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Sharing midwifery philosophy through a positive learning environment prepares students for a future providing midwifery continuity of care: A mixed method study

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ABSTRACT

Background: Global and national frameworks for midwifery education recognise and prioritise the provision of midwifery continuity of care. Previous studies report that learning is enhanced when students have professional experience placements within these models, however there remains wide variation in midwifery students' access to placements within these models in Australia.
Aim: To evaluate Bachelor of Midwifery students' experiences in midwifery continuity of care models within two local health districts in New South Wales, Australia.
Method: A mixed methods design was used: qualitative data collected through interviews, and quantitative data collected via an online survey using the Midwifery Student Evaluation of Practice (MidSTEP) tool. Thematic analysis of qualitative data and descriptive analysis of quantitative data was undertaken.
Results: Sixteen students responded, four students were interviewed, and 12 students completed the survey. The MidSTEP mean scores for all sub-scales rated above 3.0/4.0. Participants rated 'work across the full scope of midwifery practice' and five out of eight subscales of Philosophy of Midwifery Practice at 100 %. 'Experiences prepare me to be a change agent for maternity service reform' rated the lowest (67 %). Three qualitative themes emerged: care versus carer model; learning experience; and future career as a caseload midwife.
Conclusion: A mixed method approach using a validated tool to measure student experiences, contributes to the evidence that students value professional experience placements within midwifery continuity of care models. Currently this is not an option for all midwifery students and as midwifery continuity of care models expand, these findings will inform further implementation of student professional experience placement within these models.

Statement of significance and /or Problem or issue

Problem or Issue

Midwifery continuity of care has been demonstrated to improve outcomes for mothers and neonates, yet women's access to continuity models is impaired by a lack of staff. Exposing students to the benefits of continuity models during professional experience placement may inspire recruitment and retention of graduates into the models.

What is already known

Bachelor of Midwifery programs have a strong research inspired theoretical basis to prepare students for midwifery professional experience placement. The role of midwifery professional experience placements is to provide a rich and diverse learning experience, contextualising and realising the theoretical into reality. Student placement in continuity models of care is limited due to the small percentage of maternity care conducted in this model within Australia.

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What does this paper add

Placement within midwifery continuity models prepares students for full scope of practice and enables them to develop a personal midwifery philosophy. Self-care strategies are important, and students require further educational focus on being agents of change in implementing evidence-based maternity care and reform into contemporary practice.

1. Introduction

Internationally, pathways to becoming a midwife vary with programs ranging from hospital certificates to undergraduate diplomas, degrees and postgraduate degrees for nurses to become midwives. The International Confederation of Midwives (ICM) has developed essential competencies for midwifery practice that reflect the midwifery philosophy that students develop during midwifery education programs [1]. The definition of a midwife is one who has completed a midwifery education program recognized in the country where it is located and based on the ICM Essential Competencies [2].

The global standards for midwifery education prescribe that students participate in providing midwife-led continuity of care to women through pregnancy, birth, and the postnatal period [1]. The inclusion of students participating in midwifery continuity of care (MCoC) experiences is based on the evidence that this model of care is beneficial for mothers and babies. Benefits include a reduction in obstetric interventions and rates of preterm birth, and improvements in rates of spontaneous birth with a known midwife and breastfeeding [3]. There is emerging evidence that MCoC improves women's perinatal mental health [4]. Despite the well-disseminated evidence, the implementation and scale-up of MCoC models has been slow globally with only New Zealand having achieved widespread implementation [5].

The Australian Nursing and Midwifery Accreditation Council (ANMAC) follows the guidance of ICM international standards for midwifery education by directing participation in continuity of care experiences (CoCE). Australian accreditation standards specify students must complete a minimum of ten continuity of care experiences (CoCE) in order to register as a midwife in Australia [6]. The CoCE was first introduced into midwifery education in 2002 [7,8]. The intention was to provide midwifery student's with experiences of providing continuity of care to women regardless of the health service delivery model of care the woman was receiving [9]. Students are required to attend four antenatal visits, be on call for the woman's birth and attend two postnatal visits [6]. Women have found the CoCE experience satisfying [10–13] and students have experienced quality learning [14–16]. An international scoping review identified that inconsistencies in curricula content, implementation, facilitation, and evaluation of midwifery students' CoCE may hinder the transition of new graduates midwives to work in midwifery continuity of care (MCoC) models [17].

While the educational preparation of midwives is reflective of the changing contexts in which midwives practice, there remains wide variation in students' ability to access midwifery professional experience placements within established MCoC models, such as Midwifery Group Caseload Practice. Midwifery group caseload practice is described as a model where antenatal, intrapartum, and postnatal care are provided within a publicly funded maternity model by a known primary midwife, with secondary backup midwives providing cover and assistance, and collaboration with obstetricians in the event of identified risk factors [18]. These models of care are often referred to as midwifery group practice or caseload models in the literature.

