should come under the control of specific observed events that will facilitate more efficient navigation of the data sheet. For example, if the care recipient does, says, or expresses something (i.e. section 2.1 of the data sheet) then there is an associated group of behaviours to which the user should refer. This is especially desirable given the large number of items on the data sheet.

Additional strategies were utilized to further promote useability. Positive indicators listed under the first section of the data sheet do not depend on a particular antecedent event and should be occurring throughout the entirety of the observation session. Furthermore, it is impossible to engage a positive indicator (e.g. looking at the care recipient), and its opposing negative indicator (e.g. looking at someone or something other than care recipient) at the same time. Therefore, I chose to include only positive indicators in Section 1 as the inclusion of positive indicators and their negative counterparts would create extra work for the user without any added benefit. Items that were originally found under both components of mindfulness were also combined in the behavioural marker system. Conceptually, their listing under both mindfulness components is valuable. It indicates that behaviours that are topographically the same may be under the control of different stimuli depending on the caregiving situation. Making this

distinction as a user of the measurement tool would be challenging and perhaps unnecessary. As a result, the behavioural marker system includes 31 behavioural markers, 21 positive indicators and 10 negative indicators. Furthermore, the behavioural marker system uses terminology that should be familiar to any user, regardless of their experience in mindfulness and/or direct support provision. While many behavioural marker systems require their users to have domain specific job experience (Fletcher et al., 2004; Nixon et al., 2015; Rutherford et al., 2015), the current behavioural marker system was designed so that such expertise is not necessary. Users should not need to be mindfulness experts or direct support providers. The goal is to have a tool that is easy to use, but still sensitive enough to capture meaningful changes in caregiving behaviour.

Discussion

Numerous studies have investigated caregiver mindfulness training and reported significant changes in caregivers and the people they support. Those changes, however, have been primarily concerned with measures of well-being or with care recipient behaviour exclusively. Only a minority of studies have focussed on the behavioural changes that take place in caregivers. Yet to achieve a comprehensive understanding of the effects of caregiver mindfulness training and the type of caregiving that results, a behavioural account is necessary. The purpose of this study was to develop a behavioural marker system for mindful care that can be applied within the context of direct support provision.

Contributions

Of the studies relevant to mindful caregiving behaviour, this is the first to solicit, document, and analyze detailed accounts of mindful caregiving behaviour from a sample of experts. From these accounts, 33 observable mindful caregiving behaviours were identified, four of which were comparable to ones documented in the literature. In this study, the behaviours

“physical interactions with the care recipient” and “verbal interactions with the care recipient” are equivalent to the two types of positive staff-initiated client interactions outlined by Chancey et al. (2018). “Trying to reduce or redirect care recipient behaviour” was identified and included as a less mindful behaviour that could encompass two separate behaviours that others have referred to as verbal redirections (Singh et al., 2009, 2015) and restraints (Brooker et al., 2014; Chapman et al., 2013). That is, using verbal redirections or restraints could be considered examples of caregiver behaviours that function to reduce care recipient behaviour. Observing, as described by Singh et al. (2009) and Singh et al. (2015) is equivalent to the behaviour “Observing without responding” identified in this study. Consequently, four behaviours in this study were able to capture the five behaviours already documented in the literature. The 29 remaining observable behaviours that were extracted from interviews with mindfulness experts were entirely novel.

After generating a list of observable mindful caregiving behaviours, I was able to create a behavioural marker system for mindful care that researchers, practitioners, and other interested stakeholders can use as a means to measure mindful caregiving behaviour. Mindful caregiving behaviours and their negative counterparts can be tracked before, during, and after caregiver mindfulness training, the benefits of which are numerous. As an evaluation tool, the behavioural marker system could be used to measure the efficacy of mindfulness training programs. Programs that result in greater improvements in mindful caregiving are preferable to programs that result in less improvement. Decisions about program length and format could also be made based on the amount and type of change that is observed in mindful caregiving behaviour. It is possible that different programs produce different changes. For example, one program may lead to reductions in caregiver reactivity. Other mindfulness training programs may promote mindful

caregiving behaviours that are under the control of stimuli in the ambient environment. Programs could then be implemented, modified, or terminated based on the results of these evaluations and the specific needs of the researcher, organization, practitioner, or caregiver. The impact of the program could, therefore, be maximized while time investment is minimized. Organizations and individuals will be able to make more informed decisions about whether it is in their best interests to participate in a particular program. Finally, uptake of mindfulness training programs is likely to increase because of the ability to provide concrete evidence for their utility.

It would also be of interest to examine the effects of specifically training the mindful caregiving behaviours listed in the behavioural marker system without using an explicit mindfulness component. Whether similar positive outcomes would be achieved via a behavioural training program is an empirical question worth investigating. Because we know that the changes in care recipient behaviour following caregiver mindfulness training are a consequence of changes in caregiver behaviour, the behavioural training may benefit care recipients. If the results are favourable for either person, the mindfulness-free training may act as an alternative option for caregivers who are not interested in mindfulness training or for organizations who do not have the time and/or resources to provide mindfulness training. It is not always possible to find an available individual who is certified in mindfulness. If the results are unfavourable however, it would suggest that there is something unique about the behavioural change that results from mindfulness training.

Aside from the identification of specific observable behaviours for use in a behavioural marker system, my template analysis explicated the types of stimuli and events that control mindful caregiving behaviour. Specifically, the caregiver's behaviour is under the control of stimuli and events that are relevant to the immediate support experience. These include stimuli

and events in the ambient environment, as well as those that originate from the care recipient or the caregiver. Each source has a reciprocal influence that together affect the overall support experience. Maintaining attention on stimuli and events from each source gives rise to opportunities for caregivers to adjust their support in ways that improve the support experience, not only for the care recipient but for themselves. This supports an account by Singh et al. (2004) that suggests that mindful caregiving is characterized by responsiveness. On the contrary, caregivers whose behaviour is under the control of stimuli and events that are irrelevant to the immediate support experience exhibit less responsive and, therefore, less mindful care. They may disengage or become distracted during caregiving interactions.

Finally, the initial results of the analysis provide support for the application of Bishop et al. (2004)'s proposed model of mindfulness to mindful caregiving behaviour. Attention to immediate experience and a particular orientation to experience appear to be key components of both mindfulness and mindful caregiving behaviour. When asked directly, several respondents indicated that there was no difference between mindfulness and mindful care. Mindful people will engage in more mindful caregiving behaviour. Furthermore, their descriptions of mindfulness and mindful care were consistent with Bishop et al. (2004)'s conceptualization and a substantive number of the mindful caregiving behaviours they described were unique to each component. Behaviours typically demonstrated either attention to specific features of the immediate support experience, or a particular orientation to challenging experiences that appears to be characterized by calmness and reduced reactivity.

