# Women's experiences of having a Bachelor of Midwifery student provide continuity of care

**ABSTRACT**

*Background:* The Australian national midwifery education standards require students to complete a number of continuity of care (COC) experiences. There is increasing evidence outlining the value of this experience to the student, but there is limited research examining women's experiences of having a COC midwifery student. This study aimed to investigates the woman's experiences.

*Methods:* A retrospective descriptive cohort design was used. A paper-based survey was posted to all women cared for by a midwifery student in 2013 (n=698). Descriptive statistics were used to explore the proportion, mean score, standard deviation and range of the variables. Construct validity of the Satisfaction and Respect Scales was tested using exploratory factor analysis. Free text responses were analysed using latent content analysis.

*Result:* One-third of women returned a completed survey (n=237/698, 34%). There was a significant positive correlation ($p < 0.05$) between the number of AN/PN visits a midwifery student attended and women's levels of satisfaction. Women were very satisfied with having a student midwife provide continuity. The qualitative data provided additional insight demonstrating that most women had a positive relationship with the midwifery student that enhanced their childbearing experience.

*Conclusion: T*he women in this study valued continuity of midwifery care and were able to form meaningful relationships with their midwifery student. Programs leading to registration as a midwife should privilege continuity of care experiences. Not only does this benefit women but provides the future midwifery workforce with a clear understanding of models that best meet women's individual needs and the benefits of working in these models.

**Keywords**

Continuity of care (in MeSH Continuity of patient care N04.590.233.727.210);

Pregnant women M01.975.807; Midwifery H02.478.676.416; Students I02.233.748;

Education, curriculum I02.195.

**SUMMARY OF RELEVANCE**

Problem

Women's experiences of continuity of care provided by midwifery students are not well understood.

What is Already Known

Women value their relationship with their continuity of care midwifery student. The two most important factors are the relationship that is formed with the midwifery student and the presence of the midwifery student during labour, birth and the postnatal period.

What This Paper Adds

Evidence that there is a significant ($p<0.05$) positive correlation between the number of antenatal and postnatal visits a midwifery student attends and women's satisfaction with the midwifery student. This suggests that time and frequency of contact are key factors in building connected relationships. Existing evidence is strengthened surrounding the importance to women of the relationship in continuity of care with their midwifery student.

## INTRODUCTION

The Australian Nursing and Midwifery Council (ANMAC) is responsible for the accreditation of all nursing and midwifery programs leading to registration in Australia. Registration as a midwife in Australia enables scope of practice that is consistent with the international definition of a midwife. The intention of midwifery programs leading to registration within Australia is to prepare graduates to work within their full scope of practice. This includes the ability to work as a woman's primary maternity care provider in a continuity of care model (COC). Indeed the ANMAC education standards state that a midwifery curriculum should be underpinned by *"a) a woman-centred midwifery philosophy; b) a midwifery continuity of care philosophy; and c) primary health care principles"*,[1, p14]

In 2010 ANMAC introduced a minimum number of 20 COC experiences required by midwifery students in pre-registration programs. There were no requirements surrounding the number of antenatal or postnatal visits a student should attend.[2] This was up to individual universities to stipulate. Despite considerable debate and an argument from many against reducing the number of COC experiences for midwifery students ANMAC has now set the mandated COC experience at ten.[1] The minimum contact is four antenatal visits, two postnatal visits and for the majority of cases, the labour and birth.[1]

The aim of the COC experience is to expose students to the value and practicalities of continuity of care models to enable them to work within this model of care on graduation. Models of maternity care based on midwifery continuity (COC) focus on promoting normality, recognising and respecting the need for choice and control, addressing woman's individual social, emotional, physical, psychological, spiritual and cultural needs as well as expectations.[3] There is strong evidence supporting the benefits for women and their newborns of midwife-led COC.[4] The nature and quality of the relationship has been suggested to be at the heart of these positive outcomes for women and their babies.[5-7] Specifically, women who experience COC report improved social and emotional support and trust in their midwife resulting in greater self-confidence and ability to birth without pharmacological pain

relief.[7] Women also identified that a care provider knowing their story was a significant benefit of receiving COC.[8]

Despite the National Maternity Services Plan (NMSP)[9] recommendations to increase women's access to COC, most Australian women continue to receive fragmented care.[10] Therefore the majority of midwifery students experience COC through providing this care to women within a fragmented maternity care system. Additionally, midwifery students may be providing the only experience of COC that a woman experiences throughout her pregnancy.

