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ORIGINAL PAPER

Nurse Experience of Participation in a Mindfulness-Based Self-Care and Resiliency Intervention

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Abstract Nursing is recognized as a stressful occupation where the incidence of negative outcomes such as burnout and high attrition has been well documented. Studies have consistently found that a higher level of resilience is related to retention in the nursing workforce. Mindfulness has been shown to lower levels of burnout and may play an important role in resilience to vicarious trauma. A brief mindful self-care and resiliency (MSCR) program aimed specifically at reducing compassion fatigue, and enhancing nurses' resilience was piloted in a tertiary acute care hospital in Australia. This paper reports findings from the qualitative component of a mixed methods study which aimed to explore nurses' responses to the MSCR program including its perceived feasibility, acceptability, and applicability. A sample of 20 nurses completed the MSCR program, of which 16 nurses (80% response) participated in individual unstructured interviews. Verbatim transcripts of the audio recorded interviews were subjected to thematic analysis. Five themes emerged that described participants' perceptions of how the program benefitted nurses and its applicability in routine practice: Gaining perspective and insight; developing feelings of inner calm; taking time to care for self; feasibility and acceptability of the MSCR program; and using self-care strategies. The MSCR program was found to be feasible and acceptable from the perspective of nurse participants working in this acute care hospital. Fifteen nurses (94%) reported using mindful awareness and self-regulation after completing the program indicating that the strategies offered were practicable in this work setting.

Keywords Resilience · Nursing · Mindfulness · Qualitative research

Introduction

Internationally, there is increasing recognition of the importance of developing workplace interventions aimed at ameliorating the negative impacts of work for employees in high stress occupations (Blomberg et al. 2016; Lim et al. 2010; McVicar 2016). Nursing is one such occupation where the incidence of negative outcomes such as burnout and high attrition has been well documented (Andrews and Wan 2009; Hooper et al. 2010; Leiter and Maslach 2009). Recent studies have revealed rates of anxiety, stress, and burnout among nurses that are higher than community averages (Hegney et al. 2014, 2015). One study found that nurses who were younger, working full-time, and without postgraduate qualifications in nursing had the highest rates of anxiety (Hegney et al. 2014). The retention of nurses in the workplace is a high priority as recent estimates have indicated a worldwide shortage of nurses by 2025 (Health Workforce Australia 2012). Additionally, a recently published study of Australian nurses indicated the cost to replace one registered nurse who exited the workforce as between AUD$17,728–$104,686 (Roche et al. 2015).

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While high stress work environments are known to put workers at risk of negative psychological conditions such as compassion fatigue (burnout and secondary traumatic stress), not all workers will experience these negative outcomes despite being exposed to the same workplace stressors. These individuals have been described as "resilient". Studies have consistently found that a higher level of resilience is related to retention in the nursing workforce (Cope et al. 2015; Hegney et al. 2015; Hodges et al. 2010).

Resilience is broadly referred to as "the process of adapting well in the face of adversity, trauma, tragedy, threats or significant sources of stress" (American Psychological Association 2016). It is generally accepted that resilience is a multidimensional construct made up of both stable and adaptable aspects (Southwick and Charney 2012). What makes one person more resilient than another appears to be a complex mix of several individual difference variables that interact with environmental and sociocultural contexts (Rees et al. 2015).

Recently, Rees et al. (2015) put forward a theoretical model outlining key individual characteristics that contribute to individual workforce resilience. These include neuroticism, self-efficacy, coping, and mindfulness. Mindfulness refers to the ability to de-center and respond less reactively and more flexibly to events (Teasdale 1999) and has further been described as "awareness that emerges through paying attention on purpose, in the present moment, and non-judgmentally" (Kabat-Zinn 2003 p. 145). In one study with addiction counselors, greater mindful awareness was a predictor of lower burnout (Vilardaga et al. 2011). Additionally, it has been argued that it may play an important role in resilience to trauma (Thompson et al. 2011). A number of approaches have been developed which aim to enhance mindfulness with the two prominent ones being, mindfulness-based stress reduction (MBSR) (Kabat-Zinn 1990) and mindfulness-based cognitive therapy (MBCT) (Segal et al. 2002). The extant research indicates that such approaches are effective in increasing mindfulness, self-compassion, and positive affect (van der Velden et al. 2015) as well as in reducing negative mood and preventing depression (Khoury et al. 2013). Mindfulness-based interventions have resulted in lower stress (Wolever et al. 2012), burnout (Goodman and Schorling 2012; Ruths et al. 2013), and higher job satisfaction (Hülsheger et al. 2013) when trialed with health professionals.

