Piloting a stress management and mindfulness program for undergraduate nursing students: Student feedback and lessons learned

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SUMMARY

Background: Widespread reports of high stress levels and mental health problems among university student populations indicate the use of interventions to facilitate stress reduction and support student resilience and wellbeing. There is growing evidence that regular mindfulness practice may confer positive health benefits and reduced stress levels.

Objectives: The aim of this pilot project was to explore the impact of a seven-week stress management and mindfulness program as a learning support and stress reduction method for nursing and midwifery students.

Setting: The program was conducted at a large regional university in Australia.

Participants: Fourteen first-year undergraduate nursing and midwifery students agreed to attend the program and to participate in a follow-up focus group.

Method and Design: A descriptive qualitative design was utilised to examine the impact of the program. A semi-structured focus group interview was conducted with a thematic analysis undertaken of the transcript and process notes.

Results: Ten students completed the research component of this project by participating in the focus group interview. Three main themes capture the participants’ experience: attending to self, attending to others and attending to program related challenges. Data indicate a positive impact on sleep, concentration, clarity of thought and a reduction in negative cognitions. Participants also identified challenges related to timetabling, program structure and venue.

Conclusions: Overall, this pilot program enhanced the participants’ sense of well-being. Despite the challenges, benefits were identified on a personal and professional level. Valuable feedback was provided that will be used to further develop and expand stress management and mindfulness programs offered to students attending this university.

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Introduction

In the last decade, research indicating high stress levels and an increasing incidence of mental health problems among university student populations in Australia has emerged (Stallman and Shochet, 2009). Undergraduate nursing students have been identified as having higher stress levels than students in other undergraduate programs (Beddoe and Murphy, 2004; Cleary et al., 2012), while a longitudinal study confirmed nursing students as particularly vulnerable to the stressors associated with university enrolment (Watson et al., 2009). These findings draw attention to the need to develop student resilience and wellbeing. This paper reports on a qualitative study examining the impact of a stress management and mindfulness program designed to build resilience and stress management skills in first year undergraduate nursing and midwifery students.

Background/Literature Review

The factors contributing to students’ level of stress are many and varied. However, the increasing number of students from low socioeconomic backgrounds adds some additional challenges. The pressure to succeed as the ‘first one from the family’ to go to university may increase anxiety and for many students the additional burden of caring...
for a family and facing financial challenges further adds to the difficulties. Socioeconomic disadvantage may also correlate with low levels of self-care skills and diminished capacity for coping with the type of stressful situations encountered by university students. The requirement to undertake clinical practicums places an additional level of stress upon students who are already struggling to manage the challenges of university education (Moscariolo, 2009; Watson et al., 2009; Cleary et al., 2012; Laws and Fiedler, 2012).

Interventions designed to assist individuals to respond more effectively to stressors increasingly incorporate a focus on mindfulness practice as a key stress management strategy (Kabat-Zinn, 2003; Escuriex and Labbé, 2011). McCown (2013) asserts that the incorporation of mindfulness into Western clinical practice to assist in the management of mental illness and stress related problems dates back to 1945. However empirical and quantitative literature documenting mindfulness-based interventions emerged with (Kabat-Zinn, 1982, 1992) reports on the mindfulness-based stress reduction (MBSR) program. While efforts to define mindfulness continue (McCown, 2013; White, 2014), in this paper, Kabat-Zinn’s descriptions of mindfulness as ‘paying attention in a particular way: on purpose, in the present moment and non-judgmentally’ (1994, p.4) and ‘the intentional cultivation of non-judgmental moment-to-moment awareness’ (1996) are provided to orient the reader.

A rapidly growing body of research literature has identified a range of beneficial impacts attributed to the regular practice of mindfulness and/or meditation. Physiological changes, including reduction in cortisol levels, improved immune response and reduced blood pressure have been reported (Creswell et al., 2009; Fang et al., 2010). Also described are psychological benefits such as reduced anxiety, stress, depression, mood regulation (Escuriex and Labbé, 2011; Kiken and Shook, 2012), improved concentration and an enhanced sense of well-being (Sears et al., 2011; Shapiro et al., 2008).

In response, high-levels of burnout and stress amongst health professionals, mindfulness practices have been introduced as a strategy that may assist clinicians to manage the demands of the health care environment and to build resilience (Epstein, 2003; Richards et al., 2010; Foureur et al., 2013). These research findings formed the basis on which the decision was made to incorporate mindfulness practices into a program designed to assist students manage the stressors of undergraduate nursing or midwifery study.