Midwifery students' experiences of professional experience placement in MCoC models supports students' learning [19]. Students' CoCE within private midwifery practice and rural midwifery group practices, were beneficial to their learning and they felt inspired by the caseload approach to care [20]. Third year students were positive about the learning gained through a placement in MCoC models and valued the relationships they developed with women [21]. This study provided evidence that students' who had experienced a clinical placement in a caseload midwifery model, increased their confidence and competence in midwifery practice. The students described the experience as gaining a 'real-world view' of what working in a caseload model could be like post-graduation [21]. Similarly, other research found that continuity of care prepares graduates for future practice within midwifery group caseload practice [22,23].

Recently a study that explored midwifery students' experience of an extended placement in a MCoC model reported a rich learning experience that enhanced confidence and competence, and was a highlight of their degree [24]. In addition, the authors found midwifery students developed a sense of professional identity and formed a real-world view of working in MCoC at the time of graduation [24]. Students' completion of the CoCEs as part of their degree prepares them to transition directly to MCoC models as new graduates, addressing staffing and workforce issues [23]. Many qualitative studies provide insight into students' experiences of midwifery continuity of care, some within established MCoC models, however there is a lack of research using other methodologies.

The aim of this study was to evaluate Bachelor of Midwifery (BMid) students' experiences within midwifery continuity models of care using a mixed methods research design.

2. Method

A mixed methods sequential research design was undertaken incorporating qualitative data collected via interview and focus groups. The validated MidSTEP survey tool [25] was used via REDCap a secure application for building and managing online questionnaires [26].

Three research questions were developed to meet the aims of this study:

1. What are midwifery student's perceptions of their professional learning experiences when placed in a midwifery continuity of care model?
2. What is the impact of being placed in a midwifery continuity of care model on the students' professional development?
3. How does the model of midwifery care impact on the students' overall experiences, knowledge, skills and plans for future career choices?

2.1. Setting

The study was undertaken in two local health districts (LHDs) in NSW, Australia. One regional study site (A) has two midwifery continuity of care (MCoC) models. The other study site (B) has MCoC available at two hospitals (one regional and one tertiary). For both sites, the models are based on the concept of an allocated primary midwife, within a small group, who provides care throughout pregnancy, labour, and birth and up to seven days after the birth. Midwifery students were placed with midwives working in these models for midwifery professional experience (MPEP) to gain insight into the way midwives work in preparation for future career pathways.

2.2. Participants and recruitment

Purposive sampling was undertaken to recruit all midwifery students who had some of their MPEP within MCoC models.

After obtaining University ethics approval (HREC2021-0401), from the 115 students enrolled in the Bachelor of Midwifery program, 40 were eligible to participate in the study and were invited to participate in both qualitative and quantitative components of the study. A university professional staff member who was not directly involved in

teaching students posted a study announcement on the learning management system informing eligible interested participants to contact the professional staff member for more information. The participant information sheet (PIS) and consent form, including a link to the online questionnaire were emailed to the student. A follow-up email, from one of the researchers, who does not directly teach or supervise the students, was sent to those eligible students that had expressed interest in participating. Students contacted the researcher directly to arrange an individual interview or attendance at a focus group.

2.3. Data collection

Quantitative data were collected via an online survey using the validated MidSTEP tool [25]. The online survey was open between the 1st and 13th October 2022. The MidSTEP tool includes one set of items reflecting students' perceptions of how well their clinical practice environment supports learning (Clinical Practice Environment Scale −18 questions). The second set focuses on the influence of midwifery preceptors on student's professional development (Midwifery Preceptor Scale - 15 questions). Each question has a four-point Likert scale answer.

Qualitative data were collected via a focus group and one individual interview based on participants' personal choices (19 October 2022). The focus group and interview were semi-structured and guided by prompt questions (Box 1) conducted by an experienced facilitator. Due to Covid-19 restrictions, the focus group and interviews were online via Zoom and digitally recorded and transcribed automatically. All participants were de- identified using a pseudonym to ensure anonymity. The names of midwives, hospitals and health services were removed to avoid identifying data.

2.4. Data analysis

Quantitative data from the MidSTEP tool were collated and analysed using descriptive statistics in Excel™. A count and percentage for each scaled response item has been generated from the following two scales: Clinical Learning Environment Scale and Impact of the midwifery preceptor scale. The descriptive data were analysed as per Griffiths Fenwick [25] study that validated the MidSTEP tool. Student responses were collapsed into disagree/agree [25].

Qualitative data were analysed using the Braun and Clarke's six phased approach to thematic analysis [27,28]: (1) familiarizing oneself with the data, (2) generating codes, (3) constructing themes, (4) reviewing potential themes, (5) defining and naming themes, and (6) producing the report. The researchers worked together during the analysis process by reading and rereading the transcripts. Relationships or links between codes were explored to identify emerging themes describing student's experiences until reaching consensus.

2.5. Findings

A total of 12 students completed the online survey including the MidSTEP tool. Demographic data is presented in Table 1. The respondents consisted of six students in first year, two students in second year and four students in third year. Four students were placed at Site A and eight at Site B for their midwifery professional experience. Most students had received midwifery professional experience support from one midwifery preceptor (n=11, 92 %).