Our research team conducted an evaluation using mixed methods of a pilot intervention of a brief mindful self-care and resiliency (MSCR) program aimed specifically at reducing compassion fatigue and enhancing the resilience of hospital-based nurses (Craigie et al. 2016). The quantitative component of the study was designed to answer the research question: "Is the MSCR program effective in building and maintaining resilience and decreasing levels of anxiety, stress, trait negative affect and compassion fatigue?" using a survey comprised of several previously validated tools administered at pre, post, and 1 month after participation (Craigie et al. 2016). As this was a new program, we included a second research question: "What is the acceptability, feasibility and applicability of the MSCR program to nurses?" Participants in the study consented to both stages of the study upon enrolment. This paper reports the findings from the second research question which gathered qualitative data to describe the experiences and views of nurses who participated in the MSCR program and their suggestions to inform further iterations.

Method

Participants

A sample of 16 nurses (80% response) was interviewed. The majority held senior registered nurse roles (n = 11) and all were female. Participants' expectations of their remaining years in the workforce ranged from 3 to 5 years (n = 4), up to 10–15 years (n = 6), and 16–20 years (n = 5). One nurse did not provide an estimate. Six nurses worked in inpatient settings, while the others worked in outpatient clinics (n = 7) or management positions (n = 3). Table 1 summarizes participants' demographics.

Procedure

This component of the study used a qualitative descriptive design to explore nurses' experiences of the MSCR program and perceptions of its feasibility, acceptability, and applicability. The study was conducted in a 610-bed Australian tertiary hospital, which provides comprehensive emergency, medical, surgical, and critical care services. This hospital receives over 63,000 emergency presentations yearly, of which 55% are admitted contributing to the acuity and complexity of the patient population. Following ethics approval from both the hospital and supporting university human ethics committees, purposive sampling was used to recruit nurses to participate in the MSCR program. Inclusion criteria for participation in the MSCR program were working as a registered nurse, in either a full-time or part-time capacity. Nurses were excluded from participating in the MSCR program if pre-screening identified clinical levels of depression, symptoms consistent with post-traumatic stress disorder, or substance abuse or if they were receiving treatment for a mental health condition (Craigie et al. 2016). Initially, nurses were informed of the scheduled MSCR programs via advertisements circulated to the senior nursing staff group. Potential participants indicated their interest to the researcher who forwarded them the study information sheet and consent form. Contact details of participants who returned a completed consent form were provided to the program coordinator who undertook telephone screening interviews to assess eligibility. Two MSCR programs of 11

Table 1 Characteristics of interview participants

Characteristic	$n = 16$
Age (years)	
18–29	1
30–39	1
40–49	6
50–59	7
60+	1
Current position	
Full-time	12
Part-time	4
Length of nursing experience (years)	
1–9	1
10–19	2
20–29	7
30–39	6
Time in current ward/unit (years)	
1–4	10
5–9	4
10–19	1
20–29	1

nurses and 10 nurses, respectively, were conducted, one in May 2014 and the other in June 2014.

The MSCR program was a total of 12 h in duration and comprised a one-day educational workshop on compassion fatigue resiliency (three 1.75 h sessions) and introduction to mindfulness (1.75 h session); followed immediately by a series of weekly mindfulness skills seminars conducted over a period of 4 weeks. The content of the workshop comprised PowerPoint slides and information/worksheets used for mini-lectures and group exercises. The material used for the first three sessions was adapted with permission from Eric Gentry's "Compassion Fatigue Prevention and Resiliency, Fitness for the Frontline" (CFPR-FF) (Gentry 2013). Each participant was provided with a client manual at the commencement of the educational workshop that included intervention educational materials about compassion fatigue (CF) and its causes and skills to build CF resiliency, referred to as the five "antibodies" (1—self-regulation; 2—intentionality; 3—perceptual maturation; 4—connection and social support; and 5—self-care and revitalization).

