



Midwifery Education in Practice

Millennial midwifery: Online connectivity in midwifery education

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ABSTRACT

Aim: The aim of this study was to explore graduate midwives' experiences of completing a Bachelor of Midwifery online theory course and how that experience led to preparation for practice and future employment as a midwife.

Methods: This study used a questionnaire, with the core research design having a quantitative component using open-ended questions, via the use of an electronic platform.

Results: The main themes emerging from the data that the graduates considered important issues were flexibility, isolation and lack of support.

Conclusion: Course completion, experience of online learning/preparation for practice, and recommendations for improvement were identified as areas of importance for graduates of the online midwifery theory course.

1. Introduction

There are many accredited universities offering undergraduate midwifery programs from all states of Australia in 2018. Traditionally a campus-based program, the Bachelor of Midwifery (BMid) is increasingly offered in a variety of learning options to accommodate the large number of university enrolments and the varied geographical locations of Australian students. These different modes of learning range from distance or web-enhanced education, blended learning and more recently the option to study full-time online, with clinical placements obtained close to students' home communities.

In recent years, higher education institutions have witnessed a growth in both enrolments and interest in online modes of learning (De Freitas et al., 2015), including midwifery education, as new technologies provide platforms for learning that are mobile, accessible and cost effective for both students and university administrators (Soffer and Nachmias, 2018). Online education also provides students with the opportunity to complete course work around busy schedules, in their own environments while reducing the costs associated with travel and lost time (Arbour et al., 2015). Additionally, online education can help reduce the impending shortage of maternity care providers by providing accessibility to midwifery education in rural and underserved regions of Australia (Paliadelis et al., 2015), a previously excluded cohort from many campus-based courses. Understanding the effects and outcomes of this mode of learning is considered critical in the strategic planning of higher education and the academic success of students (Yen

et al., 2018).

One University in the Northern Territory of Australia offers an undergraduate Bachelor of Midwifery (BMid) course, that is available online only since 2012. The course offers integral on-campus intensive Clinical Teaching Blocks (CTB) that occur before clinical placement begins, with bi-annual CTBs in the first year, and annual CTBs in years two and three. Clinical placements are nominated by students within their local community. The course is structured to develop students' competence in midwifery care in accordance with the Nagle and Vogt (2018) for the midwife and the international definition of the role and sphere of a practicing midwife (International Confederation of Midwives, 2017). To date, limited literature exists on the experiences and outcomes of midwifery students relating to the transition from traditional on-campus learning to increasingly online modes of educational delivery. Many undergraduate nursing and midwifery courses have implemented a blended online learning model (Ota et al., 2018), which consists of face-to-face learning and online learning. However, the Bachelor of Midwifery course in this study delivers all the theory units online only. Therefore, the assessment of midwifery graduates' experiences of learning online is vital to determine the overall success of programs and important in the review of future directions towards a more contemporary approach to midwifery education, with consideration for the successful graduation of students to registered midwives.

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2. Methods

This study used a questionnaire, with the core research design having a quantitative component using open-ended questions, via the use of an electronic platform. The use of the data enhanced the descriptions and understanding of graduates' experiences and opinions of learning through an online Bachelor of Midwifery theory course.

The study aimed to address the following broad questions:

1. What are graduates' experiences and opinions of completing an online Bachelor of Midwifery theory course?
2. What are the factors/issues that both hinder and enhance theory learning?
3. How does the relationship between learning, confidence and skills impact upon preparation for practice as a midwife?

2.1. Participants

Registered midwives who had previously graduated from the Bachelor of Midwifery course from a University in the Northern Territory were invited to participate in the study by email. The email contained an information sheet outlining the study and a link to an online questionnaire using the Qualtrics™ platform. The sample size calculation was performed based on the method outlined by Yamane (1973), and a sample of twenty-two participants were needed to evaluate the outcomes of the online Bachelor of Midwifery course with the desired precision. Twenty-eight graduates completed the questionnaire. Convenience sampling was used for this study as this is a non-probability technique that allowed the researchers to select participants to specifically address the research question (Polit and Beck, 2010).

