

**EVALUATING THE EFFECTS OF A BRIEF MINDFULNESS-BASED
STRESS REDUCTION INTERVENTION ON THE EXPERIENCE OF
STRESS IN AFTER-DEGREE NURSING STUDENTS**

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ABSTRACT

This study evaluated the effectiveness of mindfulness in helping after-degree nursing students manage stress. Two 4-hour brief Mindfulness Based Stress Reduction (MBSR-B) training sessions were delivered involving sitting meditation, yoga, and body scan. Participants used the techniques 30 minutes per day for four weeks. Qualitative, individual, semi-structured interviews were conducted after the 4-week practice period. Most felt the intervention structure was effective for learning MBSR-B. The benefit of MBSR-B was stronger for some, likely related to individual learning styles, comfort with self-discovery and sharing. The group setting helped maintain focus and accountability, but could also inhibit sharing. All participants indicated mindfulness helped reduce their stress. Enhanced self-awareness resulted in early detection of stress, ability to change negative perception, development of self-compassion, acceptance of competence, immediate addressing of stress, and use of internal coping mechanisms. Findings indicate this type of stress management support may benefit after-degree nursing students, which may prove useful when developing nursing curriculums.

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CHAPTER ONE

INTRODUCTION

Qualitative intervention studies provide an opportunity to determine the effects of an intervention on a population by gaining insight into the experiences of the participants. These types of studies are important, as they rely on the experiences of the participants to provide meaning and understanding of the intervention (Patton, 2002). This is useful when dealing with a stress management intervention, as it is difficult to create an intervention that is effective without first hearing from those who experience it. Given that the experience of stress and stress management practices differs significantly from person to person, qualitative intervention studies have value when trying to create an effective stress management intervention.

This study utilized a qualitative intervention approach evaluating a stress reduction intervention and examining stress in after-degree nursing students. The first research question this study addresses is, “what are the experiences of after-degree nursing students of a brief mindfulness-based stress reduction intervention?” The second research question is, “what are the effects of a brief mindfulness-based stress reduction intervention on the experience of stress in after-degree nursing students?” This study fills an important gap in understanding this topic, as most previous work in this area has been quantitative. This research has implications for students as they develop self-care practices in preparation for entering registered nursing practice. The thesis to follow is five chapters in length: chapter one is an introduction; chapter two is a comprehensive literature review; chapter three is a paper examining after-degree nursing students’ experience of a brief mindfulness-based stress reduction intervention; chapter four is a

paper examining the effects of a brief mindfulness-based stress reduction intervention related to the experience of stress in after-degree nursing students; and chapter five is a discussion and conclusion.

Statement of Problem

Background and Context

A review of the nursing education literature suggested that the education process for nurses is difficult and stressful, with multiple stressors that affect students in different ways and at different levels of intensity (Galbraith & Brown, 2011). After-degree nursing programs, those delivered over a shorter time than traditional 4-year programs, amplify the experience of stress for after-degree students. So while a shortened program combined with a great demand for professional nurses creates a situation where students are attracted to these programs due to the decreased length of study, they may not be aware of the increased stress involved (Cangelosi & Whitt, 2005). This situation can be viewed as both positive and negative. Using a positive lens, from an individual student perspective, accelerated after-degree nursing programs offer quick access to meaningful work in a highly regarded and rewarding profession. Further, from an organizational perspective, staffing levels may remain constant despite the decline in numbers of nurses (Penprase, 2012). Finally, from a community perspective, having appropriate numbers of nurses in the health care system may directly improve the quality of care.

Using a negative lens, student stress is a problem that is relevant and warrants investigation. After-degree nursing programs are structured in such a way as to maximize the previous education of the students, while still delivering the core nursing courses.

Given that most of the courses are core nursing courses, the program may be seen as difficult and conducive to causing stress in students.

While after-degree nursing students are often seen as confident learners (Utley-Smith, Phillips, & Turner, 2007), they also tend to be perfectionists (D'Antonio et al., 2010) and high achievers (Kohn & Truglio-Londrigan, 2007). These personal characteristics may appear to be assets for a nursing student, but they may also contribute to increased stress experienced by these individuals. Also, given after-degree students are older than many undergraduate students, there may be added life stressors, such as previous student loans and other financial obligations, jobs and/or careers, and family responsibilities. With the difficult task of balancing personal responsibilities and an accelerated condensed nursing program, after-degree nursing students are at risk of experiencing high stress. Given the potential for increased stress, this study may provide some insight as to how to assist these students in managing their stress.

Rationale and Purpose

The phenomenon of after-degree nursing programs has many unique and defining factors. The need for these accelerated programs results from the well-documented nursing shortage that is occurring in North America (Penprase, 2012). Training nurses more quickly is one approach to meeting the demand for health care professionals that has arisen from the nursing shortage, and accelerated nursing education provides an important area for research related to student stress management.

The concept of mindfulness has been addressed extensively in the literature in relation to stress management interventions with various healthcare-related populations. Mindfulness is defined by as “the awareness that emerges through paying attention on

purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment” (Kabat-Zinn, 2003). Many of these studies use Kabat-Zinn’s (2003) work as a basis for describing mindfulness and providing the basis for interventions. While Kabat-Zinn’s mindfulness-based stress reduction program requires eight weeks/27.5 hours of training, a brief mindfulness-based stress reduction intervention may be more appropriate for after-degree nursing students given the time demands of their education program. After-degree nursing students experience high stress due to the condensed and accelerated nature of their education programs. While the severity and prevalence of this stress is well-documented, little is offered to assist students in managing their stress. The paucity of qualitative intervention studies looking at the effectiveness of stress-management initiatives, specifically mindfulness-based stress reduction (MBSR), with after-degree nursing students leaves a gap in the understanding of the effectiveness of MBSR and MBSR-based stress management interventions from a qualitative perspective. Further, few qualitative investigations exist specific to the use and effectiveness of brief MBSR interventions with this particular population. Therefore, the purpose of this study was to evaluate the impact of a brief mindfulness-based stress reduction (MBSR-B) intervention on the experience of stress in after-degree nursing students.

Approach to Research

Research Design

Given the significant number of quantitative studies regarding interventions to reduce stress in nursing students, a purely qualitative study design was selected. Since the aim of the study was to examine the effectiveness of a MBSR-B intervention on the

experience of stress in after-degree nursing students, a qualitative evaluation design was appropriate. According to Patton (2002), qualitative evaluation is useful when research focuses on processes or outcomes of programs. It allows participants to describe their experiences with the program and its impacts, with no intention to have their responses represent a general experience (Patton, 1980, 2002). Although generalizations are not considered when using a qualitative evaluation design, some of the experiences and possible outcomes of the program or intervention are delineated and explored in depth. Therefore, because a program/intervention was used in this study, a program evaluation design was appropriate (Patton, 2002).

Sample and Setting

A sample of four female and one male participant was obtained using purposeful criterion sampling, where participants were recruited from a specific population as they could provide rich accounts of experience related to the topic of study. Inclusion criteria included being after-degree nursing students in their final medical/surgical practice course and having no previous experience with MBSR. Following ethics approval, I recruited participants through a classroom presentation describing the study at my university. A Letter of Informed Consent (Appendix A) was distributed to all potential participants, who were then asked to complete, sign, and return the form to me if they were interested in the participating in the study.

MBSR-B Intervention

An MBSR-B intervention based on Kabat-Zinn's (2003) established 8-week/27.5 hour MBSR program was delivered to all participants. The 8-hour MBSR-B intervention was developed and delivered by an experienced instructor who completed teacher

training to deliver the 8-week Kabat-Zinn program and who has 10 years of experience teaching mindfulness. Two 4-hour sessions were conducted a week apart to provide participants the opportunity to work with the learned skills from the first session. The intervention was comprised of content relating to theory and guided practice of yoga/mindful stretching, sitting meditation, and body scan. Following the intervention, participants were asked to practice mindfulness for 30 minutes per day for four weeks. Questions about the skills from the first session were answered at the second session, which was also comprised of further practice of learned skills.

Data Collection

After practicing mindfulness for a period of four weeks, data were generated by conducting individual participant interviews at my university. The in-person semi-structured interviews lasted between 45 and 75 minutes and were digitally recorded. Completed interviews were transcribed verbatim by a transcriptionist. Examples of questions asked during the interviews can be found in Appendix B.

Data Analysis

Using NVivo 10 software, thematic analysis of the data was used to provide common ideas using open, axial, and selective coding (Braun & Clarke, 2006). First, I read all transcripts in their entirety to confirm accuracy and understanding. I then went back through each transcript, line by line, and applied codes to important elements of the participant responses (i.e., open coding). The open codes were then separated into groups based on similarity, and the new groups were re-coded with a new code potentially representative of categories (i.e., axial coding). These possible categories were then separated into groups based on similarity, which resulted in the main categories for each

paper (i.e., selective coding). As discussed in Chapter 4, one theme was identified linking all the categories produced from the thematic analysis.

Ethical Considerations

I obtained approval to conduct this study from the Human Subject Research Committee at my university (Protocol #2014-063). While the participants were students at my university, I was not the instructor for any of them at any time during the study. This was particularly important considering the potential for positional power between me and the participants. It was clearly stated during the classroom recruitment presentation as well as in the Letter of Informed Consent (Appendix A) that participation in this study was completely voluntary and that participants could leave the study at any time. While written informed consent was obtained prior to the commencement of the study, consent was confirmed prior to each of the intervention training sessions, as well as the individual interviews. Given the chance that this study caused participants to experience increased stress, support in the form of contact information for the university counselling department was offered to all participants.

Participant confidentiality and anonymity was ensured through the use of secure data management practices and pseudonyms. Data management involved deletion of digitally recorded interviews once the transcripts were determined to be accurate, and all research materials were secured in locked cabinets in my office and saved on password-protected computers. All documents will be confidentially destroyed after a period of five years. The transcriptionist signed a non-disclosure agreement before receiving any of the digitally recorded interviews (Appendix C).

Findings

The findings of this study are presented in this thesis, which contains a literature review, two separate articles, and a concluding chapter. The titles of the chapters are: “Literature Review;” “After-Degree Nursing Students’ Experience of a Brief Mindfulness-Based Stress Reduction Intervention;” “Evaluating the Effects of a Brief Mindfulness-Based Stress Reduction Intervention on the Experience of Stress in After-Degree Nursing Students;” and “Discussion and Recommendations.”

Chapter Two: Literature Review. Mindfulness is quickly becoming a mainstream idea that has been used in many different capacities. One common use of mindfulness is to support stress management. Given the complexities and unique experience of stress in different people, mindfulness has been utilized as a stress management method in different individuals and groups, which has yielded insightful research findings. In this chapter, an overview of the literature surrounding the topic of mindfulness in relation to stress management in after-degree nursing students is provided. Background and context is established by discussing defining aspects of after-degree programs and how the after-degree program format tends to produce higher levels of stress in students. Also, differences in stress between 4-year and after-degree nursing students is described, which provides rationale for this study. Moreover, an examination of stress management interventions with both groups highlights the unbalanced amount of evidence for stress management in nursing students in favour of those educated in a 4-year program; again, providing further rationale for this study. Finally, the use of mindfulness for stress management in nursing students and how this practice may be beneficial to after-degree nursing students are viewed in the literature review.

Chapter Three: After-degree nursing students' experience of a brief mindfulness-based stress reduction intervention. While there have been numerous studies examining the use of mindfulness in nursing students to help manage stress, most of these studies have been quantitative by design. Determining the effectiveness of a given practice largely based on statistical analysis provides valuable information in terms of generalization of findings. However, given the unique and personal nature of the experience of stress and the use of mindfulness to manage stress, the lack of purely qualitative studies on this topic needed to be addressed. The purpose of this chapter is to explore the experience the after-degree nursing student participants had of the MBSR-B intervention. Since the intervention was created specifically for this study, understanding participants' experiences of the intervention itself without addressing its effect on their stress was warranted.

The qualitative analysis of the data produced three main themes and six sub-themes: (a) personal learning styles, with subthemes of intervention effectiveness and attaining competency; (b) levels of comfort with emotional experience, with sub-themes of positive outcomes with mindful inquiry into experience and negative outcomes with mindful inquiry into experience; and (c) it was good to have a group, with subthemes of accountability and ability to share.

Chapter Four: Evaluating the effects of a brief mindfulness-based stress reduction intervention on the experience of stress in after-degree nursing students. Among the plethora of different stress management practices and techniques available, mindfulness is very popular. Specifically, MBSR has been the subject of numerous studies that showed the effectiveness of this method in managing stress. The shortened or

brief version of MBSR created for this study, MBSR-B, provided participants with quick access to a stress management practice that was meant to suit their specific academic situation. The purpose of this chapter is to evaluate the effectiveness of the MBSR-B intervention on the participants' experience of stress.

The qualitative analysis of the data produced four categories: (a) hitting a reset button; (b) self-compassion, (c) avoiding a downward spiral, and (d) using an internal coping mechanism. These categories were all linked to a theme of self-awareness.

Chapter Five: Discussion and recommendations. The final chapter of the thesis provides a discussion of the findings from both papers presented: Chapters 3 and 4. Also addressed in this chapter are implications of the research findings, limitations identified with the study, recommendations for further investigation, and methods of disseminating the findings.

Significance of the Study

When viewing the different elements of this study in a broader context, the importance of effective stress management in nursing students, specifically after-degree nursing students, becomes apparent. The process of successfully completing a registered nursing education program is highly stressful. Further, the profession into which these students are entering contains roles and responsibilities that may also cause them to experience extreme levels of stress, the impact of which may extend into the workplace and patient care. Providing support for stress management as a part of undergraduate nursing education may be a way for students to develop positive self-care practices that they carry forward into their nursing careers. This study examined a method to manage stress in nursing students, and the different effects of the intervention may be best

understood using a qualitative design. Further, qualitative intervention studies have been recommended as a means to evaluate the effectiveness of different mindfulness programs on 4-year and after-degree nursing student stress (Goff, 2011; Shields, 2011). Therefore, support for further study into effective stress management techniques and practices in after-degree nursing students has been established, which may result in healthier work environments and improved patient care.