The responses to the MidSTEP Clinical Practice Environment scale are presented in Table 2, five items scored highly on the *Skill Development subscale* in the Clinical Practice Environment. The remaining three items also scored positively but to a lesser extent (Table 2). There was less agreement about 'appropriate clinical experiences to support my learning of midwifery skills' (92 %) (item 1), 'opportunities to voice any concerns I have regarding my clinical placement' (92 %) (item 18) and 'opportunities for me to practice self-care strategies' (75 %) (item 7). For the *Philosophy of Midwifery Practice subscale*, five of the eight items scored 100 % (Table 2). The remaining three items again scored positive but to a lesser degree with 'experiences that prepare me to be a change agent for maternity services reform' the lowest (67 %) (item 11).

In Table 3, student responses on the Impact of the Midwifery Preceptor Scale were also grouped according to Skill Development (subscale 1) and Philosophy of Midwifery Practice (subscale 2). In the *Skill Development subscale*, most students agreed their midwifery preceptor developed their sense of clinical capability. The four items 1, 4, 6 and 13 scored 100 %, but item 2 'understand the academic requirements' of the program' scored 92 %. For the subscale of *Philosophy of Midwifery Practice* two items also scored 100 % (item 12, 14) with three items scoring 92 % (item 7, 11,15).

Table 4 shows the descriptive statistics for each scale and subscale. Although the range varied from 1 to 4 (1 being strongly disagree- 4 being strongly agree), the mean and median were greater than or equal to 3, with a narrow Standard Deviation (SD).

Table 1
Student demographics and allocated preceptor.

	Site A N	Site B N	Total N (%)
Age			
Under 20	0	1	1 (8.33)
21–25	1	2	3 (25.0)
26–30	1	3	4 (33.33)
31–35	2	2	4 (33.33)
Year of Study			
1st year	0	6	6 (50.0)
2nd year	1	1	2 (16.7)
3rd year	3	1	4 (33.3)
Preceptor			
1 designated midwife	4	7	11 (91.67)
Small group of midwives	0	1	1 (8.33)

Box 1
Interview question guide and prompts.

Interview question guide and prompts
- What are your perceptions of your clinical learning experiences when placed in a midwifery continuity of care model for your placement?
- What is the impact of being placed in a midwifery continuity of care model on your professional development?
- How does the model of midwifery care impact on your overall experiences, knowledge, skills and plans for future employment?
- Prompts (from MidSTEP questions):
- What opportunities were given to you to practice self-care strategies (e.g. taking breaks, leaving shift when fatigued)
- Please explain the experiences that align with your own midwifery philosophy (Sense of professional practice)

Table 2
Responses on Clinical Learning Environment Scale items (n=12).

	My clinical practice environment provides:	Disagree N (%)	Agree N (%)
	Subscale 1: Skill Development		
	Appropriate clinical experiences to support my learning of midwifery skills	1 (8)	11(92)
2	Experiences that enable me to work to my full scope of practice appropriate to my year level	0 (0)	12 (100)
3	Opportunities to achieve the mandatory clinical requirements	0 (0)	12 (100)
4	A culture that facilitates evidence-based midwifery practice	0 (0)	12 (100)
5	Staff that understand the requirements and capabilities of each year	0 (0)	12 (100)
7	Opportunities for me to practice self-care strategies (e.g. taking breaks, leaving shift when fatigued)	3 (25)	9 (75)
8	A self-directed approach to my learning	0 (0)	12 (100)
18	Opportunities to voice any concerns I have regarding my clinical placement	1(8)	11 (92)
	Subscale 2: Philosophy of Midwifery Practice		
9	Experiences that reinforce the positive influence I can have as a student on the health and well-being of women and their families.	0 (0)	12 (100)
11	Experiences that prepare me to be a change agent for maternity services reform.	4 (33)	8 (67)
12	Experiences that align with my own midwifery philosophy	3 (25)	9 (75)
13	Experiences that promote the importance of midwifery continuity of care.	0 (0)	12 (100)
14	Experiences that enable me to develop new insights into the complexity of care that a midwife can offer	0 (0)	12 (100)
15	Experiences that help me discover the midwife I want to be	0 (0)	12 (100)
16	Experiences that support my professional growth as a midwife	0 (0)	12 (100)
17	Experiences that show the importance of the midwife in supporting women to have a positive birth experience	1 (8)	11 (92)

Table 3
Responses on the Impact of the Midwifery Preceptor Scale (n=12).