The mindfulness component of the intervention was adapted from the eight-session (Segal et al. 2002) MBCT program and, in part, aligned with an abbreviated four-session protocol evaluated by Mackenzie et al. (2006). A central aim of the seminars was to learn mindfulness to support resiliency skills. Learning objectives of the mindfulness seminars were increasing awareness of automatic pilot and stress-related reactions and applying mindful responses to be more present and intentional (e.g., breathing space, three-sighs) so as to promote perceptual maturation, values-based actions, and self-care. Formal mindfulness practices were based on the abbreviated practices (about 10 to 20 min) described by Williams and Penman (2011) and included body and breath; body scan; mindful movement and stretching; and sitting with the breath, body, and thought practices. Each participant was provided with the book, *Mindfulness a Practical Guide to Finding Peace in a Frantic World* by Williams and Penman (2011), which includes a practice CD. For homework, participants were encouraged to complete a mindfulness practice each day using the CD (typically about 10 to 20 min in duration), as well as informal practices (mindful eating, activities, breathing spaces).

Each follow-up seminar was 1.5 h in duration and involved both experiential activities and didactic discussion. The full-day and follow-up sessions were scheduled during work days. Participants in senior positions were able to diarize their attendance. Ward-based staff negotiated time to attend with their nurse manager or attended during days off. The venue was a private room in a separate building located on the hospital campus but away from the clinical areas. This location was selected so staff members had easy access but were unlikely to be interrupted or distracted by hospital activity. A full description of the MSCR session content and protocol is described by Craigie et al. (2016).

Recruitment for the qualitative component of the study began with an email invitation to participants 4 weeks after each MSCR program inviting them to provide feedback about their experience through an individual, unstructured interview. Unstructured interviews were selected in favor of semi-structured interviews for this study as the latter can result in participants withholding information if the relevant question is not asked. Unstructured interviews provide rich detail achieved by the interviewer using active listening and probes (Corbin and Morse 2003). With the exception of five interviews that were conducted by telephone (as this was more convenient to the participant), interviews were conducted in a private room close to participants' workplaces and were audio-recorded. Interviews ranged from 12 to 38 min in length, with many ($n = 8$) between 20 and 25 min. Each interview commenced with a broad question asking the participant to describe the strengths and weaknesses of the program. Probing questions were used to explore emerging ideas and concepts.

Data Analyses

Interviews were transcribed verbatim and subjected to thematic analysis (Braun and Clarke 2006). Two experienced qualitative researchers (SS, DH), one of whom conducted the interviews, independently read the transcripts line-by-line to identify meaningful words and phrases, which were coded to generate categories in the data. The researchers met to agree

on the emergent categories. These categories were grouped and collapsed to develop overarching themes describing nurses' responses to the MSCR program. Further coding to identify sub-themes was conducted using NVivo qualitative analysis software (QSR International Pty Ltd 2012). Following agreement from both researchers, the emergent themes and sub-themes were presented in narrative form. Member checking was used to validate the interpretation of the data when tentative findings were discussed with several nurse managers who had attended the MSCR program.

Results

During the interviews, participants described how the MSCR program assisted them to cope with workplace stress, along with its feasibility, and its applicability in routine practice. Five themes were generated that described the impact of the program on nurses' thoughts and behaviors: Gaining perspective and insight; developing feelings of inner calm; taking time to care for self; perceived feasibility and acceptability of the MSCR program; and using self-care strategies. The first three themes encapsulated nurses' responses to the program content, its perceived relevance, and usefulness in helping to manage stressors encountered in their work. The final two themes illuminated nurses' engagement in the program and experiences of using strategies found to be most acceptable in the work and home environments. In regard to feasibility of the MSCR program in the longer term, there were a few suggested modifications that included shortening some sessions, including nurses of the same seniority in each group and adding opportunities for informal follow-up sessions.

Gaining Perspective and Insight

The nurses indicated that while they saw stress and the need for resilience as a normal part of working in an acute hospital, the caring role could be a source of considerable pleasure. However, in this fast-paced environment, work could become reactive depriving nurses of opportunities for reflection that brought meaning and satisfaction:

> You might work on the ward for eight hours and you might be really busy but your sense of job . . . completion at the end of the day is almost zip because you can't actually think back and think "Well I did that, and I fixed that and that's now running smoothly" . . . You just get the sense of "I've just been flat out all day . . ." and so people go home with that sense and then come back to work the next day and they build on that and so by the end of the week you've got this person who's completely and absolutely zapped.

Participants indicated that MSCR psychoeducation content helped them to recognize the impact of stress in their lives and provided coping skills. One ward-based nurse found she was able to take a more dispassionate view, which was protective:

> [In my] workplace, initially if someone . . . put me down, I will just be very hurt and have to go somewhere else for a while and think about it. And say, "Am I really that bad? Or worthless?" I've got my clinical skills which are more than twenty years and I would think "why did they have to say that to me?" but after doing this [program] I think "You know what? That's just what they think but I know what I am". So that really helped motivate me and it doesn't hurt me anymore.