Limitations

Despite the value of this research, it is not without limitations. Initially, I had intended to recruit at least 20 mindfulness experts. After contacting upwards of 70 people, only eight agreed

to participate. This could have limited the representativeness of my sample and precludes the comparison of groups with different backgrounds and expertise. Individuals with a background in mindful parenting, for example, may ascribe different behaviours to mindful caregiving than individuals with a background in mindfulness-based stress reduction for direct support staff. Similarly, mindfulness experts who have only been involved in research may have different perspectives than those who are mindfulness trainers themselves. While my study does not indicate that there is a discrepancy in how mindfulness was understood by participants, I did not include at least one behaviour that was described by a mindfulness expert who primarily conducted research related to mindful parenting training. The behaviour was not applicable within the context of direct support provision. Had I been able to recruit more participants, I also could have examined the relative frequency with which respondents mentioned each of the behaviours. Some behaviours may be more salient, or perhaps more integral to mindful caregiving, than others.

In the interest of time, I also chose not to interview caregivers unless they met my other inclusion criteria. Caregivers who have participated in a mindfulness training program, but do not provide training themselves and/or have not published a peer reviewed article related to caregiver mindfulness training, could have been a valuable resource as they may have witnessed changes in their own behaviour following mindfulness training that they could then have reported on. Although it would be time consuming and require additional training, direct observation of caregivers before and after mindfulness training would provide an even richer source of information. Behaviours from caregiver self-reports or direct observation could have been used to supplement this research, and/or verify whether the behaviours identified by the mindfulness experts in this sample have occurred in caregivers. Future research should consider

recruiting a larger, and more diverse participant group along with alternative sources of information.

Results from the inter-reliability task, while sufficient, were also less desirable than I had hoped. I expect that several of the behaviours identified in this research will present differently depending on the unique caregiving situation. To accommodate this possibility, I occasionally had to use a broad definition such as “responding to stimuli presented by the care recipient”. In this example, the caregiver’s response may be verbal or nonverbal and depends on what stimulus was presented. While this approach helps ensure that a behaviour will be captured by the measurement tool, it may explain why behaviours with broader definitions resulted in more disagreements during the inter-rater reliability task. Behaviours such as “making eye contact” have a much more specific definition and thus more easily discriminable. Whether this will be problematic when using the behavioural marker system is yet to be determined.

To be considered an adequate measurement tool, it needs to be both valid and reliable. By interviewing mindfulness experts and having them generate the items for the behavioural marker system, the behaviours listed in the tool should be accurate characterizations of mindful caregiving behaviour. However, it is unclear whether all of the critical aspects of mindful care behaviour have been represented and whether each of the behaviours that I included are applicable to direct support providers. My supervisor and I made a judgment about each behaviour’s suitability in the context of direct support provision, though it is possible that the inclusion of some behaviours would not be necessary. Consulting with direct support providers could supply key insights into this issue. Additional support for the validity of the tool could come from user testing. If the difference between mindfulness and mindful care is negligible, as mindfulness experts have suggested, then there should be a positive correlation between mindful

caregiving behaviours and self-report measures of mindfulness. Several well-established mindfulness tools could be used for this purpose, including the Toronto Mindfulness Scale (Lau et al., 2006).

User testing would also speak to the reliability of the behavioural marker system. A measurement tool that cannot be used reliably is of no use, even if it does measure what it is supposed to measure. If users were to test the behavioural marker system and supply feedback regarding its usability, adjustments could be made. With the recording format that I suggested, observation intervals and recording intervals may need to be lengthened or reduced, or the definitions of behaviours made clearer. The number of items on the list may prove to be too many to reliably observe and record. Finally, user testing would allow us to determine how much training is required to use the behavioural marker system and what training format is most effective.

Conclusion

By conducting this research, I offer a more comprehensive account of mindful caregiving and its behavioural indicators. While this research was consistent with accounts of mindful and less mindful caregiving behaviour in the literature, I was able to identify specific observable behaviours believed to be relevant to the provision of direct support. Prior to this study, I was only aware of five documented behaviours that met those criteria. Translating this knowledge into a behavioural marker system for mindful care allows for changes in mindful caregiving behaviours to be recorded and tracked, the results of which can be used for the evaluation of caregiver mindfulness training programs. Programs may even be modified to achieve more desirable changes in mindful caregiving behaviour. This is especially important for caregivers who support individuals with developmental disabilities. Often these individuals have difficulties

communicating their thoughts, feelings, or needs and it requires an attentive caregiver to notice and respond to the more subtle nonverbal cues. Furthermore, engaging in caregiving behaviours that demonstrate a mindful orientation to challenging experiences is particularly pertinent given the frequency of challenging behaviours exhibited by people with developmental disabilities.

While the behavioural marker system was designed for use in the context of direct support, there is no reason that some, if not all, of the behaviours would be applicable in other caregiving domains as well. Care recipients in all contexts can benefit from having a more mindful caregiver. Ultimately, this research will contribute to better caregiving and better quality of life for care recipients.

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Tables

Table 1

Participant Characteristics

Participant	Location	Certification	Application	
			Type	Years
1	Manitoba, Canada	-	Presentations, workshops, ACT	10
2	Manitoba, Canada	MSC, MPDSP	MSC, MPDSP, MTACP, MCSP	9
3	Manitoba, Canada	MSC, MPDSP	MSC, MPDSP	1
4	Ontario, Canada	MBSR	Modified MBSR, MBCT, research	10
5	Manitoba, Canada	MBSR	MBSR, yoga, mindful parenting,	10
6	Ontario, Canada	-	Mindful parenting, research	-
7	Manitoba, Canada	MPDSP	MPDSP	0.5
8	North Holland, Netherlands	Mymind	Mymind, research	7

Note. MSC = Mindful Self-Compassion; MPDSP = Mindful Practice for Direct Support

Providers; MBSR = Mindfulness-Based Stress Reduction; ACT = Acceptance and Commitment Therapy; MTCP = Mindful Touch and Caregiving Practices; MCSP = Mindful Care and Support Practices; and MBCT = Mindfulness-Based Cognitive Therapy.

Table 2*Final Coding Template: Codes and definitions*

Code	Definition
Attention	Bishop's 1st component of mindfulness, i.e. maintaining attention on immediate experience.
Ambient environment	Behaviours that are under the control of features of the ambient environment.
Checking or adjusting stimuli in the ambient environment	Checking or adjusting stimuli in the ambient environment that may be distracting or negatively affect the caregiver or care recipient i.e. adjusting visual, auditory, gustatory, olfactory, and/or somatosensory stimuli. Similarly, as indicated, adjusting ambient stimuli that positively impact support experiences.
Care recipient	Behaviours that are under the control of features of the care recipient
Social interaction	Behaviours that indicate that the caregiver <i>initiated</i> a positive or neutral <i>social</i> interaction with the care recipient.
Physical interaction with care recipient	Engaging in a <i>social</i> interaction with the care recipient by providing neutral or positive physical contact e.g. hugs, pats, etc.
Verbal interaction with care recipient	Engaging in a <i>social</i> interaction by making a neutral or positive statement directed at the care recipient.
Stimuli presented by care recipient	Behaviours that indicate that the caregiver is paying attention to stimuli presented by the care recipient.
Asking relevant caregiving questions	Asking the care recipient a question about their preferences, needs, feelings or anything else that may be relevant to the current <i>caregiving</i> interaction.
Listening	Waiting until the care recipient is done trying to communicate before responding.
Responding appropriately to stimuli presented by the care recipient	The care recipient does, says, or expresses something that the caregiver notices and responds to in a way that supports their current preferences, needs, or feelings.
Responding inappropriately to stimuli presented by the care recipient	The care recipient does, says, or expresses something that the caregiver notices and responds to in a way that does not support their current preferences, needs, or feelings.
Caregiver	Behaviours that are under the control of features of the caregiver.
Private events	Behaviours that indicate that the caregiver is paying attention to private events.
Statements describing caregiver's private events	Making a statement that describes the caregiver's own perceived private events i.e. thoughts, feelings, and/or sensations.
Public behaviour	Behaviours that indicate that the caregiver is paying attention to their own public behaviour.