CHAPTER TWO

LITERATURE REVIEW

The education of nurses has changed dramatically since the inception of the profession. Currently in Canada, registered nurses must be university prepared in order to enter into practice. Stress is a phenomenon present in most forms of education, with post-secondary education often being a main source. While much is known about university education and many of the stressors involved with this form of institutional learning, less is known about undergraduate nursing education programs and its associated stressors. So while post-secondary education, in general, is stressful, nursing education is very stressful (Sawatzky, 1998). Moreover, accelerated undergraduate nursing programs might be seen as even more stressful due to the condensed and accelerated delivery (Kohn & Truglio-Londrigan, 2007). It would be reasonable, then, for there to be supports in place for stress management in post-secondary education programs known to cause high levels of stress; however, this is not often the case with accelerated nursing programs. The intent of this literature review is to examine current knowledge regarding accelerated nursing education programs, the effects related to stress that these programs have on the students, stress management supports that have been used to help nursing students cope with stress, and the effects of mindfulness in reducing perceived stress among these students. The end result indicates a gap in the literature pertaining to the use of qualitative intervention studies to provide stress management support for after-degree nursing students. This literature review includes peer-reviewed journal articles, books, and an unpublished doctoral dissertation from 1974 to 2017. Search terms included after-degree, second-degree, nursing student, stress, mindfulness, mindfulness-based stress reduction,

condensed, and brief. Databases that were searched included CINAHL Plus with Full Text, ProQuest Nursing & Allied Health Source, MEDLINE, Google Scholar, Web of Science, and JSTOR. Operational definitions of after-degree nursing programs, after-degree nursing students, stress, and mindfulness will be addressed throughout the review where appropriate.

After-Degree Nursing Programs

The concept of an accelerated nursing program has been in existence for many years. Since the creation of the first accelerated nursing program in North America in 1971, many more educational institutions now offer students this option for nursing education (Kohn & Truglio-Londrigan, 2007). There are many different terms referring to this type of nursing education with the most common being accelerated, second-degree, and after-degree. While the term “accelerated” implies that the program is basically delivered in a shorter time period than a traditional program, it says nothing to describe the type of student that will be involved in the program. The term “second-degree” somewhat describes the type of student who would be involved in this type of program, but it assumes that the student has only one previous university degree. This may not be the case with many students entering this type of nursing program (Penprase, 2012). The term “after-degree” seems to be the most logical and accurate description of this type of nursing program, as it indicates students are required to have a previous degree with no mention of number, so from this point on, this term will be used to describe this phenomenon.

The terms used to describe students in after-degree nursing programs in the literature warrant addressing. Of the various references to students in after-degree nursing

programs, the most common terms used to describe these students include second-degree, second-career, accelerated second-degree, and post-baccalaureate. As was the case with the terms used in the literature to refer to after-degree programs, these student-related terms are very specific and somewhat limiting. Each term assumes that the student either only has one previous degree, had a previous career and is now changing to nursing, or that the previous degree the student received was a baccalaureate degree. Since it is clear in the literature that students of varying backgrounds enroll in after-degree nursing programs, applying a restrictive or limiting title to these students is inappropriate and inaccurate (Penprase, 2012). An appropriate term should be specific only in denoting the one element that allows students to be eligible for entry into an after-degree nursing program: completion of any previous university degree. For this reason, the term “after-degree” when referring to the students enrolled in after-degree nursing programs will be used. When referring to nursing students in a traditional, not after-degree, nursing program the term “traditional” will be used.

The presence of after-degree nursing programs indicates the need for more nurses, which may be a reflection of the increasing workload within the profession or, in the case of Canada, a shortage or decrease in the number of nurses (“Nursing shortage tipped to hit Canada,” 2015; Penprase, 2012; Pipe, Bortz, Dueck, Pendergast, Buchda, & Summers, 2009). For this reason, and perhaps others as well, after-degree nursing programs have been developed and are offered in many post-secondary institutions and seem to be a popular choice for many students. The short program duration and a direct link to possible employment seem likely to be contributing factors to what make after-degree nursing programs attractive to students as well as interest in the profession and

benefits of nursing (Sheil & Wassem, 1994). From an institutional perspective, the attractiveness of after-degree nursing programs lies in the increased demand (Cangelosi & Whitt, 2005) and in the quality of students that enroll in these programs (Vinal & Whitman, 1994). The characteristics of after-degree students that Vinal and Whitman (1994) cited as being promising to the institutions include mature, resourceful, and experienced in life and academics. A general sense from the literature has created a setting where there are a number of experienced students wanting to access the workforce through professional programs that offer a relatively short preparation period, which may sum up the attractiveness of after-degree nursing programs for both students and institutions.

After-degree nursing programs can vary greatly in their length of study and pre-requisites for admission. The shortest after-degree programs are 12 months in length (Cangelosi & Whitt, 2005; Penprase, 2012), with the most common and “ideal” program length being two years (Sheil & Wassem, 1994). Moreover, the minimum education for entry into an after-degree program is a bachelor’s degree; with the major possibly having a bearing on admission in some schools. Given these possible variations, and to adhere to the purposes of this literature review, the literature used for this review will include papers where the authors describe the after-degree program as a 2-year program where applicants hold a bachelor’s degree in any discipline as an admission pre-requisite.

Stress in Traditional Nursing Students

Stress is a somewhat vague term and can be understood in many different contexts. For the purposes of this literature review, the general definition of stress from Selye (1974) will be used. Selye’s definition simply held that stress is a person’s general

response to demands. A general definition, such as this, was selected as it is not specific to any one aspect of stress. This is important for this literature review and subsequent qualitative study, as the experience of stress is personal and unique to each individual, which would make responses to stress management strategies also personal and unique. Also, given that this definition has been used in previous nursing research as a basis for understanding stress, it seems appropriate for this study as well (Sawatzky, 1998; Selye, 1974).

Stress in traditional nursing students in various situations has been well-documented in the literature, which is indicative of the pervasiveness of this phenomenon (Alzayyat & Al-Gamal, 2014). Using quantitative measures, Beck, Hackett, Srivastava, McKim, and Rockwell (1997) demonstrated that traditional nursing students experience greater levels of stress compared to other students in health-related educational programs. In their ground-breaking work, Beck et al. investigated the levels and causes of stress experienced by traditional nursing students as well as students in other health-related programs. The strength of the Beck et al.'s study lay in the large sample size. Given that the study was purely quantitative (i.e., descriptive correlational) in design, having a sample size of 522 participants allowed for the results to be an accurate reflection of the stress experienced by students in health-related programs (Beck et al., 1997). Moreover, by having comparison groups, Beck et al. were able to determine that the traditional nursing students in the sample had significantly higher stress than the rest of the sample groups. However, by taking a strictly quantitative approach, participant descriptions of their experience of stress was missed. Although the purpose of Beck et al.'s study may not have been to investigate the actual student experience, since stress is subjective by

nature, it seems to warrant a qualitative approach when being studied. Nevertheless, the results of the study by Beck et al. can and have been used as support for further research in the area of nursing student stress in relation to the educational experience.

Stress in After-Degree Nursing Students

The major defining aspects of after-degree nursing programs relate to the pace at which these programs are delivered. That is, the elements that make after-degree nursing programs difficult are related to the accelerated delivery of the program content, which contributes to an overall stressful learning experience (Cangelosi, 2007; D'Antonio et al., 2010; Kohn & Truglio-Londrigan, 2007; Reeve, Shumaker, Yearwood, Crowell, & Riley, 2013; Shiber, 2003; Utley-Smith et al., 2007; Vinal & Whitman, 1994). By having to complete a nursing education program in an accelerated fashion, after-degree nursing students have been noted to experience higher levels of stress than traditional nursing students (D'Antonio et al., 2010). This higher level of perceived stress in after-degree nursing students may also, in part, arise from certain characteristics that distinguish them from traditional nursing students, as was further noted by D'Antonio et al. (2010).

Certain characteristics noted in the literature were attributed specifically to after-degree nursing students. Some of the traits of after-degree-nursing students that have been associated with the high stress levels they experience include being perfectionists (D'Antonio et al., 2010), high achievers (Kohn & Truglio-Londrigan, 2007; Raines, 2007), and confident learners (Utley-Smith et al., 2007). Although not normally viewed as negative characteristics, these terms are often indirect sources of the stress experienced by these students. While these characteristics would be advantageous in managing a difficult academic workload, they may also be sources of stress for students, as they may

push themselves too much. Moreover, after-degree nursing students may find they need to work harder to achieve the same level of academic achievement they experienced in their previous degree(s), which may result in an increased experience of stress.

The existence of stress in after-degree nursing students has been demonstrated in previous quantitative studies; however, the experience of this type of stress by students in after-degree nursing programs has not yet been studied using a purely qualitative design. Researching after-degree nursing stress using a qualitative design would allow the students themselves to describe the stress, how it affects them, and how it could best be addressed in the educational setting. Although the study by D'Antonio et al. (2010) was qualitative in design and utilized focus groups to gather data, all of the data pertaining to stress in after-degree nursing students were garnered from the faculty and not the students. This may bring the credibility of the research into question, given that the information was not retrieved from a direct source. Only by allowing after-degree nursing students to describe their experiences in relation to stress will researchers truly begin to understand the optimal way to help the students cope with this stress.

Just as characteristics of after-degree students may influence their stress, aspects of their nursing education may also influence stress in after-degree students. Socialization into the nursing profession may be severely affected by the decreased program length of after-degree programs. Utley-Smith et al. (2007) and Vinal and Whitman (1994) found that the decreased time for socialization into the profession of nursing causes after-degree students to experience high levels of stress. However, these quantitative studies either associated socialization stress with life experience/background and adult learning needs (Vinal & Whitman, 1994) or looked at data provided by instructors and not the after-

degree students themselves (Utley-Smith et al., 2007). Further, Utley-Smith et al. described one of the factors involved in the breakdown of the socialization process as being the competency of the instructors, which again did not deal with the after-degree nursing students themselves. Although Utley-Smith et al.'s (2007) and Vinal and Whitman's (1994) works provided information on socialization into the nursing profession as a source of stress for after-degree nursing students, the studies did not contribute a clear understanding of how after-degree nursing students experience the socialization process and its contributions to stress. However, by indicating socialization into the profession causes stress for after-degree nursing students, these studies provided support for moving forward with stress management initiatives as support for this group.

Another aspect of nursing education that causes stress for students relates to competence. After-degree nursing students find the idea of becoming competent or prepared to enter the workforce stressful because of the shortened program (Cangelosi, 2007). This finding seems to be in conflict with the notion that after-degree nursing students are confident learners (Utley-Smith et al., 2007) and that after-degree nursing graduates feel prepared and competent to enter the workforce (Raines, 2009). The idea of confident students worrying about becoming competent may speak to the accelerated pace of after-degree nursing programs. The decreased length of study may be a contributing factor to the students feeling pressured to achieve their goal. Since data between quantitative studies often differed, which may be a result of study design, it may prove useful to study after-degree student stress using a qualitative design, where this population can explain in their own words their own sources and experiences of stress.

The review presented suggests that there has been a limited amount of work done that explores after-degree nursing student stress, especially qualitative work. There have been no purely qualitative studies done to understand after-degree nursing students' experiences of stress from their program of study. Further, very few studies have looked qualitatively at the effects of stress management interventions in relation to after-degree nursing student populations.

Stress Management Interventions

Since there is an understanding that after-degree students experience high levels of stress, it would seem to follow that there would be research done in the area of interventions that might help these students manage their stress. However, there has been little information regarding stress management interventions in after-degree nursing student populations. Further, there were no qualitative intervention studies related to this topic and population. For these reasons, the majority of information addressed in this portion of this literature review will pertain to common stress management practices in traditional nursing students as well as interventions to assist them to cope with the stresses of their educational programs.

When a traditional nursing student population has been studied to determine how they cope with and manage the stress they experience as a result of their educational program, there have been some similarities in findings. The concept of self-efficacy, defined as belief in one's abilities to meet specific demands, in traditional nursing students as being effective in managing stress in this population has been proposed by Gibbons (2010) and Gibbons, Dempster, and Moutray (2011) (Wood and Bandura, 1989). These studies were very similar in regards to looking at stress and coping in

traditional nursing students. Using the same data set, one study looked at stress and coping in relation to well-being (Gibbons et al., 2011), while the other was in relation to burn-out (Gibbons, 2010). While the notion of self-efficacy and its effect on stress in traditional nursing students may be a factor in coping, it is not considered to be a practice or intervention, since it cannot be applied to the population in question. Rather, it is a personal characteristic or trait that may be inherent in some students. It is possible, though, to foster a sense of self-efficacy through informal and timely encouragement of students who lack this characteristic (Gibbons, 2010).

Another aspect to the work done by Gibbons (2010) and Gibbons et al. (2011) involved how avoidance is used by traditional nursing students in response to stress. The research showed that avoidance of dealing with stressful events was not effective in helping students manage stress, and the use of avoidance as a coping mechanism was correlated with burn-out (Gibbons, 2010) and to a decrease in student well-being (Gibbons et al., 2011). Similar to self-efficacy, it seems that avoidance is more a behaviour than a skill, which might not result in a positive outcome. The work by Gibbons (2010) and Gibbons et al. (2011) was not to evaluate the effectiveness of an intervention, but rather to quantitatively explore the coping strategies used by traditional nursing students.

Gibbons' (2010) work also suggested that an effective means of stress management utilized by traditional nursing students involved social support. This aspect of student coping was seen as being practiced often (Gibbons, 2010). The strength and usefulness of this approach to stress management in traditional nursing students was echoed by Decker and Shellenbarger (2012) and Reeve et al. (2013). While these studies

were all quantitative, Reeve et al. did offer some descriptive data collected from short-answer portions of their survey. Most importantly relating to social support, the student participants were able to not only say they used social support as a stress management practice, but they also listed the individuals who represented their social support systems, which included peers, spouse/significant other, family members (Reeve et al., 2013).

Reeve et al.'s (2013) study was also one of the first studies to focus on perceived stress and stress management practices in after-degree nursing students. A real strength to this study is noted in the sample of 49 traditional nursing students and 58 after-degree nursing students, as comparisons can be made between the stress experiences and coping strategies between these two student groups. Nevertheless, the study did not explore the effectiveness of a specific intervention and did not offer any new suggestions for stress management in either traditional or after-degree nursing students. Agreement of findings between Decker and Shellenbarger (2012), Gibbons (2010), and Reeve et al. related to the use and effectiveness of social support for nursing students was powerful; however, they did not offer any new suggestions for stress management interventions.