Although there is a growing body of research describing the experience of midwifery students providing COC, there remains limited work exploring women's experience of this clinical learning experience.[11-14] A search of the literature from the past 10 years identified only four studies that examined women's experiences of receiving COC from a midwifery student. Three studies were from Australia and one study was from Norway.[14-18] Overall, the studies revealed that women's experiences of having a midwifery student provide COC were very positive. Two major themes emerged from the literature; 'relationship' and 'presence'. Women described their relationship with their midwifery student as 'genuine' and 'personalised'.[14-17] This appeared to be especially important for Australian Aboriginal and Torres Strait Islander women who felt that their cultural needs, often not met by the maternity care system, were addressed by their midwifery student providing COC.[15] Positive relationships with students were also important to the partners of women although it was not always recognised until labour and birth.[14] The second theme was labelled 'presence'. The women in these four studies described wanting to be the focus of care. They expected their care providers to be aware of their needs and emotionally and physically present for them. Women described how their midwifery students were able to aptly meet these expectations.[14, 16-18] Additionally, Aune et al.[14] and Browne and Taylor[16, p112] found that women valued the opportunity to "talk about" their labour and birth experience with the student. The value of this may have been amplified as a result of the limited opportunity to debrief for women in fragmented models of care.[19]

Given the overwhelming evidence that all women should have access to a known midwife[4] it is important to continue to examine women's experience of COC by a student midwife to determine whether this educational initiative is of value to women and whether these experiences promote COC to the women receiving it.

## AIM

The aim of this study was to investigate Australian women's experience of COC provided by an undergraduate midwifery student.

## METHOD

### Design

A retrospective cohort design was chosen for this study. Data were collected using a self-administered questionnaire.

### Setting

One Australian university that offered a Bachelor of Midwifery program. Students enrolled in this program were required to complete a minimum of five antenatal visits, attend the woman's labour and birth and undertake three postnatal visits including a six week postnatal visit. Students could recruit women for their COC experience from any of the University's practice partner sites which also included private midwifery practices. As such students experienced supporting women in a wide range of environments including tertiary, regional and rural hospitals, community venues and women's own homes (including the opportunity to attend a woman giving birth at home).

### Sample

The participants in this study were women who had agreed to have a midwifery student provide continuity of care in their recent childbirth experience and who had completed a six-week postnatal visit in 2013 (n=698).

**Data Collection**

A study package including a cover letter, information sheet and questionnaire was posted to all women having received COC student care. Women were assured that the survey was voluntary and anonymous. Consent was implied if the woman completed and returned the questionnaire.

Forty-one surveys were returned with the address unknown. A reminder letter offering an option of data collection by telephone was sent nine weeks following the first mail out. When the survey closed after four months (June 2014), a total of 237 completed questionnaires had been returned using a reply paid envelope. This was a response rate of 34%.

***Measure***

A paper-based questionnaire seeking information on women's experiences of having a midwifery student provide COC was developed and pilot tested with a small focus group of women of childbearing age. In the first section of the questionnaire participants were asked to provide some general demographic information such as age, education and work status as well as personal information about their childbirth experience (for example birth mode, primary carer and model of care).

In the following sections women were asked questions that explored their perceptions of their midwifery student such as timing of first contact, year level of student, attendance and engagement of student and the woman's feelings about referring others to a midwifery student. Using a three-point Likert scale, women were also asked to rate care provided by their midwifery student during pregnancy, birth and postpartum (1 = not as good as you hoped, 2 = As good as you hoped and 3 = better than you hoped).

In addition women were asked to respond to a number of items that firstly explored feelings of 'respect' (n=5) and secondly 'satisfaction' (n=5). In terms of 'respect' items included statements such as 'did you feel your student midwife was easy to talk to?', 'did you feel your decisions were

respected by your midwifery student?' and 'did you feel your student midwife was sensitive to your cultural needs and those of your partner and family?' Responses ranged from 0 = No, never to 4 = Yes, always. The second scale included items such as 'were you satisfied with the way your midwifery student listened and responded to your questions and concerns?' and 'were you satisfied with the emotional support you received from your student?' For these items women responded to a 5 point Likert scale of 0= very dissatisfied to 4 = very satisfied.

Lastly a free text section provided women with an opportunity to make any further comments about their midwifery student. One hundred and fifty-four women (65%) commented on the care they received from their COC midwifery student.

**Data Analysis**

***Quantitative***

Data was entered into Statistical Package for the Social Sciences (version 22) and analysed using non-parametric testing due to an abnormal distribution of results. Prior to analysis, variables were checked for errors. Descriptive statistics (means and frequencies) were used to describe the data set.