	In general my midwifery preceptor:	Disagree N (%)	Agree N (%)
	Subscale 1: Skill development		
1	Directly support the development of my midwifery skills	0 (0)	12 (100)
2	Understand the academic elements of my degree program	1 (8)	11 (92)
4	Facilitate progressive development of my confidence as a student midwife	0 (0)	12 (100)
6	Support me to achieve my clinical requirements	0 (0)	12 (100)
13	Support me to perform clinical skills	0 (0)	12 (100)
	Subscale 2: Philosophy of midwifery		
7	Role model positive self-care practices	1 (8)	11 (92)
11	Create a sense of belonging to the organisation	1 (8)	11 (92)
12	Create opportunities for sharing professional best practice	0 (0)	12(100)
14	Value my clinical opinion	0 (0)	12 (100)
15	Support me to advocate for women's rights	1 (8)	11 (92)

2.6. Qualitative findings

Four midwifery students agreed to be interviewed via interview or attend a focus group. There were two second-year students and two third year students. Three main themes were identified from the qualitative data: *Sharing a midwifery philosophy; Having a positive learning experience; and, Future career as a caseload midwife.* From the second theme Learning Experience, there were two sub-themes identified: building midwifery skills, knowledge and confidence; and, different midwives, difference experiences for students. Pseudonyms have been used to ensure anonymity.

Table 4
Descriptive statistics for the MidSTEP subscales.

Scale	No of items	Range	Mean (SD)	Median
Clinical Learning Environment Total	16	2.4	3.35 (0.02)	3.33
Skill Development subscale	8	1–4	3.41 (0.21)	3.33
Philosophy of Midwifery Practice subscale	8	2–4	3.37 (0.27)	3.00
Midwifery Preceptor Total	10	2–4	3.40 (0.15)	3.33
Skill Development subscale	5	2–4	3.47 (0.17)	3.58
Philosophy of Midwifery Practice subscale	5	2–4	3.33 (0.06)	3.33

2.6.1. Sharing a midwifery philosophy

Midwifery students in this study identified that while there were variations in the extent of continuity of carer within MGP caseload model, they all shared a similar midwifery philosophy that was woman-centred and tailored to the women's needs in promoting physiological birth:

> All the midwives are on the same track with what they educate women on, and they build that confidence in the women, and then they see us develop as well… And then, with caseload even more so. They [midwives] know the women (Audrey, 3rd year).

The students' witnessed and valued the promotion of physiological birth by all the midwives as follows:

> They [women] just seem to be more relaxed and more calm during their birth, willing to listen and to take on board what their midwives are suggesting, and it just seems to make it a much more pleasant environment to be in as well and to witness (Wynn, 2nd year).

The students described how the philosophy of woman-centred care meant the midwives were able to tailor care to the woman's needs as described here:

> The actual appointments were a bit more comfortable, and they were a lot more individualized to her care. What I've noticed in the other clinics is it's more of a stock standard. Okay, we're going to talk about GGT at this appointment, labour care, we're going to talk about this, breast care at this appointment (Scarlett, 3rd year).

2.6.2. Having a positive learning experience

Midwifery students were very positive about the educational value of being placed within MCoC models and the learning opportunities provided from different midwives within these models:

> I feel like I've worked with the same midwife a lot, and they teach. They've taught me more. They really take the time. They'll go through it with you. They let you do things like they let you learn, and they encourage you to try new things (Wynn, 2nd year).

These learning experiences supported students to build their midwifery skills and knowledge, and develop skills in communicating with women and being a change agent.

2.6.2.1. Building midwifery skills, knowledge and confidence. Students learnt to build midwifery knowledge, skill and confidence across the scope of practice when placed in midwifery group practice caseload care models. The students described the opportunities to learn when placed in MGCP models:

> I was really grateful for this year, it felt like I was able to tie up loose ends- seeing the care from the model, see this whole model, and see the start to finish- all the way through to two-week postpartum phone calls or six-week postpartum phone calls (Wynn- 2nd year).

Further, learning about the full scope of practice of a midwife:

> This year I was in a one to one [caseload] model. With my midwife I was definitely able to do a lot… the trust was there for me to able to be more independent in my role (Scarlett, 3rd year).

Being placed within MGCP models not only gave midwifery students the opportunity to build their midwifery knowledge and understand the role of the midwife, but it also provided an opportunity to develop skills in communicating with women and learning the art of advocacy and trusting the women's knowledge. As described by this third student:

> I definitely developed my skills on how to converse with them [women], and about different topics… you really need to get the women confident to make decisions and research for themselves (Audrey, 3rd year).

In building these skills another student highlights the support from midwives in providing time to develop these skills:

> They'll [midwives] take the time they'll go through it with you. They let you do things like they let you learn, and they encourage you to try new things, I found that really beneficial as a student (Wynn, 2nd year).

In addition to developing these skills, students spoke about how their confidence grew from working alongside these midwives with one student explaining:

> I work with the most amazing midwife, she's been practicing forever, and she's just so amazing…I've gotten so much more confident in my skills throughout the experience… 'She sort of let me run the show a little bit, but then just gives me a little guide and some feedback which has been amazing (Audrey 3rd year).

While seeing the value of these learning opportunities, this student discussed needing more preparation from the university for their midwifery professional experience when being placed in MCoC models as follows:

> "I think maybe just more discussion about what your life will look like whilst undertaking things like- this about being on call, and what that means, and how to sort of factor that into your work, life balance" (Olive, 2nd year).