**Intervention**

The seven-week stress management and mindfulness program was developed by two of the researchers as a pilot program for first-year undergraduate nursing and midwifery students. Both researchers are employed as counsellors and have many years of personal experience in mindfulness and meditation practices as well as in the professional delivery of mindfulness meditation courses. The program piloted was designed to provide beginning students with skills that would build resilience; reduce stress levels and improve concentration.

The intervention comprised seven 1-hour sessions held at the same time each week. Each session involved a didactic component and an experiential component. This format was designed to enable an intellectual understanding of the impact of stress and the practices that would be taught and an in-session experience of a range of mindfulness exercises. Practices commonly utilised in therapeutic interventions such as MBSR were taught. These included; sitting mindfulness practices where participants were encouraged to sit and focus their attention on observing their breath, bodily sensations, emotions or thoughts; mindful walking and the body scan. The aim of the body scan was to enable the participant to be aware of each area of the body in turn and experience how that area feels at that particular moment in time. Students were encouraged to practice the exercises regularly at home in between formal sessions.

**Evaluating the Intervention**

**Study Design**

A descriptive qualitative design (Kermode, 2004) was employed for this study using a 60-minute semi-structured, focus group interview for data collection. Ethical approval for the study was obtained from the university’s ethics committee prior to commencement of the program.

**Participants**

Students were recruited from the first-year cohort of undergraduate nursing and midwifery students. Second and third year students from undergraduate nursing and midwifery programs were excluded. Recruitment was via flyers posted on information boards, an email sent to all students in the target population and an announcement posted on the electronic learning management system (blackboard) for first-year students. Students who expressed an interest in the program were e-mailed a copy of the information sheet. All participants who consented to participate in the program also consented to attend a focus group interview conducted at the completion of the stress management and mindfulness sessions.

Fourteen students were recruited to this study; however, only ten students completed the research component of this project by attending the focus group interview. See Table 1 for demographic data for those who attended the focus group.

Attendance during the seven-week program was irregular (see Fig. 1) with only one of the ten participants attending all sessions. Those students attending 5 or more sessions were identified as coming from the non-school leaver group.

**Data Collection**

Information regarding students’ experience of the program was elicited during a 60-minute focus group interview conducted two weeks after the completion of the seven-week program. The interview was semi-structured and followed the interview schedule outlined in Fig. 2.

The recorded interview was conducted by two members of the research team who had had no prior contact with the participants. One member facilitated the interview, while the other recorded process notes as observer to the group processes. During the interview, participants were encouraged to speak further with prompts such as ‘does anyone wish to add further information?’ or ‘do you want to expand on that response?’ At 30-min into the interview, the group appeared to be cohesive with participants keen to provide feedback and doing so with generally little need for prompting. The researcher-observer wrote in his notes “this was a highly motivated group and the participants are very responsive to each other. There is a great deal of eye contact and support for comments made by others”.

**Data Analysis**

The focus group interview was transcribed by an experienced transcriber enabling accurate tracking of individual contributions to the focus group interview. This enabled a more cogent and coherent

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**Table 1**

<table>
<thead>
<tr>
<th>Participant profile.</th>
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<tbody>
<tr>
<td><strong>Gender</strong></td>
</tr>
<tr>
<td>Female = 10</td>
</tr>
<tr>
<td>Male = 0</td>
</tr>
<tr>
<td><strong>Overall age range</strong></td>
</tr>
<tr>
<td>19–53 yrs</td>
</tr>
<tr>
<td><strong>Status on entry to university</strong></td>
</tr>
<tr>
<td>Entry directly from school $n = 3$ (age range 19–20 yrs) (Average 19 yrs)</td>
</tr>
<tr>
<td>Non-school leaver $n = 7$ (age range 29–53 yrs) (Average 36 yrs)</td>
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transcript. Two members of the research team independently utilised thematic content analysis to analyse the transcript of the interview. Thematic analysis involves selecting themes or variables and then coding according to the different categories of ideas or phrases (Kermode, 2004). The themes identified by the two researchers working independently were then reviewed together while confirmation of themes and clarification was sought through cross-checking against the transcript. A series of discussions within the research team, further cross-checking with the transcription and observer records, and careful recording of field notes kept as an audit trail were instituted to ensure the trustworthiness of the data.

Findings

Analysis of the transcription yielded three main themes: attending to self, attending to others and attending to the program. It is important to recognise that, in many instances, these themes overlap and intertwine. Each of the three themes will be illustrated with direct quotations (in italics) taken from the transcription.