The construct validity of the both the 'respect' and 'satisfaction' scales were tested using exploratory factor analysis. Suitability of data for factor analysis was assessed using Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity.

*Respect items:* The Kaiser-Meyer-Olkin (KMO) was 0.73 and the Bartlett's test of sphericity on all five items indicated that the data was suitable for factor analysis ($p < 0.001$). No correlation co-efficients were particularly large ranging from 0.17-0.77 so no items were deleted before running the factor analysis. A one-factor solution emerged explaining 57% of the variance. The five items showed moderate internal reliability in this scale with a Cronbach's alpha value of 0.65. The Cronbach's alpha increased to 0.79 when the first item was excluded (which also had a low factor loading of 0.41) thus it was decided to construct the scale using only four items (see Table 1).

*Satisfaction items:* The Kaiser-Meyer-Olkin (KMO) was 0.81 and the Bartlett's test of sphericity indicated that the data was suitable for factor analysis ($p < 0.001$). No correlation co-efficients were particularly large ranging from 0.73-0.89 so no items were deleted before running the factor analysis. A one-factor solution emerged explaining 86.4% of the variance. The five items showed good internal reliability in this scale with a Cronbach's alpha value of 0.95. This is well above the recommended 0.7 (Table 2).

***Qualitative***

Latent content analysis was used to analyse the free text responses of 154 women. Latent content analysis aims to identify meaningful patterns that describe the phenomena.[20] All the text was transcribed into a Word document. Similar concepts were then grouped together. Groupings were constantly revised until meaning was elicited. Audit trails of the data groupings were shared and discussed between the research team.

Ethics approval was obtained through Griffith University Human Research Ethics Committee (NRS/28/13/HREC). The study was conducted in accordance with the National Health and Medical Research Council (NHMRC) (2014) guidelines.

## RESULTS

### Sample Characteristics

The sample was largely representative of Australia's birthing women however English speaking women (n=112, 47.3%), women with a tertiary qualification (n=81, 34.3%) and women who received COC from their primary care provider (n=230, 97.5%) were over-represented in the study. The average age of participants was 30.8 years (range 18-45, SD 5.1) and the majority birthed in regional or semi-rural hospital (n= 231, 97.6%). At the time of data collection the four major clinical partner hospitals were considered regional hospitals despite two of these hospitals having over 3000 births per annum each.[21] See Table 3.

**Midwifery student recruitment and engagement with women**

Most women were given the option of having a midwifery student provide COC during an antenatal appointment (n=94, 39.7%). Seventy four women (31.2%) were approached directly by the student in a health care facility. The remaining women (n= 69, 29.1%) contacted the university seeking continuity of care from a student midwife and had heard about this option through friends, direct experience in a previous pregnancy and receiving university promotional literature. Women were initially contacted by their midwifery student at a mean of 19.4 weeks gestation (standard deviation 7.1, range 4 - 36) and had their first antenatal visit with their student at a mean of 21.3 weeks gestation (standard deviation 7.0, range 4 – 37).

**Year level of student**

Many women in this study received care from a first year student (n=82, 35%) or a third year student (n=76, 32.5%). Forty-one women (17.5%) received care from a second year student and 35 women (15%) could not recall the study year of their student midwife.

**Midwifery students attending births**

Most midwifery students (n=211, 90.2%) attended their COC woman's birth. Of the 23 women (9.8%) not attended by their student at the birth, 22 women provided a reason. The most common reason for the student missing the birth was that the woman laboured and birthed quickly (n=15). In this circumstance eight women stated that despite missing the actual birth their student was in attendance soon after the birth. A range of other reasons were given for the remaining seven students who missed the birth.

**Antenatal and postnatal visits with COC midwifery student**

The mean number of antenatal visits attended by a student midwife was 6.59 (standard deviation 2.89, range 1 – 20). The mean number of postnatal visits midwifery students attended was 5.11 (standard deviation 3.67 range 0 – 20).

**Satisfaction with care provided by a midwifery student**

Table 4 presents women's satisfaction with each component of their care. The majority of women reported that their pregnancy, labour and birth and postnatal care were better than they had expected. Women were less satisfied overall with the postnatal care compared with antenatal and labour and birth care in approximately 10 % of cases.

***Satisfaction and number of visits***

There was a significant ($p < 0.05$) positive correlation between the number of antenatal and postnatal visits a midwifery student attended and levels of satisfaction (Table 5). Antenatal visits and postnatal visits independently correlated with satisfaction scores.