Code	Definition
Low voice	Speaking at a low volume.
Neutral or positive facial expression	Having a neutral or positive facial expression.
Neutral or positive tone of voice	Using a neutral or positive tone of voice.
Body position and movement	Behaviours that indicate that the caregiver is paying attention to how their body is positioned and/or moves relative to the care recipient.
Gentle touch	During a caregiving interaction that requires physical contact, the caregiver touches the care recipient in a way that is gentle.
Rough touch	During a caregiving interaction that requires physical contact, the caregiver touches the care recipient in a way that is rough.
Looking at the care recipient	Eyes are directed towards the care recipient.
Making eye contact	Making eye contact while looking at the care recipient.
Open posture	Arms and legs are uncrossed
Physically accessible to care recipient	Adjusting position so that it is easier to respond to or be seen and/or heard by the care recipient.
Slow pace	Moving at a slow, steady pace while interacting with the care recipient or while adjusting stimuli in the ambient environment.
Increasing predictability during a caregiving task	Behaviours that increase the care recipient's ability to predict what is about to happen during the <i>caregiving</i> interaction.
Announcing actions	Making a statement out loud describing or narrating what is happening or is about to happen during the <i>caregiving</i> interaction, while being receptive to expressions of consent and preferences.
Gestural cue	Making a gesture that indicates what is about to happen during the <i>caregiving</i> interaction.
Distraction	Behaviours that reduce the caregiver's awareness of the care recipient's experience. or indicate that the caregiver is not paying attention to the care recipient.
Fast pace	Moving at a rushed pace while interacting with the care recipient or adjusting stimuli in the ambient environment.
Looking at someone or something other than care recipient	Eyes are directed at someone or something other than the care recipient
Not responding to stimuli presented by the care recipient.	The care recipient does, says, or expresses something and the caregiver does not respond.
Verbal interaction with someone other than care recipient	Initiating a <i>social</i> interaction by making a positive or neutral statement directed at someone other than the care recipient.

Code	Definition
Orientation to challenging experiences	Bishop's 2nd component as it applies to <i>challenging experiences</i> , i.e. adopting a particular orientation toward one's experiences, characterized by curiosity, openness, and acceptance.
Indicators of a less mindful orientation	Responses to <i>challenging experiences</i> that are not consistent with the 2nd component.
Negative speech content	Making a statement that expresses disapproval of the care recipient or interactions with the care recipient.
Trying to reduce or redirect care recipient behaviour	Observing care recipient behaviour that results in a challenging experience and responding in a reactive way to try and reduce or redirect that behaviour.
Reactivity	Behaviours that indicate that the caregiver is reactive during <i>challenging experiences</i> .
Immediate response	Responding to the care recipient's behaviour immediately following its occurrence.
Negative facial expression	Having a negative facial expression.
Negative tone of voice	Using a negative tone of voice.
Raised voice	Speaking at a volume that is louder than is necessary to be heard.
Indicators of a mindful orientation	Responses to <i>challenging experiences</i> that are consistent with Bishop's 2nd component.
Statements describing care recipient's private events	Making a statement that describes the care recipients perceived private events during a challenging experience i.e. thoughts, feelings, and/or sensations.
Observing without responding	Observing care recipient behaviour that results in a challenging experience without responding in a reactive way to try and reduce or redirect that behaviour.
Calmness	Behaviours that indicate that the caregiver is calm during <i>challenging experiences</i> .
Low voice	Speaking at a low volume during a <i>challenging experience</i> .
Neutral or positive facial expression	Having a neutral or positive facial expression during a <i>challenging experience</i> .
Neutral or positive tone of voice	Using a neutral or positive tone of voice during a <i>challenging experience</i> .
Pauses	Pausing before responding to the care recipient's behaviour. This may/may not involve taking a deep breath before responding.

Note. The items "Low voice", "Neutral or positive facial expression", and "Neutral or positive tone of voice" are listed twice, but the definitions are different. One specifically relates to challenging experiences.

