‘Time, fatigue, money’

Understanding the Personal Cost of Continuity of Care Experiences on Midwifery Students.

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Abstract

Continuity of Care Experiences (CoCE) are a mandated component of all midwifery programs leading to registration in Australia. Through CoCE the midwifery student is afforded the opportunity to follow the woman and her family across the perinatal period. Educational benefits of CoCE are well reported, and the benefits to the pregnant woman have also been evaluated. Currently, students are required to undertake 10 CoCE across their program, however this number has changed significantly across Australian midwifery programs since the introduction of the three-year degree in 2002. Despite these changes, students continue to cite difficulties in achieving success in this component of their midwifery program. Although CoCE is a mandated component of midwifery education, there is minimal guidance on how it should be situated within the course, nor how to best support students as they undertake learning within this aspect of their course. To establish how to best support students in CoCE, the potential barriers and challenges faced by students should be evaluated. Current literature provides only limited evidence on the financial and time costs of undertaking CoCE.

A mixed methods approach was chosen to collect both qualitative and quantitative data to explore the experiences of midwifery students undertaking CoCE. Surveys were used initially to collect demographic and qualitative comments regarding students' perceptions of CoCE. Following this, diaries were used to prospectively collect quantitative data to reflect time and financial impact, as well as qualitative data to provide context to the experiences.

An integrated analysis of the data corpus resulted in four themes; perception of CoCE, personal safety, impact on self and family, and professional relationships. Findings indicated that although students found CoCE to be a valuable learning experience, they often felt pressured to simply achieve numbers and that the current methods of CoCE was not reflective a true continuity model. Safety concerns particularly around fatigue and parking were identified, as well as significant impact on relationships, finances, children and psychological health. Finally, professional relationships were highlighted as a factor that impacted on the students' ability to be successful in meeting the learning outcomes and requirements of the CoCE program.

This study used a model of social interdependence to discuss the findings of this study and the resulting recommendations to improve student outcomes in the CoCE program, as well as potential strategies to support students. Education regarding CoCE and the role of the student in the woman's care is required for all stakeholders. Additional education for the student regarding communication, collaboration and stress management is suggested, as well as university enforced breaks from CoCE. Further, it is suggested that a review of the number of CoCE be commenced with alternative methods of achieving continuity to be explored.

Certificate of Authorship/Originality

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis was written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

Signature of student

Wendy Foster

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I feel as though I may well be the most fortunate of master's students to have had this amount of support and care. I cannot thank you all enough.

Chapter One: Introduction and Background

Introduction

This chapter will explore the concepts of continuity of care experiences (CoCE) in midwifery education, providing context and background to the following research. Initially, this chapter will provide an overview of CoCE, followed by a background to midwifery programs in Australia, including educational governance and the integration of CoCE into the Bachelor of Midwifery. The benefits and limitations of CoCE will be introduced in this chapter to assist with understanding, however this will be discussed in further detail through the literature review. A problem statement, as well as the study aims and objectives will demonstrate the need for this research, followed by a summary of the proceeding chapters.

Continuity of Care Experiences

Continuity of care, formerly known as 'the follow through experience', is a specific component of all midwifery programs leading to registration within Australia (Tierney, Sweet, Houston, & Ebert, 2017b). Through the CoCE aspect of their course, midwifery students are required to experience and contribute to the maternity care of women across the continuum of pregnancy, birth and postnatal period. According to the initial 'Standards for the Accreditation of Three-Year Bachelor of Midwifery Programs' (2003) the CoCE is described by the Australian College of Midwives Incorporated (ACMI) as,

> *'Follow through means the ongoing midwifery relationship between the student and the woman from initial contact in early pregnancy through to the weeks immediately after the woman has given birth, across the interface between hospital and community settings' (Pincombe, Thorogood, & Kitschke, 2003 p.29 p.29).*

The CoCE component of the Bachelor of Midwifery was designed to afford students the experiences of a continuity of care model, assisting in their development and understanding of woman-centred maternity care (Sweet & Glover, 2013). Through CoCE, students can work in partnership with the woman in the model of care chosen by her. Although the Australian Nursing and Midwifery Accreditation Council (ANMAC) currently mandate that all students undertake a minimum of ten CoCE throughout their degree, this number has reduced

dramatically since its inception, and even through the duration of this research project. At the time of commencing this research, the required number of CoCE at Flinders University was 20 in both the three-year direct entry and the 18-month Registered Nurse pathways.

As a graduate of a three-year undergraduate midwifery program, I have experienced the many benefits of undertaking CoCE in my own studies. I have also experienced the challenges of balancing the CoCE around a young family, part-time work and academic requirements. Throughout my studies, I like many other students, chose to undertake additional CoCE over and above the university's minimum requirements. My reasoning for undertaking additional CoCE was different for each case. Some women were recruited to increase my chances of reaching the required 40 vaginal births, while others were followed due to the need of the woman for additional support and my feeling a professional responsibility to them. Now, at the time of writing, I am a practicing midwife, and a midwifery educator at Flinders University, South Australia. My role at the university is as a clinical teacher. Through this role I explore, debrief and facilitate the learning of students in and from CoCE.

A Background to Midwifery Programs

Despite midwifery being one of the oldest professions, its establishment as an independent profession in Australia remains in its infancy, with the first direct entry program being introduced in 2002 (Department of Health 2013). Prior to this time, all programs leading to registration as a midwife required a registered nursing qualification (Leap, 2002; Tierney et al., 2017b). Through the 1970s and 80s, midwifery education was largely provided as hospital-based training, before moving to the university setting, supporting an increase in theoretical teachings, as well as practical based learning (Mason, 2013). In the 1990's, the first midwifery program was offered through Flinders University, South Australia (Mason, 2013). This program was open only to those already holding registration as a nurse. In 2002, the first Bachelor of Midwifery was offered to applicants without a nursing qualification (Tierney et al., 2017b).

The Changing Face of Midwifery Education and the Development of the Three-year Bachelor of Midwifery

In 1999; funding was secured to develop the Australian Midwifery Action Project (AMAP) (Tierney et al., 2017b). This project was tasked with addressing the changing needs of the profession, as well as programs leading to registration. Following a review of 27 universities across Australia offering a program leading to registration as a midwife, an executive summary was presented. The summary detailed concerns regarding the program design and duration, as well as a lack of consistency in practice requirements, the cost of postgraduate courses, and a national shortage of midwives (Leap, 2000; Pincombe et al., 2003; Tierney et al., 2017b). It is important to note that at this time, there were no national regulatory standards governing midwifery programs, which possibly contributed to the variations in some programs.

While AMAP continued, Flinders University and The University of South Australia established a midwifery education working party to seek advice and feedback on the development of a three-year Bachelor of Midwifery program, as well as to address any concerns or reservations within the profession (Pincombe et al., 2003). The working party arranged for information to be collected from a wide number of stakeholders including maternity care consumers, midwives, employers, educators, and industry advisors. The flow on of the working party was the first ACMI National Bachelor of Midwifery Taskforce that consisted of highly skilled midwives with experience in curriculum design and policy development (Pincombe et al., 2003). Additionally, international consultation on development was sought, as many countries including the United Kingdom, Canada and New Zealand had all established an undergraduate pathway for midwifery registration without a nursing qualification.

The primary focus of the National Bachelor of Midwifery Taskforce was to provide direction to the development of the accreditation of the three-year Bachelor of Midwifery (Pincombe et al., 2003; Tierney et al., 2017b). As a result of this work, the first National Accreditation Standards for Midwifery Education were released in 2001. At this time, there was no national registering body available, and as a result registration for each university program occurred at a state level. This led to modifications in each university curriculum approved in each state, and as such, differences were noted in program content and clinical practice requirements (Tierney et al., 2017b). It would not be until 2010 that ANMAC would take control from state

and territory agencies, leading to an agreement on the minimum education standards needed to register as a midwife in Australia (ANMAC 2014). Individual universities did not have to change their program requirements until their following accreditation which occurs on a five-yearly basis. Due to this, a variance in numbers continued for approximately four years following this change.