2.2. Questionnaire

The survey tool incorporated both qualitative and quantitative questions, which included demographic non-identifying questions such as age when the course was commenced, gender, and graduate outcomes. There were some open questions with a text box and some questions were ranked via a Likert scale. Participants had eight weeks to complete the questionnaire, and at the fourth week a reminder email was distributed to remind participants of the study. Participation was voluntary, and participants were informed that they had the right to withdraw at any time without prejudice or need for justification. As the questionnaire was anonymous, any information that was submitted was not able to be returned to the participants as the data was de-identified.

2.3. Ethical considerations

Ethics approval was sought and granted by Charles Darwin University Human Research Ethics Committee prior to the commencement of data collection, number H18094.

2.4. Data collection

The data for this study was collected using an electronic questionnaire with both closed and opened ended questions. Questionnaire completion time was kept to a minimum (approximately 20 min) and an in-depth information sheet was provided to help motivate participants.

2.5. Data analysis

The unit of analysis for this study were previously enrolled midwifery students who have since graduated and expected to be working as registered midwives. The inclusion criterion was that participants had completed a Bachelor of Midwifery online course at the University in the Northern Territory. The data was analysed using descriptive statistics.

Table 1
Demographics on entering the course.

Age	n (%)
18–29	9 (32)
30–49	17 (61)
50–64	2 (7)
Nursing Qualification on entry	n (%)
Direct Entry (not nurses)	18 (67)
Enrolled Nurses	3 (11)
Registered Nurse	6 (22)
State where placements completed	n (%)
Northern Territory (NT)	18 (64.2)
New South Wales (NSW)	4 (14.3)
Queensland (QLD)	3 (10.7)
South Australia (SA)	1 (3.6)
Victoria (VIC)	1 (3.6)
Western Australia (WA)	1 (3.6)

Thematic analysis was used for the open-ended responses (Braun et al., 2019), involving the search for and identification of trends that occurred within the data. It was an inductive thematic analysis approach that guided the development of coding and extracting themes from the data. The process consisted of several steps that consisted of reading through the data to understand the broader concepts and themes of the data; coding and developing the extracted themes, placing codes into categories, and reviewing the themes in relation to the data. The researchers conducted this process independently, and then together as a group to identify similarities and differences, using discussion to work through any discrepancies.

2.6. Participants

Twenty-eight participants (n = 28) completed the online questionnaire. Percentages have been provided but the purpose of this is to be able to compare with other studies and reports that present their data in this way rather than to suggest that this sample is necessarily representative of the complete Bachelor of Midwifery cohort at the University. The Higher Education course enrolments, at the University where participants in this study were enrolled, has traditionally attracted mature students with 71.9% of students enrolling at 25 years of age or older. Table 1 shows the age of the participants when they began their midwifery degree (see Table 2).

There are three entry pathways to the Bachelor of Midwifery course. One for those without prior nurse training known as 'direct entry', one for enrolled nurses and a third for registered nurses. These groups were all represented in the survey cohort (Table 1).