***Respect and satisfaction with student***

The level of respect women perceived their midwifery student demonstrated was high. Three of the four items had a mean score of 4 (maximum score 4) (respect for decisions, cultural needs and kindness) and the fourth item (easy to talk to) had a score of 3.9 (Table 1). Likewise women were very satisfied with the student's ability to listen and respond, provide physical care and work with others (mean score 3.9 out of maximum score of 4). Emotional support provided by the student had a mean score of 4 (Table 2).

**Next pregnancy and recommendation of a student to others**

The majority of women in this study would choose to have a midwifery student provide COC in a subsequent pregnancy (n=204, 87.9%) and would recommend a student midwife to family and friends (n=220, 94%).

**Qualitative findings**

In line with the quantitative results, the findings generated from women's free text responses demonstrated that the vast majority of women were very positive about their experience of having a

COC midwifery student (Table 6). Women consider their students to be 'amazing' people who made a significant difference to their experience; '*She went above and beyond to be there for me and it was an absolute pleasure to have her there during birth, a familiar face* (156)'. Women reported numerous benefits of having a student follow them across pregnancy birth and the early transition to motherhood. Women talked about how their student gave them confidence, provided reassurance and eased their fear. As one woman stated about her student; '*I felt like she was always looking for opportunities to try and make me more comfortable and feel relaxed (175).*' The importance of having someone that was '*known*' and '*knowledgeable*' throughout pregnancy was also evident in the data set; *'My student was the only constant I had during my care. If I had not had the student I think I would have been very disappointed with my overall care. My student was the only person that followed me through from beginning to end and provided continuity (45)'*.

While not many, some women reported being unhappy with their midwifery student experience. Students who women perceived were either overly or under confident were a cause of concern. Women were also disappointed when students failed to attended appointments as they had promised or did not attend the birth. As one women stated '*I was disappointed by her lack of attendance to appointments as she was my main antenatal support* (217)'

**DISCUSSION**

Understanding how women perceive continuity of care provided by midwifery students remains an important priority as educationalists work to ensure newly qualified midwives enter the profession being able to work across their full scope of practice in evidence-based models of service delivery. While the study outlined in this paper is one of the largest to be conducted in this area and the sample was generally representative of Australia's childbearing population the results must be interpreted within the context of the study's limitations.

Convenience samples are not easily generalised to a population and are considered the weakest form of sampling.[22] In addition recall bias may have presented a threat to the internal validity of this study. Recall is dependent on memory, which can be unreliable. A 1987 study by Bradburn, Rips and

Shevell[23] found that after one year 20% of critical data is irretrievable by memory. They argued that the quality of the reported data is dependent on the time between the event and the study. For some women in this study the interval of time between the experience of student continuity and reporting of their experience was in excess of one year. Having said this there is also a body of work that demonstrates women's recall of their childbearing event is consistently precise and accurate.[24] Notwithstanding, the results do add to the evidence base around women's experience of continuity of care as well as continuity delivered by midwifery students.

In line with the results previously outlined this study demonstrated that women valued continuity of care experiences provided by a midwifery student.[15-18] Women reported receiving respectful individualised care from their COC student that met their physical and emotional needs. In addition, women spoke of students' engendering trust, empowerment and self-confidence. These are all concepts associated with quality woman-centred maternity care.[5-8]

An interesting finding of the study was the positive correlation between satisfaction and the number of antenatal and postnatal visits. Where a student provided more than seven antenatal visits and more than five postnatal visits women reported being highly satisfied with their student experience. The explanation for this is likely to be twofold and reciprocal in nature. Firstly, in order for the student to attend appointments and the labour and birth, the woman needs to notify the student of the time and place of these events. Engaging in this way signifies a woman's wish to receive continuity. In turn the student has to respond in a positive manner demonstrating a level of commitment to attending the woman. In this study the majority of women reported receiving more than the minimum stipulated number of visits required by the program. This additional contact may have worked to facilitate the development of a deeper more meaningful relationship between the student and the woman as it was clear that women valued the relationship they formed with their student. In this context the student is continually exposed to the benefits of continuity perhaps increasing their desire to go beyond the minimum COC requirements of the program.

The ability of students to engage with women above the set COC requirements sits in contrast with some of the other available literature that has argued that completing the mandated COC experiences is difficult for students to achieve and creates stress.[11-13, 25] The undergraduate program from which the students were drawn has a strong commitment to continuity. Attending women is prioritized across the program and is a clearly stated program meta-value.[26] Mixed modes of teaching and learning also offer flexibility to students with the aim of helping them organize their follow-through experiences. In this way the program addresses any misperception by students that their university requirements might clash with their COC experiences and demonstrates commitment to the stated program meta-values[26].