In 2002, the first Bachelor of Midwifery program was offered to applicants without formal nursing qualifications, who were known as 'direct entry' students (Tierney et al., 2017b). At this time, five Australian universities commenced the first three-year Bachelor of Midwifery programs; Flinders University, The University of South Australia, Australian Catholic University, Victorian University of Technology, and Monash University (Pincombe et al., 2003). The introduction of the direct entry program was developed in response to multiple factors, including strong consumer demand, a changing demographic of maternity care needs and government recommendations for an increase in midwifery-led maternity care models on the back of a shortage of midwives across Australia (Pincombe et al., 2003). In addition to this, Leap, Brodie, and Tracy (2017 p. 169) describe an '*invisibility of midwifery within nursing regulation, education, policy and nomenclature*' as additional factors in the decision to implement the direct entry stream of midwifery education. It was not until 2010 with the establishment of AHPRA, that a separate register for midwifery was standardised nationally Gray, Rowe & Barnes, 2016).

Currently, there remain multiple pathways leading to registration as a midwife in Australia including both undergraduate and postgraduate streams. Pathways differ in duration from 12 months up to four years depending on the stream and the university program, however the midwifery practice experience requirements for registration are standardised across Australia (ANMAC 2014). The current Midwifery Accreditation Standards stipulate that each student must achieve a minimum of: 10 Continuity of Care Experiences, 100 antenatal episodes of care, be the primary accoucheur for 30 normal vaginal births, care for 40 women with complex needs in pregnancy, 100 postnatal episodes of care, as well as 20 newborn examinations, including those with complex needs across the perinatal period (ANMAC 2014). Although these are the minimum practical experience requirements, the expectations for each university may differ.

Ongoing Governance of Midwifery Programs in Australia

In accordance with the Tertiary Education Quality and Standards Agency (TEQSA) all universities programs must be accredited every five years (ANMAC, 2014). The purpose of this is to continually review and improve educational programs. Midwifery programs are not exempt from this process and must demonstrate compliance with changing accreditation standards as defined by the ANMAC. Depending on where each program is in that cycle, university programs may be accredited against different standards, which has led to inconsistencies between university programs across Australia, and within each state at any given time.

The CoCE was first included in midwifery programs in Australia in 1990's however this was not mandated until 2010 (Tierney et al., 2017b). Whilst a standard in midwifery education, the number required remained varied for many years following, with numbers ranging from two to 30 across different programs (Tierney et al., 2017b). This has been a topic that has had significant attention from the accreditation authorities, with the CoCE requirements revised multiple times before the current 2014 standards were announced. This has seen a decrease of experiences from 30 to 20, and most recently to 10 (ANMAC 2014; Tierney et al., 2017b). It is important to recall that while these are minimum standards, some programs have chosen to maintain their requirements above mandated numbers.

Continuity of Maternity Care

To understand the complexity behind the introduction of the CoCE in midwifery education, it is important to first recognise the philosophical underpinnings and known benefits of midwifery led continuity of care models. The historical factors and influences should be recognised in the contextualisation of the CoCE in midwifery education.

In 1983, the 'Know Your Midwife' study was commenced at the St George's Hospital in London (Flint, Poulengeris, & Grant, 1989). This study, one of the first to evaluate continuity of a known midwife through the perinatal period, identified that compared to those in the standard fragmented maternity care model, women were more satisfied with their care, had decreased wait times for appointments, felt better prepared and were confident to discuss concerns and problems as they arose (Flint et al., 1989). The findings of this study have continued to be replicated throughout the years, despite the changing health demographics

of birthing women (Dove & Muir-Cochrane, 2014; Hodnett, 2001; Homer et al., 2001; Rowley, Hensley, Brinsmead, & Wlodarczyk, 1995; Williams, Lago, Lainchbury, & Eagar, 2010).

A Cochrane systematic review of midwifery-led maternity care has found that continuity models of care are associated with decreases in intervention, preterm birth, episiotomies and instrumental birth, and should be offered to most birthing women (Sandall, Soltani, Gates, Shennan, & Devane, 2015). With a growing body of evidence to support continuity of care models as safe, high quality, cost-effective and in-demand by women, the World Health Organization (WHO) recommends that midwifery-led continuity of care models be available to all pregnant women (WHO, 2016). Additionally, the Australian Government in its publication 'Improving Maternity Services in Australia; The Report of the Maternity Services Review' highlighted the need for an increase in maternity care choices, with demand for midwifery-led continuity models currently exceeding places available to women (Department of Health and Ageing, 2009). The International Confederation of Midwives (ICM) state that all midwifery programs should address the needs of the workforce (Thompson, Fullerton, & Sawyer, 2011), highlighting the need for midwives who are trained to work within these continuity models of maternity care. To develop the skills and attributes to meet this need, it is important that midwifery students are afforded opportunities to practice within this model (Sweet & Glover, 2011).

Continuity of Care in Midwifery Programs

As previously described, CoCE is a clinically-based educational component of midwifery programs through which the student engages with a woman and her family from early pregnancy, through the labour and birth, and into the postnatal period (ANMAC, 2014). It is a requirement that in combination with the provision of clinical care, appropriate documentation, and 'regular reflection and review by the education or health service provider' is undertaken (ANMAC, 2014 P.24). This educational affordance is based on the concept of woman-centred care that promotes the benefits of continuity of carer for the woman (Sweet & Glover, 2011; Sweet & Glover, 2013). The purpose of the CoCE in midwifery education has been identified as affording experiences which will enable the student to,

> *'engage with and reflect on the world of midwifery work, understand and develop their individual capacity for the profession and understand the*

nuances of the many and diverse instances of midwifery practices and birthing women's trajectories' (Sweet & Glover, 2011 p. 85 p. 85).

To meet the requirements of CoCE, students must recruit women into the program. This occurs in different manners across Australia, with some universities expecting students to identify women themselves, while others provide the student with details of women to contact who have already expressed interest in participating. Following this, students must attend a minimum of four antenatal appointments. These appointments are held in which ever model of care the woman has chosen, at a time convenient to the woman. It is expected that students will attend more than half the births of the women they follow, and due to the unpredictable nature of labour and birth, students are required to be on call at any time they are following a woman, unless negotiated with the woman. Following the birth, students must attend a minimum of two postnatal appointments in either the health service or community setting, and then conclude the professional relationship. From these expectations and requirements, the commitment needed by the student cannot be underestimated. Students often enter the course with young children as well as paid employment that must also be negotiated around these commitments, placing pressure on the student.

As an educational model, the concept of CoCE is not limited to Australian standards, with the United Kingdom, New Zealand and the Netherlands all including continuity of care as a mandated component of their midwifery programs (Tierney et al., 2017b). Although the definitions and terminology as well as required hours of care all differ, the basic premise of the student being afforded the opportunity to provide care across the continuum of the perinatal period remains consistent. An example of this, as described by Rawnson (2011) in the UK, is where they negotiate the number of women a student must provide continuity of care based on individual and academic factors.

For a student to succeed in their midwifery program, and specifically the CoCE aspect, they require support in many areas. They require support firstly from the woman herself, as well as well as support from the university, clinical venues and staff, friends, family and peers (McKellar, Charlick, Warland, & Birbeck, 2014). Recognition of the interdependent nature of this aspect of the program is of high importance. Any interruption or barrier to support

structures could limit the possibility for the woman to meet her pregnancy and birthing goals, as well as the student to meet their education and learning goals.