Figures

Figure 1

Preliminary Coding and Clustering

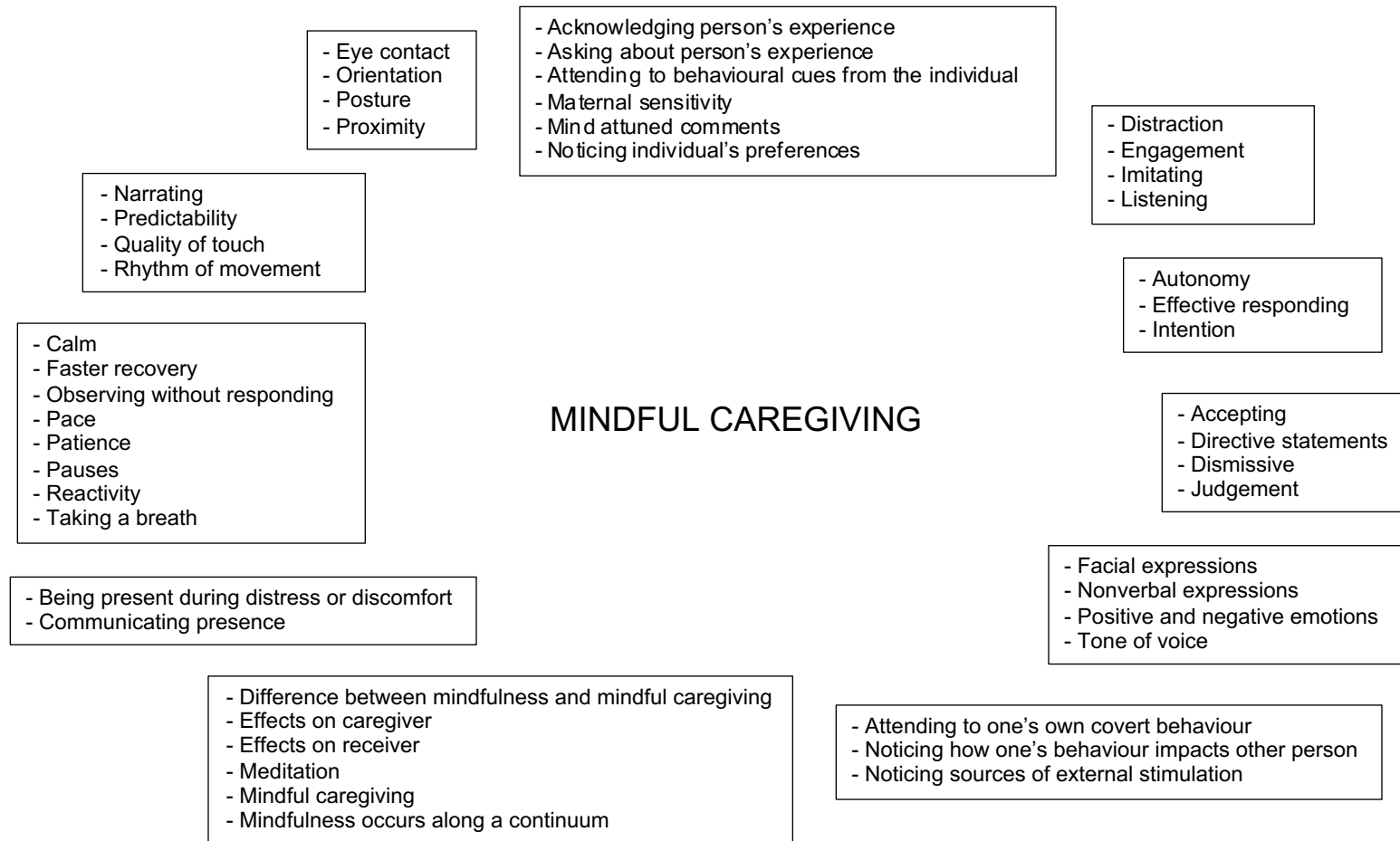


Figure 2*Template Version 1: Superordinate Theme 1***L1. ATTENTION****L2. Physical environment**

- L5. Adjusting relevant stimuli in the physical environment
- L5. Material interaction

L2. Care recipient**L3. Adjusting behaviour based on care recipient's behaviour**

- L5. Adjusting facial expressions
- L5. Adjusting tone of voice
- L5. Adjusting volume of voice

L3. Other

- L5. Asking care recipient questions
- L5. Listening
- L5. Noticing care recipient's preferences
- L5. Statements describing care recipient's perceived private behaviour
- L5. *Distracted*

L3. Being present during distress or discomfort**L2. Caregiver****L3. Caregiver private behaviour**

- L5. Statements describing caregiver's private behaviour

L3. Caregiver public behaviour**L3. Body position****L4. Eye contact**

- L5. Making eye contact
- L5. *Looking at something or someone other than care recipient*

L4. Orientation

- L5. Orientation away
- L5. *Orientation toward*

L4. Posture

- L5. Open posture
- L5. *Closed posture*

L4. Proximity to care recipient

- L5. Physically accessible
- L5. *Physically inaccessible*

L3. Pace

- L5. Slow pace
- L5. *Fast pace*

L3. Increasing predictability during a caregiving task

- L5. Announcing actions
- L5. Gestural cue

L3. Speech content**L3. Quality of touch****L3. Communicating presence****L2. Engagement**

- L5. Gestural interaction
- L5. Physical interaction
- L5. Narrating

L3. Verbal interaction

- L5. Verbal interaction with care recipient
- L5. *Verbal interaction with someone other than the care recipient*

Note. Version 1 of the coding template for the first superordinate theme. Each level represents increasingly specific characterizations of mindful care behaviour where L1 = superordinate themes, L2 = behaviour categories, L3 and L4 = behaviour subcategories, and L5 = behavioural markers. Italics denote negative indicators of mindful care.

Figure 3*Template Version 1: Superordinate Theme 2***L1. ORIENTATION TO EXPERIENCE****L2. Dismissive****L2. Emotional reaction**L5. *Negative facial expression*L5. *Raised voice*

L5. Short duration

L2. Response latencyL5. *Immediate response*

L5. Pauses

L5. Observing (challenging behaviour) without response

L2. Nonjudgement

L5. Fewer complaints

L5. *Should statements***L2. Nondirective**L5. *Directive statements***L2. Compassion****L2. Acceptance**

L5. Not trying to change care recipient's behaviour

L5. *Trying to change care recipient's behaviour***L2. Calm**

L5. Low voice

L5. Neutral or positive facial expression

L5. Neutral or positive tone of voice

L2. Fewer assumptions**L2. Nonreactivity****L2. Deliberate action****L2. Patience**

Note. Version 1 of the coding template for the second superordinate theme. Each level represents increasingly specific characterizations of mindful care behaviour where L1 = superordinate themes, L2 = behaviour categories, L3 and L4 = behaviour subcategories, though none were identified, and L5 = behavioural markers. Italics denote negative indicators of mindful care.

Figure 4*Template Final Version***L1. ATTENTION****L2. Ambient environment**

L5. Checking or adjusting stimuli in the ambient environment

L2. Care recipient**L3. Social interaction**

L5. Physical interaction with care recipient

L5. Verbal interaction with care recipient

L3. Stimuli presented by the care recipient

L5. Asking relevant caregiving questions

L5. Listening

L5. Responding appropriately to stimuli presented by the care recipient

L2. Caregiver**L3. Private events**

L5. Statements describing caregiver's private events

L3. Public behaviours

L5. Low voice

L5. Neutral or positive facial expression

L5. Neutral or positive tone of voice

L4. Body position and movement

L5. Gentle touch

L5. Looking at the care recipient

L5. Making eye contact

L5. Open posture

L5. Physically accessible to care recipient

L5. Slow pace

L4. Increasing predictability during a caregiving task

L5. Announcing actions

L5. Gestural cue

L2. DistractionL5. *Fast pace*L5. *Rough touch*L5. *Looking at someone or something other than care recipient*L5. *Not responding to stimuli presented by the care recipient*L5. *Responding inappropriately to stimuli presented by the care recipient*L5. *Verbal interaction with someone other than care recipient***L1. ORIENTATION TO CHALLENGING EXPERIENCE****L2. Indicators of a less mindful orientation**L5. *Negative speech content*L5. *Trying to reduce or redirect care recipient behaviour***L3. Reactivity**L5. *Immediate response*L5. *Negative facial expression*L5. *Negative tone of voice*L5. *Raised voice***L2. Indicators of a mindful orientation**

L5. Statements describing care recipient's private events

L5. Observing without responding

L3. Calmness

L5. Low voice

L5. Neutral or positive facial expression

L5. Neutral or positive tone of voice

L5. Pauses

Note. Final version of the coding template. Each level represents increasingly specific characterizations of mindful care behaviour where L1 = superordinate themes, L2 = behaviour categories, L3 and L4 = behaviour subcategories, and L5 = behavioural markers. Italics denote negative indicators of mindful care.