A different group of studies have found another aspect to traditional nursing student stress management. The concept of hardiness has been found to be a factor in traditional nursing students' management of stress related to their educational programs (Goff, 2011; Jameson, 2012; Sawatzky, 1998). Hardiness is, like self-efficacy, a personal trait that can be developed. It requires that a person develop learned resourcefulness, which includes self-controlled emotional responses and problem-solving strategies, in order to assist them in managing or coping with stress or stressful situations (Goff, 2011). According to Goff (2011), this learned resourcefulness, in general, allows an individual

to feel like they have more control over the situation that is causing them stress or of the environment from where the stressful situation is arising. As hardiness or learned resourcefulness increased (Goff, 2011) or was introduced (Jameson, 2012), the level of stress in traditional nursing students decreased. This negative correlation is ideal in stress management studies where researchers are testing the effectiveness of an intervention.

However, Goff (2011) did not introduce hardiness as an intervention, but rather explored characteristics already present in the nursing students. Jameson (2012) found hardiness, where a person feels in control of the opportunity/challenge a stressful situation brings, had a significant effect in decreasing stress in an experimental group. However, hardiness continues to resemble personal traits rather than learned skills. Both studies were quantitative, with Goff being explanatory correlational and Jameson being quasi-experimental. Lastly, Sawatzky (1998) attempted to construct a framework for understanding stress in traditional nursing students based on previous research, which, like Goff (2011), did not offer any attempt at trying a new intervention with nursing students to help them manage their stress.

In a systematic review, Galbraith and Brown (2011) proposed that effective stress management interventions for nursing students should ideally include relaxation techniques as well as changing the way students perceive stress. They suggested that interventions that reduce or remove the stressor are less important than interventions that change the perception of the stressor and assist with the negative effects of that stressor in an individual. The strength of this review is its evaluation of stress management interventions, which offers a new starting point for novel approaches or interventions to be applied and evaluated in a nursing student population.

Another important aspect of Galbraith and Brown's (2011) work can be noted from their results and final recommendation for future research. Since the research illustrated that the most effective intervention for stress management in traditional nursing students should include a focus on both relaxation and perception of stressors, it seems reasonable that future interventions should be a combination of these two ideas (Galbraith & Brown, 2011). Moreover, their study recommended that stress management interventions are needed and should be offered to nursing students at both individual and organizational levels. If understood from a more general approach, the best stress management intervention for nursing students would be a skill that can be taught that addresses both relaxation techniques and perception of stressors.

There was extensive support from the literature in pursuing studies that address increasing or offering support for nursing students related to stress management (Capp & Williams, 2012; Charlesworth, 1981; Decker & Shellenbarger, 2012; Galbraith & Brown, 2011; Gibbons, 2010; Gibbons et al., 2011; Gibbons, Dempster, & Moutray, 2009; Goff, 2011; Reeve et al., 2013). In looking at the past studies presented on stress management in nursing students, the approach suggested by Galbraith and Brown (2011) and the overwhelming support from the literature, the need for a qualitative mindfulness-based intervention study to help after-degree nursing students manage stress was evident.

Mindfulness in Nursing Students

In the area of mindfulness and its effects on health and wellness, Kabat-Zinn (2003) could be considered the leading figure. Kabat-Zinn proposed a definition of mindfulness that can be used as a basis for research purposes when looking at the phenomenon in different contexts. Kabat-Zinn defined mindfulness as "the awareness

that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment” (p. 145). This operational definition may be clear to those familiar with mindfulness practice; however, it may not be sufficient for most in addressing how this practice plays a role in the perception, experience, or management of stress. Looking at mindfulness by way of an alternate definition or explanation, Cohen-Katz, Wiley, Capuano, Baker, and Shapiro (2004) made it easier to relate mindfulness practice to its role in the perception or experience of stress. Cohen-Katz et al. stated that mindfulness allows the participant to remain free of the negative emotions and thoughts associated with stress. This does not mean the absence of negative elements, but rather reducing the impact by learning to not become fixed on them. (Cohen-Katz et al., 2004). Using both the definition of mindfulness proposed by Kabat-Zinn and the clarifying statement of Cohen-Katz et al., a good understanding of the process and pragmatism of mindfulness can emerge.

The use of mindfulness, particularly in health care professionals, is also a topic that has been widely addressed in the literature. Past studies have looked at mindfulness techniques in relation to stress in nurses (Cohen-Katz et al., 2004; Foureur, Besley, Burton, Yu, & Crisp, 2013; Poulin, Mackenzie, Soloway, & Karayolas, 2008), and to stress in traditional nursing students (Beddoe & Murphy, 2004; Chen, Yang, Wang, & Zhang, 2013; Kang, Choi, & Ryu, 2009; Linden, Turner, Young, & Bruce, 2001; Moscaritolo, 2009; Shields, 2011; Shirey, 2007; Song & Lindquist, 2015). The vast majority of studies examining mindfulness in nurses and nursing students have looked at its relationship to stress using a quantitative design. Although the tools and scales used to measure stress within each of the studies differed, the focus was on showing that

mindfulness had a significant effect on decreasing stress, which, in fact, these studies were successful in doing. However, when there were elements of qualitative work (e.g., open-ended questions or focus groups), data emerged that would not have been captured by quantitative measures alone. Through their grounded theory research, Irving et al. (2012) found that small elements of change in how stress was perceived or experienced by participants are present and important aspects to this topic of study. Given the nature of qualitative studies in allowing subtle nuances in data to be noticed, a qualitative design may be a useful tool when studying individuals' experiences of stress. That is, even though there might be an overall effect of decreasing stress when using mindfulness in a group of study participants, certain other effects of the mindfulness techniques used might have gone unnoticed if the design of the study was solely quantitative.

The use of mindfulness to reduce or manage stress in various groups has been the topic of investigation in many studies. Most of these studies have presented results after conducting research using a quantitative design. Only one study was found that pertained to the use of a mindfulness intervention to reduce stress in after-degree nursing students (Shields, 2011). Stress reduction techniques were delivered to the participants through a modified form of the 2.5 hours per week for eight weeks program developed by Kabat-Zinn (Cohen-Katz, 2004). The participants completed pre-intervention and post-intervention surveys reporting their levels of stress (Shields, 2011). The participants also provided handwritten narrative comments to the researcher about their experiences with the study (Shields, 2011). Interestingly, the quantitative data did not show any significant decrease in stress as a result of the mindfulness intervention; however, Shields (2011) noted that the qualitative data from the handwritten comments provided support for the

effect of mindfulness in decreasing participants' stress. Moreover, the narrative comments provided support for the inclusion of mindfulness techniques in nursing education, which, on its own, indicated the need for future research and perhaps changes to curriculums (Shields, 2011). It should be noted that Shields stated that the reason for including the narrative comment component to the surveys was to provide a balance to the data given the small sample size (i.e., 20 participants). It seems as though not much weight was given to the qualitative aspect of the study, when, in the end, the qualitative data provided the most valuable information. Perhaps the most powerful idea to come out of Shields's (2011) work was the statement made that a purely qualitative design would have been more suited to this type and size of study.

Brief Mindfulness-Based Stress Reduction Interventions

A great amount of research has involved MBSR and its effects on different elements of stress in various groups. In the majority of studies, the 8-week MBSR program developed by Kabat-Zinn (2003) has been the form in which MBSR training has been delivered. These studies provide support for the effectiveness of MBSR in reducing or managing stress in program participants. However, there is less research focusing on brief or shortened versions of the original program as developed by Kabat-Zinn (2003). Of the studies located, Carmody and Baer (2009) discovered that MBSR-B interventions of varying lengths can have similar effects on stress as Kabat-Zinn's (2003) 27.5 hour/8-week program. Some of these studies involved programs of 28 hours (Williams, Kolar, Reger, & Pearson, 2001), 26 hours (Carmody & Baer, 2008), 20 hours (Shapiro, Bootzin, Figueredo, Lopez, & Schwartz, 2003), and 6 hours (Klatt et al., 2008). Understanding the potential of MBSR-B from the literature coupled with the extreme academic demands of

after-degree nursing programs, it might follow that a MBSR-B intervention study with after-degree nursing students may be warranted.

Brief MBSR interventions offer the advantage of decreased training time, which, if effective at reducing stress, may represent a more efficient way for participants to access the benefits of MBSR. Given that after-degree nursing students have little spare time in their extremely busy academic program, MBSR-B may be a promising avenue for educators looking to incorporate stress management into nursing curriculums.

Conclusion

Upon reviewing the literature surrounding the use of mindfulness techniques to decrease stress among after-degree nursing students, it was discovered that there was little to no research done in this area. Much data were found indicating high levels of stress in after-degree nursing students as a result of their educational programs, with little information provided in regards to support for stress management practices with this group. Further, the studies presented have shown that mindfulness techniques are proven to be beneficial for other groups, including nurses, in reducing the effects of stress both in the workplace and in life in general. With this understanding, I believe there is a definite need to look at the effects of a mindfulness-based stress reduction intervention in after-degree nursing students using a purely qualitative design.

CHAPTER THREE

After-Degree Nursing Students' Experience of a Brief Mindfulness-Based Stress Reduction Intervention

Nursing students experience stress from the demands of their education (Beck et al., 1997; Sawatzky, 1998). This stress arises from long periods of study involving difficult content, experiences of emotionally sensitive topics, and high-pressure clinical situations (Beck & Srivastava, 1991). While students in 4-year nursing programs experience stress, nursing students in after-degree programs, usually two years in length, experience even more stress (Cangelosi, 2007; D'Antonio et al., 2010; Kohn & Truglio-Londrigan, 2007; Reeve et al., 2013; Shiber, 2003; Utley-Smith et al., 2007; Vinal & Whitman, 1994). Despite numerous recommendations supporting stress management with after-degree nursing students, little has been done in this regard (Galbraith & Brown, 2011). The research question addressed in this paper is, "what are the experiences of after-degree nursing students of a brief mindfulness-based stress reduction intervention?"

Literature Review

Previous studies have mostly explored the prevalence of stress and its effects on nursing students, rather than offering suggestions for stress management. Personal characteristics and strategies, such as hardiness (Goff, 2011; Jameson, 2012; Sawatzky, 1998), self-efficacy (Gibbons, 2010; Gibbons et al., 2011), avoidance (Gibbons, 2010; Gibbons et al., 2011), and social support (Decker & Shellenbarger, 2012; Gibbons, 2010; Reeve et al., 2013), have all been aspects of stress management in nursing students. Reeve et al. (2013) examined stress management practices of after-degree and 4-year

nursing students, and while effective and non-effective practices were identified, the study did not provide alternative methods for managing stress. While the identification of existing stress management practices is important, Galbraith and Brown (2011) found providing relaxation training and teaching about perception of stressors was also effective in managing nursing student stress.

Mindfulness-based stress reduction (MBSR) was developed by Kabat-Zinn (2003) and has been found to be effective in stress management. In studies with nursing students, MBSR reduced stress, anxiety, anger, and depression and increased their ability to cope with stressful events (Beddoe & Murphy, 2004; Chen et al., 2013; Kang et al., 2009; Linden et al., 2001; Moscaritolo, 2009; Shields, 2011; Shirey, 2007, Song & Lindquist, 2015). Recommendations from the authors of these quantitative studies included qualitative designs and intervention studies in relation to this topic (Goff, 2011; Shields, 2011). A search of literature pertaining to after-degree nursing students' use of a mindfulness-based intervention yielded only one quantitative study (Shields, 2011). Therefore, I hypothesized that conducting a qualitative study using a brief mindfulness-based stress reduction (MBSR-B) intervention to help manage stress in this group would help address the existing gap in understanding of the experience of MBSR in after-degree nursing students. However, given the accelerated delivery of after-degree programs and students' tight scheduling, a shortened version of the MBSR program may be more appropriate for students.

The effectiveness of the traditional 8-week MBSR program developed by Kabat-Zinn (2003) was well-established in the literature; however, less study has been devoted to the effectiveness of different adaptations to the original program. Some studies related

to effectiveness of different MBSR-B interventions found similar effectiveness measures for programs of 28 hours (Williams, Kolar, Reger, & Pearson, 2001), 26 hours (Carmody & Baer, 2008), 20 hours (Shapiro, Bootzin, Figueredo, Lopez, & Schwartz, 2003), and 6 hours (Klatt et al., 2008). In other words, shorter adapted MBSR-B interventions seem to be as effective as the traditional 8-week Kabat-Zinn program (Carmody & Baer, 2009). These findings suggest the number of training hours of an MBSR-B program may not have a great impact on positive participant outcomes. In keeping with these findings, this study incorporated an 8-hour MBSR-B intervention adapted from Kabat-Zinn's original 8-week program.

Managing stress using a mindfulness-based intervention fit with the theoretical framework of coping as developed by Lazarus and Folkman (1984). According to this theory, stress management resources are crucial for the effective minimization of the negative effects of stress. Therefore, the conceptual framework for this study included providing after-degree nursing students with a resource to improve their ability to minimize the effects of stress.

Methods

Given the nature of experience with MBSR-B being complex and personal, a qualitative methodology was selected for this study. More specifically, qualitative evaluation was used, as it allows the researcher to gather information about a specific program/intervention, determine the effectiveness, and provide recommendations for future implementations (Patton, 2002)

Research Design

A qualitative evaluation design was used to explore after-degree nursing students' experiences of an MBSR-B intervention. This method involved understanding participant perspectives and experiences through collecting and analyzing their descriptions of events, interactions, or programs, while being context-specific, with no intention of generalizing the findings (Patton, 1980, 2002). Based on two 4-hour training sessions followed by four weeks of daily practice, participants described their experiences of the MBSR-B intervention in individual semi-structured interviews.