Benefits of the CoCE program

Although the benefits of continuity of maternity carer have been described above, the benefits to both the woman and the student through the CoCE are also significant (Aune, Dahlberg, & Ingebrigtsen, 2012; Browne, Haora, Taylor, & Davis, 2014; Dahlberg & Aune, 2013; Sweet & Glover, 2011). For students, undertaking CoCE has been described as an opportunity to develop a connectedness to the woman, extensive understanding of the context of family and psychosocial being, as well as an extensive amount of exposure to clinical midwifery (Sweet & Glover, 2011). Students have reported an increase in awareness, confidence in practice, and feeling that they are contributing positively to the woman's care (Browne et al., 2014).

The benefits of CoCE to the woman and family have been detailed in several studies, with Aune et al. (2012) describing the empowerment expectant mothers and fathers experienced through their pregnancy and birth when supported by a continuity student. Further to this, Rolls and McGuinness (2007) also explored the positive experiences of women who had been followed through with the care of a midwifery student. Women in this study reported they had an increased sense of support as well as an interface between themselves and the hospital system (Rolls & McGuinness, 2007).

Limitations of the CoCE Program

Despite the benefits to women and students, it is recognised by Sweet and Glover (2011) that CoCE presents challenges for students, with little evidence or guidance as to how CoCE should be positioned within midwifery programs, nor how students could be supported in this educational model. A recent review of literature concerned with the CoCE as an educational concept has confirmed there remain no direction in either formative or summative assessment of progress within CoCE (Tierney, Sweet, Houston, & Ebert, 2017a). With CoCE expected to provide a significant amount and range of clinical learning opportunities, it is important that midwifery education providers structure the program in a manner that supports the students while undertaking these dynamic experiences.

Although the learning that occurs within CoCE is highly regarded, there are multiple limitations described by students (Browne et al., 2014; Gray, Leap, Sheehy, & Homer, 2013; McLachlan, Newton, Nightingale, Morrow, & Kruger, 2013). Recruitment of women into the program has been noted as a significant issue, with students also describing competing time demands, and minimal support from universities as negatively impacting their achievement of the required number of CoCE (Gray, 2010; McLachlan et al., 2013). Further to this, issues regarding the on-call nature of the CoCE on maintaining employment through the degree has been identified (Browne et al., 2014). Further detail regarding the impact of CoCE on students will be provided in chapter two.

Problem Statement

There are unique educational and learning opportunities available through the CoCE program. There are also significant challenges and barriers to successfully undertaking this component of the midwifery program. Recognising this, it is important to continue to find better ways to support and encourage students and minimise any adverse personal impact. By identifying the key areas of social, emotional and financial impact, both faculty and clinical facilitators will be better able to advise and guide students through the complexities encountered while undertaking this valuable learning aspect of midwifery programs. Attrition in midwifery programs is a significant issue across Australia, and CoCE has been posited as one possible contributing factor in this (ANMAC 2014). Further insight may assist in pre-enrolment counselling and student preparedness on entrance to a midwifery program. Improved preparedness may improve student outcomes and satisfaction, as well as retention.

Study Aims and Objectives

The aim of this study is to identify the factors impacting students' ability to successfully undertake the CoCE component of their midwifery program and to formulate means to minimise barriers and improve outcomes. It is proposed that a better understanding of the student experience will allow for more structured supports to assist in student retention and success.

Objectives of this research include:

1 – Identification of the financial costs of undertaking activities required for the CoCE

2 – Identification of the time demands of undertaking activities required for the CoCE

3 – Identification of the real and potential safety risks for students undertaking activities required for the CoCE

4 – Identification of the key areas of personal concern for students

5 – Identification of the potential demographical issues that influence the personal cost experience of students

Chapter Summary

Midwifery education has undergone significant changes in recent years, with education transitioning from hospital to university-based systems. Since 2002, there has been an escalation in changes which has seen the introduction of the three-year Bachelor of Midwifery following notable work by the National Bachelor of Midwifery Taskforce instrumental in transitioning midwifery from a sub specialty of nursing profession to an autonomous health profession.

Significant benefits to both the woman and student when engaged in the CoCE have been reviewed. Women have described the support and care they have received from students as a positive aspect of their pregnancy and birth, highlighting the role of the student in providing quality care. For students, the understanding of woman-centred care from a psychosocial vantage is a clear benefit, as is the range and number of experiences undertaken.

There are some limitations that must be addressed to maximise the potential of CoCE as an educational construct. Educational models to assist in learning and assessment through CoCE is of importance as this has not been addressed since its integration into midwifery. Students have reported issues with participant recruitment, university support systems, as well as balancing clinical, academic and CoCE requirements. Further information is required to understand the factors impacting on midwifery students while undertaking CoCE and their capacity to succeed in this pivotal educational affordance.

Overview of the Thesis

This thesis will be presented over six chapters. Chapter one has presented the background to midwifery programs in Australia, as well as the philosophical underpinning and integration of CoCE as an educational model. A problem statement, the aim and study objectives have been presented. Chapter two provides a critical review of the published literature on the known issues impacting on students while undertaking CoCE, with the results displayed as a thematic synthesis. Through chapter three, the methods and methodology will be presented, including epistemological understandings of the researcher. A mixed methods approach has been chosen to guide this research and this will be justified and described within this chapter. The findings of this study will then be presented in chapter four, including both qualitative and quantitative results. Chapter five will focus on the discussion and recommendations based on the theory of social interdependence and integrates the findings of this study together with the results of the literature review. Finally, chapter six will conclude this thesis, providing an overview of the preceding chapters, a summary of how this study has met the aims and objectives, the key findings, as well as the recommendations.

Chapter Two: Literature review

Introduction

This chapter will analyse the literature to provide background and discussion on the known issues impacting on students while undertaking CoCE as part of their midwifery course. With the CoCE being relatively new in the context of tertiary midwifery education, commencing in the late 1990s, the majority of existing literature focuses on woman-centred care, the benefit to the women involved and the benefits on student learning. This review will however focus on the direct or perceived impact of undertaking CoCE on midwifery students.

Multiple database searches were conducted, using SCOPUS, MEDLINE, CINAHL and PubMed to locate relevant literature. Due to the recency of the introduction of the CoCE aspect of midwifery programs, no date limit was set on this search. A range of search terms were used, including 'continuity', 'CoCE', 'follow through', 'caseload', 'midwife OR midwifery OR midwives', and 'student/s', including combinations of these. Initially, no limitation was placed on the country of origin for this information. The reference lists of each retrieved article were then assessed to identify any additional literature than had not been located through the database searches. Following analysis of international midwifery programs and their inclusion of CoCE, it was established that there were too many differences to be compared to the Australian context. Therefore, only Australian publications remained for review. Information regarding this will be furthered in the discussion. A detailed inclusion and exclusion criteria can be viewed at Table 1. The findings for each of the databases searches are shown in Appendix 1. The identified articles were then screened and assessed for eligibility. The outcomes of this process are shown in a Prisma chart (Appendix 2). All identified articles were either qualitative or mixed methods. As there is currently no validated tool for assessing mixed methods research, the Critical Appraisal Skills Programme (CASP) tool (2018) was used to confirm the quality of all studies prior to acceptance for the final review and synthesis. A total of eight articles were included in the final literature review. A summary of these is provided in Appendix 3.