Behavioural Marker System for Mindful Care: Data Sheet

Observation interval: 30 s Recording interval: 15 s Total session time: 9.75 min

SECTION 1: Mark (✓) if the behaviour was occurring at the END of observation intervals 1, 7, and 13.

[illegible]

SECTION 2: Mark (✓) if the behaviour occurred at least ONCE during each observation interval. Do not mark anything for intervals 1, 7, and 13.

		Intervals												
		1	2	3	4	5	6	7	8	9	10	11	12	13
2.1 Care recipient did, said, or expressed something:	Responded appropriately to a stimulus presented by care recipient													
	Responded inappropriately to a stimulus presented by care recipient													
	Did not respond to a stimulus presented by care recipient													
	Listened													
	Paused before responding													
	Immediately responded													
	Tried to reduce or redirect behaviour													
	Observed behaviour without trying to reduce or redirect it													
2.2 Caregiver physically interacted with care recipient or ambient environment:		1	2	3	4	5	6	7	8	9	10	11	12	13
	Checked or adjusted stimuli in the ambient environment													
	Engaged in a physical <i>social</i> interaction with the care recipient													
	Gentle touch													
	Rough touch													
	Slow pace													
	Fast pace													
2.3 Caregiver communicated something:		1	2	3	4	5	6	7	8	9	10	11	12	13
	Low voice													
	Raised voice													
	Neutral or positive tone of voice													
	Negative tone of voice													
	Negative speech content													
	Statement describing caregiver's private events													
	Statement describing care recipient's private events													
	Asked a relevant caregiving question													
	Announced an action													
	Gave a gestural cue													
	Verbal social interaction with care recipient													
	Verbal social interaction with someone other than care recipient													

Appendix A

Interview Recruitment Letter

Dear [insert name]:

My name is Jessica Duris and I am a Master's Student in the Psychology Department at the University of Manitoba. This letter is an invitation to consider participating in a research study that I am conducting entitled, *A Behavioural Marker System for Mindful Care*.

The purpose of this study is to: 1) identify observable mindful care behaviours and 2) develop and test an instrument that can be used to measure those mindful care behaviours during caregiving interactions.

Participation is voluntary. If you provide consent, you can change your decision at any time without consequences.

Our study involves an individual interview where participants will be asked some questions about mindfulness, mindful care, and their background in mindfulness. The interview should take no longer than 60 minutes. More details about the study are provided in the Project Description and Consent Form.

This research has been approved by the Psychology/Sociology Research Ethics Board. If you are interested in participating or if you would like more information about the project, you may contact the Principal Investigator, Jessica Duris, via phone or e-mail (durisj@myumanitoba.ca), or please complete and return the enclosed Project Description and Consent Form. An extra copy has been enclosed for your records.

Thank you for taking the time to consider this request.

Sincerely,

Jessica Duris
M.A. Student
Email: durisj@myumanitoba.ca

Dr. Toby Martin
Director, St Amant Research Centre
Assistant Professor, Psychology
University of Manitoba
Toby.Martin@umanitoba.ca

Appendix B

Interview Project Description and Consent Form

Research Project Title: A Behavioural Marker System for Mindful Care

Supervisor: Dr. Toby Martin
Assistant Professor, Psychology Department, University of Manitoba
Director, St. Amant Research Centre
toby.martin@umanitoba.ca

Principle Investigator: Jessica Duris
M.A. Student, Psychology Department, University of Manitoba
durisj@myumanitoba.ca

This study is being conducted by Jessica Duris, supervised by Dr. Martin. This project description and consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask by either calling or emailing Jessica. Please take the time to read this carefully and to understand any accompanying information.

What is the purpose of the study?

This research study is concerned with mindful care. Mindful care is a term that we use to describe caregiver behaviours that demonstrate mindfulness. The primary objectives of this research are: 1) to identify observable mindful care behaviours and 2) to develop and test an instrument that can be used to measure those mindful care behaviours.

Why was I asked to participate?

You are being asked to participate in this study because you meet one or more of the following criteria: a) you are certified as a mindfulness trainer; b) you are/were employed as a mindfulness trainer; or c) you have published an article in a peer reviewed journal that relates to caregiver mindfulness training. As a mindfulness expert, you will be able to help us generate a list of observable mindful care behaviours.

What will participants do in the study?

An individual interview will be conducted by the primary investigator. During the interview you will be asked about caregiver mindfulness training and your background in mindfulness, as well as answer some questions related to mindful care. Many of the questions will involve providing examples of observable caregiver behaviours that you believe represent mindful care. By observable, we mean that the behaviour could be observed by a third person. The entire interview should take no more than 60 minutes. We request your consent to make audio recordings during the session, to improve the quality of our data collection. Once the information from your interview has been summarized, you will receive a copy of the results and be given an opportunity to provide feedback.

What are the risks and benefits of taking part in the project?

There are no anticipated risks to participants. Participation in this study will not benefit you directly, but information gained from your participation will contribute to the development of a measurement tool for mindful care. In the future this tool could be used in the evaluation and modification of caregiver mindfulness training programs, which may benefit the caregivers who receive such training and their clients.

Is there any payment or cost for participating?

There are no payments or costs for participating in the study.

Is participation voluntary?

Participation is voluntary. Also, you may withdraw consent at any time for any reason by letting any of the researchers know, without any negative consequences.

Will my personal information be kept confidential?

All information from this research study will be kept strictly confidential. Your name will not be used at all in the study records. Instead data from each participant will be coded using a unique number. In this way participants will remain anonymous.

If we get permission to record the sessions, the audio recordings will be immediately transferred from the recording device onto a secure network at St. Amant. The audio recordings and interview transcriptions will be stored in an encrypted drive, password protected, and accessible only to those that are part of the research team and have signed confidentiality agreements authorized by Dr. Toby Martin. Once uploaded onto the protected network, the audio recordings will be erased from the recording device. All audio recordings and transcriptions will be erased securely from the network within 3 months of the completion of the project (Approximately December 2020).

How will the results be disseminated?

If you wish to be informed of the results of the study, please indicate the method you wish to receive the summary of the findings at the end of this form. The summary will be available by approximately December 2020.

The results of the study will be distributed in various forms accessible by the public so that others may learn from it. Forms of distribution may include presentations at professional and scientific meetings, and written summaries, reports or publications that are publicly accessible electronically or in hardcopy. Individual and group data will be reported, but at no time will the participants' identity be revealed.

Signing the consent forms

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities.

The University of Manitoba may look at your research records to ensure that the research is being done in a safe and proper way.

This research has been approved by the Psychology/Sociology Research Ethics Board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator (HEC) at 204-474-7122 or humanethics@umanitoba.ca. A copy of this consent form has been given to you to keep for your records and reference.

Signature

I, _____ (print your name) hereby consent to participation in the study entitled “A Behavioural Marker System for Mindful Care.”

- I **do / do not** (circle one) consent to the use of audio recording to improve data collection.
- I **do / do not** (circle one) wish to be contacted about future studies.