Participants

According to Galbraith and Brown (2011), after-degree nursing students are more likely to experience the highest level of stress during their final medical/surgical practice rotation. Consequently, a purposive criterion sampling strategy was used to obtain a sample representative of the target population (Liamputtong, 2013). Four females and one male student were recruited through classroom presentations, where a description of the intervention was provided. Participants were between the ages of 25 and 34, with three participants being between 25 and 29 years of age. Inclusion criteria consisted of enrollment in a Bachelor of Nursing after-degree program, in the final medical/surgical practice rotation, and no previous experience with MBSR.

Setting

The study was conducted at a university in Southern Alberta, Canada. A room was arranged at the researcher's university to provide consistency and a suitable environment for both the MBSR-B training and the interviews. Following the training, participants practiced MBSR daily for four weeks. Without a designated setting or time

for the personal practice, participants were able to practice the techniques to fit their preferences and schedules.

MBSR-B Intervention

A modified mindfulness intervention was adapted from the 8-week MBSR program of Kabat-Zinn (2003). Participants received two 4-hour mindfulness training sessions separated by seven days. Separating the intervention sessions allowed participants to practice the techniques learned in the first session and then bring questions and concerns to the second session. Details of the MBSR-B program can be obtained by contacting the author. The content of the intervention was developed and delivered by a qualified instructor with 10 years of experience teaching mindfulness, who had completed the official 8-week MBSR training developed by Kabat-Zinn. Following the sessions, participants were asked to practice mindfulness (i.e., any combination of sitting, yoga, and body scan) for 30 minutes per day for a 4-week period and track their practice.

Data Collection

Data were generated through individual digitally-recorded semi-structured interviews four weeks following the completion of the MBSR-B intervention. This allowed time for the participants to practice the mindfulness techniques and evaluate aspects of the intervention, including their personal practice. Examples of interview questions can be found in Appendix B. Interviews were transcribed verbatim by a transcriptionist, who had signed a confidentiality agreement (see Appendix C).

Data Analysis

Thematic analysis, as described by Braun and Clarke (2006), was done using NVivo 10 software. Following the reading of each for accuracy and familiarity, the

transcripts were analyzed line by line, and codes were applied to significant statements. The resulting codes were then divided into groups of similarity and re-coded as potential themes. Finally, themes were identified from further analysis of the coded groups considering their fit with the study.

Ethical Considerations

Ethics approval was received prior to the study from the Human Subject Research Committee at the researcher's university (Protocol #2014-063). Since the researcher is an instructor at the participants' university, the researcher's teaching assignment was modified in such a way as to not be the instructor for any of the participants for the duration of the study. Participation in the study was voluntary, with the option of withdrawing at any point. However, no participants withdrew from the study. Consent was received in writing following the classroom recruitment presentations and was verified prior to each of the MBSR-B training sessions and the individual interviews. Support was offered to participants in case the study caused stress. Use of pseudonyms ensured participant anonymity. Data management included deletion of digitally-recorded interviews following transcription and storage of all research documents in locked cabinets and password-protected computers for a 5-year period, after which time, all will be destroyed/deleted. The transcriptionist signed a non-disclosure agreement prior to receiving recorded interviews (Appendix C).

Results

The qualitative data analysis resulted in three main themes and six subthemes, which included the following: (a) personal learning styles, with subthemes of intervention effectiveness and attaining competency; (b) levels of comfort with emotional experience,

with subthemes of positive outcomes with mindful inquiry into experience and negative outcomes with mindful inquiry into experience; and (c) it was good to have a group, with subthemes of accountability and ability to share.

Personal Learning Styles

People have different approaches to learning, which resulted in some participants having differing views of the intervention. These views differed in both in terms of the structure of the training sessions (i.e., number of hours and scheduling) as well as the level of competency attained during the 4-week home practice.

Intervention effectiveness. Some participants noted how the sessions had a “good pace” and that if the information delivered during the intervention was spread over more days, the sessions “wouldn’t have maintained my interest as much.” One participant, Christy, summed up the positive support for the training session structure by stating, “I felt like it was a totally appropriate amount of time. I feel like one session wouldn’t have been enough but two was good.” These statements reflected the effectiveness of both the number of hours required for the sessions and the amount of information delivered in each session. The learning style of these participants matched how the sessions were structured.

Given the importance of the number of training hours, most participants felt delivering the content over two sessions was preferable from a scheduling perspective. When asked about spreading the hours out over several sessions, Alexandra stated, “I would rather have two really condensed days than have to give up another Saturday.” The importance of having the sessions fit their schedule was nicely summed up by Christy when she said, “For what you are trying to accomplish with students it’s kind of

necessary. If we had to come once a week for eight weeks, I would not have done it.”

While most felt the structure was effective, not all participants felt the same.

One participant, Katie, felt the structure and scheduling of the sessions could have been more effective: “I almost wish the sessions were shorter, and there was more of them.” Katie was stating her learning style is such that she prefers smaller amounts of information, in this case MBSR techniques, to internalize and develop before moving on to the next technique. Katie described her ideal scenario as follows: “I like to set goals. We’re going to do this technique for a week, and then we’re going to meet, learn a new one, and then do that one for a week.” Katie also stated that this type of structure would help her fit the home practice into her schedule: “If I had an entire week to just work on sitting, it might have been a little bit easier to fit into my schedule.” Katie’s learning style was such that frequent shorter sessions would have been more effective for her learning as well as scheduling.

Attaining competency. Having the ability to be mindful for any length of time is difficult. Frustration occurs when a person tries to focus on something only to find their mind wanders and they lose focus. Most participants found it most difficult to attain competency at sitting meditation. As a consequence, only two out of the five participants practiced sitting meditation consistently over the 4-week practice period as noted from the home practice records. Those who experienced difficulty were perhaps not able to focus their minds for any considerable amount of time and, as a result, felt time went slow. Christy echoed this idea by saying:

I did the sitting meditations as well. At first, they were very difficult, just the length of time. I would set my timer first for 10 minutes, and I would realize after five minutes I was thinking, “Oh my gosh isn’t this over yet?” I would look at the clock and it wasn’t.

Christy was not alone in her feelings of frustration with time moving slowly. Adding to this idea, Katie commented:

I was trying to make myself as quiet and calm as possible, but I was still kind of fidgety. I thought about what I was going to do that day. Then I thought how much time had passed. Had it been 10 minutes yet? It took a while for me to be able to sit down and shut my brain off.

Interestingly, despite Christy's initial difficulties, she was able to successfully incorporate mindfulness into her daily life: "I think when I'm trying to be more mindful of what I'm doing, when I have less mental distraction, the time actually does seem to go faster." Another participant, Smith, also felt decreased mental distraction following mindfulness practice. The benefit for him was being more organized at work.

Levels of Comfort with Emotional Experience

Mindful inquiry into experience was meant to bring awareness to both positive and negative thought processes. This was accomplished using the RAIN (Recognize what is happening; Allow things to be as they are; Investigate with kindness; Rest in awareness) meditation (Brach, 2013) and the Taking in the Good meditation (Hanson, 2013). The RAIN meditation involved becoming aware of feelings that surfaced after participants focused on a negative hypothetical scenario, while the Taking in the Good meditation allowed feelings to emerge from focusing on a positive hypothetical scenario. Participants experienced self-discovery in understanding how thoughts made them feel and how they reacted to both positive and negative thoughts. This understanding helped with recognizing and allowing negative thoughts to remain as they are and returning to the focus of attention. Moreover, being able to take in the good from positive thoughts without getting distracted by them is also important. While some participants had a positive experience with the inquiry-based meditations, others had a negative experience.

Positive outcomes with mindful inquiry into experience. The participants who had positive outcomes with mindful inquiry into experience acknowledged that the activities were difficult. They felt the challenge of self-discovery during Brach's (2013) RAIN meditation, but were able to also see the benefits of the practice. One participant, Dawn, openly welcomed the practice:

I think I may be the only one that really loved the second day with more focused [mindful inquiry into experience] meditations. I really loved that. I know there was quite a resistance from the others with that just because it was uncomfortable, but I really liked the uncomfortable.

Dawn's openness and ability to cope with negative feelings that arose during the RAIN meditation, as well as her recognition of value in the often uncomfortable practice of self-discovery, may have related to the timing of the study:

I'm tremendously thankful. It was put in front of me at the exact time in my life when I needed it. It was tremendously helpful, especially since I'm going through all these changes. So it was just a wonderful thing for me. It was a great experience.

Katie also experienced difficulty with the mindful inquiry into experience during the RAIN meditation, but she too was able to recognize the benefit, despite feeling uncomfortable. She decided her feelings warranted further exploration:

I shut down a lot during the introspection part. It made me realize it was actually helpful at the same time because I found myself very uncomfortable with it, and then I started looking at myself. Why am I uncomfortable with it? It actually led me to go to Counselling Services and discuss why I have issues with feelings.

Katie also described the challenge of mindful inquiry into experience as being "much harder to focus on something when you know that it's scary; you know that it's difficult."

Dawn and Katie both felt they benefitted from exploring their responses to negative thoughts.

Negative outcomes with mindful inquiry into experience. Some participants found value in the discomfort brought on by the mindful inquiry into experience of negative thoughts, and it would seem logical that this would also be consistent with inquiry into positive thoughts. However, Alexandra did not share this sentiment:

Reflecting on a time that you felt powerful or a time that this or that was kind of a cool exercise, but it's probably not something I would personally do again just because I didn't find that as beneficial.

Further, Alexandra felt mindful inquiry into experience when visualizing a positive scenario during the Taking in the Good meditation (Hanson, 2013) actually “caused more stress,” which may also have contributed to her feeling she did not gain much from them. However, Alexandra was not the only participant who felt little value in the Taking in the Good meditation. Interestingly, Christy, who stated she thought the mindful inquiry into experience “was good” also experienced little value in the way of personal benefit: “It probably wasn't the most valuable part of the sessions for me.” While not totally discounting the activity, it was obvious that both Alexandra and Christy felt there was little value for them from the Taking in the Good meditation.

It Was Good to Have a Group

Experiencing an MBSR-B intervention and practicing in a group setting was beneficial for after-degree nursing students in this study. Many felt a group setting created a sense of accountability and purpose, which helped to maintain focus during the various techniques (e.g., sitting meditation). Further, participants felt sharing experiences with introspective meditations was easier when part of a group.

Accountability. While some participants felt the group setting was beneficial, they were often unable to provide the exact reason. Christy supported this by saying, “I

don't know why, it just seems easier when more people are doing it. Maybe because you're all focused on the same thing." After further discussion, Christy added:

I've heard that it is good to meditate in a group, and I did find that true in my experience. I'm not exactly sure what it is. If I'm by myself, I'm more tempted to just get up and go do something else. Whereas, if I'm with a group of people, obviously I'm not going to do that. I'm there for a purpose.

Christy's view that the group provided purpose to sessions was also supported by Katie, who stated,

I was prepared for those days. I had my blanket, my pillow, and this is what I'm going to be doing today. We're going to be meditating. So I didn't really have as many issues shutting my brain off because I knew that's what I've dedicated today for.

Adding to her feelings of dedication and accountability, Katie noted the group setting decreased feelings of awkwardness when she said, "I think it was good to have a group of people. I think that was more effective than if it was a one-on-one thing." Despite having difficulty describing why she felt the group setting was beneficial, Katie provided an interesting observation by stating, "It worked well. I really enjoyed the stretching meditation and the sitting meditation when someone else was watching me." She went on to explain that having someone watch her helped her to stay focused, perhaps echoing the earlier statements from Christy about accountability to the group. Katie also felt that the group setting assured her that she was "doing it right."

Ability to share. Participants felt the sharing of feelings with the group was not affected by the size of the group. When speaking of group size, Christy felt that "it probably would have been okay even to have more people." Katie supported this by saying, "I think a little bit of a larger group would be completely fine." While these

participants liked the group setting and felt the size could have been larger without any negative effect, some felt differently.

Even though Smith felt comfortable with the size of the group in this study, when asked about having a larger group, he said, “The problem with a bigger group is sometimes people are more hesitant to share.” Curiously, he quickly added, “However, if I heard somebody sharing maybe that would also prompt me to want to share too.” Smith simultaneously described advantages and disadvantages to both larger and smaller groups, which is valuable in planning MBSR sessions with after-degree nursing students.

Likely, the most salient comment about group size in relation to ability to share feelings came from Dawn:

I think it would have worked with a larger group. I think you would have had the same dynamics; you would have had people like myself very open to sharing the experiences, and some people that were more resistant. I think 5 or 25 participants; you would have got the same result.

Discussion

Many studies supported using MBSR to manage stress in nursing students; however, the majority of these were quantitative, and the use of MBSR or MBSR-B with after-degree nursing students was limited (Beddoe & Murphy, 2004; Chen et al., 2013; Kang et al., 2009; Linden et al., 2001; Moscaritolo, 2009; Shields, 2011; Shirey, 2007; Wolf, Warner Stidham, & Ross, 2015). Therefore, a qualitative approach to understanding the experiences of after-degree nursing students during an MBSR-B intervention is a valuable addition to the existing body of knowledge in this area.

For the participants in this study, the MBSR-B intervention was largely perceived as beneficial, even though not all aspects of it were optimal for each member of the group. While preferences for structure, scheduling, and techniques may have differed,

participants all reported satisfaction with some aspect of the intervention. The levels of comfort with emotional experience related to mindful inquiry and sharing experiences and feelings with others in the group varied among participants, but this was to be expected and should not be considered a drawback to offering MBSR-B training, as MBSR was intended to be delivered in a group setting, with sharing as a key component (Cohen-Katz et al., 2004; Kabat-Zinn, 2003). Despite some participants feeling uncomfortable with certain aspects of the intervention, offering stress management skills to after-degree nursing students should be a priority, and therefore, it should be included as a part of the curriculum (Beddoe & Murphy, 2004; Gibbons et al., 2009, 2011; Goff, 2011; Linden et al., 2001; Reeve et al., 2013; Shields, 2011; Yildirim, Karaca, Acikgoz, & Akkus, 2017).