Table 1: Inclusion/ exclusion criteria

Inclusion	Exclusion
Continuity of Care in midwifery education	Focus on disciplines other than midwifery
Australian context	International context
Focus on the student experience	Focus on the experience of the woman or the educational value of continuity of care
Full text available	Full text not available
English language	Any language other than English

A thematic synthesis was used to present the information collected from this review as the primary focus was to explore the experiences as described by the students undertaking CoCE. According to Booth, Sutton, and Papaioannou (2016), a thematic synthesis is useful when considering the perspectives and experiences of individuals. It is used to identify key focus within each study to understand the phenomenon presented. In alignment with the methods for thematic synthesis as described by Booth et al. (2016), a three-step approach was undertaken. Initially, each study was assessed for aspects that were not familiar or required further examination. Following this, each line was read for the purpose of coding. These codes were then arranged into primary themes, followed by sub-themes and the comparison of each study to another. The key themes identified included: perception of the CoCE program, quantity over quality, impact of CoCE on personal, financial and academic attainment, as well as the need for adequate support systems. These themes and the sub-themes are shown in Table 2.

Table 2: Themes and sub-themes

Themes	Sub-themes	Associated Study
Perception of CoCE	Positive perception	Seibold 2005, Gray, Leap et al. 2012, Gray, Leap et al. 2013, McLachlan, Newton et al. 2013, Browne, Haora et al. 2014, McKellar, et al. 2014, Sweet 2013
	Negative perception	Gray, Leap et al. 2012 Sweet 2013
	Being 'with woman'	Sweet 2013, McKellar 2014,
Professional safety	Professional boundaries	McKellar 2014
Quality over quantity	Numbers required	Seibold 2005, McLachlan, Newton et al. 2013, Gray, Leap et al. 2013, McKellar, et al. 2014
	Standard of work	Seibold 2005, McLachlan, Newton et al. 2013, Gray, Leap et al. 2013, Sweet 2013
	Falsifying documents	Gray, Leap et al. 2012, Gray, Leap et al. 2013, McLachlan, Newton et al. 2013
Personal costs	Relationships	Dawson, Newton et al. 2015, McLachlan, Newton et al. 2013, Browne, Haora et al. 2014,
	Financial	McLachlan, Newton et al. 2013, Browne, Haora et al. 2014, McKellar 2014,
	Academic	Gray, Leap et al. 2013, McLachlan, Newton et al. 2013, Dawson, Newton et al. 2015
	Personal safety	McLachlan, Newton et al. 2013,
Supports required	Academic	Gray, Leap et al. 2012, McLachlan, Newton et al. 2013, Gray, Leap et al. 2013, McKellar, 2014,
	Clinical	Seibold 2005, Gray, Leap et al. 2012, Gray, Leap et al. 2013, McLachlan, Newton et al. 2013, McKellar, 2014
	Peers	Gray, Leap et al. 2012

Perception of the CoCE program

The overarching response to the CoCE program from the students was that it was a positive aspect of the course. Studies portrayed responses from both students and academics regarding perceived benefits of the CoCE for both women and students (Browne et al., 2014; Gray, Leap, Sheehy, & Homer, 2012; Gray et al., 2013; McKellar et al., 2014; McLachlan et al., 2013; Seibold, 2005; Sweet & Glover, 2013). Specific benefits of the CoCE program were identified including communication, team work as well as clinical skills development. Clinical learning through CoCE was described as the primary benefit by both students and academic staff. In their study of current midwifery students and recent graduate midwives (n=101), Gray et al. (2012) found that 84% of respondents found the CoCE program to be of benefit to their clinical learning, while 75% believed that it should be a compulsory activity for all midwifery students. With similar results, McLachlan et al. (2013) found 72% of students (n=401) identified the CoCE program to be beneficial and one that could not be replicated in tradition clinical education models. Further to this, 85% of academic staff either agreed or strongly agree with this (McLachlan et al., 2013). One study reporting on the experiences of the first cohort of direct entry students to graduate from an Australian University in Victoria found 100% of the 13 students who participated to be in support of the CoCE program (Seibold, 2005). This aspect of the course was described by students as benefiting their ability to make connections with women, as well as increasing self-confidence (Seibold, 2005).

The ability for CoCE to afford students the ability to work in their scope 'with women' and to develop a professional identity was discussed in all eight studies reviewed. While the study by Seibold (2005) simply stated that students and academics agreed CoCE provided experiences above that which could be experienced in regular placements, other studies provided much more detail. Students in the study by Gray et al. (2012) provided comments that reflected their ability to work in partnership with the woman and to find out what was important to her. This was further detailed in the later publication by the same authors, with students reflecting on their experience, and one student stating:

> *'You really get to know, especially with the home visits, what her home environment is like and how that's impacting on the person that she is, and the choices that she is going to make – it's not just during the birth, but in her parenting, immunisation etc. You really get to know that, whereas if*

> *you're on a placement situation and you're attending a birth, you've just met them right there and then, you don't know anything else that's happened around them' (Gray et al., 2013 p. 402 p. 402).*

Similar findings were later replicated in the studies by Sweet and Glover (2013), Browne et al. (2014), and McKellar et al. (2014), further highlighting the student's perception of the positive influence of undertaking CoCEs.

Increasing levels of confidence in clinical midwifery skills was cited in three studies (Browne et al., 2014; Gray et al., 2013; Seibold, 2005), while also highlighting the importance of the woman-centred nature of the CoCE program. The study by Browne et al. (2014) highlighted the increased exposure to clinical activities, with one student stating:

> *'I think you're more likely to be able to, get things signed off if you need cannulation or suturing, a woman is probably more likely to say 'yes' to having you do that if she's met you from the first visit, and has formed a relationship with you…' (Browne et al., 2014 p. 575 p. 575).*

Despite this, Sweet and Glover (2013) found that students may have to 'prove themselves' when they provide care for a woman through CoCE, with one student stating:

> *'If you're on clinical and you're allocated to the midwife, …she can get a feel for what you're like and then she'll give you a wider scope whereas if you're with a follow through you've got to work a lot harder to earn the respect of the midwives because you're an appendage of the woman, you're not an appendage of the midwife' (Sweet & Glover, 2013 p. 264 p. 264).*

Despite the positive responses, two studies identified students who were not engaged, or did not support the CoCE program (Gray et al., 2012; Sweet & Glover, 2013). This aspect was reflected in the words of one student who stated, *'I don't think I've learnt anything through the follow-through experience that couldn't have been learnt through a week in antenatal clinic'* (Gray et al., 2012 p. 262). This was later replicated by Sweet and Glover (2013), who identified that some students felt excluded from the care of the woman and felt the potential for learning in these situations was low.

The perception of the CoCE program was also reflected upon by registered midwives in the study by Browne et al. (2014). The general perception was that the CoCE program prepared students to be woman-centred and assisted to instil positive values to future practice (Browne et al., 2014). Additionally, six of the eight articles examined, indicated results of a perceived mutual benefit for both the student and the woman to be involved in CoCE (Browne et al., 2014; Gray et al., 2012; Gray et al., 2013; McKellar et al., 2014; McLachlan et al., 2013; Seibold, 2005).

Professional Safety

The issue of professional safety was mentioned in only one study, McKellar et al. (2014), though this was a significant consideration in their findings. Through this study, it was highlighted that students often felt unprepared and unsure how to respond when women ask for advice regarding their care. It was also found that there were some issues with professional boundaries when students would be invited to birthday parties or social events. The comment was made that students felt women had '*unrealistic expectations'* and that '*professional boundaries were difficult to maintain'* (McKellar et al., 2014 p. e64).

Quantity over Quality

The number of CoCE that were required for completion of the midwifery course varied from 10-40, with 20 being the most common. Despite the variance in numbers, the amount of CoCE that would or should be required to be undertaken in the course was posed as a question in all but one of the studies identified.