Developing this insight into their own stress responses sensitized nurses to the need to de-escalate feelings of rising tension or re-route negative thought patterns. It was evident that mindfulness practices taught during the program helped nurses to be less reactive to their thoughts, thus reducing stress and calming emotions.

Developing Feelings of Inner Calm

A number of nurses were aware of a sense of inner calm that helped them feel better and think clearly. For one nurse, the consequent ability to focus contributed to more effective interpersonal interactions. She explained:

> It really calms you down. You function better, the language you speak. You don't shout out, you are, if you're calm your thoughts are better and . . . you can think before you speak. Otherwise . . . you'll regret the words later.

This growing sense that they functioned more effectively tended to persuade nurses of the value of MSCR practices. Many participants described a new approach of taking time for themselves away from their caring roles at work or at home, such as "doing the body scan, concentrating on the breathing, doing the exercises . . . actually allocating it and naming it – [saying] that's self-care activity that you've done for today."

Taking Time to Care for Self

Following the MSCR program, participants felt comfortable devoting resources to their own well-being. For example, a nurse manager who was otherwise doubtful about the benefit of the MSCR program admitted, "I have given myself permission to allocate 30 minutes per day every day to play my piano." Another nurse reported, "not feeling guilty about

putting time for yourself" while a nurse working in an executive role saw that she needed to do something for her own health in order to sustain herself in her role. She reported:

> The job had really consumed me to the point where I was not putting my own needs first and I was getting sick all the time. I now do stretching every morning when I get up and I tell myself "You're really going to enjoy this" and I do.

Feasibility and Acceptability of the MSCR Program

It was apparent that the program was seen to be feasible from the perspectives of nurses working within this busy tertiary acute hospital. As evidence, 20 of the 21 participants who commenced the MSCR program also completed it. Moreover, the vast majority (94%) reported continuing to use at least one practice in the workplace or at home during the weeks afterwards. One young ward-based nurse recalled learning, "skills to de-stress and I actually use them at work . . . the three sighs and I listen to the [supplied meditation] CD and sometimes it's just like ringing in my mind." Participants noted that the skills learnt not only assisted them with their day-to-day work but also, for some, assisted them at home. Several nurses noted that the program "had come at exactly the right time" for them as they were having significant stressors at home as well as work.

The flexibility of the program allowed nurses to choose which skill might work best for them in specific situations. In particular, the strategy of three short breaths was the most frequently used as it was quick and unobtrusive and could be done in any setting. None of the nurses believed that meditation was a skill that they could use at work, but several did indicate they might pursue this by use of the supplied CD at home.

Five nurses volunteered their reasons for undertaking the MSCR program. Three participants were motivated by an awareness of their own increased stress levels. Of these, two nurses were seeking strategies to manage work-related stress and one was recently bereaved, which was affecting her work. A further two nurses described previous positive experiences that prompted them to enroll. One nurse saw a particular relevance in that, "I felt it was almost an extension of reflective practice". However, one participant reported that the program did not assist her. She had come to the MSCR program expecting to learn how to deal with a perceived lack of resilience in other, younger, staff. In this regard, she "didn't get what I was looking for out of it. .. Some people that [were] there really got into it".

On the whole, nurses expressed satisfaction with the format and scheduling of the MSCR sessions. Delivery of MSCR content in a group format offered opportunity to reflect and learn from each other. Sharing with peers tended to normalize experiences of stress and reduce isolation. One nurse summed this up as "just really helpful to know that you're not alone." Several suggestions to consider for future programs were offered. For example, a few participants commented on the MSCR program length and recommended abridging the sessions, particularly when clinical work was thought to be accumulating in their absence. Opinions were divided, however, with other nurses satisfied with the format and opposed to removing content because "the full day was good . . . I don't think you can cut down the one and a half hours [follow-up sessions]. No, I think that was good as well and just to get together and everyone to debrief".

There was consensus that including nurses of varying seniority in the same group negatively influenced the group dynamics, constraining discussion. From the perspective of senior nurses, there was some reluctance to divulge work problems and emotional difficulties in the presence of junior staff. In turn, others became uncomfortable if they felt discussion was stifled. For example, one nurse reported:

> I found I was becoming more silent because it was just a group that wasn't very "feedback-y". And whether that was because of the participants, because it was a – because the majority of the group was a fairly highflying participants . . . I found that very difficult.