An important finding of this study is the difference midwifery students made to most women's childbirth experiences. The participants were able to form trusting relationships with their COC midwifery student and this appeared to enhance women's satisfaction. Although COC by a midwifery student should not replace women's access to COC models of care, the positive benefits of continuity provided to childbearing women needs to be reiterated and emphasized to keep pressure to reform a maternity system that continues to struggle to implement the evidence around a known midwifery care provider. Midwifery students providing COC are in a unique position to be able to facilitate women centered care across different maternity care providers and contexts as they are positioned both within the system and outside of it.[18] An educational focus on primary maternity care and evidence-based learning is likely to equip the midwifery student with an increased capacity to act as a woman's advocate particularly in the birth space. Students are not only familiar and comfortable with the hospital environment but through continuity models are aware of women's individual needs, wants and preferences. It is interesting to note that the recent changes to the midwifery education standards have set the COC requirements at a level below what participants considered provided them with care that was as good as or better than expected. Additionally, the number of COC experiences has been reduced from 20 to 10 meaning that potentially half the number of women will be introduced to the benefits of COC than was previously the case. This may have implications for the maternity services reform movement because one of the key drivers of change has been the organized voices of women and families.[9] Peak maternity consumer organisations such as Maternity Choices are reliant on people

volunteering to remain active and effective and the more women that experience and know about COC the more likely they are to advocate for it for themselves and others.[27]

Finally, this study demonstrates that collecting data from women on the quality of their COC relationship with their midwifery student could be implemented by educational facilities in a user-friendly way. The results providing a valuable independent measure of individual student ability and program quality.

## CONCLUSION

Midwifery students provide many women with an introduction to the benefits of continuity in what is still largely a fragmented maternity care system in Australia and this may have important implications for the maternity service reform movement. Midwifery students providing COC may confer benefits for women when they are able to bridge the gap by providing knowledge and understanding of the fragmented system whilst having an in-depth understanding of the woman's own individual needs and preferences. Once again the relationships women share with maternity care providers, in this case students, was considered instrumental to supporting quality care and engendering satisfaction. The association between the numbers of visits the student undertook and increased satisfaction levels needs further exploration especially within the context of revised education standards reducing the requirements for students to engage in continuity experiences.

**Acknowledgements and Disclosures**

All authors on this paper made a significant and valuable contribution to this paper and have met the criteria for authorship.

Significant contributors to this study include Professor Debra Creedy (proof read method section) and Ghazala Adams (research assistant for statistical support).

No financial assistance was given for this project.

**REFERENCES**


1. Australian Nursing and Midwifery Accreditation Council (ANMAC). *Midwife: Accreditation standards*. 2014. Available from: http://www.anmac.org.au/sites/default/files/documents/ANMAC_Midwife_Accreditation_Standards_2014.pdf.
2. Australian Nursing and Midwifery Accreditation Council. Midwives: Standards and criteria for the accreditation of nursing and midwifery courses leading to registration, enrolment, endorsement and authorization in Australia – with evidence guide. 2009. Available from: http://www.anmac.org.au/sites/default/files/documents/ANMC%20Accreditation%20Standards%20-%20Midwives%20-%20November%202010.pdf.
3. Queensland Government. *Delivering continuity of midwifery care to Queensland women: A guide to implementation*. Brisbane: Queensland Government 2012. Available from: http://www.qcmb.org.au/media/pdf/Midwives%20Imp%20guide_web.pdf.
4. Sandall J, Soltani H, Gates S, Shennan A, Devane D. Midwife-led continuity models versus other models of care for childbearing women. *Cochrane Database of Systematic Reviews* 2013:8.
5. Gamble J, Creedy D, Teakle B. Women's expectations of maternity services: a community-based survey. *Women And Birth* 2007; 20(3):115-120.
6. Hunter B, Berg M, Lundgren I, Ólafsdóttir Ó, Kirkham M. Relationships: The hidden threads in the tapestry of maternity care. *Midwifery* 2008; 24(2):132-137.
7. Leap N, Sandall J, Buckland S, Huber U. Journey to confidence: Women's experiences of pain in labour and relational continuity of care. *Journal of Midwifery and Women's Health* 2010; 55(3): 234-242.
8. Homer C, Foureur M, Allende T, Pekin F, Caplice S, Catling-Paull C. 'It's more than just having a baby' women's experiences of a maternity service for Australian Aboriginal and Torres Strait Islander families. *Midwifery* 2012; 28(4): E449-E455.