In order to receive a summary of the results of this interview, please provide a mailing address below. Doing so is important if you would like the opportunity to provide feedback regarding the results.

Mailing address: _____

I understand that I can withdraw my consent at any time and for any reason.

Print your name

Signature

Date

Please return all pages of this *Project Description and Consent Form* to the researcher. An extra copy has been included for your records.
Thank you.

Appendix C

Interview Release Form

Research Project Title: A Behavioural Marker System for Mindful Care

Supervisor: Dr. Toby Martin
Assistant Professor, Psychology Department, University of Manitoba
Director, St. Amant Research Centre
toby.martin@umanitoba.ca

Principle Investigator: Jessica Duris
M.A. Student, Psychology Department, University of Manitoba
durisj@myumanitoba.ca

I, _____ (print your name) understand that Jessica Duris (Author) is preparing, writing, and intends to publish Work(s) based on the contents of this interview. This may include (but is not limited to) publications in research articles and/or conference presentations and for the completion of a Master's Thesis. It is possible that the Work(s) will include a resource deliverable available for use in educational and service settings.

In order to assist the Author in the preparation of these Work(s), I have agreed to be interviewed and to provide information which may include personal experiences, remarks, incidents, dialogues, actions, and recollections. I understand that my name will not be associated with any of the information provided in the interview.

I hereby grant and assign the Author and her licenses, successors, and assigns the right to quote, paraphrase, reproduce, edit, distribute or otherwise use this interview or any portion of it either alone or in combination with other material including text, images, animation, graphics and video throughout the world and in perpetuity.

I acknowledge that I have no copyright, ownership or other rights in the intended Work(s).

_____	_____	_____
Print your name	Signature	Date
_____	_____	_____
Witness	Signature	Date

An extra copy of this release form has been provided for your records.

Appendix D

Interview Protocol

1. Tell me about your background in mindfulness.
 - How many years of experience do you have practicing/studying mindfulness?
 - [If applicable] Where did you receive your training?
 - What were the reasons you started practicing/studying mindfulness?
2. How would you describe mindfulness?
3. How would you describe mindful caregiving?
4. Think of a specific caregiving task and describe how someone who is mindful might perform it.
 - How might that task be performed differently by someone who is not mindful?
5. What changes in caregiving behaviour have you observed in yourself or others following mindfulness training?
 - [If applicable clarify whether those behaviours increased or decreased]
6. Aside from changes in caregiving behaviour that you have actually observed, can you think of any caregiving behaviour that you would expect to change following mindfulness training?
 - [If applicable clarify whether those behaviours would increase or decrease]
7. Which types of events or stimuli might a mindful caregiver be more or less likely to attend to?
[Clarification:]
 - These events or stimuli could be related to you or the client, such as thoughts, feelings, etc. or they could be related to the external environment.
8. How do you think clients respond to mindful caregiving versus unmindful caregiving?
9. We would like to recruit more participants for our study. Do you know of any other individuals with a background in mindfulness that we could contact?

Appendix E

Training Materials

Materials

Before beginning, please ensure you have the following documents:

- BMS Taxonomy
- BMS Definitions
- Behavioural Markers
- Terms revised
- Interview Statements

Background

The purpose of this project is to develop an instrument, specifically a behavioural marker system, that can be used to measure mindful caregiving. Based on interviews with mindfulness experts, a list of observable behaviours indicative of mindful caregiving has been created and organized into a hierarchical taxonomy. The taxonomy consists of five different levels: Level 1 represents major components of mindfulness; Level 2 represents behaviour categories, Levels 3 – 4 represent behaviour subcategories; and Level 5 represents the observable behaviours (i.e. behavioural markers) indicative of each of the behaviour categories and/or subcategories of mindful care (See BMS Taxonomy).

Definitions for each of the components, categories, subcategories, and behavioural markers has been provided (See BMS Definitions), along with a condensed list containing only the behavioural markers (See Behavioural Markers). A list of terms and their corresponding definitions has also been provided to aid in the interpretation of the taxonomy (See Terms).

Task

A list of interview statements has been provided (See Interview Statements). Please assign each statement to the behavioural marker that best captures what is being described in that statement. Multiple statements may be assigned to one behavioural marker. If there is no behavioural marker that accurately captures what is being described, please write “N/A”. Pay particular attention to any words or phrases that have been bolded and underlined, as these are particularly relevant pieces of information when assigning each statement.

Once you have completed the task, please return a copy to Jessica Duris (email: durisj@myumanitoba.ca).

BMS Taxonomy

Below is a hierarchical behavioural marker system for mindful caregiving with five levels where L1 = components; L2 = behaviour categories; and L3 and L4 = behaviour subcategories. Items belonging to L5 (i.e. behavioural markers) are indicated with their corresponding numerical code.

ATTENTION (Level 1)

- **Ambient environment (Level 2)**
 - 1. Checking or adjusting stimuli in the ambient environment
- **Care recipient (Level 2)**
 - 2. Asking relevant caregiving questions
 - 3. Listening
 - 4. Responding to stimuli presented by the care recipient
- **Caregiver (Level 2)**
 - **Private events (Level 3)**
 - 5. Statements describing caregiver's private events
 - **Public behaviour (Level 3)**
 - 6. Neutral or positive facial expression
 - 7. Neutral or positive tone of voice
 - 8. Low voice
 - **Body position and movement (Level 4)**
 - 9. Gentle touch
 - 10. Looking at the care recipient
 - 11. Making eye contact
 - 12. Physically accessible to care recipient
 - 13. Slow pace
 - **Increasing predictability during a caregiving task (Level 4)**
 - 14. Announcing actions
 - 15. Gestural cue
- **Distraction (Level 2)**
 - 16. Fast pace
 - 17. Looking at someone or something other than care recipient
 - 18. Not responding to stimuli presented by the care recipient.
 - 19. Verbal interaction with someone other than care recipient
- **Social Interaction (Level 2)**
 - 20. Physical interaction with care recipient
 - 21. Verbal interaction with care recipient

ORIENTATION TO CHALLENGING EXPERIENCE (Level 1)**Indicators of a less mindful orientation (Level 2)**

- **Reactivity (Level 3)**
 - 22. Negative speech content
 - 23. Trying to reduce care recipient behaviour
 - 24. Immediate response
 - 25. Negative facial expression
 - 26. Negative tone of voice
 - 27. Raised voice

Indicators of a mindful orientation (Level 2)

- **Calmness (Level 3)**
 - 28. Observing without responding
 - 29. Low voice
 - 30. Neutral or positive facial expression
 - 31. Neutral or positive tone of voice
 - 32. Pauses

BMS Definitions

Below is a list of definitions for the behavioural marker system. Different shades are used to denote the different levels of the taxonomy: components = black; behaviour categories = dark grey; behaviour subcategories = light grey, and behavioural markers = white. The numerical code for each behavioural marker is also listed.