The study by Seibold (2005) was the first to identify the experiences of students who had undertaken one of the first Bachelor of Midwifery programs in Australia. It is noted that students in this study were required to undertake 30 CoCE to fulfil the course requirements. Students were asked what they thought a reasonable amount of CoCE would be for first year, with responses of three to five (Seibold, 2005). Following from this, McLachlan et al. (2013) found that 91% of students, and 81% of academics believed that 20 CoCE would negatively impact on the students' ability to complete the course requirements, and felt the additional time spent would serve no benefit to their learning. The students in this study furthered this point by indicating that they believed different expectations should be held for each entrance

pathway; eight to 20 for the Bachelor of Midwifery, four to eight for the RN/RM dual degree, one to ten for the Graduate Diploma of Midwifery or Masters of Midwifery (McLachlan et al., 2013). It was not clear if these numbers were suggested by the individuals enrolled in each specific course, and no justification was provided for this variance. Conversely, Gray et al. (2013) identified that students completing ten CoCE were able to manage this number well but identified they would not involve themselves to the same depth if they were expected to complete 30. Interestingly, the same study identified one student who had completed 30 and found that while difficult to meet the requirements believed that less would be detrimental to her learning outcomes (Gray et al., 2013).

When asked if 20 CoCE would be achievable for students, academics responded by stating that this would equate to more than 10 hours of full-time work over the year, without taking into consideration travel and waiting time (McLachlan et al., 2013). Further to this, they stated that it would not be feasible, and that it would preclude students with a family, or who needed to remain in paid employment from being able to complete the course. One student in the same study stated '*I would not be able to complete the course if I was to see 20 women for 20 hours. People will either drop out or make up hours……. What happened to quality over quantity?*' (McLachlan et al., 2013 p. 1071).

One significant finding in four of the studies was the potential for students to falsify documents or to complete the CoCE to a lower standard given the high numbers of CoCE to undertake (Gray et al., 2012; Gray et al., 2013; McLachlan et al., 2013). Students in one study in particular spoke of how they would change their recruitment from early pregnancy to late pregnancy and would undertake only the bare minimum of hours required if the expected numbers were set higher than ten (Gray et al., 2013). It was also reported that documents were made up due to the pressure of achieving the required numbers (McLachlan et al., 2013). The same study also identified that 82% of academic staff believed that students were falsifying CoCE documents (McLachlan et al., 2013).

Impact of CoCE on Personal, Financial and Academic Attainment

Five of the eight studies identified aspects of the students' life that were detrimentally affected by undertaking the CoCE component of their midwifery program (Browne et al., 2014; Dawson, Newton, Forster, & McLachlan, 2015; Gray et al., 2013; McKellar et al., 2014; McLachlan et al., 2013). These included personal, financial and academic stressors, including the impact on other clinical placement experiences.

Personal

Impacts on social, personal and family relationships were mentioned in four of the six studies examined. Gray et al. (2013) reported potential for impact on intimate relationships, while Browne et al. (2014) found the CoCE impacted on the students' entire family. Further to this, Dawson et al. (2015) identified that students felt burnt out and could not rest in typical 'down time' between semesters due to being on call for CoCE appointments and births. This was well described by one student who stated, *'I do love my work, but I don't want to end up resenting it'* (Dawson et al., 2015 p. e10). This finding was further acknowledged by McLachlan et al. (2013) who identified that 73% percent of students were on call during holidays either 'often' or 'fairly often', impacting on their social and family lives.

Family members were often relied on heavily, especially by those students with young children who required assistance with childcare (Browne et al., 2014; Gray et al., 2013; McLachlan et al., 2013). Midwives in the study by Browne et al. (2014) were also sympathetic to pressure of the CoCE program on students by noting '*…. so, she'd just get home from one woman, and then she would get a phone call for another woman. They would certainly need supportive partners'* (Browne et al., 2014 p. 576).

Despite the positive comments regarding the amount of support that was received, one student detailed the strain this could place of on a relationship by stating; '*I've come out the other end with my marriage intact, which is better than some people did!*' (Gray et al., 2013 p. 403). This finding was replicated in the study by Browne et al. (2014) with one student reflecting on their experience by noting;

> *'It is not only monetary, it is emotional and physical and it effects your whole family and those who are around you to free you up to get where you need to go when you need to go' (Browne et al., 2014 p. 576).*

Social impacts were noted in only one study by McLachlan et al. (2013), who identified students who would forgo social activities in case they were called to a birth, with one student noting that she would leave straight away if called. Further to this, academic staff indicated that CoCE would impact on the student's social life, as well as their ability to schedule holidays (McLachlan et al., 2013).

Personal safety was mentioned in the study by McLachlan et al. (2013) who identified students who would work during the day, and then attend births overnight, driving home early in the morning having had little to no sleep. Additionally, they noted that students would often take public transport to births, requiring them to be waiting out on the street late at night, posing significant personal safety concerns.

Financial

Financial impacts due to the cost of undertaking the CoCE was acknowledged by McLachlan et al. (2013), Browne et al. (2014) as well as McKellar et al. (2014) with similar results. It was identified by McLachlan et al. (2013) that 49% of students felt undertaking CoCE had a negative impact on their ability to hold employment, while Browne et al. (2014) noted that there were significant costs related to travel, additional child care, as well as loss of income. These findings were also found by McKellar et al. (2014), with costs related to phone calls, petrol and carparking all described. Additionally, it was noted that students found the time commitment of the CoCE not achievable if also holding part time employment (McKellar et al., 2014). Students in the study by McLachlan et al. (2013) were asked to estimate the cost involved to undertake CoCE at the time of undertaking the survey. An average cost of $368 was estimated, taking into consideration parking, fuel, public transport, childcare or other costs. Further impacts on family finances were also identified as extending to partners and family who needed to leave work early or have time off to look after children.

Academic

Gray et al. (2013) and Dawson et al. (2015) reported that students experienced stress due to the need to juggle course requirements with CoCE. One student noting '*It was unrealistic and too much'* (Gray et al., 2013 p. 403). Both students and academic staff identified that undertaking CoCE made it difficult for the students to successfully undertake the theoretic and other clinical course components (McLachlan et al., 2013). In this study, 78% of students noted they had missed class to attend CoCE related appointments or births, and 38% indicated they had missed placement due to CoCE, further impacting their ability to meet course requirements (McLachlan et al., 2013).

Supports

Support from family, clinical staff, as well as academics was a key feature in five of the six studies. Findings varied from positive experiences with good support, to the negative effect it could have on the student when information was not passed on clearly, or differences in understanding between support systems. Support to recruit women into the CoCE program, as well as the need clinical supervision and mentorship was highlighted as important aspects.

Academic Supports

The need for academic support was one theme of significance throughout the literature, however Gray et al. (2012) identified only half of the students interviewed felt they had received support to meet the CoCE aspect of their program. This finding was replicated by McLachlan et al. (2013) who identified that approximately half of the students and academics surveyed felt students had adequate support to meet the CoCE requirements. In addition to this, McLachlan et al. (2013) also found that only 58% of academics felt they were clear on the role of students when involved in CoCE in regards clinical care.

According to Gray et al. (2013), students received little to no support to undertake CoCE from their university. Conversely, Gray et al. (2012) indicated that students were provided with opportunity to meet with a dedicated CoCE facilitator or support person to assist students. While some students in this study reported positive experiences using these supports, others found the lack of understanding impacted on the way they were able to interact with the sessions (Gray et al., 2012). One quote highlights this issue well by stating:

> *'We were allocated to one of three groups, each led by a midwifery lecturer. I was lucky and was in a group where the midwife had a clear understanding of what was involved – other students were not as fortunate and found their meetings a waste of time' (Gray et al., 2012 p. 260 p. 260).*

Recruitment of women into the CoCE program was difficult for many students (Gray et al., 2012; Gray et al., 2013; McKellar et al., 2014; McLachlan et al., 2013; Sweet & Glover, 2013). McKellar et al. (2014) described the students' access to recruiting women was influenced by several factors, including a lack of support from midwives and venues, as well as a lack of understanding by women as to what CoCE means for their care. Students in three studies described barriers to the student approaching women for recruitment into CoCE, with Gray et al. (2012) noting it to be awkward and invasive and potentially breeching the privacy of the woman. Sweet and Glover (2013) and McKellar et al. (2014) found the students level of confidence may impact on their ability to approach women.