2.6.2.2. Different midwives, different experience for students. Students emphasized the value of working with different midwives and the impact this had on their professional development described here:

> 'It's good because you get a lot of experience with different midwives… because you're seeing how different midwives work, and what they do differently" (Audrey, 3rd year).

In comparison, some midwives provide too much information as described here:

> I worked with a different midwife for a month. Her appointments would go for like an hour, when it's only for a half hour, because she was just bombarding with them with the information, and then we just got a glaze over [look], and I was just like -That's not what they want (Audrey, 3rd year).

Others saw working within MCoC models as shaping their future practice and the possibility of being a change agent and lessening obstetric interventions:

> … Giving that the women who we're working with, that empowerment and that feeling of ability she's got this and she can do it, and she's capable. Just providing that, will lessen obstetric interventions, increasing natural positivity, less birth trauma. That's what I would like to be able to see. [But] I don't know if it's possible to be that change agent. But I would like to think that, maybe I can be (Wynn, 2nd year).

2.6.3. Future career as a caseload midwife

The experience of being placed within MCoC models was inspirational in shaping and preparing students for future midwifery practice. Students discuss their experience as a positive influence on their future career pathways describing the joy they experienced from working in this model:

> I think once I've started caseload, I just went- Oh, my goodness, this is where I want to be, and I've actually applied for a position in caseload next year… Because I just loved it, I just saw how you bond with these women. And I'm excited to wake up at two in the morning when one of the women calls right, it's so different like. It's just how midwifery should be (Audrey, 3rd year).

Another student agreed highlighting the value of learning through relationships and the impact this had on shaping her future career:

> I would want caseload for that continuity, and that's purely from my own personal experiences with my CoCE's. I did develop really good relationships with my CoCE. And I found that at the end of that relationship I was just on such a high from it. It was so nice that I think I would prefer a caseload over a team [shared care] environment (Wynn, 2nd year).

Other students voiced different experiences:

> I'm not a fan. I love the idea of it. Love it if it went … picture book storytelling, perfect MGP. I would adore it. But I just rarely ever saw that [benefits to woman and staff satisfaction] It has completely put me off [career choice]. The idea of ever wanting to be an MGP midwife (Olive, 2nd year)

The same student stated other challenges in working in MGCP models as not having a healthy life work balance or even when at work sometimes, not getting a break:

> It's pretty rare you'd get [a break]. You'd be working through your break, through your toilet break, not able to go to the toilet or eat lunch. In my personal experience you'd be skipping an antenatal appointment with someone because we'd be working through our lunch, doing notes through morning tea…you never really get a step back and breathe (Olive, 2nd year).

The ability to be on call when juggling family commitments was also challenging for another student:

> 'the 2 am phone calls… I would be waiting for my youngest to be a little bit older for me to go down that route just because I found it very stressful (Wynn, 2nd year).

Another student described the importance of good role models in shaping future practice as caseload midwife and achieve a healthy work life balance:

> [midwife named] I'm working with this year definitely has showed me how to have a good work life balance generally with caseload. I think that if I hadn't worked with her, if I'd worked with maybe one of the others where their appointments go on forever, and they have massive days, I don't think I would want to do caseload (Audrey, 3rd year).

3. Discussion

The findings in this study offer a measure of students reported skill development when placed within MCoC, and builds on previous qualitative studies [20,21,24,29]. We found all students reported skill development and 92 % reported the placement helped them understand the academic elements of their degree. The qualitative findings added depth to how universities can work closely with their placement partners to ensure high quality teaching and learning processes as prescribed by the ICM Global Standards for Midwifery Education [1].

The impact of having MPEP placement within a MCoC model was described by students as providing an opportunity to develop capacity as confident, assertive and autonomous midwives. These finding align with the ICM competency standards of a midwife [2] to provide care across through pregnancy, labour and birth and the ongoing care of women and newborns. In addition 75 % of students in the study agreed that MPEP within MCoC models aligns with their own midwifery philosophy. These findings are important as the ICM explains midwives offer care based on a philosophy which influences the model of midwifery care [30].

Some participants felt unprepared to work in MCoC, attributed mostly to family commitments. Students discussed the competing demands of their midwifery program impacting their life work balance, a notion echoed by others [15,31–36]. Although this contrasts with studies that show registered midwives felt they were able to better manage work-life balance and family commitments in a MCoC model compared with rostered shift work [37,38].

In addition, three quarters of the students' in the study agreed that MPEP reported opportunities for self-care. This was not reiterated in the qualitative findings where students mentioned unsupportive workplace cultures that did not provide time for breaks due to a high workload. It is recommended students develop an ability to foster self-care- to prepare them for contemporary practice [39]. Developing self-care strategies and building resilience should be incorporated into midwifery programs early [40] to ensure they are equipped with skills to deal with novel and unexpected scenarios [41]. Midwifery students may need more opportunity to practice self-care if they are to realise the harmonious work–life balance described by midwives with self-determined caseloads [42,43].