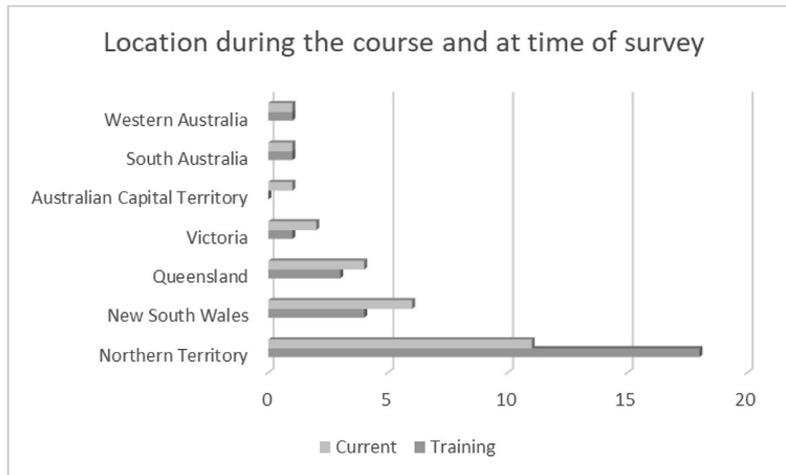
2.7. Themes

Three main themes emerged from the results that characterised the participant experience of completing a Bachelor of Midwifery online theory course. These themes related to how the course prepared the participants for practice as a midwife. The first theme 'flexibility' relates to balancing family, work commitments and completing the course; the second theme 'isolation' emerged as a disadvantage when studying a midwifery theory course online, and the third theme 'lack of support' relates to some midwifery concepts being difficult to learn or understand solely via online learning.

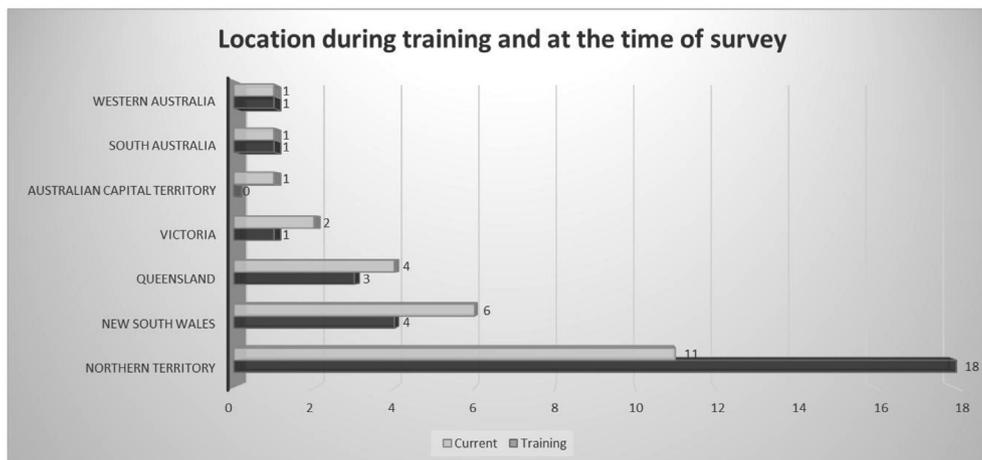
3. Results

Participants were asked about the location of clinical placements during enrolment on the course. One of the benefits of an online course

Table 2
Location of Bachelor of Midwifery Graduates during the course and at the time of survey.



OR



is that students can enrol wherever they happen to live providing they have local placement options or are willing to travel to gain the necessary clinical experience. Participants stated that being able to stay in their region and enrol in a Bachelor of Midwifery course, whilst also completing clinical placements was the main reason they chose an online midwifery course.

“I wanted to be a midwife and this course allowed me to do that. I enjoyed the course because it was what I wanted to do” (G22).

As a Bachelor of Midwifery course is not always available to potential students or may be over-subscribed in some areas, it is not surprising that participants reported that they were based in states all over Australia whilst completing the online midwifery course. However, some participants identified that they had experienced concerns with lack of support and isolation. These comments were predominantly related to feelings of isolation and lack of face-to-face contact with both staff and fellow students.

“There was a lack of face to face cohort contact for study, debrief, social contact” (G3).

“There was no personal help I felt like a number not a person” (G13).

“I missed not being able to engage with the lecturers and other students like you would in a classroom” (G21).

“It was harder to ask questions” (G18).

Some participants verified the lack of support and isolation themes by stating that they would encourage future students on how to seek support and the importance of support. Commitment and organisation were also identified by some participants, who suggested that personal qualities regarding motivation and commitment were useful attributes for success when enrolled on an online midwifery course:

“Having good family/friend support being available to you is important. Even though the course was flexible, you still need to work with time [management] to complete learning every day” (G19).

“You need to be motivated and be in contact with student groups” (G7).