9. Australian Government Department of Health. *The National Maternity Services Plan;* 2011. Available from: http://www.health.gov.au/internet/publications/publishing.nsf/Content/pacd-maternityservicesplan-toc~pacd-maternityservicesplan-chapter5.

10. Li Z, Zeki R, Hilder L, Sullivan E. *Australia's mothers and babies 2011. Perinatal statistics series no. 28. Cat. no. PER 59.* Canberra: AIHW; 2013.

11. Gray J, Leap N, Sheehy A, Homer C. Students' perceptions of the follow-through experience in 3 year bachelor of midwifery programmes in Australia. *Midwifery* 2013; 29(4):400-406.

12. McLachlan H, Newton M, Nightingale H, Morrow J, Kruger G. Exploring the 'follow-through experience': A statewide survey of midwifery students and academics conducted in Victoria, Australia. *Midwifery* 2013; 29(9):1064-1072.

13. Rawnson S. A qualitative study exploring student midwives' experiences of carrying a caseload as part of their midwifery education in England. *Midwifery* 2011; 27(6):786-792.

14. Aune I, Dahlberg U, Ingebrigtsen O. Relational continuity as a model of care in practical midwifery studies. *British Journal of Midwifery* 2011; 19(8):515-523.

15. Kelly J, West R, Gamble J, Sidebotham M, Carson V, Duffy E. 'She knows how we feel': Australian Aboriginal and Torres Strait Islander childbearing women's experience of continuity of care with an Australian Aboriginal and Torres Strait Islander midwifery student. *Women and Birth* 2014; 27(3):157-162.

16. Browne J, Taylor J. 'It's a good thing…': Women's views on their continuity experiences with midwifery students from one Australian region. *Midwifery* 2014; 30(3):108-114.

17. Dahlberg U, Aune I. The woman's birth experience: The effect of interpersonal relationships and continuity of care. *Midwifery* 2013; 29(4):407-415.

18. Rolls C, McGuinness B. Women's experiences of a Follow Through Journey Program with Bachelor of Midwifery students. *Women and Birth* 2007; 20(4):149-152.

19. Fenwick J, Gamble J, Creedy D, Barclay L. Women's experiences of the PRIME midwifery counselling intervention: Promoting Resilience in Mothers Emotions. *Women and Birth* 2011; 24, Supplement 1(0):S11-S12.

20. Liamputtong P. *Qualitative Research Methods (4th Ed.).* Melbourne: Oxford University Press; 2013.

21. Humphrey M, Colditz P, Flenady V, Whelan N. *Maternal and perinatal mortality and morbidity in Queensland: Queensland maternal and perinatal quality council report 2013*. Queensland, Australia: State of Queensland, Department of Health; 2013.

22. Schneider Z, Whitehead D, LoBiondo-Wood G, Haber J. *Nursing and Midwifery Research: Methods and appraisal for evidence-based practice (4th Ed.).* Mosby: Elsevier; (2013).

23. Bradburn N, Rips L, Shevell S. Answering autobiographical questions: The impact of memory and inference on surveys. *Science* 1987; 236(4798):157-161.

24. Simkin P. Just another day on a woman's life? Women's long term perceptions of their first birth experience. Part 1. *Birth* 1991; 18:203 - 211.

25. Sweet L, Glover P. An exploration of the midwifery continuity of care program at one Australian University as a symbiotic clinical education model. Nurse Education Today 2013; 33(3):262-267.

26. Bass J, Sidebotham M, & Gamble J., Fenwick J. (2015). Commencing undergraduate midwife students' beliefs about birth and the role of the midwife. International Journal of Childbirth 5 (2), 83-90.

27. Teakle B. (2014). *Primary maternity care reform: Consumer action pack.* Available from: http://www.maternitychoices.org.au/uploads/1/5/1/4/15149676/cractionpack.pdf.

**Table 1: Student midwife respect scale items**

| **Question on 5 point Likert scale** | **Mean** | **Standard Deviation** | **Factor Loading** |
|---|---|---|---|
| Did you feel your midwifery student was easy to talk to? | 3.9 | 0.3 | 0.7 |
| Did you feel your decisions were respected by your midwifery student? | 4.0 | 0.2 | 0.9 |
| Did you feel your student midwife was sensitive to your cultural needs and those of your partner and family? | 4.0 | 0.2 | 0.8 |
| Did you feel you were treated with kindness and understanding by your student midwife? | 4.0 | 0.2 | 0.9 |