In preparing students for midwifery contemporary practice, participants identified that being exposed to positive role models was inspirational and helped in shaping their future career as a midwife providing continuity of care. Most students (92 %) had received support from one preceptor and one student reported not having a named preceptor but was still supported by the small team. The findings are comparable to current literature showing that placement within a MCoC helped students develop stronger relationships with clinicians. This is turn allowed them to establish appropriate professional and work-life boundaries in assisting them to understand how continuity models are operationalised [21,44].

Conflicting views regarding student's ability to be 'change agents' was a finding of concern. While some students viewed themselves as 'change agents' and had strong aspirations for improving clinical care, this item scored the lowest in the MidSTEP survey (67 %). While it can be said that including placement in MCoC models promotes high quality learning experiences that prepare midwives who meet the ICM definition across the scope of midwifery practice, being change agents warrant further investigation in midwifery curricula [15,34,45]. Midwifery leaders and educators in Australia need to be agents of change to ensure access to quality education; implement evidence-based maternity care and a commitment to raising visibility and achieving the full potential of midwives [46]

Students require sufficient midwifery practice experience in facility-based and community care settings, including women's homes, to attain the current ICM Essential Competencies for Midwifery Practice [2]. Where MCoC models exist these student experiences are enabled and facilitate the prescribed competencies that are central to current midwifery curricula. Educational institutions and partnering health facilities in Australia should be confident that re-orientating student's MPEP to include experience in MCoC models aligns with current evidence, is likely to improve workforce wellbeing, improve retention and is a sustainable way forward [20,24,33,34,42,44].

4. Strengths and limitations

The strengths of this study included a mix methods design and the use of a midwifery specific validated tool. There was a high level of agreement amongst respondents in many areas, lending some confidence to the conclusions. The results however need to be considered and cannot be generalised because of the small sample size. Additionally, this study was conducted at only one University and findings are specific to the midwifery students enrolled in undergraduate MPEP courses with MCoC models, the students experience ranged from tertiary and regional settings. We recommend a larger multi-site study with adequate power using the validated MidSTEP tool in future research.

This small study may contribute to the development of a larger study and inform future national and international collaborations with other maternity services and universities. Further collaborative studies are warranted for comparisons and to create action plans on how to facilitate implementation and overcome potential barriers on midwifery students MPEP in midwifery continuity of care models, such as midwifery group caseload practice.

5. Conclusion

Students reported positively on the impact of their MPEP within MCoC models on their professional growth and skill development, in aspiring them to transition to MCoC models at the time of graduation. As MCoC models become more prevalent in Australia, student's MPEP must reflect these practice changes. Universities and maternity services need to prioritise students' MPEP in extended placements within MCoC, rather than just an additional requirement. Students identified their MPEP with continuity practicing midwives provided an optimal and necessary opportunity to develop woman-centred practices and gain insight into the way midwives working in MCoC models can facilitate a harmonious work-life balance and to be agents of change for maternity reform. Designing programs that support midwifery autonomy and prepare graduates to contribute to evidence-based maternity care reform is critical to the ICM definition of a midwife and competency standards for midwifery education.

Implications for clinical practice and midwifery professional experience placements

This study reinforced the positive influence that student MPEP within midwifery continuity of care models had on professional growth and shaping future midwifery practice. While mostly positive, not all of these experiences were optimal and highlighted the need to develop and implement strategies to better support students to achieve their life-work balance. Strategies need to be implemented to support students in a supportive learning environment addressing areas of self- care and preparing students to be change agents for maternity services reform.

Implications for future research

Previous research explored the student experience in the practice setting predominantly generated a focus on the problems encountered by students. Future research is necessary to explore on a larger scale, the student's experiences and behaviours, and the strategies used for successful implementation within MPEP, both nationally and internationally. These studies need to use a validated specific midwifery tool that is a reliable measure of students' perceptions of their clinical learning experiences.

Author contributions: CRediT statement

Nicole Hainsworth: Conceptualisation, Methodology, Investigation, Formal analysis, Writing- original draft, writing- review and editing, Funding acquisition. **Elysse Prussing**: Formal analysis; Writing - review and editing. **Danielle Clack**: Writing- review and editing; **Lyndall Mollart**: Conceptualisation, Methodology, Data curation, Formal analysis, Writing- original draft, Writing- review and editing. **Allison Cummins:** Conceptualisation, Methodology, Formal analysis, Writing-

original draft, Writing-review and editing, Funding acquisition, supervision.

All authors contributed to final approval of the version submitted.

Author agreement statement

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Ethical statement

Ethical approval for the study was provided by the ethical review committee of the university where the study was taking place (Approval number: H-201-401).

Declaration of Competing Interest

All authors declare that there is no actual or potential conflict of interest, including financial and personal relationships with people or organisations, within 12months of beginning the submitted work that could inappropriately influence (bias) our work.