Along with group discussion, the MSCR program included a range of self-care activities that were taught and practiced during these interactive group sessions. It was evident that the choice of strategies that could be applied at work or at home contributed to the perceived feasibility of the program.

Using Self-Care Strategies

The MSCR program encouraged participants to choose from activities aimed at increasing self-care (e.g., recreational activities, physical activities, social support, and psychological skills such as self-validation and mindfulness) in the knowledge that individuals differ in their preferred approach. This flexibility was seen as a distinct benefit. Meditation promoted relaxation and focus but was difficult to use during the working day. A compromise was to use the three breaths, a strategy seen to be easy, unobtrusive and, therefore, sustainable in routine practice.

Several participants reported sharing the practices that they had found immediately useful when they returned to the workplace. For example, this nurse recalled:

> My head was scattered this one day and [a colleague who had done the MSCR program] said "I got [sic] a storm" she says and "I focus on the storm and I think about the storm and look at the storm to just clarify your

> thoughts, clear your mind" . . . and so because she's done it, we're able to bounce ideas with each other.

Two nurses had encouraged colleagues to seek out opportunities to attend future MSCR programs, while one clinical nurse reported sharing what she had learnt with a newly qualified nurse faced with the emotional demands of caring. She recalled:

> I've just been really supportive and making them do some of the deep breaths . . . because a patient died on the shift and she was just a grad[uate] so I took her aside and made her, you know and [I said] "It's nice to feel that way but at the same time you need to still cope".

There was also a call for some means of reconnecting in the months following completion of the MSCR program. It was thought that reconvening the group could motivate participants to sustain the practices. Participants saw benefit in revisiting guided mindfulness practice. Moreover, they sought opportunities to share experiences of using MSCR content in their day-to-day lives and learn how others "managed to maintain it and keep it up . . . help each other to continue to have that practice."

Discussion

These qualitative findings elucidated nurses' experiences of the MSCR program and its perceived usefulness in helping them to gain insight and perspective, inner calm, and self-care skills to manage the inherent stress of working in a busy hospital. These findings help to explain the observed association between the intervention and significant reductions in burnout, trait negative affect, and obsessive passion towards work (Craigie et al. 2016). Perspectives of the feasibility and acceptability of the MSCR program when delivered in this acute care environment and applicability of specific self-care strategies were also evident.

Analysis of the data provided evidence of nurses' continuing use of resiliency antibodies in the weeks following the intervention. For example, some nurses reported more self-affirming and self-caring attitudes when experiencing stress (part of the self-validation component of perceptual maturation antibody), which appeared to help them de-couple from their initial emotional reactions and negative appraisals during stressful encounters with others. There were also numerous other examples of mindful awareness of bodily reactions that facilitated some form of acceptance, thought reappraisal, or distancing from thoughts to self-regulate and promote inner calm.

As a result of their participation in the MSCR program, participants described their growing awareness of stress in their work environment and its detrimental effect on their physical and emotional well-being. They indicated how heavy workloads and lack of support from others in the working environment detracted from the potential satisfaction of caring, experiences reported elsewhere by nurses (Blomberg et al. 2016; McVicar 2016). They also described how the emotional cost of caring, which stemmed mostly from dealing with death and dying and interactions with patients and families, also increased their stress (McVicar 2016). In addition to the working environment, stressors outside of work influenced nurses' ability to cope. This finding is supported by others who have found that work-family conflict and the inability to detach working life from home life influence the perceptions of work stress (McVicar 2016; Sveinsdottir et al. 2000, cited in McVicar 2016, p. E123).

Consistent with previous mindfulness research, participants also found that MSCR program gave them more awareness of their thought patterns in stressful situations, thus providing them with the ability to circumvent rising negative self-talk and consciously adopt a more positive perspective on the situation (Garland et al. 2011). Participants described feelings of inner calm that they believed, not only promoted their own well-being, but also facilitated more productive interactions with colleagues in the workplace and at home. These findings are supported by a recent review of qualitative evidence evaluating the impact of mindfulness training on nurses' and midwives' practice (Hunter 2016) that found that mindfulness engendered relaxation and calm that improved coping. Together, participant experiences of MSCR program were broadly consistent with the view that mindfulness training cultivates emotional regulation and flexible responding to workplace stressors (Corcoran et al. 2010; Good et al. 2016). Additionally, they help validate the utility of MSCR program teaching goals of enhancing mindful awareness of stress reactions, intentional self-regulation, perceptual maturation, and self-care.