Clinical staff

The type and amount of support received from clinical staff was found in multiple studies to either facilitate or limit the students' ability to meet the requirements of the CoCE program, and make sense of their experiences (Gray et al., 2012; Gray et al., 2013; McLachlan et al., 2013; Seibold, 2005). Positive experiences were highlighted by Seibold (2005 p. 11), with the comment *'She knew just how and when to guide you'.* Gray et al. (2012) replicated this finding, with students noting that a supportive supervising midwife or obstetrician at the time of the experience was very beneficial to their learning. Clinical support was identified as coming from supervising midwives, obstetricians, mentors and clinical facilitators.

The primary limitation in receiving support in the clinical environment was identified as a lack of understanding of health care staff regarding the role of the student in the woman's care. Inconsistent information was highlighted by Seibold (2005) who found that information provided by academic staff was not consistent with the expectations of clinical staff. It was further suggested that clinical staff required further education regarding the experience, as well as the required documentation for CoCE. This aspect was highlighted by Gray et al. (2012) who stated, '*Not a lot of health care professionals understand the follow through experience,*

and as a result, a lot of doors have been closed in my face' (p. 261). The lack of understanding was further explored with reports that midwives would sometimes refuse to call students in for births, despite the woman requesting them to be present (Gray et al., 2012; Gray et al., 2013). The combination of a lack of understanding of CoCE requirements from the university and the clinical environments was described by one student, who commented, '*So without support from the education system and from the providers, then us poor students really get pushed from pillar to post. You end up in despair and it is all too hard*' (Gray et al., 2013 p. 403). This statement further details the importance of support from all stakeholders in CoCE as well as the interdependent nature of the program.

Peer supports

The role of other students in both debriefing, as well as support to meet course requirements was identified by Gray et al. (2012). When debriefing, although university and clinical venues were able to provide some support for students, several students reported peers as their primary contact when discussing experiences. In addition to this, when recruiting women into the CoCE program, some students found that rather than approaching the university, other students within the program were better able to assist them in this area (Gray et al., 2012). This is important given the difficulties reported with recruiting women and the lack of support from other avenues.

Limitations

In the first instance, it should be highlighted that this literature was difficult to compare due to the inconsistencies in the number of CoCE that were required of the students in each study. In addition, some studies also compared the responses of different cohorts of students with different CoCE requirements within the same study. Further to this, the inherent requirements of each program will differ slightly which further complicates comparison. Despite these limitations, this review did bring the opportunity to compare the understanding and complexities associated with different CoCE requirements.

One significant limitation of all studies in this review is the potential for recall *bias*, as well as recall *error*. According to Oleckno (2008) recall bias occurs when responses are recalled either over or under-favourably. This bias is often influenced by either a positive or negative

outcome, in which the respondent may have spent a significant amount of time reflecting on the situation under evaluation. In the articles by Gray et al. (2012) and Gray et al. (2013), both past and present students were asked to respond to their experience of the CoCE program. The limitation is the potential for example, for those who did not receive offers for a graduate position to respond less favourably to the course, or to focus on the negative aspects, while those who did receive a position, to focus on the positive aspects. In addition to this, all studies in this review collected retrospective data, with varying time frames. For example, the study by McLachlan et al. (2013) asked students to estimate the amount of money they had spent while undertaking CoCE, over a time frame of 1-4 years previously. It has been noted by Biemer, Groves, Lyberg, Mathiowetz, and Sudman (2011), that increases in duration of time may impact on the respondent's ability to accurately recall information. This could have severely impacted on the student's ability to accurately reflect the true cost associated with CoCE, limiting the validity of these findings.

Discussion

As previously described in the background chapter, one of the reasons for mandating CoCE in midwifery programs was the need to develop and expand a maternity workforce able to practice within continuity models of care. Unfortunately, the findings of Dawson et al. (2015) indicate that due to negative factors experienced through CoCE students may turn away from this model, finding it does not fit with their family and personal lives. As described by McLachlan et al. (2013), students and academics both believe CoCE provides an appreciation for working in continuity models of maternity care. If they are not well supported to succeed, however, it may influence their understanding of this model of care, leading to a decline rather than an increase in midwives willing to work in continuity models.

The number of CoCE required in midwifery education is an aspect that has been strongly debated since its introduction. In 2010, it was mandated that students must undertake 20 CoCE through their program, with eight being undertaken in the last year of their course. Following this, the first consultation paper to review the educational standards was released, with the expert advisory group raising concerns regarding the number of CoCE required, despite all involved highlighting the importance of retaining this as a mandated component (ANMAC 2014). Following the second consultation paper, the recommendation was made to

reduce the minimum number from 20 to ten, however individual institutions reserve the right to specify a higher number (ANMAC 2014). It is not clear from this literature review of the number of CoCE that would best meet the learning objectives, while still being attainable for students. Individual students have conflicting ideas on the benefit of CoCE on their learning, and this may be influenced by many personal factors. As described in the introduction chapter, students undertaking CoCE in the United Kingdom complete an individualised number of women following discussion with academic staff. The number of experiences they are required to complete is based on their family and academic situations with academic staff working closely with the student to ensure it is manageable (Rawnson, 2011). This could be posited as a possible solution to minimise the negative aspects of CoCE on students.

The support required for students to successfully undertake CoCE is of high importance to students and is reflected within this literature review. Academic staff input has been identified as both a help and a hindrance to learning depending on the knowledge base and capacity of the staff to support the student. Additionally, clinical staff were often seen as barriers to student learning, with a lack of understanding of the CoCE program identified as a key contributing factor. Standard 8 of ANMAC's Midwife accreditation standards specify that,

> *'Academics, midwives and other health professionals engaged in supervising, supporting and/or assessing students during midwifery practice experiences are adequately prepared for the role…' (ANMAC 2014 p. 23).*

From the literature, it may be deduced that historically, this has not been the case, and the lack of support in this instance has the capacity to detrimentally affect student experiences and subsequent development.

Further Research

From this literature review, it is evident that there is clear support for CoCE from students and academics. While the literature presented does describe many of the key challenges faced by students such as social, emotional, academic and financial stress, these have been gathered retrospectively and may not be accurate. Nevertheless, there is significant evidence to support the inclusion of CoCE in midwifery programs. The challenge for universities is to ensure the students are well prepared and facilitated in a manner that will foster engagement and strategies for success in CoCE. To best support students it is important to understand the

influencing factors that help or hinder progression in this component of their midwifery program. This study will aim to overcome many of the limitations identified in this literature review by collecting real-time longitudinal data regarding the actual time, financial and personal experiences of students undertaking CoCE.

Chapter Summary

This chapter has explored the current literature detailing the student experience of undertaking CoCE as part of their midwifery programs. The CoCE is a compulsory component of all midwifery programs in Australia and is a requirement to register with AHPRA. This review has explored the perceived impact of this educational model on the midwifery student, identifying factors that both enhanced and limited ability to successfully complete the CoCE component of the midwifery program. While most students and academics support CoCE in midwifery education, issues regarding achieving numbers as well as the support required for the university and clinical environments remain evident. To maximise the learning that can occur within these experiences, it is important that academic and clinical staff have the correct understanding of the CoCE program, as well as the role of the student in providing care for these woman and families.