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References

[1] International Confederation of Midwives. ICM Global Standards for Midwifery Education. 2021. ⟨https://www.internationalmidwives.org/assets/files/general-files/2021/09/global-standards-for-midwifery-education_2021_en.pdf⟩.
[2] International Confederation of Midwives. Essential competencies for midwifery practice. 2019. ⟨https://www.internationalmidwives.org/assets/files/general-files/2019/10/icm-competencies-en-print-october-2019_final_18-oct-5db05248843e8.pdf⟩.
[3] J. Sandall, H. Soltani, S. Gates, A. Shennan, D. Devane, Midwife-led continuity models versus other models of care for childbearing women, Cochrane Database Syst. Rev. 4 (4) (2016) Cd004667.
[4] S. Cibralic, W. Pickup, A.M. Diaz, et al., The impact of midwifery continuity of care on maternal mental health: a narrative systematic review, Midwifery 116 (2023) 103546.
[5] B.F. Bradford, A.N. Wilson, A. Portela, F. McConville, C. Fernandez Turienzo, C.S. E. Homer, Midwifery continuity of care: a scoping review of where, how, by whom and for whom? PLOS Glob. Public Health 2 (10) (2022).
[6] Australian Nursing and Midwifery Accreditation Council. Midwife Accreditation Standards 2021. ⟨https://www.anmac.org.au/sites/default/files/documents/06920_anmac_midwife_std_2021_online_05_fa.pdf⟩.
[7] J. Pincombe, C. Thorogood, J. Kitschke, The development of National ACMI standards for the accreditation of three-year Bachelor of Midwifery programs, Aust. Midwifery 16 (4) (2003) 25–30.
[8] O. Tierney, L. Sweet, D. Houston, L. Ebert, A historical account of the governance of midwifery education in Australia and the evolution of the continuity of care experience, Women Birth 31 (2018) e210–e215.
[9] O. Tierney, L. Sweet, D. Houston, L. Ebert, The continuity of care experience in Australian midwifery education– what have we achieved? Women Birth 30 (3) (2017) 200–205.
[10] N. Tickle, J. Gamble, D.K. Creedy, Women's reports of satisfaction and respect with continuity of care experiences by students: findings from a routine, online survey, Women birth J. Aust. Coll. Midwives 34 (6) (2021) e592–e598.
[11] N. Tickle, M. Sidebotham, J. Fenwick, J. Gamble, Women's experience of having a bachelor of midwifery student provide continuity of care. Women Birth 29 (3) (2016) 245–251.
[12] V. Stulz, D.R. Elmir, H. Reilly, Evaluation of a student-led midwifery group practice: A woman's perspective, Midwifery 86 (2020) 102691.
[13] E. Jefford, S.J. Nolan, H. Sansone, S.C. Provost, A match made in midwifery': Women's perceptions of student midwife partnerships, Women birth J. Aust. Coll. Midwives 33 (2) (2020) 193–198.
[14] L. Ebert, O. Tierney, D. Jones, Learning to be a midwife in the clinical environment: tasks, clinical practicum hours or midwifery relationships. Nurse Educ. Today 16 (2016) 294–297.
[15] G. Moncrieff, C.H. Martin, G. Norris, S. MacVicar, It's no ordinary job": factors that influence learning and working for midwifery students placed in continuity models of care, Women birth: J. Aust. Coll. Midwives 36 (3) (2023) e328–e334.
[16] L. Sweet, Enhancing learning in the midwifery continuity of care experiences, Aust. Nurs. Midwifery J. 21 (8) (2014) 42.
[17] N. Hainsworth, E. Dowse, L. Ebert, M. Foureur, Continuity of Care Experiences' within pre-registration midwifery education programs: a scoping review, Women Birth 34 (6) (2021) 514–530.
[18] Australian Institute of Health Welfare Institution. Maternity models of care in Australia. 2023. ⟨https://www.aihw.gov.au/reports/mothers-babies/maternity-models-of-care⟩.
[19] N. Hainsworth, A. Cummins, E. Newnham, M. Foureur, Learning through relationships: the transformative learning experience of midwifery continuity of care for students: a qualitative study, Women birth: J. Aust. Coll. Midwives (2022).
[20] A.G. Carter, E. Wilkes, J. Gamble, M. Sidebotham, D.K. Creedy, Midwifery students' experiences of an innovative clinical placement model embedded within midwifery continuity of care in Australia, Midwifery 31 (8) (2015) 765–771.
[21] M. Sidebotham, J. Fenwick, Midwifery students' experiences of working within a midwifery caseload model, Midwifery 74 (2019) 21–28.
[22] L. Kuliukas, S.J. Bayes, Gearaghty, Z. Bradfield, C. Davison, Graduating midwifery students' preferred model of practice and first job decisions: a qualitative study, Women Birth 34 (2021) 61–68.
[23] A.M. Cummins, C. Catling, C.S.E. Homer, Enabling new graduate midwives to work in midwifery continuity of care models: a conceptual model for implementation, Women Birth 31 (5) (2018) 343–349.