Implications

In terms of the structure and scheduling of the MBSR-B intervention, the data suggested that appropriate planning was done. As a result, the delivery of the intervention was a good fit for this student group. This may provide support for nursing educators in providing MBSR-B interventions for stress management in after-degree nursing programs, as it highlights key aspects for consideration when planning MBSR-B interventions. Of particular importance is that group size was not viewed as inhibitory to intervention effectiveness, which would allow this type of stress management support to be easily incorporated into the nursing curriculum. Also, having a reasonable time commitment such that it was easily incorporated into the participants' schedule was a key element, as this element has been shown to reduce participation in MBSR programs where the time commitment was unmanageable (Chang et al., 2004). Moreover,

shortened versions of MBSR interventions may be more appropriate for health care professionals given their busy schedules (Burton, Burgess, Dean, Koutsopoulou, & Hugh-Jones, 2017). Again, this may inform future planning and delivery of MBSR-B sessions with after-degree nursing students.

This type of evaluation research is valuable to both educators and after-degree nursing students, as both groups have an interest in student stress management (Rossi, Lipsey, & Freeman, 2004). Moreover, evaluating a brief MBSR-B intervention provides insight into the appropriateness of this type of support being offered as part of an after-degree nursing program.

Limitations

The qualitative data collected were specific to individual participants and were not meant to form a basis for generalizability. The response of future after-degree nursing students to MBSR interventions may not reflect those of this study's participants; however, the themes discovered may be helpful in understanding the impact that this type of intervention could have on this population.

Even though the sample was small, the personal accounts and rich description of experiences are what make small sample sizes appropriate for qualitative research (Creswell, 2013). Although data saturation may not have been achieved due to this small sample (Liamputtong, 2013), distinct themes were discernable from the data, which may negate the need for data saturation in this instance.

Lastly, given this study included both an intervention and an interview process, the time commitment participants needed to make may have negatively impacted recruitment. As a result, careful attention is required when developing the intervention,

expectations for practice during the study, and the interview schedule. Similarly, the goal of the study was to support stress management; however, there was a risk of increasing stress for participants from the time commitment, skill acquisition, or lack of positive results. Consequently, support for participants experiencing stress as a result of the study was offered.

Evaluating a brief MBSR-B intervention may support stress management in after-degree nursing students as it does with 4-year nursing students (Beddoe & Murphy, 2004; Chen et al., 2013; Kang et al., 2009; Linden et al., 2001; Moscaritolo, 2009; Shields, 2011; Shirey, 2007). While elements of interventions may not equally benefit all participants, this study has suggested that offering after-degree nursing students support for stress management is worthwhile. Therefore, consideration of intervention content is crucial for future planning.

CHAPTER FOUR

Evaluating the Effects of a Brief Mindfulness-Based Stress Reduction Intervention on the Experience of Stress in After-Degree Nursing Students

The high levels of stress that after-degree nursing students experience has been well documented (Beck et al., 1997; Sawatzky, 1998). This stress has often been attributed to the type of work the students are exposed to in their educational training (Beck & Srivastava, 1991). Even though students in 4-year nursing programs experience the same demands as after-degree nursing students, after-degree students experience greater stress due to the condensed and accelerated nature of their programs (Cangelosi, 2007; D'Antonio et al., 2010; Kohn & Truglio-Londrigan, 2007; Reeve et al., 2013; Shiber, 2003; Utley-Smith et al., 2007; Vinal & Whitman, 1994). While the need to provide assistance with stress-management for after-degree nursing students was recognized, there has been little research done in this area (Galbraith & Brown, 2011). The research question addressed in this paper is, "what are the effects of a brief mindfulness-based stress reduction intervention on the experience of stress in after-degree nursing students?"

Background

Early studies have mainly investigated the occurrence of stress, its effects, and how these effects are impacted by specific intervention techniques in the nursing student population (Galbraith & Brown, 2011). Elements of stress management that nursing students have been found to use include personal traits, such as hardiness (Goff, 2011; Jameson, 2012; Sawatzky, 1998), self-efficacy (Gibbons, 2010; Gibbons et al., 2011), and approaches like avoidance (Gibbons, 2010; Gibbons et al., 2011) and social support

(Decker & Shellenbarger, 2012; Gibbons, 2010; Reeve et al., 2013). Galbraith and Brown (2011) found providing relaxation training and teaching about perception of stressors was also effective in managing nursing student stress. Reeve et al. (2013) examined stress management practices of after-degree and 4-year nursing students. While stress management practices were identified, the authors provided no alternative methods for managing stress.

John Kabat-Zinn (2003) developed MBSR as a way to manage stress. Previous studies investigating MBSR with nursing students found MBSR reduced stress, anxiety, anger, and depression and increased their ability to cope with stressful events (Beddoe & Murphy, 2004; Chen et al., 2013; Kang et al., 2009; Linden et al., 2001; Moscaritolo, 2009; Shields, 2011; Shirey, 2007; Song & Lindquist, 2015). The authors of these mainly quantitative studies recommended qualitative designs and intervention studies dealing with this topic (Goff, 2011; Shields, 2011). Further, only one study was found where mindfulness was used to help after-degree nursing students manage stress (Shields, 2011). Shields (2011) delivered an MBSR intervention (i.e., two 1-hour training sessions followed by 10 minutes/day, five days per week of daily practice lasting four months) to 20 after-degree nursing students. While Shields relied mainly on quantitative data in her study, qualitative data were also collected by means of participant comments about the intervention. Even though the quantitative data showed the intervention had no statistically significant impact on stress, the participant comments indicated the intervention was useful. Given the difference in the findings of the study, Shields determined the sole-use qualitative data may have been more appropriate given the nature of the intervention. Therefore, it was hypothesized that conducting a qualitative

intervention study using MBSR-B to help manage stress in after-degree nursing students would help address the existing gap in understanding the experience of MBSR-B in this population.

So, while the effectiveness of Kabat-Zinn's (2003) original 8-week MBSR program was well-documented in the literature, few studies have focused on the effectiveness of various adaptations to the traditional program. That being said, modified MBSR-B programs of 28 hours (Williams et al., 2001), 26 hours (Carmody & Baer, 2008), 20 hours (Shapiro et al., 2003), and six hours (Klatt, Buckworth, & Malarkey, 2009) were judged by participants to be as effective as those participants who used Kabat-Zinn's original 8-week program. Moreover, shorter adapted MBSR-B interventions have also shown to be as effective as the traditional 8-week Kabat-Zinn program (Carmody & Baer, 2009). This suggested that positive participant outcomes may not be impacted by the number of training hours of an MBSR-B program. This paper will report the findings of an 8-hour MBSR-B program.

Method

Research Design

A qualitative evaluation design was used to investigate the impact of an MBSR-B intervention on the experience of stress in after-degree nursing students. This method involved understanding participant perspectives and experiences through collecting and analyzing their descriptions of events, interactions, or programs, while being context specific with no intention of generalizing the findings (Patton, 1980, 2002). Based on two 4-hour training sessions followed by four weeks of daily practice, participants described their experience of stress while practicing MBSR-B techniques.

Participants

According to Galbraith and Brown (2011), after-degree nursing students experience the highest level of stress during their final acute care clinical practice rotation. Therefore, a purposive criterion sampling strategy was used to obtain a sample representative of the target population (Liamputtong, 2013). Four females and one male student were recruited through in-class presentations, where the intervention and study were described. Participant ages were between 25 and 34 years. Inclusion criteria consisted of enrollment in a Bachelor of Nursing after-degree program, in the final acute care clinical practice rotation, and no previous experience with MBSR.

Setting

The study was conducted at a university in Southern Alberta, Canada. After the training sessions were completed, participants practiced mindfulness daily for four weeks in any location of their choice. Following four weeks of personal practice, to ensure privacy and confidentiality, participants were interviewed individually in a room at the researcher's university.

MBSR-B Intervention

A modified mindfulness intervention was adapted from Kabat-Zinn's (2003) 8-week/27.5 hour MBSR program. Two 4-hour mindfulness training sessions were delivered to participants. The sessions were separated by seven days, which allowed participants to practice the techniques learned in the first session and then bring questions and concerns to the second session. Details of the MBSR-B program can be obtained by contacting the author. The content of the MBSR-B intervention was developed and delivered by an experienced instructor who completed the official 8-week MBSR training

developed by Kabat-Zinn and who had 10 years of experience teaching mindfulness.

Upon completing the training sessions, participants were asked to practice mindfulness for 30 minutes per day for a 4-week period and track their practice.

Data Collection

Data were generated through individual digitally-recorded semi-structured interviews conducted by the researcher four weeks following the completion of the MBSR-B intervention. Interviews lasted between 45 and 90 minutes. Examples of interview questions can be found in Appendix B. Interviews were transcribed verbatim by a transcriptionist.

Data Analysis

NVivo 10 software was used to conduct a thematic analysis (Braun & Clarke, 2006). After reading each transcript for correctness and understanding, the transcripts were analyzed line by line. Important statements and/or words became codes. Codes were then grouped according to similarity and re-coded as potential categories. Categories were then collapsed based on similarity. Lastly, the theme “self-awareness” was identified as linking the categories that captured the participants’ experiences of the MBSR-B intervention.

Ethical Considerations

Ethics approval was received prior to the study from the Human Subject Research Committee at the researcher’s university (Protocol #2014-063). The researcher did not instruct any of the participants for the duration of the study. Participation in the study was voluntary, and participants could withdraw at any time. However, all participants completed the study. Written consent was provided following the classroom recruitment

presentations. Consent was further obtained prior to each MBSR-B training session and the individual interviews (Appendix A). Participants were offered support in the form of contact information for counselling services on campus in the event that the study caused increased stress. Pseudonyms were used to ensure participant anonymity. Data management involved deletion of recorded interviews following transcription and storage of all research documents in locked cabinets and password-protected computers. Destruction/deletion of all documents will occur after a 5-year period has elapsed. Prior to receiving any recorded interviews, the transcriptionist signed a non-disclosure agreement.

Results

Qualitative data analysis generated four categories: (a) hitting a reset button, (b) self-compassion, (c) avoiding a downward spiral, and (d) using an internal coping mechanism. These categories are linked by a theme of self-awareness; the development of which has been supported through neuroscientific studies in individuals following mindfulness practice (Vago, 2013; Vago & Silbersweig, 2012).

Hitting a Reset Button

Participants found they were able to use a personal reset button that helped them change their perception of a stressful experience into a positive one. Moreover, participants also felt they were more able to recognize elevated stress levels, which prompted the use of a personal reset button. Some participants noted how hitting an internal reset button made them “feel a lot calmer” (Katie). After realizing they were stressed, they understood that while the stress was still there, shifting how they were

thinking allowed them to take a brief break from the stressful situation and approach it with a new outlook. Katie described her experience in this way:

It is like we are going to press reset. We are going to start off fresh and brand new, and are going to tackle all those issues again; but we are going to try it a little differently. The stressors are still there. They exist. We are just going to take a break, reset, and try it again. It is like I have a new plan. We are going to get this done and it is not going to be a big deal.

Katie's comment clearly showed how she was able to recognize her stress and consciously change her perception of that stress. By starting off with a new mindset, Katie was attempting to work through the situation that was previously causing her stress. This also created a sense of hope: "It took a minute to clear my mind, and then I felt like I have this. This is possible. I can do this" (Katie). The short break from the stressor benefitted Katie. Christy echoed this sentiment as she described a clinical situation:

There was one day that I forgot to give my patient his heparin shot because for some reason I thought it was scheduled for 2100, but it was actually scheduled for 1700. My clinical instructor pointed out to me that it was an hour late and I felt terrible. It was a once a day heparin shot, but if this had been last year or even a few semesters ago I would have felt awful, and I would have felt that my clinical instructor thought I was an incompetent nurse. Actually, at first I felt so stupid and should have been better organized. Then, I stopped and told myself it is okay. My instructor does not think I am stupid. I am not a terrible nurse. I realized I was panicking and that I did not need to be. I was able to just sort of let it go.

Much the same as Katie's realization of being negatively affected by a stressor, Christy also showed how she was able to recognize her negative thought pattern related to the situation and shifted her perception to a more positive outlook.

Self-Compassion

Some participants felt an increased sense of self-compassion and acceptance in their clinical practice and were better able to accept their capabilities and limitations. Rather than focusing on the feelings of inadequacy related to their experience or skill

levels in difficult situations, participants found they were able to recognize their stressful thoughts and opt to view the situation from a different perspective. This was effectively described by Dawn as she described her self-talk:

I was constantly telling myself that I was inadequate and needed to do other things. Now I feel like I have less judgement and more acceptance. I say to myself, "You are doing the best you can right now with your current knowledge base; with your current experience. You need to be easier on yourself. You need to chill out. You need to do the best you can for your patients and for you." I felt like I had a more nurturing relationship with myself.

It was evident from Dawn's comments that she was typically very critical of her performance, to the point where she found stress as a result of perceived inadequacy.

Feeling inadequate when not performing to a specific level was also common to Christy prior to practicing MBSR-B:

I have always been one of those highly over-achieving people. If I do not get an A on something it ruins my day. It has been easier for me to step back and say, "So what if you did not get an A on this. You got a B, and that is fine. You are not going to fail. You are still a good nurse."

Both Dawn and Christy's comments indicated they have a more accepting attitude toward themselves and their clinical practice after realizing the presence of negative thoughts and deciding to view the situation from a different perspective. The resulting positive attitude had a direct impact for Dawn, not only in her feelings toward herself, but also in her clinical practice:

I had a couple of really stressful days in clinical last week. I found myself actually removing myself from the patient's room and taking a few deep breaths. I was quite overwhelmed because of a heavy patient load, and I didn't feel like I was able to catch up. I felt frantic. I literally took a step back and gave myself a few minutes to say, "You are human. You are learning. It is okay." I really found this was beneficial to my patient interactions.

The realization of stress coupled with the approach of taking time to be accepting of herself allowed Dawn to perceive herself as being a more effective student nurse.

Avoiding a Downward Spiral

Most participants felt they were able to detect and deal with stress as it was happening, rather than letting it build and get out of control and becoming “whirl-windy and frantic” (Dawn). This early recognition seemed to help reduce the overall impact of stress on participants, as they were “more present and able to cope with stressors as they arrive” (Dawn). They were also more proactive in dealing with stress “as it is happening, as opposed to a reflective process” (Alexandra). Katie noted how it felt for her: “It is like I am catching myself before I completely go into a downward spiral. It is like I tell myself, ‘Oh, wait. Stop. Think this through.’ This allows me to keep going.” Similar to Katie’s ability to realize that she needs to pause and reflect on a specific situation, Smith provided detail into how he avoids a build-up of stress: “I find a way of talking to myself so that I do not get worked up, because I tend to do that.” Smith’s comment seems to indicate that he often experiences increased stress as a direct result of his thoughts perpetuating the stressor and his reaction to it. The importance of moving past the stress before it becomes more problematic was discussed by Alexandra:

It definitely reduces my stress. Before, I would not really think about it and would allow it to build and build until it just blew up, and then I would move on from it. Whereas now I do not let it build and build. I just think about it and realize there is nothing I can do but to move on.