**Table 2: Student midwife satisfaction scale results**

| **Question on 5 point Likert scale** | **Mean** | **Standard Deviation** | **Factor Loading** |
|---|---|---|---|
| Were you satisfied with the way your student midwife listened and responded to your questions and concerns? | 3.9 | 0.3 | 0.9 |
| Were you satisfied with the way your student midwife listened and responded to your family/partner's concerns? | 3.9 | 0.4 | 0.9 |
| Were you satisfied with the way your student worked with midwives and other health professionals? | 3.9 | 0.3 | 0.9 |
| Were you satisfied with the emotional support you received from your student midwife? | 4.0 | 0.4 | 0.9 |
| Were you satisfied with the physical care you received from your student? | 3.9 | 0.5 | 0.9 |

**Table 3: Characteristics of women in sample**

| **Characteristic** | **Participants n (%)** | **Australia* %** |
|---|---|---|
| **Age (mean)** | **30.78** | **30*** |
| <20 years | 4 (1.8) | 3.7* |
| 20-24 | 26 (11.1) | 13.8* |
| 25-29 | 65 (27.7) | 27.9* |
| 30-34 | 82 (34.9) | 31.6* |
| 35-39 | 48 (20.4) | 18.3* |
| ≥ 40 | 10 (4.3) | 4.7* |
| **Marital status** | | |
| Single | 8 (3.4) | 29.5* |
| Married/defacto | 224 (94.5) | 59* |
| Divorced/separated | 5 (2.1) | 11.5* |
| **Education level** | | |
| < year 12 | 32 (13.6) | 28.8* |
| year 12 | 58 (24.6) | 16.6* |
| apprenticeship or diploma | 65 (27.5) | 23.3* |
| tertiary | 81 (34.3) | 18.8* |
| **Employment status** | | |
| Unemployed | 51 (21.5) | 6.1* |
| Paid work | 148 (62.4) | |
| Studying | 13 (5.5) | |
| Paid work and study | 24 (10.1) | |
| **Income $** | | |
| ≤ 20000 | 11 (4.6) | |
| 20001-40000 | 13 (5.5) | |

| | | |
|---|---|---|
| 40001-60000 | 41 (17.3) | |
| 60001-80000 | 45 (19) | |
| 80001-100000 | 44 (18.6) | |
| >100000 | 58 (24.5) | |
| Not stated | 25 (10.5) | |
| **Private Health fund** | | |
| Yes | 89 (38) | 53* |
| No | 145 (62) | 47* |
| **Country of birth (maternal)** | | |
| Australia | 177 (75) | 70.4* |
| New Zealand | 27 (11.4) | 2.9* |
| Europe | 18 (7.6) | 5.3* |
| Asia | 7 (3) | 13.8* |
| Other | 7 (3) | 7.6* |
| **English as language spoken at home** | | |
| Yes | 230 (97.5) | 76.8* |
| No | 6 (2.5) | 23.2* |
| Aboriginal/Torres Strait Islander | 4 (1.7) | 3.9* |
| Non Indigenous | 232 (98.3) | 96.1* |

*National Data - Australia's birthing population demographic data was taken from the 2011 Australia's Mothers and Babies report (Li et al., 2013); Australian Bureau of Statistics Education and Work report (Australian Bureau of Statistics, 2011); Australian Bureau of Statistics Labour Force, Australia report (Australian Bureau of Statistics, 2011); Australian Bureau of Statistics, Health Services: Use and patient experience (Australian Bureau of Statistics, 2011) and Australian Bureau of Statistics Highest Level of Education (Australian Bureau of Statistics, 2014).

**Table 4: Women's level of overall satisfaction with midwifery student across different aspects of care**

| Care received from student midwife | Not as good as hoped n(%) | As good as hoped n(%) | Better than hoped n(%) |
|---|---|---|---|
| **Antenatal** | 5(2.1) | 41(17.5) | 188(80.3) |
| **Labour and birth** | 5(2.1) | 40(17.9) | 179(79.9) |
| **Postpartum** | 15(6.5) | 56(24.3) | 159(69.1) |