- Attending to self

Attending to self in this paper focuses on self-care activities. For the purposes of this analysis Pincus’s (2006) definition of self-care, as what one does to improve a sense of subjective well-being to enable positive outcomes, has been adopted. The benefits of attending to self more effectively were linked by students to their ability to study more efficiently. Within this theme, a number of sub-themes were identified as follows:

  o Self-awareness

  Self-awareness is integral to the student recognising their heightened level of stress and enabling effective utilisation of the stress management and mindfulness practices that had been taught.

It helps you recognise when you get to that level of stress that you need to calm down and take your time and... if you stress you are not going to get anything done, you are not going to remember anything. You are better off doing an hour’s calm study rather than just rushing it and...

  It’s just recognising it.

The mindfulness practice of ‘observation of thoughts’ likewise enabled increased self-awareness.

…the bit that I have probably enjoyed the most is the non-judgement of thoughts and I do not think I am a particularly judgemental person, but you realise how much judgement you put on thoughts and how much value you put on that being a good thought or a bad thought, or a good situation or a bad situation.

For one student, mindfulness practice focusing on awareness and acknowledgement of negative thoughts was beneficial.

I really appreciated it when we did the negative thoughts and acknowledging those. Not that I’m a negative person or anything but I feel like negativity has overwhelmed me in the last few weeks so then when I acknowledge that and I go: Oh no, stop...try and be positive. I think that’s helped me more than anything.

  o Self-management

An inability to self-manage behaviours such as sleep may result in both physical and mental health difficulties and a decreased capacity to function efficiently during the day. An enhanced ability to manage sleep was identified by several students with overall agreement from the group as a whole of the positive impact upon sleep as a result of participation in this program.

My sleep has largely improved. Have a tendency to wake up in the middle of the night and lie there for hours worrying about all the things that I cannot do anything about at that moment. In addition, I find that doing the exercises just to clear my mind and then I could go back to sleep.
Students spoke of improved sleep patterns resulting in a positive impact on their ability to study.

Sleep I... had many problems with sleeping. I was going through some stuff and I thought well, I know mindfulness like the breathing exercises isn’t so much to put yourself to sleep but I’d find if I did that before I went to bed I could sleep so easy. It was really, really helpful which made me study and focus so much better the next day, mindfulness helped sleep, helped study and...I really found it useful for that one thing.

Likewise, this student also expressed an element of surprise and some confusion as to the way in which mindfulness practices assisted her, while at the same time acknowledging the impact it had on her ability to sleep.

I found it did help me focus a lot more with my assignments and things. I did not even realise that it would help but when I did realise, oh, that is a good thing. Again, it helped me sleep but I think that is really it. It did not help me in any huge way but I guess it did, because sleep rather relates to everything else.

- **Focusing on study**

As students a primary component of attending to self and reducing stress is giving attention to successful completion of study requirements. When asked directly, if the program had assisted their learning, students did not seem able to make a direct link; however, throughout the interview they gave examples indicative of improved clarity of thought and focus on their studies.

It really did help me focus on assignments...not be tired...I worked a whole lot better and actually surprised myself when I was doing my last assignment. There was not a Facebook tab open...wow, I am actually focusing on what I am doing!...that was so surprising...

I found it did help me focus a lot more with my assignments....Now I focus on one thing at a time, just teaching me to focus on the task that I am doing.

I kind of feel like I have slowed down...Just slow down for a minute and focus on now. A bit more balanced.

- **Being present**

At the heart of mindfulness practice is an emphasis on the ability to bring one’s attention to the present moment without judgment and with acceptance of what is. A number of students identified an enhanced ability to be present. This quotation reveals one student’s attempt to articulate the benefit for her of ‘living in the moment’.

I have still been doing it, a mental thing, rushing, that whole thinking I have to rush so quickly...so you know, concentrating on that first, was my priority and then...being very present....I’ve got a 6-year old daughter rushing around, and we’re going to do this now and I thought, no, however, long it takes, it takes and being there and present and not missing out then freed...somehow I still managed to do all of that and still be focussed enough to be...think about living in the moment.

One student described clearly the way in which acceptance of ‘what is’ enabled her capacity to focus in the present moment.

I’ve got this much time and I’ll get done what I can get done in that time. I just accept that rather than beating myself up for the fact that I did not do (more).

- **Attending to others**

Students spoke of the ways in which they believed their neophyte skills as nurses and midwives were enhanced by the mindfulness practices and the positive impact they expected that this would have on their ability to attend to others, to be centred and present.

...Being in the moment helped me enormously and probably helped the women enormously ‘cos I wasn’t jumping about or trying to do a job. I could actually just sit and be present for her or her family....