Once Alexandra recognized and accepted her stress, she was able to effectively deal with it using MBSR-B techniques, which decreased the length of time she experienced the negative effects of stress:

I am more aware of the stress when I have it. I can use these little tricks to help deal with stress when it first arises, as opposed to letting it get bad, and then having a week of really bad stress.

Further, Alexandra felt MBSR-B techniques helped her to avoid reoccurrence of stress related to previous events that she had worked through. This may indicate how past stressors as well as new stressors can influence after-degree nursing students:

There were numerous times where I know my anxiety would have become worse and worse. I probably would have hyper-analyzed it into the next day or two afterwards. However, because I thought about it at the time and worked through and dealt with it, I would start to think about it again later and then tell myself, "You have already dealt with this, so do not start thinking about it again." I know this would not have happened before.

Using an Internal Coping Mechanism

Some participants noted how their prior use of external coping mechanisms for stress management was less frequent after learning how to use the internal methods that MBSR-B techniques offer. MBSR-B provided the opportunity to deal with stress anytime with no other requirements other than knowledge of the techniques. Moreover, MBSR-B enhanced participants' self-awareness in terms of thinking patterns and how they cope with stress. Katie spoke to the obvious advantage of dealing with stress internally rather than externally: "I do not need a tool or an aid to do it. I do not need any equipment." Given Katie used to go to the gym and work out by lifting weights as an external way of managing her stress, she noticed that the internal method of MBSR-B provided a similar effect in reducing her stress without having to go anywhere and needing any specific equipment. She also noted similarities between the two approaches to stress management:

The external and internal ones are similar because I can concentrate on one thing which allows me to drop everything else. However, this one [internal] I can actually do a lot more by myself. I do not need anything external to help me.

Being able to manage stress internally and by herself seemed to be very important to Katie. Similarly, Dawn described her experience of using an internal coping mechanism rather than external ones:

I am not proud to say this, but I would always use external things to help me cope with stress. I was a smoker a while ago. I would also like to have a couple glasses of red wine. Now, here I am actually having to deal with my stress without using other substances. It was the first time in my adult life that I have actually had to do this.

It seems that Dawn traditionally only ever relied on external stress management practices, but realized MBSR-B offered her an effective and internal way to cope with stress:

I no longer use those external sources. I think it [MBSR-B] has been really helpful because before when I was stressed I would look forward to putting my feet up and having a glass of wine and chill. This was the only way I knew how to [manage stress]. Now, instead of having that glass of wine I have a glass of water and sit mindfully in silence. I give myself the space I need to deep-breathe and it has the exact same effect. This is awesome.

Dawn's specific example may indicate how effective MBSR-B can be, as she began to use it more than her usual external coping mechanism for stress management.

Discussion

The categories of (a) hitting a reset button, (b) self-compassion, (c) avoiding a downward spiral, and (d) using an internal coping mechanism that emerged in this study reflect an overarching theme of self-awareness. Kabat-Zinn (2003) suggested that mindfulness practice aims to enhance a sense of awareness that is present at all times. This awareness would allow one to be more perceptive of thoughts and emotions in different situations, which may lead to the early detection of stress. The early detection of stress through increased self-awareness has been shown to be beneficial in managing stress in nursing students using mindfulness (van der Riet, Rossiter, Kirby, Dluzewska, & Harmon, 2015). In this study, the development of a deeper sense of self-awareness was brought about by the practice of the MBSR-B techniques, which resulted in participants having the capacity to detect and manage their stress more efficiently and effectively. Following the early detection of stress, the participants were able to "hit a reset button,"

indicating they changed their perception of the situation, thus coping with the stress involved. While this effect was greater for some than for others, the sentiment that the learned techniques worked to improve their recognition and dealing with stress was common among the participants. The conscious detection and management of stress demonstrated the self-awareness often associated with MBSR practice (Pipe et al., 2009).

Further, early recognition through increased self-awareness reduced the amount of time some participants were affected by stress. Not dwelling on negative thoughts helped participants prevent the stress from becoming more than it initially was, therefore decreasing the amount of stress experienced. In doing so, stress did not accumulate, and participants were able to “avoid a downward spiral” by dealing with it early. This finding is crucial, as prolonged stress in nursing students during their training may lead to future impairment during their practice (Beck & Srivastava, 1991).

Moreover, MBSR-B offered a way for this negative self-view related to experience or skill level to be recognized through self-awareness and replaced with a more self-compassionate attitude. This helped the participants to be more accepting of their abilities, which had a positive impact on their clinical practice. The development of increased self-compassion is a phenomenon linked with MBSR practice (Birnie, Speca, & Carlson, 2010). Also, having an increased sense of self-awareness allowed participants to use MBSR-B in ways that best suited them and their situation. This is a key finding given the stressful nature of after-degree nursing student academic theory content and unpredictability of clinical practice settings (Beck & Srivastava, 1991). Using MBSR-B techniques situationally to reduce stress in the workplace has also been observed in

nurses and may have a positive impact on patient interactions and outcomes (Foureur et al., 2013; Hunter, 2016).

Overall, the results of this study were consistent with the idea that MBSR teaches people to be more accepting of themselves and less self-critical, which, for nurses, relates to self-care (Cohen-Katz et al., 2004). The significance is that MBSR has led to decreased emotional exhaustion and depersonalization in nurses; both of which are factors related to burnout (Cohen-Katz, Wiley, Capuano, Baker, & Shapiro, 2005). While this study did not examine these specific negative impacts of stress, minimizing the occurrence of burnout in future nurses is important. Given that all participants experienced some benefit from the MBSR-B intervention and associated techniques, providing stress management skills for after-degree nursing students should be a priority and included as a part of the curriculum (Beddoe & Murphy, 2004; Gibbons et al., 2009, 2011; Goff, 2011; Linden et al., 2001; Reeve et al., 2013; Shields, 2011).

Implications

The data suggested that the MBSR-B intervention helped participants manage stress. The findings may assist and provide support for nursing educators in offering MBSR-B interventions as a means to manage stress in after-degree nursing students. While not all participants had the same experience with MBSR-B practice, they all were able to use MBSR-B in ways that were effective for them. This is of particular importance, as MBSR-B seems to be adaptable, which lends itself to being beneficial for all future participants: a shared interest of both nursing educators and students (Rossi et al., 2004). Moreover, providing training with multiple techniques should be considered to allow students to customize their practice and use only those techniques that are effective

at reducing their stress. Given the acknowledgment of stress that after-degree nursing students experience as well as the effectiveness of MBSR-B in this population, further studies exploring MBSR-B interventions as a part of nursing curriculum should be considered. These studies would provide insight into the long-term effectiveness and sustainability of MBSR-B interventions in after-degree nursing programs. Moreover, support for stress management interventions and support in nursing curriculums has been established (Yildirim et al., 2017). Such inclusions in nursing programs may offer a benefit to the nursing work environment and enhance the quality of patient care (Smith, 2014).

Limitations

The participants provided individual qualitative data describing their experiences of practicing mindfulness following an MBSR-B intervention. The experience of other after-degree nursing students to MBSR-B interventions may not mirror those of the participants in this study. However, the categories and overarching theme may provide insight into possible effects for those considering a similar approach to stress management.

While the sample in this study was small, the personal experiences and detailed descriptions allow for small sample sizes in qualitative research (Creswell, 2013). Moreover, the small purposeful sample allowed in-depth investigation and understanding of the effects of MBSR-B on participant stress (Patton, 2002). Data saturation may not have been reached as a result of the small sample (Liamputtong, 2013).

Finally, given this study included an intervention and an interview process, the time commitment required may have had a negative impact on recruiting participants. As

a result, consideration is required when developing the intervention, expectations for practice during the study, and the timing of the interviews. Moreover, the aim of the study was to provide stress management support; however, there was an increased chance of causing stress in participants as a result of the time commitment, skill development, or MBSR-B being ineffective. Therefore, for future studies, support needs to be offered to participants experiencing stress caused by the study.

Evaluating a brief MBSR-B intervention may support stress management in after-degree nursing students as it does with 4-year nursing students (Beddoe & Murphy, 2004; Chen et al., 2013; Kang et al., 2009; Linden et al., 2001; Moscaritolo, 2009; Shields, 2011; Shirey, 2007). While experiences may not have been equal among all participants, the positive impact for all participants in this study suggests that offering support for stress management for after-degree nursing students through the use of an MBSR-B program should be considered.

CHAPTER FIVE

DISCUSSION AND RECOMMENDATIONS

Discussion of Findings

Evidence of the high levels of stress experienced by nursing students is extensive in the literature. Factors such as the amount and type of content delivered and the nature of the clinical experiences in nursing education may contribute to stress in students (Alzayyat & Al-Gamal, 2014; Beck et al., 1997). The accelerated delivery of the program as well as aspects related to socialization into the profession and competence are major factors related to stress experienced by after-degree nursing students (Cangelosi, 2007; D'Antonio et al., 2010; Kohn & Truglio-Londrigan, 2007; Reeve et al., 2013; Shiber, 2003; Utley-Smith et al., 2007; Vinal & Whitman, 1994).

Given the acknowledged existence of stress in after-degree nursing students, there is relevant research related to how these nursing students manage stress. However, there was little research investigating the management of stress in this population using specific stress management interventions (Galbraith & Brown, 2011). The majority of studies located that focused on after-degree nursing student stress management were quantitative by design. Some of these quantitative studies recommended qualitative designs and intervention studies in this same topic area (Galbraith & Brown, 2011; Reeve et al., 2013; Shields, 2011).

When looking at the participants' experience of the MBSR-B intervention, three themes and seven subthemes emerged. The first theme identified was "personal learning styles," with subthemes of "intervention effectiveness" and "attaining competency." This theme relates to whether or not participants felt the intervention was effective and

appropriate for the intended purpose. Understanding that all people have different learning styles, it is not surprising that views on intervention effectiveness differed in this group. Some participants felt the intervention was very appropriate given the purpose of the study as well their busy schedules. Also, the delivery of content over two sessions was sufficient and prevented their loss of interest. The 2-day structure was also identified by some participants as being key to fitting the intervention into their schedules, as one participant would not have participated in the study had it been more than two sessions in length. On the other hand, another participant felt having shorter, more-frequent sessions may have allowed for a better understanding of each technique, resulting in increased competency.

Individual learning styles played a key role in determining the effectiveness of this intervention. This may be explained, in part, by understanding the nature of after-degree nursing students. These students have been shown to be confident in their ability to learn, which may support those who felt two days was ample time to attain competency with the intervention content (Utley-Smith et al., 2007). Conversely, the participant who stated a preference for shorter, more-frequent sessions may have had a desire to perfect the skills being taught during the sessions, which supported D'Antonio et al.'s work (2010).

The second theme identified was “levels of comfort with emotional experience,” with subthemes of “positive outcomes with mindful inquiry into experience” and “negative outcomes with mindful inquiry into experience.” Two guided meditations were used during the intervention to allow participants an opportunity to experience how they react to different situations. The first guided meditation focused on emotional responses

to a negative hypothetical scenario, and the second focused on emotional responses to a positive hypothetical scenario. Participants differed in their level of comfort with these activities, with some feeling uncomfortable experiencing a negative scenario and others feeling uncomfortable experiencing a positive scenario. While four participants found the guided meditation activities to be challenging from an emotional standpoint, only two participants recognized the value in them. These two participants felt the self-discovery and growth they experienced was beneficial to their understanding of how they respond to stress from both negative and positive thoughts. Reflecting on their responses to negative thoughts allowed some participants to have a better understanding of how stress affects them, which, in turn, provided insight into effectively dealing with stress. Interestingly, one participant felt increased stress from the guided meditation focusing on a positive scenario. Moreover, some participants did not find value in exploring their responses to the guided meditations and felt they would not use these techniques.

The third theme identified was “it was good to have a group,” with subthemes of “accountability” and “ability to share.” Participants all felt having the MBSR-B intervention in a group setting was beneficial to the experience. Being part of a group made the members accountable to one another for both being present and attentive during the sessions, which they felt helped them to focus during the difficult activities (e.g., sitting meditation). One participant felt that the group setting allowed her to feel confident she was doing the techniques correctly.

The ability to share feelings and experiences with the group was deemed by most participants to not be affected by group size. In fact, some participants felt a larger group would have produced the same results in terms of feeling comfortable with sharing.

However, while one participant felt the group size did not affect the sharing during the intervention, it was pointed out that a larger group size might inhibit some from sharing.

The effect of the MBSR-B intervention on the experience of stress in the participants was also investigated. In this part of the thesis four categories were generated: (a) hitting a reset button, (b) self-compassion, (c) avoiding a downward spiral, and (d) using an internal coping mechanism. These categories were all linked to a theme of self-awareness—the development of which has been positively correlated with mindfulness following experience with a MBSR program (Birnie et al., 2010).

When managing stress or dealing with a stressful situation, the initial step that must occur is the recognition of the presence of stress. The first category, “hitting a reset button,” relates to the ability of some participants to alter their perception of a stressor after becoming aware of its existence. Early detection of stress, as well as making a deliberate attempt at reframing the situation to view the stressor in a more positive way, effectively reduced the experience of negative stress. Moreover, because the participants felt they were more aware of their thoughts and emotions, they were able to continually monitor their stress level (Richards, Campenni, & Muse-Burke, 2010). As a result, the ability to manage stress may have developed as a result of the MBSR-B intervention. Previous research by Richards et al. (2010) showing how self-awareness and mindfulness tend to increase simultaneously, married nicely with the finding of this thesis work since these constructs are what made “hitting a reset button” possible for participants.