Chapter Three: Methods

Introduction

The purpose of this chapter is to define both the methods and methodological process used in this study. This will encompass the paradigm in which the research is undertaken, the epistemological underpinnings, as well as the methodological process (Durdella, 2017). A mixed methods approach was undertaken for this study, with both quantitative and qualitative data sought using diaries completed by students undertaking CoCE.

Mixed methods research is an emerging form of methodology that challenges the concept that research should remain within one of the two primary paradigms; qualitative and quantitative. Qualitative research promotes a focus on experiences, attitudes and beliefs in a social context (Whitehead, LoBiondo-Wood, & Haber, 2016). In contrast, quantitative research focuses on the collection and analysis of numerical data that can be used to determine relationships between variables (Schneider et al. 2016). Mixed methods research addresses the potential limitations of each of the traditional paradigms, collecting data to support both qualitative and quantitative findings. The benefits of undertaking mixed methods research includes the ability for the researcher to '*simultaneously ask exploratory and confirmatory questions'* (Richardson-Tench, Nicholson, Taylor, & Kermode, 2018 p. 281). Despite the strengths of a mixed methods research design, one key limitation is the time it may take for a researcher to collect and analyse the two types of data (Creswell & Clark, 2017; Richardson-Tench et al., 2018).

Paradigms

The use of mixed methods has gained momentum with researchers attempting to address complexities within society not able to be addressed with one single methodological approach. The mixed methods approach to social research has been described as 'the third methodological movement' (Tashakkori & Teddlie, 2010, p. ix). This approach allows the researcher to view the question or problem from different dimensions, affording a greater understanding of the situation or phenomenon (Bazeley, 2017; Creswell, 2014). Additionally, there are many instances when the findings of each method can be used to enhance or

confirm the findings of the other (Bazeley, 2017; Fetters, Curry, & Creswell, 2013). There are, however, those who would question the use of mixed methods. Research purists may argue the epistemological underpinnings of qualitative and quantitative research to be so drastically opposed that neither could be employed concurrently (Guba, 1987). Despite this, many contemporary researchers would argue the benefits of mixed methods; when used correctly, can significantly benefit the richness of findings within a study (Driscoll, Appiah-Yeboah, Salib, & Rupert, 2007; Fetters et al., 2013; Tashakkori & Teddlie, 2010; Venkatesh, Brown, & Bala, 2013). This view is described well by Creswell (2011, p. 272), who notes that the mixed method strategy not only alleviates the issue of 'force fitting' a research question to either the qualitative or quantitative paradigms, but rather encompasses a combination of methods that support and strengthen each other.

In the context of understanding the personal experiences of the students undertaking the CoCE program, a mixed methods approach was considered most appropriate. This decision was made due to the limitations of previous studies which required either the student to recall and estimate costs associated or focused primarily on the qualitative aspects of the student experience by recall. Neither type of study can fully describe the factors impacting their ability to undertake this essential component of their midwifery program. As the aim of this study is to explore and describe the experiences of students undertaking CoCE as part of their midwifery programs, it is appropriate to choose a study design that allows for both qualitative and quantitative data collection in real-time.

Philosophical Understanding

According to Heyvaert, Hannes, Maes, and Onghena (2013), the philosophical stance of the researcher is an important aspect when considering the quality of any mixed methods research. Constructivism is a theory based on the early works of social theorists Husserl and Heidegger, who argue that all research requires interpretation and context of the participants reality (Mertens, 2014). Research in the constructivist paradigm positions itself to the understanding that knowledge is subjective, and that an individual creates their own world view. Constructivist theory promotes the opinion that a person's own reality is socially constructed (Mertens, 2014). My own beliefs regarding the understanding of how the knowledge of students' experiences can be interpreted and shared is based on their individual

experiences, in the context of their being. I do not believe it is possible or appropriate for a researcher to assume the thoughts or feelings associated with 'walking in another's shoes', however it is important to describe these multiple experiences to gain an appreciation for the complex and diverse nature of each social encounter. One important aspect of constructivism, as described by Given (2008), is the role of the researcher to describe, contrast and narrate the experiences of the participants, and that it is only through the sharing of information can understanding be achieved for either.

Research Question

It has been stated that research questions '…provide the inevitable and necessary starting point for, and path for, and have the priority in, all forms of scientific knowledge development' (Alvesson & Sandberg, 2013 p. 11). However, as described by Onwuegbuzie and Leech (2006), developing a question for a mixed methods study is inherently difficult as it must satisfy both qualitative and quantitative aspects of the research. To meet the aims and objectives of this study, it is important to review the questions that have informed its basis. The question underpinning this research is 'What are the factors impacting midwifery students to successfully undertake CoCE?'

Ethical considerations

Ethics approval was sought and granted through the Flinders University Social and Behavioural Research Ethics Committee (Appendix 4). As described by Dresser (2016), ethical considerations in participant recruitment is of primary importance, yet researchers often fail to appreciate the potential impact of the research on participants. This point is further discussed by Leentjens and Levenson (2013) who detail the harm that may occur when recruiting university students into research projects. The issue of coercion, perceived reward, as well as privacy concerns have all been described as factors with the potential to impact on the 'voluntariness' of student participation. Although at the time of undertaking this research I did not have any direct student contact as an educator, two of the research team were employed as teaching staff at one participating university during the recruitment process.

Understanding the potential for power relationships and influences when recruiting students into research undertaken by academic staff, an email form of contact was chosen for initial

contact. As the first email was directed to the students from the administration staff rather than directly from the researchers, the students were given time to consider all aspects of the study, and to clarify the requirements of their involvement prior to consenting to the study without pressure. Phone numbers and email addresses were provided should the student wish to contact the research team at any time. Students were assured of their ability to remain anonymous, and that all information supplied would not be identifiable unless they chose to be known to the researcher. As data were collected, it was stored in a locked cabinet in a secure office, with only the research team members having access to this information.

As this research required students to recall and document issues such as personal safety and relationship impacts, there was an acknowledgement that this could cause some psychological discomforts. To address this issue, students were provided with contact details of student support services within the universities, as well as the support of the academic and clinical facilitation staff should they require time to debrief about their experiences.

Research Participants

Convenience sampling refers to a group of potential participants who meet the requirements, or, have experienced the phenomena of interest (Macnee & McCabe, 2008). This sampling method has the benefit of being non-selective with no specific demographic of participant required other than being midwifery students, having experienced the phenomena in question, and undertaking CoCE. This can allow for less problematic recruitment as the population of interest may not be limited. According to Johnson and Christensen (2010), one of the primary limitations of a convenience sample is the inability to generalise from the findings. In alignment with the study aims, the purpose is not to make generalisations, but rather to gain an understanding of the personal costs experienced by students when undertaking CoCE. The convenience sampling method was chosen as the students were under no obligation to participate. The primary limitation with this is the risk of not having accurate representation of each demographic such as age and year level of study but was however seen as necessary to maximise the number of participants involved.

Recruitment

All students enrolled in a Bachelor of Midwifery at two South Australian Universities were approached to participate. This included students from all year levels and entry pathways (pre-registration and registered nurse entry) who were actively involved with the CoCE component of the curriculum. Students were initially approached to participate via an email, which included a participant information sheet providing details of the study and the research team, as well as a link to a demographic survey and diary template (see Appendix 5). If students were still willing to participate after reading the participant information sheet, they could click the link to begin the demographic survey and print their diary templates.

This research is concerned with understanding the impact on the students undertaking CoCE. It was anticipated through a constructivist lens, that each student, in accordance with their own life situation would experience the impact of the CoCE program differently. With a large demographic of students, it was important for the researchers to gain insight into the different stressors and levels of impact the program had in each of the students' reality.