These qualitative data offered an insight into participants' perceptions of the acceptability of the MSCR program to nurses working in an acute care setting. The findings indicate that the program design and content were acceptable and suitable from the perspective of these participants. Similar views were expressed by nurses who participated in the Stress Management and Resilience Training (SMART) program carried out in the USA (Chesak et al. 2015). While the SMART program included a different type of mindfulness training component compared to the MSCR intervention, the intervention group participants demonstrated higher scores (but no statistically significant differences) on the Mindful Attention Awareness Scale at 12-weeks follow-up. Similar to our finding, nurses in the SMART program also believed the follow-up sessions, where participants could reconnect and "benchmark" themselves, would help sustain their resilience practice (Chesak et al. 2015).

Our findings clearly demonstrate that there is a need for workplace programs that strengthen nurses' ability to work

more healthily (McVicar 2016). These programs, however, need to be embedded in a model that encompasses not only individual but workplace environmental factors (McVicar 2016; Rees et al. 2015). Nurses' few suggestions for modifications to the program indicate that the brief MSCR program format was feasible in this acute care hospital setting. However, future iterations of the program should consider including nurses of similar seniority in each group and the possibility of ongoing regular sessions enabling participants to reconnect and share to sustain their mindfulness practices.

Limitations and Future Directions

It is acknowledged that the study was conducted in one acute care setting hospital, and the perspectives of these participants may not represent those of nurses in other practice environments. The sample was self-selected and the majority of participants were senior in level of experience. In the current study, it was essential to include end-users who were senior nurses as an important translation strategy. Accordingly, these participants were more experienced with longer tenure in nursing. Despite the mix of levels of seniority of the participants, data saturation was reached, which suggests the program contained enough flexibility to meet the needs of different levels of nurse. A description of the hospital and sample has also been provided to facilitate the transferability of the results to other settings (Lincoln and Guba 1985). Similarly, a rich description of the findings, supported by exemplar quotations, is included to enhance transferability (Graneheime and Lundmann 2004).

The brief MSCR program was found to be feasible and acceptable from the perspective of nurse participants working in this acute care hospital. They articulated the need for nurses to develop individual resilience in order to cope with multiple stressors encountered throughout their working lives. Nurses' continuing use of mindful awareness and self-regulation in the weeks following the program indicated that the course format was effective and that the strategies offered were practicable in this work setting. Further research to evaluate the MSCR program in diverse nursing populations, including with new graduates, and to explore its acceptability, feasibility, and appropriateness over the longer term is warranted.

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Compliance with Ethical Standards

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Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

References

American Psychological Association (2016). The road to resilience. Retrieved 05 Jan 2017, from http://www.apa.org/helpcenter/road-resilience.aspx.

Andrews, D. R., & Wan, T. T. H. (2009). The importance of mental health to the experience of job strain: an evidence-guided approach to improve retention. *Journal of Nursing Management, 17*(3), 340–351. https://doi.org/10.1111/j.1365-2934.2008.00852.x.

Blomberg, K., Isaksson, A.-K., Allvin, R., Bisholt, B., Ewertsson, M., Kullen Engstrom, A., …. Gustafsson, M. (2016). Work stress among newly graduated nurses in relation to workplace and clinical group supervision. *Journal of Nursing Management, 24*(1), 80–87. https://doi.org/10.1111/jonm.12274.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa.

Chesak, S. S., Bhagra, A., Schroeder, D. R., Foy, D. A., Cutshall, S. M., & Sood, A. (2015). Enhancing resilience among new nurses: feasibility and efficacy of a pilot intervention. *The Ochsner Journal, 15*(1), 38–44.

Cope, V., Jones, B., & Hendricks, J. (2015). Why nurses chose to remain in the workforce: portraits of resilience. *Collegian, 23*(1), 87–95. https://doi.org/10.1016/j.colegn.2014.12.001.

Corbin, J., & Morse, J. M. (2003). The unstructured interactive interview: issues of reciprocity and risks when dealing with sensitive topics. *Qualitative Inquiry, 9*, 335–354. https://doi.org/10.1177/1077800403009003001.

Corcoran, K. M., Farb, N., Anderson, A., & Segal, Z. V. (2010). Mindfulness and emotion regulation: outcomes and possible mediating mechanisms. In A. Kring & D. Sloan (Eds.), *Emotion regulation and psychopathology: a transdiagnostic approach to etiology and treatment* (pp. 339–355). New York: The Guildford Press.