The second category, “self-compassion,” describes some participants’ acceptance of their current level of practice and skills. In the clinical setting, after-degree nursing students tend to worry about their competence, or lack of, which is a cause of stress

(Cangelosi, 2007; Wolf et al., 2015). With this in mind, the development of self-compassion in participants was an important finding, given that these students question their skills and abilities at this time in their education, which was comprised of their last acute care clinical rotation, where they should be honing their skills. By being more accepting of their level of performance in the clinical setting through self-compassion, feelings of inadequacy were minimized, thereby reducing stress. Indeed, for one participant in particular, developing a more accepting and positive approach to her practice allowed her to better connect with patients and meet their health care needs.

The third category that emerged from the data, “avoiding a downward spiral,” describes how participants resisted the tendency to get caught up in negative thoughts. Rather than focusing and fixating on the negative thoughts generated by stressful events, participants were able to detect and address the stressor. In doing this, they did not allow their stress level to build to a point where it would be problematic. Again, this ability was brought about by an increased sense of self-awareness, which not only helped deal with stress in the moment, but also reduced the reoccurrence of stress from previous experiences.

The final category, “using an internal coping mechanism,” highlights the utility of mindfulness and how it can help with stress management in many instances. Some participants noted how they used external resources, like lifting weights and substance use, to manage stress in the past. However, these participants acknowledged that these external sources of coping were not very effective because they are not always readily accessible, and/or when used, they may not be the most-healthy options available. Some participants noted how they benefitted from the instant accessibility of mindfulness when

they required support for stress management, as it relied on internal practices (e.g., focused breathing) to help deal with stressors. Evidence of this may be illustrated by one participant who began using mindfulness more than her usual external means of dealing with stress. Having developed a greater sense of self-awareness, this participant recognized the need to give herself some space and time to focus on her breathing, which provided relief from stressful situations.

Implications

Given this study focused on supporting stress management in after-degree nursing students, the findings may be useful when examining stress in nursing education. Nursing students, particularly after-degree students, are under enormous stress during their education (D'Antonio et al., 2010). Having students experience a stressful education process with little support could have a negative impact on learning and their own health (Wolf et al., 2015). Being unable to manage their own health does not seem to be in congruence with what nursing students are being taught to do in helping their patients, so it may be beneficial to provide supports for them during their education. While Wolf et al. (2015) found self-esteem and social support as variables that affect coping with stress in nursing students, they concluded that stress in nursing students must be addressed. One way to address nursing student stress should involve education focused on managing stress being incorporated into nursing curriculums (Wolf et al., 2015; Yildirim et al., 2017).

Nursing educators may benefit from training related to MBSR-B, how and when it can best be incorporated into their teaching, and what they might expect to experience. In order to address any faculty reservations around mindfulness theory and practice,

information and training sessions including evidence and experiential learning might prove useful. Also, recommendations for incorporation into clinical courses, for example during post-conferences, may provide a basic structure for faculty moving forward with this type of initiative. Moreover, providing faculty with information on dealing with negative student reactions to mindfulness practice would help prepare them for all possible outcomes to this practice. This may come in the form of specific therapeutic communication techniques or standardized follow-up procedures to support both students and faculty. This information would also be best reviewed during faculty information and training sessions.

Stress not only affects nursing students during their education, but also during their professional practice as registered nurses. The impact of stress may develop into nurse burnout related to prolonged stress (Boamah, Read, & Spence Laschinger, 2016). Given self-care is an important aspect of nursing practice, stress management in professional nurses may be an aspect to consider (Richards, 2013). Moreover, research has indicated the potential benefits mindfulness presents for managing stress in health care workers (Burton et al., 2017). Therefore, providing nursing students with knowledge and skills for stress management might allow them to incorporate this practice into their professional nursing roles, resulting in a long and fulfilling career.

Health care organizations may also favour stress management skills being taught to nursing students. Evidence indicated stress and burnout in nurses are factors contributing to negative impacts on patient safety and care (Hall, Johnson, Watt, Tsipa, & O'Connor, 2016). Understanding that stress in nurses can result in risks to patient safety, it has been suggested that self-care practices in nurses should be a professional

expectation (Richards, 2013). With this in mind, the notion of teaching stress management during their education before burnout occurs seems to be a sensible option. Moreover, MBSR-B interventions can offer quick access to effective stress management techniques given the shortened length of training. This may be appropriate for implementation with after-degree nursing students based on the very busy academic schedules that these programs entail. The decreased time to receive the benefits of MBSR-B is valuable for after-degree nursing students as well as for nursing educators. Incorporating MBSR-B as a support for stress management in nursing curriculums may be less of a hardship when considering cost and time constraints. With this in mind, this study may prove useful for educators planning the implementation of MBSR-B into after-degree nursing programs.

Limitations

This study has some limitations. Since the qualitative design produced data unique to each participant, there was no attempt to generalize the findings. That said, the lack of generalizability is not viewed as a drawback in this instance (Creswell, 2013). This study had a small sample size of five participants; however, rich descriptions of experiences were obtained from each participant, which allowed for sufficient data analysis. Therefore, the potential lack of data saturation may be negated in this instance (Liamputtong, 2013). The male gender representation of participants in this study (20%) is lower than the total after-degree nursing student cohort the participants were recruited from (28%). However, the 20% male gender representation in this study is much higher than the 6.6% representation of male registered nurses in Canada in 2011 (Canadian Institute for Health Information, 2013). For greater understanding of male student

experiences with a mindfulness intervention, using purposeful recruitment strategies with the intent of recruiting more male participants may be warranted.

Recommendations

Given the limitations to this study, it may prove useful to conduct similar qualitative intervention studies with larger sample sizes, as this would provide more data and insight into how MBSR-B affects stress in after-degree nursing students. Further, a larger-scale study may also provide evidence of how this type of initiative might fit into a nursing program. Other support for the inclusion of stress management interventions in nursing curriculum might be garnered from a longitudinal study with students who have experienced a similar intervention and have continued (or not) to practice mindfulness in their registered nursing careers.

Conclusion

This qualitative study evaluated the impact of a brief mindfulness-based stress reduction intervention on the experience of stress in after-degree nursing students. The first and last chapters are the introduction and conclusion for the entire study. Chapter 2 has served as a comprehensive literature review of traditional 4-year nursing students, after-degree nursing students, stress and stress management in both student groups, as well as mindfulness-based stress reduction as a means for supporting stress management. In Chapter 3, I examined after-degree nursing students' experience of a brief mindfulness-based stress reduction intervention. In Chapter 4, I focused on participant experiences of a brief mindfulness-based stress reduction intervention for managing after-degree nursing student stress.

The findings suggest that after-degree nursing students thought the intervention was structured and delivered in a way that was manageable for them. Also, participants found the techniques learned from the intervention helped them effectively manage their stress. The findings supported the incorporation of stress management support into nursing curriculum. This type of support offered early in the education of registered nurses may have immediate and long-term effects on the health of those receiving the support, the organizations they will work for, as well as people who these future nurses will manage care for.

Dissemination

While this thesis has served as the first means of research dissemination, there are some other ways I plan to further explore as methods to disseminate the finding of this study. First, each paper in this study (i.e., Chapters 3 and 4) will be further refined and submitted for publication in nursing education journals. Second, I will explore opportunities to present my research at conferences or workshops related to this particular topic and issue. Speaking directly to those interested may result in the findings being incorporated more quickly than by waiting for interested parties to review the work if it becomes published. Given the pervasiveness of stress in nursing students and the potential impacts, discussion prompted by any formal or informal method of dissemination would hopefully bring further recognition of the issue with the goal of having MBSR-B incorporated into nursing curriculum.

REFERENCES

- Alzayyat, A., & Al-Gamal, E. (2014). A review of the literature regarding stress among nursing students during their clinical education. *International Nursing Review, 61*, 406–415.
- Beck, D. L., Hackett, M. B., Srivastava, R., McKim, E., & Rockwell, B. (1997). Perceived level and sources of stress in university professional schools. *Journal of Nursing Education, 36*, 180–186.
- Beck, D. L., & Srivastava, R. (1991). Perceived level and sources of stress in baccalaureate nursing students. *Journal of Nursing Education, 30*, 127–133.
- Beddoe, A. E., & Murphy, S. O. (2004). Does mindfulness decrease stress and foster empathy among nursing students. *Journal of Nursing Education, 43*, 305–312.
- Birnie, K., Speca, M., & Carlson, L. E. (2010). Exploring self-compassion and empathy in the context of mindfulness-based stress reduction (MBSR). *Stress & Health, 359–371*. doi:10.1002/smi.1305
- Boamah, S. A., Read, E. A., & Spence Laschinger, H. K. (2016). Factors influencing new graduate nurse burnout development, job satisfaction and patient care quality: A time-lagged study. *Journal of Advanced Nursing, 00(000)*, 000-000. doi:10.1111/jan.13215
- Brach, T. (2013). *True refuge: Finding peace and freedom in your own awakened heart*. New York, NY: Bantam Books.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3(2)*, 77–101.
- Burton, A., Burgess, C., Dean, S., Koutsopoulou, G. Z., & Hugh-Jones, S. (2017). How effective are mindfulness-based interventions for reducing stress among healthcare professionals? A systematic review and meta-analysis. *Stress and Health, 33*, 3–13. doi:10.1002/smi.2673
- Canadian Institute for Health Information (2012). *Regulated nurses: Canadian trends, 2006-2015*. Ottawa: Author.
- Cangelosi, P. R. (2007). Accelerated second-degree baccalaureate nursing programs: What is the significance of clinical instructors? *Journal of Nursing Education, 46*, 400–405.
- Cangelosi, P. R., & Whitt, K. J. (2005). Accelerated nursing programs: What do we know? *Nursing Education Perspectives, 26(2)*, 113–116.

- Capp, S. J., & Williams, M. G. (2012). Promoting student success and well-being: A stress management course. *Holistic Nursing Practice, 26*(5), 272–276. doi:10.1097/HNP.0b013e318263f32a
- Carmody, J., & Baer, R. A. (2008). Relationships between mindfulness practice and levels of mindfulness, medical and psychological symptoms and well-being in a mindfulness-based stress reduction program. *Journal of Behavioral Medicine, 31*, 23–33.
- Carmody, J., & Baer, R. A. (2009). How long does a mindfulness-based stress reduction program need to be? A review of class contact hours and effect sizes for psychological distress. *Journal of Clinical Psychology, 65*, 627–638. doi:10.1002/jclp.20555
- Chang, V. Y., Palesh, O., Caldwell, R., Glasgow, N., Abramson, M., Luskin, F., Gill, M., Burke, A., & Koopman, C. (2004). The effects of a mindfulness-based stress reduction program on stress, mindfulness self-efficacy, and positive states of mind. *Stress and Health: Journal of the International Society for the Investigation of Stress, 20*, 141–147.
- Charlesworth, E. A. (1981). Stress management skill for nursing students. *Journal of Clinical Psychology, 37*, 284–290.
- Chen, Y., Yang, X., Wang, L., & Zhang, X. (2013). A randomized controlled trial of the effects of brief mindfulness meditation on anxiety symptoms and systolic blood pressure in Chinese nursing students. *Nurse Education Today, 33*, 1166–1172. <http://dx.doi.org/10.1016/j.nedt.2012.11.014>
- Cohen-Katz, J., Wiley, S. D., Capuano, T., Baker, D. M., & Shapiro, S. (2004). The effects of mindfulness-based stress reduction on nurse stress and burnout. *Holistic Nursing Practice, 18*(6), 302–308.
- Cohen-Katz, J., Wiley, S. D., Capuano, T., Baker, D. M., & Shapiro, S. (2005). The effects of mindfulness-based stress reduction on nurse stress and burnout, part II. *Holistic Nursing Practice, 19*(1), 26–35. doi:10.1097/00004650-200501000-00008
- Creswell, J. W. (2013). *Qualitative inquiry and research design: choosing among five approaches* (3rd ed.). Los Angeles, CA: Sage.
- D'Antonio, P., Beal, M. W., Underwood, P. W., Ward, F. R., McKelvey, M., Guthrie, B., & Lindell, D. (2010). Great expectations: Points of congruencies and discrepancies between incoming accelerated second-degree nursing students and faculty. *Journal of Nursing Education, 49*, 713–717. doi:10.3928/01484834-20100831-08

- Decker, J. L., & Shellenbarger, T. (2012). Strategies for nursing faculty to promote a healthy work environment for nursing students. *Teaching and Learning in Nursing, 7*, 56–61. doi:10.1016/j.teln.2010.12.001
- Foureur, M., Besley, K., Burton, G., Yu, N., & Crisp, J. (2013). Enhancing the resilience of Nurses and midwives: Pilot of a mindfulness-based program for increased health, sense of coherence and decreased depression, anxiety and stress. *Contemporary Nurse, 45*(1), 114–125.
- Galbraith, N. D., & Brown, K. E. (2011). Assessing intervention effectiveness for reducing stress in student nurses: quantitative systematic review. *Journal of Advanced Nursing, 67*(4), 709–721. doi:10.1111/j.1365-2648.2010.05549.x
- Gibbons, C. (2010). Stress, coping and burn-out in nursing students. *International Journal of Nursing Studies, 47*, 1299–1309. doi:10.1016/j.ijnurstu.2010.02.015
- Gibbons, C., Dempster, M., & Moutray, M. (2009). Index of sources of stress in nursing students: A confirmatory factor analysis. *Journal of Advanced Nursing, 65*, 1095–1102. doi:10.1111/j.1365-2648.2009.04972.x
- Gibbons, C., Dempster, M., & Moutray, M. (2011). Stress, coping and satisfaction in nursing students. *Journal of Advanced Nursing, 67*, 621–632. doi:10.1111/j.1365-2648.2010.05495.x
- Goff, A. (2011). Stressors, academic performance, and learned resourcefulness in baccalaureate nursing students. *International Journal of Nursing Education Scholarship, 8*, 1–20. doi:10.2202/1548-923X.2114
- Hall, L. H., Johnson, J., Watt, I., Tsipa, A., & O'Connor, D. B. (2016). Healthcare staff wellbeing, burnout, and patient safety: A systematic review. *PLoS ONE, 11*(7). doi:10.1371/journal.pone.0159015
- Hanson, R. (2013). *Hardwiring happiness: The new brain science of contentment, calm, and confidence*. New York, NY: Harmony Books.
- Hunter, L. (2016). Making time and space: the impact of mindfulness training on nursing and midwifery practice. A critical interpretive synthesis. *Journal of Clinical Nursing, 25*(7-8), 918–929. doi:10.1111/jocn.13164
- Irving, J. A., Park-Saltzman, J., Fitzpatrick, M., Dobkin, P. L., Chen, A., & Hutchinson, T. (2012, September 19). Experiences of health care professionals enrolled in mindfulness-based practice: A grounded theory model. *Mindfulness*. doi:10.1007/s12671-012-0147-9
- Jameson, P. R. (2012). *The effects of a hardiness educational intervention on hardiness and perceived stress of baccalaureate nursing students*. (Doctoral dissertation). Retrieved from CINAHL. (No. 2012240194)

- Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice, 10*(2), 144–156. doi:10.1093/clipsy/bgp016
- Kang, Y. S., Choi, S. Y., & Ryu, E. (2009). The effectiveness of a stress coping program based on mindfulness meditation on the stress, anxiety, and depression experienced by nursing students in Korea. *Nurse Education Today, 29*, 538–543. doi:10.1016/j.nedt.2008.12.003
- Klatt, M. D., Buckworth, J., & Malarkey, W. B. (2009). Effects of low-dose mindfulness-based stress reduction (MBSR-ld) on working adults. *Health Education and Behaviour, 36*(3), 601–614. doi:10.1177/1090198108317627
- Kohn, P. S., & Truglio-Londrigan, M. (2007). Second-career baccalaureate nursing students: A lived experience. *Journal of Nursing Education, 46*, 391–399.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, NY: Springer.
- Liamputtong, P. (2013). *Qualitative research methods* (4th ed.). Melbourne, Australia: Oxford University Press.
- Linden, W., Turner, L., Young, L. E., & Bruce, A. (2001). Student nurse health promotion: Evaluation of a mindfulness-based stress reduction intervention. *The Canadian Nurse, 97*(6), 23–26.
- Moscaritolo, L. M. (2009). Interventional strategies to decrease nursing student anxiety in the clinical learning environment. *Journal of Nursing Education, 48*, 17–23.
- “Nursing shortage tipped to hit Canada.” (2015). *Australian Nursing & Midwifery Journal, 23*(2), 29.
- Patton, M. Q. (1980). *Qualitative evaluation methods*. London, England: Sage.
- Patton, M. Q. (2002). *Qualitative research & evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.
- Penprase, B. (2012). Perceptions, orientation, and transition into nursing practice of accelerated second-degree nursing program graduates. *The Journal of Continuing Education in Nursing, 43*(1), 29–36. doi:10.3928/00220124-20110315-02
- Pipe, T. B., Bortz, J. J., Dueck, A., Pendergast, D., Buchda, V., & Summers, J. (2009). Nurse leader mindfulness meditation program for stress management: A randomized controlled trial. *The Journal of Nursing Administration, 39*(3), 130–137.

- Poulin, P. A., Mackenzie, C. S., Soloway, G., & Karayolas, E. (2008). Mindfulness training as an evidenced-based approach to reducing stress and promoting well-being among human services professionals. *International Journal of Health Promotion & Education, 46*(2), 72–80.
- Raines, D. A. (2007). Caring abilities of students in an accelerated program of study: A program evaluation study. *International Journal for Human Caring, 11*(3), 45–49.
- Raines, D. A. (2009). Competence of accelerated second degree students after studying in a collaborative model of nursing practice education. *International Journal of Nursing Education Scholarship, 6*, 1–12.
- Reeve, K. L., Shumaker, C. J., Yearwood, E. L., Crowell, N. A., & Riley, J. B. (2013). Perceived stress and social support in undergraduate nursing students' educational experience. *Nurse Education Today, 33*, 419–424.
<http://dx.doi.org/10.1016/j.nedt.2012.11.009>
- Richards, K. (2013). Self-care is a lifelong journey. *Nursing Economics, 31*(4), 198–202.
- Richards, K. C., Campenni, C. E., & Muse-Burke, J. L. (2010). Self-care and well-being in mental health professionals: The mediating effects of self-awareness and mindfulness. *Journal of Mental Health Counselling, 32*(3), 247–264.
- Rossi, P. H., Lipsey, M. W., & Freeman, H. E. (2004). *Evaluation: A systematic approach* (7th ed.). Thousand Oaks, CA: Sage.
- Sawatzky, J. V. (1998). Understanding nursing students' stress: A proposed framework. *Nurse Education Today, 18*, 108–115.
- Selye, H. (1974). *Stress without distress*. London, England: Hodder & Stoughton.
- Shapiro, S. L., Bootzin, R. R., Figueredo, A. J., Lopez, A. M., & Schwartz, G. E. (2003). The efficacy of mindfulness-based stress reduction in the treatment of sleep disturbance in women with breast cancer: An exploratory study. *Journal of Psychosomatic Research, 54*, 85–91.
- Sheil, E. P., & Wasseem, R. (1994). Thoughts of college graduates in a nursing baccalaureate program. *Journal of Nursing Education, 33*, 89–90.
- Shiber, S. M. (2003). A nursing education model for second-degree students. *Nursing Education Perspectives, 24*(3), 135–138.
- Shields, L. R. (2011). *Teaching mindfulness techniques to nursing students for stress reduction and self-care* (Unpublished doctoral dissertation). St. Catherine University, Minnesota.

- Shirey, M. R. (2007). An evidence-based solution for minimizing stress and anger in nursing students. *Journal of Nursing Education, 46*, 568–571.
- Smith, S. A. (2014). Mindfulness-based stress reduction: an intervention to enhance the effectiveness of nurses' coping with work-related stress. *International Journal of Nursing Knowledge, 25*(2), 119–130.
- Song, Y., & Lindquist, L. (2015). Effects of mindfulness-based stress reduction on depression, anxiety, stress and mindfulness in Korean nursing students. *Nurse Education Today, 35*, 86–90. <http://dx.doi.org/10.1016/j.nedt.2014.06.010>
- Utley-Smith, Q., Phillips, B., & Turner, K. (2007). Avoiding socialization pitfalls in accelerated second-degree nursing education: The returning-to-school syndrome model. *Journal of Nursing Education, 46*, 423–426.
- Vago, D. R. (2013). Mapping modalities of self-awareness in mindfulness practice: A potential mechanism for clarifying habits of mind. *Annals of the New York Academy of Sciences, 1307*, 28–42. doi:10.1111/nyas.12270
- Vago, D. R., & Silbersweig, D. A. (2012). Self-awareness, self-regulation, and self-transcendence (S-ART): A framework for understanding the neurobiological mechanisms of mindfulness. *Frontiers in Human Neuroscience, 6*(296), 1–30. doi:10.3389/fnhum.2012.00296
- van der Riet, P., Rossiter, R., Kirby, D., Dluzewska, T., & Harmon, C. (2015). Piloting a mindfulness program for undergraduate nursing students: Student feedback and lessons learned. *Nurse Education Today, 35*, 44–49. <http://dx.doi.org/10.1016/j.nedt.2014.05.003>
- Vinal, D. F., & Whitman, N. (1994). The second time around: Nursing as a second degree. *Journal of Nursing Education, 33*, 37–40.
- Williams, K. A., Kolar, M. M., Reger, B. E., & Pearson, J. C. (2001). Evaluation of a wellness-based mindfulness stress reduction intervention: A controlled trial. *American Journal of Health Promotion, 15*(6), 422–432.
- Wolf, L., Warner Stidham, A., & Ross, R. (2015). Predictors of stress and coping strategies of US accelerated vs. generic baccalaureate nursing students: An embedded mixed methods study. *Nurse Education Today, 35*, 201–205. <http://dx.doi.org/10.1016/j.nedt.2014.07.005>
- Wood, R., & Bandura, A. (1989). Impact of conceptions of ability on self-regulatory Mechanisms and complex decision making. *Journal of Personality and Social Psychology, 56*, 407-415.

Yildirim, N., Karaca, A., Cangur, S., Acikgoz, F., & Akkus, D. (2017). The relationship between educational stress, stress coping, self-esteem, social support, and health status among nursing students in Turkey: A structural equation modeling approach. *Nurse Education Today*, 48, 33–39.
<http://dx.doi.org/10.1016/j.nedt.2016.09.014>

APPENDIX A: LETTER OF INFORMED CONSENT

Dear Participant,

You are being invited to participate in a research study about the use of mindfulness as a method for reducing stress. This study involves attending a two day brief Mindfulness-Based Stress Reduction (MBSR) intervention where you will learn about specific MBSR techniques, as well as how MBSR can help reduce stress. Following the intervention, you will be asked to use the MBSR techniques over the course of four weeks (whenever it suits you best). After using MBSR techniques for four weeks, you will then be asked to participate in a 1.5 - 2 hour individual interview with the researcher about your experience with MBSR. The time commitment required of you will be 6-8 hours for the MBSR intervention (3 - 4 hours per session for two sessions), the amount of time spent using MBSR over the four weeks following the intervention (minimum of 2 -3 x 10 minute sessions per day, but total will vary among participants), and 1.5 - 2 hours for the individual interview. You will have contact with the researcher during the MBSR intervention, on a regular basis during the four weeks of individual MBSR practice (check-in emails), and during the individual interview.

You have been invited to participate in this study because research indicates that after-degree nursing students experience very high levels of stress, both in their academic and personal lives. I feel there should be support for stress management offered to after-degree nursing students by their academic programs.

The purpose of this study is to evaluate the impact of a brief MBSR intervention on the experience of stress in after-degree nursing students, and to develop recommendations and program considerations for after-degree nursing programs in light of the findings. Although MBSR is intended to reduce stress, there is the possibility that learning MBSR techniques and developing new stress management skills may potentially cause minimal stress for you. Also, during the interview you will be asked to discuss stressors related to your education experience and your life circumstances, which may also potentially cause minimal stress for you. If you do experience increased stress as a result of the study, please inform me after the interview or at [phone #]. I will assist you in accessing appropriate counselling resources through the University of Lethbridge Counselling Services [phone #].

This study does provide the potential benefit of receiving MBSR training. This training is intended to help you manage and reduce stress both in your academic and personal life. Following the study you may continue to practice and develop your MBSR skills which may have a lasting positive effect for you in managing and reducing stress in your life. There will be no monetary compensation for participating in this study.

This study involves a two-day group condensed MBSR training session which does not allow for anonymity and confidentiality to be assured as far as who is participating in the study. However, all information gathered during the individual interview will be strictly confidential, and anonymity will be ensured through the use of a pseudonym. With your permission, the interview will be digitally recorded, and transcribed by a transcriptionist who will sign a non-disclosure agreement to ensure

confidentiality. During the interview, you may choose not to answer any questions, stop the recording of the interview, or end your participation in the interview. There will be no consequences for choosing not to continue with any part of the study at any time. Similarly, you may choose to end your participation in the entire study at any time without consequence, and all of your information and data collected during the study will be deleted/shredded/destroyed. Your grades and standing in the Bachelor of Nursing After-Degree program will not be affected if you choose not to answer certain questions during the interview, or if you stop your participation in the study. You will be asked to review your transcribed interview for accuracy, after which time the digital recording of the interview will be deleted/destroyed.

If, during the interview process, responses to questions reveal reportable (by law) activities, I am obligated to report this information. For this reason, you will be informed of the potential questions and provided the opportunity to skip any such questions.

The results from this study will be shared with others in form of academic and non-academic publications and presentations, and will be done so in a manner that protects anonymity and confidentiality. Results from this study may also be used for teaching purposes, and to provide considerations for after-degree nursing programs in implementing support for stress management for their students. You will have the opportunity to hear about the research findings during a presentation to all participants, as well you will receive a printed summary of the research findings.

- Do you consent to a potential follow-up interview or contact 2-3 weeks after the conclusion of the study to determine if you are still using MBSR? If yes, please place an “X” in the box.

This research is being conducted by Bob Marthiensen RN BSc BN as part of the Master of Health Sciences program, Faculty of Health Sciences, University of Lethbridge. If you require further information about this study, please contact me at [email address] or at [phone #].

By signing this form below, you are indicating that you understand the purpose of this study and what is expected of you as a participant. You are consenting to attend a two-day condensed MBSR intervention, using MBSR techniques, as much or as little as you prefer, over a four week period, and participating in a 1.5 – 2 hour individual digitally recorded interview. You are acknowledging that you have had the opportunity to have all your questions answered prior to participating in the study.

Name of Participant (printed)

Signature

Date

APPENDIX B: INTERVIEW QUESTIONS

Question #	Question Details
1	Please describe your experience with using MBSR and the techniques you learned from the brief MBSR intervention from this study.
2	Please describe which aspects of the brief MBSR intervention worked well for you.
3	Please describe which aspects of the brief MBSR intervention did not work well for you.
4	Please compare your experience of stress from before the MBSR intervention to after using the MBSR techniques for four weeks.
5	What, if any, changes do you feel would make the brief MBSR intervention more effective?
6	Is there anything else you would like to add?

APPENDIX C: CONFIDENTIALITY AGREEMENT FORM

**UNIVERSITY OF LETHBRIDGE
RESEARCH ASSISTANT CONFIDENTIALITY AGREEMENT**

Purpose of the Study: To determine the effectiveness of mindfulness as a support for stress management in after-degree nursing students.

Project Title: Evaluating the Impact of a Brief Mindfulness-Based Stress Reduction Intervention on the Experience of Stress in After-Degree Nursing Students.

I, _____, the Research Assistant, agree to:

1. keep all the research information shared with me confidential by not discussing or sharing the research information in any form or format (e.g., laptops, USB sticks, transcripts, surveys) with anyone other than the Researcher(s).
2. keep all research information in any form or format (e.g., laptops, USB sticks, transcripts, surveys) secure while it is in my possession.
3. return all research information in any form or format (e.g., laptops, USB sticks, transcripts, surveys) to the Researcher(s) when I have completed the research tasks.
4. after consulting with the Researcher(s), erase or destroy all research information in any form or format regarding this research project that is not returnable to the Researcher(s) (e.g., information stored on computer hard drive).

Research Assistant

(print name)

(signature)

(date)

Researcher(s)

(print name)

(signature)

(date)