**Table 5: Number of visits with student midwife and overall satisfaction with care provided by student midwife**

| | **Antenatal visits** | | | | **Postnatal visits** | | | |
|---|---|---|---|---|---|---|---|---|
| | **n** | **Mean SD** | **Mean rank** | **P value K W test** | **n** | **Mean SD** | **Mean rank** | **P value** |
| **Antenatal care** | | | | | | | | |
| Not as good | 3 | 3.7 (0.6) | 22.17 | <0.05 | 4 | 0.5 (0.6) | 7.0 | <0.001 |
| As good | 32 | 6.0 (2.8) | 76.6 | <0.05 | 36 | 3.8 (3.1) | 77.4 | <0.001 |
| Better | 140 | 6.8 (2.9) | 92.0 | <0.05 | 167 | 5.5 (3.7) | 112.1 | <0.001 |
| **Labour / birth care** | | | | | | | | |
| Not as good | 4 | 4.3 (0.5) | 32.6 | <0.05 | 4 | 2.0 (1.4) | 34.4 | <0.05 |
| As good | 34 | 5.8 (2.2) | 71.5 | <0.05 | 37 | 3.5 (1.8) | 75.1 | <0.05 |
| Better | 130 | 7.0 (3.1) | 89.5 | <0.05 | 157 | 5.6 (3.58) | 106.9 | <0.05 |
| **Postnatal care** | | | | | | | | |
| Not as good | 13 | 5.1 (2.1) | 56.5 | <0.05 | 13 | 3.2 (4.0) | 50.9 | <0.001 |
| As good | 47 | 6.32 (2.2) | 81.6 | <0.05 | 52 | 4.4 (3.4) | 84.6 | <0.001 |
| Better | 112 | 7.0 (2.9) | 92.0 | <0.05 | 138 | 5.7 (3.6) | 113.4 | <0.001 |

**Table 6: Summary of the qualitative responses**

| Concepts | Selected quotes |
|---|---|
| **My student was…**<br>• Wonderful<br>• Amazing<br>• Unbelievable<br>• Went above and beyond<br>• Nice<br>• Lovely<br>• Great | She was totally amazing (12)<br><br>She was wonderful (79)<br><br>I suffer from anxiety and it was worse during pregnancy. She was amazing support. I enjoyed my labour (178)<br><br>She went above and beyond to be there for me and it was an absolute pleasure to have her there during birth, a familiar face (156)<br><br>She was great in labour (125)<br><br>This program is great (22) |
| **My student…**<br>• Personalised my journey<br>• Helped me<br>• Gave me strength<br>• Eased my fear<br>• Reassured me<br>• Made me happy<br>• Relaxed me<br>• Comforted me<br>• Calmed me<br>• Supported me<br>• Informed me<br>• Made everything so much better | She made the whole pregnancy journey much more personal and the support she provided to myself and husband was amazing. (20)<br><br>Being my 1st child it was a little frightening but knowing Sarah was there with me was a huge relief (12)<br><br>The support I received during labour was unbelievable (172)<br><br>She made me feel comfortable when I was scared and I feel did a better job than most of the midwives there, especially emotionally (11)<br><br>I felt so at ease with my student midwife (4)<br><br>I felt like she was always looking for opportunities to try and make me more comfortable and feel relaxed (175)<br><br>I was scared and nervous about the c-section, but having someone there who had been with me the whole way helped to ease that fear (76)<br><br>Supporting, helping, giving me the strength was so beneficial (24) |
| **Having continuity from my student meant.**<br>• I knew her she knew me<br>• She knew my complexities<br>• We learnt together<br>• Not having to repeat myself<br>• A personal journey | The most enjoyable part for me was being able to share the whole experience of pregnancy and birth with another person (besides family). You could see how much she was learning at every single visit (60)<br><br>She was very proactive in asking the doctors and midwives anything I wasn't sure about or even just clarifying for herself (70) |

| | |
|---|---|
| • Not being left alone<br>• Having constant support<br>• Regular contact<br>• She was there the whole way<br>• She was right by my side<br>• She was the only one there for me<br>• No matter where I was she was there<br>• Someone was watching out for me<br>• Someone to answer my questions<br>• Someone to interpret<br>• Having a resource person | Both pregnancies I have had issues that are uncommon so having someone there for each appointment was very beneficial and put my mind at ease as someone knows my history my story (25)<br><br>My student was the only constant I had during my care. If I had not had the student I think I would have been very disappointed with my overall care. My student was the only person that followed me through from beginning to end and provided continuity (45)<br><br>I loved the thought of knowing she was going to be there for all my appointments and the birth, just having someone from the beginning to the end that knew what I wanted and what I had been through (54) |
| **My student was…**<br>• Lacked skills and confidence<br>• Promised but didn't deliver<br>• Overly confident | She was overly confident and seemed to think she already knew as much as a very experienced midwife (7)<br><br>I was not overly confident in the care received by the student. She herself seemed very unsure of her clinical and theoretical practice at times (104) |
| **My student…**<br>• Disappointed me | Disappointed by her lack of attendance to appointments as she was my main antenatal support (217)<br><br>I was disappointed that she was unable to attend the birth (128) |