Another midwifery student added,

But it’s also taught me...some valuable tools that I can use in practice...you know at this early stage of my midwifery career, but obviously I think something that I can expand upon, build on skills in future....

One midwifery student spoke of mindfulness practice as something that she could potentially use with birthing mothers in the future, while a nursing student reflected on how she believed mindfulness would enhance her clinical practice.

...the idea is from a nurse’s point of view...when all this drama’s going on, to slow down, stop, think...yes and then look before you act. I thought well, that’s...really an important thing and obviously to manage the stress of the type of work.

In this cohort, 7 out of 10 were mature age students (with an average age of 35 years). For these students, the demands associated with caring for family and children were coupled with a heavy academic and clinical load. One student spoke of initially undertaking the stress management and meditation program for herself and then commented on how this was helpful for others.

I found...this is quite helpful for other people...Not necessarily patients, but, just you know, like my husband, my kids, friends...I found it really helpful to share with friends who are going through a difficult time. In addition, it has been helpful for me too.

Another student described how mindfulness assisted her to regulate her own emotional state and thus attend more effectively to the challenges of both family and study.

I have found that because I have five children and one with autism that sometimes when he does muck up it has actually been helping me calm down a lot quicker...being able to deal with him is a lot easier. So it has helped me a lot, that situation, as well as the study.

- **Attending to the stress management and meditation program**

Students were encouraged to complete ‘homework’ between sessions, i.e. practice the mindfulness exercises at home. When asked if this had occurred, only a few had practiced several times and the remainder said that outside session practice had occurred once only. On further reflection, one student noted:

I felt like I did manage it a couple of times a day, but not necessarily a whole practice...brushing my teeth is my one and that’s always my mental trigger...

Other students’ responded with non-verbal assent suggesting perhaps homework and practice were considered as intentional ‘sitting down to practice’ in contrast to moments of increased awareness and mindfulness interspersed throughout the day.

- **Challenges impacting on attending**

The timing and scheduling of the program were problematic for students. The program was conducted on a Friday sandwiched into the lunch break between a 4-hour and a 2-hour block of face-to-face lectures. The impact of this is reflected in these comments. It was stressful for me...and I’d asked...is there any other time I can do it because...I’d be thinking about food as I was getting here and when I’m going to the bathroom today and...when am I gonna (going to) do that.

Yeah, this is our lunch break so we come in our lunch break and we try to eat and do...everything in that one hour.

The setting was seen as cold, noisy and unwelcoming, in contrast to expectations that stress management and mindfulness would be taught in a comfortable and inviting environment.

Even a bit more cosy...I suppose you do meditation you go to a spot and...you start to get relaxed automatically and there might be even smells and stuff that you associated with that and...creates a sense of relaxation.

Despite the unwelcoming venue, students generally agreed that entry to the tutorial room became a prompt for mindfulness in the middle of very hectic Friday schedule. Not only were scheduling and venue a challenge, for some, the arrangement of the room and seating of participants did not support a sense of group cohesiveness. Delivery of some parts of the session was also problematic and described as inconsistent and disjointed with didactic material delivered via PowerPoint juxtaposed with experiential exercises.
The way this room is set up as well, everyone is rather disjointed. You are not really a cohesive whole… I just feel like if I'm doing a study and it's meditation, you'd want to be connected… like even if you moved the tables away and we all had to sit on the floor or in a big round circle with chairs.

**Improving the stress management and meditation program**

Students were articulate in both voicing critical feedback and offering suggestions for how the program could be improved. They offered a range of ideas, including a request for a clear overview of the program, a workbook that detailed the overall structure, content incorporating the didactic material and each of the mindfulness practices to support between session practices. While students regarded the experiential component of the program as what was most helpful, a desire to understand the link between theory and practice was expressed.

If you can… start to think anatomically, that that means that, and that's what's actually happening in my brain when I do that. I suppose 'cos we're all doing nursing of some sort, we're thinking about that. We like to relate the two and understand it…

Students were aware that their attendance had been spasmodic, and identified how difficult it was to get to each session. The value placed on the sessions prompted the request that sessions be recorded. Thus, where a student was unable to attend, they could review the session in their own time. While critical feedback was provided vociferously, positive comments regarding the program were also expressed.

For me, I really liked the energy of the facilitator. I found that she had a very soothing voice. It was… just listening to her talk… the pace that she spoke was… almost rhythymical… She was setting the tone… for me that was important.