Craigie, M., Slatyer, S., Hegney, D., Osseiran-Moisson, R., Gentry, E., Davis, S., … Rees, C. (2016). A pilot evaluation of a mindful self-care and resilience (MSCR) intervention for nurses. *Mindfulness, 7*, 764–774. https://doi.org/10.1007/s12671-016-0516.x.

Garland, E. L., Gaylord, S. A., & Fredrickson, B. L. (2011). Positive reappraisal mediates the stress-reductive effects of mindfulness: an upward spiral process. *Mindfulness, 2*(1), 59–67. https://doi.org/10.1007/s12671-011-0043-8.

Gentry, J. E. (Producer) (2013). PowerPoint slides for compassion fatigue prevention and resilience (2012). pptx. Retrieved from http://www.compassionunlimited.com

Good, D.J., Lyddy, C.J., Glomb, T.M., Bono, J.E., Brown, K.W., Duffy, M.K., … Lazar, S.W. (2016). Contemplating mindfulness at work: an integrative review. *Journal of Management, 42*(1), 114–142. https://doi.org/10.1177/0149206315617003.

Goodman, M. J., & Schorling, J. B. (2012). A mindfulness course decreases burnout and improves well-being among healthcare

providers. *The International Journal of Psychiatry in Medicine, 43*(2), 119–128. https://doi.org/10.2190/PM.43.2.b.

Graneheime, U. H., & Lundmann, B. (2004). Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today, 24*(2), 105–112. https://doi.org/10.1016/j.nedt.2003.10.001.

Health Workforce Australia (2012). Health workforce 2025: doctors, nurses and midwives – Volume 1. Retrieved from https://submissions.education.gov.au/forms/archive/2015_16_sol/documents/Attachments/Australian%20Nursing%20and%20Midwifery%20Accreditation%20Council%20(ANMAC).pdf.

Hegney, D. G., Craigie, M., Hemsworth, D., Osseiran-Moisson, R., Aoun, S., Francis, K., & Drury, V. (2014). Compassion satisfaction, compassion fatigue, anxiety, depression and stress in registered nurses in Australia: study 1 results. *Journal of Nursing Management, 22*(4), 506–518. https://doi.org/10.1111/jonm.12160.

Hegney, D. G., Rees, C. S., Eley, R., Osserain-Moisson, R., & Francis, K. (2015). The contribution of individual psychological resilience in determining the professional quality of life of Australian nurses. *Frontiers in Psychology, 6*, 1613. https://doi.org/10.3389/fpsyg.2015.01613.

Hodges, H. F., Troyan, P. J., & Keeley, A. C. (2010). Career persistence in baccalaureate-prepared acute care nurses. *Journal of Nursing Scholarship, 42*(1), 83–91. https://doi.org/10.1111/j.1547-5069.2009.01325.x.

Hooper, C., Craig, J., Janvrin, D. R., Wetsel, M. A., & Reimels, E. (2010). Compassion satisfaction, burnout, and compassion fatigue among emergency nurses compared with nurses in other selected inpatient specialties. *Journal of Emergency Nursing, 36*(5), 420–427. https://doi.org/10.1016/j.jen.2009.11.027.

Hülsheger, U. R., Alberts, H. J., Feinholdt, A., & Lang, J. W. (2013). Benefits of mindfulness at work: The role of mindfulness in emotion regulation, emotional exhaustion, and job satisfaction. *Journal of Applied Psychology, 98*(2), 310–325. https://doi.org/10.1037/a0031313.

Hunter, L. (2016). Making time and space: the impact of mindfulness training on nursing and midwifery practice. A critical interpretative synthesis. *Journal of Clinical Nursing, 25*(7–8), 918–929. https://doi.org/10.1111/jocn.13164.

Kabat-Zinn, J. (1990). *Full catastrophe living: using the wisdom of your body and mind to face stress, pain and illness*. New York: Delta Trade Paperbacks.

Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: past, present, and future. *Clinical Psychology: Science and Practice, 10*(2), 144–156. https://doi.org/10.1093/clipsy.bpg016.

Khoury, B., Lecomte, T., Fortin, G., Masse, M., Therien, P., Bouchard, V., … Hofmann, S.G. (2013). Mindfulness-based therapy: a comprehensive meta-analysis. *Clinical Psychology Review, 33*(6), 763–771. https://doi.org/10.1016/j.cpr.2013.05.005.