3.1. Course completion data

We were interested to find out how long most students took to complete the course and how successful they were at gaining employment as midwives. The course is available on a full and part-time basis however, the survey did not ask whether the midwives had been full-time or part-time students, but it did ask how long it had taken to complete the course.

Table 3
Demographics on completion of the course.

Number of years it took to complete the degree	n (%)
3 years	24 (86)
4 years	2 (7)
5 years	1 (3.5)
6 years	1 (3.5)
Postgraduate employment	n (%)
Graduate program	24 (86)
Employment as a midwife but not a graduate program	1 (3.5)
Not employed as a midwife post-graduation	2 (7)
Other	1 (3.5)
Current employment sector	n (%)
Public hospital	20 (74.1)
Private hospital	3 (11.1)
Midwifery Group Practice	2 (7.4)
Other	2 (7.4)
Current State where practicing	n = 26 (%)
Northern Territory	11 (42.3)
New South Wales	6 (23.1)
Queensland	4 (15.4)
South Australia	1 (3.8)
Victoria	2 (7.7)
Western Australia	1 (3.8)
ACT	1 (3.8)
Current employer	n = 27
Public hospital	20 (74.1)
Private hospital	3 (11.1)
Midwifery Group Practice	2 (7.4)
Other	2 (7.4)

3.2. Experience of online learning and preparation for practice

The participants were asked a series of questions and asked to respond using a five-point Likert scale. The questions were designed to enable students to consider the same question from opposite viewpoints. The first series of questions were focused on the program itself and the second on how well they felt the program had prepared them for their subsequent practice. The participants stated that the online platform for midwifery education did provide them with the necessary knowledge and skills they needed to be a midwife but recognised that some aspects of the course were difficult to learn online.

“I could engage with others online and learned clinical skills on the clinical teaching block week and on clinical placement” (G11).

“I think that learning midwifery is far more beneficial when you have a hands-on approach, so in some respects learning online has disadvantages to the student learning midwifery” (G19).

The participants generally engaged fully with the online tasks and activities that were provided, although a few agreed that they did not always complete all the tasks suggested. However, as adult learners it is appropriate to be able to make these choices. Another strong finding was that the participants said that the midwifery lecturers encouraged them in their learning.

“I was able to call lecturers to clear up problems anytime” (G1).

It has already been noted in the demographic data that the participants were mainly mature students. This maturity brings with it the responsibilities of family and employment, so we asked participants about incorporating the online course into work/life balance and the responses strongly agreed that they could. Flexibility was a term that dominated participants' responses when asked what was good about the

online learning experience. Several participants used the words ‘flexible’ and ‘flexibility’ when describing the online midwifery course, but others attributed the flexibility came from family, work and ‘fitting in’ the course around other activities. One participant commented:

“It was comfortable, and I was able to care for my family and work part-time. It was very convenient” (G5).

The participants were asked whether they preferred online learning and asked if they would have preferred face-to-face lectures and tutorials. The majority said that they preferred online learning because it was a flexible option that suited their lifestyles. However, when participants were asked whether they would have preferred face-to-face education they were almost evenly divided with 11 participants agreeing that they would have preferred this compared to the 14 participants who did not. Interestingly, the question on preference for online learning had the greatest number of ‘no opinion’ responses (n = 3). Perhaps this is due to not having another experience to compare it with, but this cannot be confirmed from the data.

The second series of questions were designed to explore the participants' views on how well the course had prepared them for their subsequent midwifery clinical practice. Generally, the respondents agreed that the course had prepared them for all areas of midwifery with 20 out of 28 participants agreeing with this statement. Questions were then asked about which clinical areas (antenatal, intrapartum or postnatal) the participants felt best prepared for upon graduation. Some participants had responded with ‘no opinion’ to this question (n = 2) but despite this, most participants agreed that they were prepared for practice in all the clinical areas. It needs to be noted however, there were several participants (n = 8) who did not agree that they were prepared.