The group strongly supported this viewpoint and others spoke of the particular mindfulness practices that they had most enjoyed. Probably my favourite was the body scan one. They were all good, but probably the body scan was the one I got the most out of.

Having offered critical and supportive feedback, students commented that the improved program as per their recommendations would be ‘awesome’ and one student suggested, ‘Let's do the course again and invite us all’.

**Discussion**

Commencing a nursing degree at university not only creates increased levels of stress and challenge for student programs (Beddoe and Murphy, 2004; Cleary et al., 2012); it can also provide an opportunity to learn new adaptable behaviours and skill acquisition for managing stress, self and relationships (Foureur et al., 2013). The explicit acknowledgement of these challenges through the provision of a stress management and mindfulness program can be viewed as normalising the stress and challenges encountered during the transition to university study. The intervention piloted in this study provided participants the experience of learning skills with a potential benefit for both personal and professional self-care.

Despite irregular attendance and numerous challenges, students reported positive impacts on personal, academic and professional functioning. The initial theme, attending to self, provides an insight into how students described the impact of the program on self-care. The enhanced self-awareness described as an outcome of mindfulness practice is congruent with findings reported elsewhere (Richards et al., 2010; Williams et al., 2010). Indicative of a defining attribute of mindfulness, ‘paying attention… non-judgmentally’ (Kabat-Zinn, 1994) students described a capacity to recognise and ‘let go’ of intrusive and negative thoughts without judging them as ‘bad’ or engaging with them. Bowlin and Baer (2012) suggest that this capacity to ‘adopt a mindful approach toward… internal experiences’ may be protective against anxiety and depression in hard-working students (p. 414).

The analysis found descriptions of the positive impact of mindfulness that extended beyond the individual to their intimate relationships, wider social networks and clinical work. White (2014) asserts that ‘mindfulness has the potential to support the cultivation of holistic nursing practices’ (p. 290). These first-year nursing students were able to clearly identify the benefits of mindfulness upon therapeutic nursing practice describing an enhanced ability to ‘be-with’ others and to ‘imagine’ future benefits of mindfulness as they developed as clinicians.

Some participants were perplexed as to whether mindfulness had aided their learning, although they were able to link a decrease in insomnia leading to more effective study behaviours and ability to focus. These findings are consistent with a study where a ‘small dose of mindfulness training’ incorporated into a clinical interviewing class for social work students resulted in students identifying ‘mindfulness as key to their clinical learning process’ (Gockel et al., 2013, p. 343).

Attending to the program proved to be a major challenge for all participants. The scheduled sessions clashed or overlapped too closely with other commitments, while difficulties incorporating formal practice into already busy schedules were widespread. Issues such as finding time and motivation to practice may be viewed as ‘doubts’ related to the efficacy of mindfulness. These issues have been identified as worthy of careful attention by instructors in mindfulness with suggestions that addressing these may reduce attrition in mindfulness and meditation programs conducted with student populations (Sears et al., 2011). However, the positive benefits achieved by these participants from limited attendance are consistent with findings from a brief MBSR intervention for nurses reported by Mackenzie et al. (2006). A number of limitations are acknowledged by the researchers. As a pilot study utilising an intervention that has not previously been trialled or validated in a similar setting, the results cannot be generalised to other settings. It is worth noting, however, that the individual components of the program, i.e. the impact of the various mindfulness practices, have been widely reported elsewhere. The sample size and composition (female only) and irregular attendance also limit the generalisability of these findings. Likewise, this is qualitative data describing students’ self-report of the impact of their participation in the stress management and mindfulness program. Although beneficial impacts are reported, there is no ‘objective data’ to provide the sought after findings expected of quantitative research, i.e. data obtained from a matched cohort of students who had not participated in the program. A mixed method design would have perhaps been more desirable. However, we have captured the rich nature of the students’ experience in this qualitative project and is consistent with White’s (2014) emphasis on the importance of qualitative methodologies in developing the concept of mindfulness in nursing.

**Conclusion**

This study reporting on the qualitative analysis of a pilot stress management and mindfulness program for undergraduate nursing and midwifery students indicates potential benefits for stress reduction and an enhanced ability to attend to self and others in both personal and professional settings. Overall, student reports indicate increased concentration and clarity of thought, in conjunction with increased awareness and a reduction in negative cognitions. The benefits reported from limited attendance suggest the possibility that a briefer intervention may yield similar benefits. The positive feedback, rigorous critique and recommendations from students will inform future development of stress management and mindfulness programs for undergraduate nursing and midwifery students.

**Acknowledgements**

We are grateful to the students who participated in this study.