[24] K. Baird, C.R. Hastie, P. Stanton, J. Gamble, Learning to be a midwife: Midwifery students' experiences of an extended placement within a midwifery group practice, Women birth: J. Aust. Coll. Midwives 35 (1) (2022) e19–e27.
[25] M. Griffiths, J. Fenwick, J. Gamble, D. Creedy, Midwifery student evaluation of practice: the MidSTEP tool — perceptions of clinical learning experiences, Women Birth 33 (2020) 440–447.
[26] P.A. Harris, R. Taylor, B.L. Minor, et al., The REDCap consortium: building an international community of software platform partners, J. Biomed. Inform. 95 (2019) 103208.
[27] V. Braun, V. Clarke, Successful Qualitative Research: A Practical Guide for Beginners, Sage Publications, Thousand Oaks, 2013.
[28] V. Braun, V. Clarke, Reflecting on reflexive thematic analysis, Qual. Res. Sport Exerc. Health 11 (4) (2019) 589–597.
[29] L. Sweet, P. Glover, Optimising the Follow-through Experience for Midwifery Learning, in: A. Billet, A. Henderson (Eds.), Developing Learning Professional, Professional and Practice-based Learning, Springer Science, 2011.
[30] International Confederation of Midwives (ICM). Philosophy and Model of Midwifery care. The Hague; 2014.
[31] H.L. McLachlan, M. Newton, H. Nightingale, J. Morrow, G. Kruger, Exploring the 'follow through experience': a statewide survey of midwifery students and academics conducted in Victoria, Australia, Midwifery 29 (2013) 1064–1072.
[32] J. Gray, N. Leap, A. Sheehy, C.S. Homer, Students' perceptions of the follow-through experience in 3 year bachelor of midwifery programmes in Australia, Midwifery 29 (4) (2013) 400–406.
[33] J. Gamble, M. Sidebotham, A. Gilkison, D. Davis, L. Sweet, Acknowledging the primacy of continuity of care experiences in midwifery education, Women Birth 33 (2) (2019).
[34] J. Carter, M. Sidebotham, E. Dietsch, Prepared and motivated to work in midwifery continuity of care? A descriptive analysis of midwifery students' perspectives, Women Birth 35 (2) (2022) 160–171.
[35] W. Foster, L. Sweet, K. Graham, Midwifery students experience of continuity of care: a mixed methods study, Midwifery 98 (2021) 102966.
[36] M. Newton, F. Faulks, C. Bailey, et al., Continuity of care experiences: a national cross-sectional survey exploring the views and experiences of Australian students and academics, Women birth: J. Aust. Coll. Midwives 35 (3) (2022) e253–e262.
[37] E. Prussing, G. Browne, E. Dowse, D. Hartz, A. Cummins, Implementing midwifery continuity of care models in regional Australia: a constructivist grounded theory study, Women birth: J. Aust. Coll. Midwives 36 (1) (2023) 99–107.
[38] B. Taylor, F. Cross-Sudworth, L. Goodwin, S. Kenyon, C. MacArthur, Midwives' perspectives of continuity based working in the UK: a cross-sectional survey, Midwifery 75 (2019) 127–137.
[39] L. Sist, S. Savadori, A. Grandi, et al., Self-care for nurses and midwives: findings from a scoping review, Healthcare 10 (12) (2022).
[40] A.M. Cummins, R. Wight, N. Watts, C. Catling, Introducing sensitive issues and self-care strategies to first year midwifery students, Midwifery 61 (2018) 8–14.
[41] S. Davies, L. Coldridge, No Man's Land': an exploration of the traumatic experiences of student midwives in practice, Midwifery 31 (9) (2015) 858–864.
[42] J. Fenwick, M. Sidebotham, J. Gamble, D.K. Creedy, The emotional and professional wellbeing of Australian midwives: a comparison between those

providing continuity of midwifery care and those not providing continuity, Women Birth: J. Aust. Coll. Midwives 31 (1) (2018) 38–43.
[43] I. Jepsen, S. Juul, M. Foureur, E.E. Sørensen, E.A. Nøhr, Is caseload midwifery a healthy work-form? – A survey of burnout among midwives in Denmark, Sex. Reprod. Healthc. 11 (2017) 102–106.
[44] L. Kuliukas, J. Warland, P. Cornell, B. Thomson, H. Godwin, Z. Bradfield, Embracing the continuity of care experience: A new Australian graduate entry master of midwifery course with a student caseload of 15 women per year, Women birth: J. Aust. Coll. Midwives 36 (2) (2023) 151–154.
[45] G.O. Hole, S.J. Brenna, B. Graverholt, D. Ciliska, M.W. Nortvedt, Educating change agents: a qualitative descriptive study of graduates of a Master's program in evidence-based practice, BMC Med Educ. 16 (2016) 71.
[46] J.E. Adcock, M. Sidebotham, J. Gamble, What do midwifery leaders need in order to be effective in contributing to the reform of maternity services? Women Birth 35 (2) (2022) e142–e152.