ATTENTION		Bishop's 1st component, i.e. the self-regulation of attention so that it is maintained on immediate experience.
Ambient environment		Behaviours which indicate that the caregiver is paying attention to features of the ambient environment.
Checking or adjusting stimuli in the ambient environment	1	Checking or adjusting stimuli in the ambient environment that may affect the caregiver or care recipient i.e. adjusting visual, auditory, gustatory, olfactory, and/or somatosensory stimuli.
Care recipient		Behaviours which indicate that the caregiver is paying attention to features of the care recipient.
Asking relevant caregiving questions	2	Asking the care recipient a question that is relevant to the <i>caregiving</i> interaction.
Listening	3	Waiting until the care recipient is done trying to communicate before responding.
Responding to stimuli presented by care recipient	4	The care recipient does, says, or expresses something that the caregiver notices and responds to.
Caregiver		Behaviours which indicate that the caregiver is paying attention to their own behaviour.
Private events		Behaviours which indicate that the caregiver is paying attention to their own private events.
Statements describing caregiver's private events	5	Making a statement that describes the caregiver's own perceived private events.
Public behaviour		Behaviours which indicate that the caregiver is paying attention to their own public behaviour.
Neutral or positive facial expression	6	Having a neutral or positive facial expression.
Neutral or positive tone of voice	7	Using a neutral or positive tone of voice.
Low voice	8	Speaking at a low volume.
Body position and movement		Behaviours which indicate that the caregiver is paying attention to how their body is positioned and/or moves relative to the care recipient.
Gentle touch	9	During a caregiving interaction that requires physical contact, the caregiver touches the care recipient in a way that reduces startle.
Looking at the care recipient	10	Eyes are directed towards the care recipient.
Making eye contact	11	Making eye contact while looking at the care recipient.
Physically accessible to care recipient	12	Adjusting position so that it is easier to respond to or be seen by the care recipient.
Slow pace	13	Moving at a slow, steady pace while interacting with the care recipient or stimuli in the ambient environment.
Increasing predictability during a caregiving task		Behaviours which increase the care recipient's ability to predict what is about to happen during the <i>caregiving</i> interaction.
Announcing actions	14	Making a statement out loud describing what is happening or is about to happen during the <i>caregiving</i> interaction.
Gestural cue	15	Making a gesture that indicates what is about to happen during the <i>caregiving</i> interaction.
Distraction		Behaviours which indicate that the caregiver is not paying attention.
Fast pace	16	Moving at a fast, rushed pace while interacting with the care recipient or stimuli in the ambient environment.
Looking at someone or something other than care recipient	17	Eyes are directed at someone or something other than the care recipient
Not responding to stimuli presented by care recipient.	18	The care recipient does, says, or expresses something and the caregiver does not respond.
Verbal interaction with someone other than care recipient	19	Initiating a <i>social</i> interaction by making a positive or neutral statement directed at someone other than the care recipient.
Social interaction		Behaviours which indicate that the caregiver initiated a positive or neutral <i>social</i> interaction with the care recipient.
Physical interaction with care recipient	20	Initiating a <i>social</i> interaction by physically interacting with the care recipient in a positive or neutral manner.
Verbal interaction with care recipient	21	Initiating a <i>social</i> interaction by making a positive or neutral statement directed at the care recipient.

ORIENTATION TO CHALLENGING EXPERIENCES		Bishop's 2nd component as it applies to <i>challenging experiences</i> , i.e. adopting a particular orientation toward one's experiences, characterized by curiosity, openness, and acceptance.
Indicators of a less mindful orientation		Responses to <i>challenging experiences</i> that are not consistent with the 2nd component.
Negative speech content	22	Making a statement that expresses disapproval of the care recipient or interactions with the care recipient.
Trying to reduce care recipient behaviour	23	Observing care recipient behaviour that results in a challenging experience and responding in a way to try and reduce that behaviour.
Reactivity		Behaviours which indicate that the caregiver is reactive during <i>challenging experiences</i> .
Immediate response	24	Responding to the care recipient's behaviour immediately following its occurrence.
Negative facial expression	25	Having a negative facial expression.
Negative tone of voice	26	Using a negative tone of voice.
Raised voice	27	Speaking at a volume that is louder than is necessary to be heard.
Indicators of a mindful orientation		Responses to <i>challenging experiences</i> that are consistent with Bishop's 2nd component.
Observing without responding	28	Observing care recipient behaviour that results in a challenging experience without responding in a way to try and reduce the behaviour.
Calmness		Behaviours which indicate that the caregiver is calm during <i>challenging experiences</i> .
Low voice	29	Speaking at a low volume during a <i>challenging experience</i> .
Neutral or positive facial expression	30	Having a neutral or positive facial expression during a <i>challenging experience</i> .
Neutral or positive tone of voice	31	Using a neutral or positive tone of voice during a <i>challenging experience</i> .
Pauses	32	Pausing before responding to the care recipient's behaviour. This may/may not involve taking a deep breath before responding.

Behavioural Markers

Behavioural markers are listed below, along with their corresponding numerical code and definition.

ATTENTION		
Checking or adjusting stimuli in the ambient environment	1	Checking or adjusting stimuli in the ambient environment that may affect the caregiver or care recipient i.e. adjusting visual, auditory, gustatory, olfactory, and/or somatosensory stimuli.
Asking relevant caregiving questions	2	Asking the care recipient a question that is relevant to the <i>caregiving</i> interaction.
Listening	3	Waiting until the care recipient is done trying to communicate before responding.
Responding to stimuli presented by the care recipient	4	The care recipient does, says, or expresses something that the caregiver notices and responds to.
Statements describing caregiver's private events	5	Making a statement that describes the caregiver's own perceived private events.
Neutral or positive facial expression	6	Having a neutral or positive facial expression.
Neutral or positive tone of voice	7	Using a neutral or positive tone of voice.
Low voice	8	Speaking at a low volume.
Gentle touch	9	During a caregiving interaction that requires physical contact, the caregiver touches the care recipient in a way that reduces startle.
Looking at the care recipient	10	Eyes are directed towards the care recipient.
Making eye contact	11	Making eye contact while looking at the care recipient.
Physically accessible to care recipient	12	Adjusting position so that it is easier to respond to or be seen by the care recipient.
Slow pace	13	Moving at a slow, steady pace while interacting with the care recipient or stimuli in the ambient environment.
Announcing actions	14	Making a statement out loud describing what is happening or is about to happen during the <i>caregiving</i> interaction.
Gestural cue	15	Making a gesture that indicates what is about to happen during the <i>caregiving</i> interaction.
Fast pace	16	Moving at a fast, rushed pace while interacting with the care recipient or stimuli in the ambient environment.
Looking at someone or something other than care recipient	17	Eyes are directed at someone or something other than the care recipient
Not responding to stimuli presented by the care recipient.	18	The care recipient does, says, or expresses something and the caregiver does not respond.
Verbal interaction with someone other than care recipient	19	Initiating a <i>social</i> interaction by making a positive or neutral statement directed at someone other than the care recipient.
Physical interaction with care recipient	20	Initiating a <i>social</i> interaction by physically interacting with the care recipient in a positive or neutral manner.
Verbal interaction with care recipient	21	Initiating a <i>social</i> interaction by making a positive or neutral statement directed at the care recipient.