We were interested in the broad concepts of knowledge, skills and confidence entering midwifery practice, and asked whether the course had provided the knowledge to enhance the participant's clinical practice. Twenty-seven participants agreed that the course did provide knowledge to enhance clinical practice, one participant disagreed. Conversely, four participants said they had minimal knowledge to enhance their clinical practice. In a similar response 24 participants agreed that they had the skills upon graduation to enhance their midwifery practice, and four participants said they had minimal skills to enhance their midwifery practice.

Twenty-three participants agreed that the course provided them with the confidence to practice as a midwife upon graduation. Five participants did not agree with this statement, but confidence in clinical practice is an issue that new graduates in midwifery can find challenging (Davis et al., 2012), so this is not a surprising finding. It is important to note that most graduates agreed and strongly agreed that the course prepared them with the knowledge, skills and confidence to practice as midwives.

3.3. Recommendations for improvement

Participants made suggestions as to how the online midwifery course could be improved for future students. Some of the participants disliked the discussion boards using one-line sentences, “remove discussion boards”, and suggested more online face-time with lecturers and more face-to-face interactive learning opportunities. Suggestions regarding improvements to the learning content were made by one participant who identified their personal experience:

“I do not think I got enough anatomy and physiology on the course. I now know it was skimmed over - I knew nothing about spiral arteries in the uterus. I do now. Also, I was not taught sepsis or how to recognise domestic violence. I would have been better prepared if these things had been included” (G13).

4. Discussion

The data revealed what the participants had enjoyed about the online midwifery theory course, what they had not enjoyed, and suggestions were made for improving the course. Three themes emerged from the data, and these were flexibility, isolation and lack of support.

4.1. Flexibility

The participants identified flexibility as a common theme. This was not surprising as studying online has the benefit of allowing students control regarding when to study and allows convenient access to learning materials compared to many face-to-face only courses (Ota et al., 2018). Accessing all learning materials online was viewed as advantageous to graduates who valued not having to relocate to be able to undertake the course, or physically attend lectures or tutorials as is the case with traditional University learning.

Balancing family, work commitments and completing the course are important considerations for students, especially as over sixty percent of the cohort of graduates in this study were aged 30 plus years on commencement of the online midwifery course. Most students take a minimum of three years to complete the requirements of the Bachelor of Midwifery course if they are a full-time student. Most of the respondents completed the course in this time frame. Those who are Registered Nurses can complete the program in two years because of the credit granted for prior learning however, six graduates who entered the course as Registered Nurses did not complete within two years. This was probably due to these graduates working as nurses whilst completing the course, which provided them with that flexibility.

From a health service perspective there is considerable investment in providing clinical placements to midwifery students, and this is even more valuable in rural and remote settings. The benefit is that those local students can then become locally based employees. We found that some participants had relocated since qualifying from the region where they gained their clinical experience as students. It is notable that the Northern Territory was the only state where fewer of the Northern Territory University trained midwives were located at the time of the study than during the participant's training. It is not possible to tell whether this movement is just in one direction because we cannot correlate individual responses from the survey data.

Flexibility regarding studying and learning has brought about significant changes in the delivery of midwifery programs and research has revealed that students have more interest and positive attitudes toward flexible learning opportunities (Chong et al., 2016; Lewis et al., 2016). Flexibility has been linked to autonomy, retention and success (Stone and O'Shea, 2019), which are essential components for on-going learning within an online environment.

4.2. Isolation

Although most graduates stated that they could learn all aspects of midwifery through the online course with clinical teaching blocks and clinical practice, isolation emerged as a disadvantage when studying a midwifery theory course online. Lack of contact from both peers and academic staff were identified as to why some students did not enjoy studying online. The literature has identified that the online learning environment can be a lonely and isolated experience (Chametzky, 2018; Miller and Griffiths, 2017), and has been associated with attrition and disempowerment (Martin et al., 2018). Despite the current trend for many who study in the 21st century preferring technological communication (Bowers & Kumar, 2015; DeLeo and Geraghty, 2017), human contact remains valuable during studies. Graduates in this study stated that they would have liked more contact with other students and lecturers whilst studying.