Leiter, M. P., & Maslach, C. (2009). Nurse turnover: the mediating role of burnout. *Journal of Nursing Management, 17*(3), 331–339. https://doi.org/10.1111/j.1365-2834.2009.01004.x.

Lim, J., Bogossian, F., & Ahern, K. (2010). Stress and coping in Australian nurses: a systematic review. *International Nursing Review, 57*(1), 22–31. https://doi.org/10.1111/j.1466-7657.2009.00765.x.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park: Sage Publications.

Mackenzie, C. S., Poulin, P. A., & Seidman-Carlson, R. (2006). A brief mindfulness-based stress reduction intervention for nurses and nurse aides. *Applied Nursing Research, 19*(2), 105–109. https://doi.org/10.1016/j.apnr.2005.08.002.

McVicar, A. (2016). Scoping the common antecedents of job stress and job satisfaction for nurses (2000–2013) using the job demands–resources model of stress. *Journal of Nursing Management, 24*(2), E112–E136. https://doi.org/10.1111/jonm.12326.

QSR International Pty Ltd. (2012). *NVivo qualitative data analysis software (version 10) [computer software]*. Doncaster Victoria: QSR International Pty Ltd..

Rees, C. S., Breen, L. J., Cusack, L., & Hegney, D. (2015). Understanding individual resilience in the workplace: the international collaboration of workforce resilience model. *Frontiers in Psychology, 6*, 73. https://doi.org/10.3389/fpsyg.2015.00073.

Roche, M. A., Duffield, C. M., Homer, C., Buchan, J., & Dimitrelis, S. (2015). The rate and cost of nurse turnover in Australia. *Collegian, 22*(4), 353–358. https://doi.org/10.1016/j.colegn.2014.05.002.

Ruths, F. A., de Zoysa, N., Frearson, S. J., Hutton, J., Williams, J. M. G., & Walsh, J. (2013). Mindfulness-based cognitive therapy for mental health professionals—a pilot study. *Mindfulness, 4*(4), 289–295. https://doi.org/10.1007/s12671-012-0127-0.

Segal, Z. V., Williams, J. M. G., & Teasdale, J. D. (2002). *Mindfulness-based cognitive therapy for depression*. New York: The Guilford Press.

Southwick, S. M., & Charney, D. S. (2012). *Resilence: the science of mastering life's greatest challenges*. Cambridge: Cambridge University Press.

Sveinsdottir, H., Biering, P. & Ramel, A. (2000). Occupational stress, job satisfaction, and working environment among Icelandic nurses: A cross-sectional questionnnaire survey. *International Journal of Nursing Studies, 43*(7), 875–889. https://doi.org/10.1016/j.ijnurstu.2005.11.002.

Teasdale, J. D. (1999). Metacognition, mindfulness and modification of mood disorders. *Clinical Psychology & Psychotherapy, 6*(2), 146–155. https://doi.org/10.1002/(SICI)1099-0879(199905).

Thompson, R. W., Arnkoff, D. B., & Glass, C. R. (2011). Conceptualizing mindfulness and acceptance as components of psychological resilience to trauma. *Trauma, Violence & Abuse, 12*(4), 220–235. https://doi.org/10.1177/1524838011416375.

van der Velden, A.M., Kuyken, W., Wattar, U., Crane, C., Pallesen, K.J., Dahlgaard, J., … Piet, J. (2015). A systematic review of mechanisms of change in mindfulness-based cognitive therapy in the treatment of recurrent major depressive disorder. *Clinical Psychology Review, 37*, 26–39. https://doi.org/10.1016/j.cpr.2015.02.001.

Vilardaga, R., Luoma, J.B., Hayes, S.C., Pistorello, J., Levin, M.E., Hildebrandt, M.J., . . . Bond, F. (2011). Burnout among the addiction counseling workforce: the differential roles of mindfulness and values-based processes and work-site factors. *Journal of Substance Abuse Treatment, 40*(4), 323–335. https://doi.org/10.1016/j.jsat.2010.11.015.

Williams, J. M. G., & Penman, W. (2011). *Mindfulness a practical guide to finding peace in a frantic world*. London: Piatkus.

Wolever, R. Q., Bobinet, K. J., McCabe, K., Mackenzie, E. R., Fekete, E., Kusnick, C. A., & Baime, M. (2012). Effective and viable mind-body stress reduction in the workplace: a randomized controlled trial. *Journal of Occupational Health Psychology, 17*(2), 246–258. https://doi.org/10.1037/a0027278.