ORIENTATION TO CHALLENGING EXPERIENCES		
Negative speech content	22	Making a statement that expresses disapproval of the care recipient or interactions with the care recipient.
Trying to reduce care recipient behaviour	23	Observing care recipient behaviour that results in a <i>challenging experience</i> and responding in a way to try and reduce that behaviour.
Immediate response	24	Responding to the care recipient's behaviour immediately following its occurrence.
Negative facial expression	25	Having a negative facial expression.
Negative tone of voice	26	Using a negative tone of voice.
Raised voice	27	Speaking at a volume that is louder than is necessary to be heard.
Observing without responding	28	Observing care recipient behaviour that results in a <i>challenging experience</i> without responding in a way to try and reduce the behaviour.
Low voice	29	Speaking at a low volume during a <i>challenging experience</i> .
Neutral or positive facial expression	30	Having a neutral or positive facial expression during a <i>challenging experience</i> .
Neutral or positive tone of voice	31	Using a neutral or positive tone of voice during a <i>challenging experience</i> .
Pauses	32	Pausing before responding to the care recipient's behaviour. This may/may not involve taking a deep breath before responding.

Terms

The following is a list of terms that are used in the behavioural marker system. In order to facilitate consistent interpretation, the definitions used by the researcher have been provided.

Mindful caregiving: A way of delivering care in which the person is fully engaged, adaptable and calm during caregiver interactions, accepting of behaviour and aware of the internal and external stimuli that may be influencing their own behaviour and that of the care recipient.

Behavioural marker: An observable behaviour that depicts a specific component of mindful caregiving.

Ambient environment: The immediate surroundings of the caregiver and care recipient.

Private events: Stimuli or responses that *cannot* be readily observed by another person without the use of special equipment i.e. thoughts, feelings, and/or sensations.

Public behaviour: Behaviour that *can* be readily observed by another person without the use of special equipment.

Caregiving interaction: Any interaction involving the provision of direct support/care e.g. assistance with basic personal hygiene, dressing, meal preparation, transport, medicine administration, etc.

Social interaction: Any interaction that does not involve the provision of direct support/care. A social interaction is carried out for the sake of it.

Challenging experience: Any event that would typically elicit or evoke a negative emotional response.

Interview Statements Sample

Please assign statements by writing the numerical code of the behavioural marker that best captures what is being described, or write N/A.

Uhm I think you could you could do some stuff like, when you're approaching somebody you could <u>put their hand on their shoulder just to let them know</u> , because they might not uhm... like auditory might not be the best way that they communicate or receive information so just like <u>letting know that you're there and what's gunna be happening</u> .	
But uhm, <u>sitting with rather than standing over someone</u> uhm if during a conversation uhm, so that eye contact is important but eye contact at eye level I think is profoundly respectful.	
And this is it. I mean, as a parent you you you need to feel when you need to be flexible and when you need to be stable. So, I could say to you like okay they would stick with with with just holding the child, but on the other hand when you feel like hey, I need to change something then of course...yeah.	
Listening to them	
I wouldn't necessarily say it always has to be gentler. Like it may be that you're wanting to encourage something in someone and let them know how glad you are to see them, so then you're <u>using a tone</u> that's like, "Hey, it's great to see you! How are ya doing today? You got a nice watch on today." or whatever. Uhm, I'm thinking of specifically someone who changes your watch quite a bit at work. Uhm...or maybe it needs to be matter of fact where you're feeling frustrated or not wanting to complete something that is a required task and your tone might reveal that this isn't your favourite thing to do. So, you would want to be neutral, or encouraging, or say "Okay, let's go have some fun" or whatever. And there would be times when you need to use a tone to help soothe or relax if you know you're going into an activity that might cause someone some uhm stress.	
I mean that's what <u>you would observe, complaining to other people</u> . I suppose you could ask somebody "so after you let this experience, did you have those judgmental kinds of thoughts er you know, so yeah I mean I guess that would be the other kind of way that might capture that.	

Appendix F

Interview Follow-up Letter Example

Dear [name removed]:

My name is Jessica Duris and I am a Master's Student in the Psychology Department at the University of Manitoba. Recently you completed an interview for the research study that I am conducting entitled, *A Behavioural Marker System for Mindful Care*.

Based on the information that you provided, we have compiled a list of observable mindful care behaviours. These behaviours should each reflect mindfulness in a caregiving situation. Behaviours that do not reflect mindful care, or are indicators of less mindful care, may also have been identified. A complete list of the behaviours has been attached to this letter for your consideration.

If, in your opinion, a behaviour on the list is not an accurate representation of a behaviour that you described, does not reflect mindfulness in a caregiving situation or you have any suggestions please contact the Principal Investigator, Jessica Duris, via phone or e-mail (durisj@myumanitoba.ca). While you are not obligated to respond to this letter, we value any feedback that you may have. Should you choose to respond, we ask that you do so before [two weeks after letter send date]. After this date we cannot guarantee that your feedback will be incorporated as we have only a limited amount of time to complete the project.

Thank you for your participation.

Sincerely,

Jessica Duris
M.A. Student
Email: durisj@myumanitoba.ca

Dr. Toby Martin
Director, St Amant Research Centre
Assistant Professor, Psychology
University of Manitoba
Toby.Martin@umanitoba.ca

Based on the information that you provided during your interview, the following *observable behaviours* were identified, and a definition was created for each. Note that we intend to include these behaviours in our measurement tool as *indicators* of either mindful care, or less mindful care depending on the nature of the behaviour.

Behaviours indicative of mindful care	Definition
Asking relevant caregiving questions	Asking the care recipient a question that is relevant to the <i>caregiving</i> interaction.
Responding to stimuli presented by the care recipient	The care recipient does, says, or expresses something that the caregiver notices and responds to.
Neutral or positive facial expression	Having a neutral or positive facial expression.
Neutral or positive tone of voice	Using a neutral or positive tone of voice.
Looking at the care recipient	Eyes are directed towards the care recipient.
Making eye contact	Making eye contact while looking at the care recipient.
Slow pace	Moving at a slow, steady pace while interacting with the care recipient or stimuli in the ambient environment.
Pauses	Pausing before responding to the care recipient's behaviour. This may/may not involve taking a deep breath before responding.

Behaviours indicative of LESS mindful care	Definition
Negative speech content	Making a statement that expresses disapproval of the care recipient or interactions with the care recipient.
Trying to reduce care recipient behaviour	Observing care recipient behaviour that results in a <i>challenging experience</i> and responding in a way to try and reduce that behaviour.
Immediate response	Responding to the care recipient's behaviour immediately following its occurrence.
Negative facial expression	Having a negative facial expression.

Feedback

Please feel free to provide any written feedback below. You are also welcome to add comments to the document itself.