4.3. Lack of support

Many of the graduates highlighted various midwifery concepts that they thought were difficult to learn or understand solely via online learning. This is supported by research that supports the gaining of midwifery skills through clinical practice (Ebert et al., 2016; Gilkison et al., 2018; Mikkonen et al., 2016). Hence lack of face-to-face support for gaining understanding regarding theory into practical midwifery skills was noted as a challenge in online learning.

It is mandatory for all midwifery students in Australia to attend designated clinical placements to complement theory learning, via real-world practice amongst experienced midwives and medical staff. This face-to-face engagement in authentic clinical midwifery practice is a key component of any midwifery course. Individual support by academic staff was identified in this study as an important factor in assessing progress but also in minimising isolation. Graduates suggested that lecturers should engage in more checking in via video or telephone calls to enquire as to how students enrolled on an online course are tracking, thus helping to minimise feelings of isolation.

One graduate had highlighted that some content required for midwifery practice was not included in the online course, but this was not correct. All the subjects identified by the graduate were taught in the online midwifery course and students enrolled in the course were expected to engage with all the course content throughout the three-years. Lectures have been traditionally used for many years and have been regarded as effectual for teaching and synthesising information, particularly when complex issues are taught (Lumpkin et al., 2015). However, there is a lack of evidence suggesting this is the optimal approach to imparting information and many students are known to pretend to pay attention within classrooms/lecture theatres (Bradbury, 2016). Therefore, monitoring student online engagement and learning can be achieved by lecturers, but it remains difficult to enforce participation and is not aligned with adult learning principles.

4.4. Employment

Graduate programs are offered by many maternity services and are considered beneficial to help students gain confidence while making the transition from student to professional midwife (Fisher and Stanyer, 2018). We were interested to know how successful the participants were at gaining graduate positions and if they were not, whether they were able to gain midwifery employment as these programs are beneficial rather than mandatory.

The results showed that many respondents started working as a midwife in a graduate program. One participant began working as a midwife without the benefit of a specific program. Two graduates did not work as a midwife on completion of the course. We did not ask for reasons behind these decisions, so we cannot give an explanation. However, some nurses in the Northern Territory enter a midwifery course because they work as a remote area nurse and want to provide skilled antenatal and postnatal care to the women in the communities, they are employed in. Also, nurses working for emergency retrieval services such as the Royal Flying Doctors or Care Flight often train as midwives as well because it provides the skills and knowledge needed to manage obstetric emergencies encountered during their work in these roles. We cannot say whether these two respondents fit this picture, but anecdotally we know that several nurses entering the midwifery course at the Northern Territory University come from and/or go to this kind of employment on completion, so not being currently employed as a midwife is not necessarily a disappointing finding.

The respondents were asked what type of facility they worked in at the current time. The majority reported that they were working in the public sector with only three working in private hospitals. Midwifery Group Practice is a model of care that has been found to improve outcomes for women and job satisfaction for midwives (Sandall et al., 2016; Warmelink et al., 2015). We were therefore interested to know

whether any of the participants were working in this model. The results showed that two were currently working in this model.

5. Conclusion

This study has identified course completion, experience of online learning/preparation for practice, and recommendations for improvement as areas of importance for graduates of an online midwifery theory course. Graduates identified further issues of flexibility, isolation and lack of support that formed the main themes and should be considered as significant components to be considered when online midwifery theory courses are being designed. Further research might focus on whether there are graduates who felt they were generally ill prepared for working within the clinical areas following graduation from an online midwifery theory course, or that graduates struggled with different aspects of midwifery care following graduation. Although the area of online midwifery theory study requires further research, midwives are successfully graduating from online midwifery theory courses and have secured employment and have embarked upon careers in midwifery.

Conflicts of interest

All authors do not have any financial and personal relationships with other people or organisations that could inappropriately influence (bias) their work. We have no conflicts of interest including employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.nepr.2019.07.008>.

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