Data collection

A convergent parallel mixed methods design was the underpinning framework of this research. Through this strategy, both qualitative and quantitative data were collected concurrently. Following this, the data were analysed as separate sets, before being realigned to make sense of the construct in its entirety (Creswell 2011).

In the first stage of data collection, demographic information was sought using an online survey (Appendix 5). A link to the online survey was distributed to students via email by administration staff from the school office. 'Lime survey' was the online platform used to administer the survey.

The survey was pilot tested with a recent graduate who had experience with CoCE and was familiar with the type of experiences that could be captured. Information collected through this survey described the student's home life, university enrolment details, as well as previous experience with the CoCE program. This included space to reflect on any concerns and provide comments or suggestions they had regarding CoCE. It was deemed important for this information to be collected as there is likely to be a vast difference in the experiences such as

first, compared to second- or third-year students. It was also thought that those students who have children may have additional stressors when considering the unplanned nature of the CoCE program. It was valuable for this study to be able to distinguish these demographics, when considering all other aspects of the data collected.

In the second stage, students were provided a diary template on which to record travel, wait, and clinical times, and financial costs associated with each encounter (i.e. parking, food/drink, childcare etc). In addition to this, space was provided for students to record any other aspects of personal safety, professional relationships, impact of family and any other significant concerns. Students were given approximately 30 weeks in which to record their CoCE encounters. A copy of the diary template is available in Appendix 6.

The collection of data through the use of a diary has multiple benefits, as well as several limitations. Bolger, Davis, and Rafaeli (2003) state that one key benefit of the diary is the ability to capture events and experiences in the context of the individuals' own environment. Further to this, they note diaries can be used to confirm and expand on ideas that would otherwise be excluded from more traditional methods of data collection. As the diary method is a longitudinal data collection strategy, it is subject to limitations such as drop out as well as incomplete data. Despite this, the alternative of a retrospective 'aggregated diary' through which the participant is required to simply recollect past events may be even more limited particularly due to recall bias (Althubaiti, 2016). As this research seeks to understand the impacts of CoCE across the semester, the diary entry method of data collection was seen to have the potential to provide a large amount of rich data concerning the individual experiences as described in real-time by the student. Diaries were collected over a nine-month period to allow time for COCE undertaken during the study to be completed.

Data analysis

The term used to describe data analysis in mixed methods research is known as 'mixed analysis' (Onwuegbuzie & Combs, 2011). Due to the two different types of data collected, the analysis section of a mixed methods study has been described as the most difficult step to undertake (Onwuegbuzie & Combs, 2011). This is likely because, in order to preserve the integrity of the data collected, the researcher must hold an adequate understanding of both qualitative and quantitative data analysis methods.

Prior to commencing analysis of both qualitative and quantitative information, it is important to decide the most appropriate manner through which the data will be presented. As described by Onwuegbuzie and Combs (2011), data can be presented with a dominant form (i.e. quantitative dominant or qualitative dominant) or with equal status given to both paradigms. The question should be asked at this stage, will the qualitative data be used to support the quantitative findings, or will the quantitative data be used to support the qualitative findings? This is deemed important at this stage of the project as the researcher must be aware of how the data will be used. If one paradigm is seen as dominant, it may impact on the manner in which the data from the other paradigm is analysed (Onwuegbuzie & Combs, 2011). An integrative mixed methods design was chosen to provide structure to this analysis (Castro, Kellison, Boyd, & Kopak, 2010). Through this method, qualitative and quantitative data are examined within their own paradigms, before an integrative process through which the data is transformed to reconstruct the experiences using both data sets. For the purpose of answering the research question posed earlier in this chapter, both qualitative and quantitative data were considered to have equal value, however the qualitative aspect remains dominant due to the quantity of data supporting these findings. Quantitative data has been integrated to support the qualitative findings and provides an additional dimension to the findings.

Qualitative data analysis

A constant comparative analysis was used to for the qualitative phase of inquiry. This method refers to the comparison of experiences as described by the participants, while determining meaning between contexts and interactions (Thorne, 2000). Constant comparative analysis is based on the sociological research methods first recorded by Glaser, Strauss, and Strutzel (1968). Although initially applied to the context of grounded theory, it has been argued that it is appropriate for all qualitative based studies (Fram, 2013). O'Connor, Netting, and Thomas (2008) note that when data are analysed with constant comparative analysis it becomes a systematic inductive process rather than allowing data to be dismissed when it does not subscribe to a 'theme'. Constant comparative analysis was chosen for this study as it afforded the researcher space to consider the commonalities between experiences and characteristics, while also recognising the individual and personal involvements of each participant within CoCE. This method of data analysis is deemed appropriate, as according to Thorne (2000) it

best relates to research concerned with understanding the experiences of participants, fitting well to the aims and objectives of this study.

Qualitative data collected from the initial survey was copied directly into NVIVO to be included in the analysis and synthesis of information. Using the above method of constant comparative analysis, each response was initially read in its entirety, taking demographic information into consideration to make meaningful interpretations of the data. Experiences were compared and contrasted to expand the understanding between groups.

Initially, all diaries were read in their paper form. As described by Pannucci and Wilkins (2010), there is a risk of bias to be introduced to research at any stage, including the data analysis phase. Reading the diaries in their entirety with both qualitative and quantitative data present allowed the researcher to understand the perspective of each experience. Further to this, it prompted the researcher to remain aware of the potential to tend towards information that would fit preconceptions, rather than valuing the uniqueness and nuances in each passage of writing. Following the initial reading, data were transcribed from the diaries into an excel spread sheet, in alignment with step two of the previously described framework. To manage the data appropriately, it was then entered into the NVivo® software program, version 11, for further analysis. According to Bazeley and Jackson (2013) NVivo can be used to increase the effectiveness and efficiency of learning from data, as well as providing a platform through which the researcher can visualise, question and report on specific aspects of the research.

A framework by Scott (2004) was used to guide the coding of information once it had been entered into NVivo. Through this framework, the researcher uses questions to move from open, to axial and selective coding. The questions posed by Scott (2004) include;

- What is [the category]?
- When does [the category] occur?
- Where does [the category] occur?
- Why does [the category] occur?
- How does [the category] occur?
- With what consequences does [the category] occur or is [the category] understood?

(Scott, 2004 pp. 115-116)

Using this strategy, information was interpreted and compared, before beginning themes were considered. As the data had already been analysed and compared prior to moving into themes, potential for any data to be overlooked was minimised. Regular meetings were held with the two supervising researchers, and codes were reviewed and discussed at these meetings to undertake cross checking.

Quantitative data analysis

Quantitative data collected from both survey responses and the diaries were collated with Microsoft Excel® and analysed using the software program IBM SPSS®. SPSS is a software program designed to assist in the statistical analysis of quantitative data sets (Cronk, 2017), while the Microsoft Excel® program is a well-known data processing software.

Initially, data were transcribed from the diaries, into an Excel® work book. As this is seen as a 'high risk' time for errors (McFedries, 2013), data were cross checked again from hard copies of the diary to the electronic version to ensure accurate transcription. Diary entries were either included or excluded depending on the aspect required. For the purpose of estimating the average time and financial cost for a completed CoCE, only those diaries that met the minimum requirements were retained. This limited included diaries to those that recorded a minimum of three antenatal and two postnatal appointments.

Copies of original data sets were maintained as well as sets of each 'clean' of the data. Identified outliers were assessed as individual data points, and then removed from formal quantitative analysis. These outliers were re-included through the integrative analysis phase. This 'clean' data was then entered into the IBM SPSS Version 25 for analysis.

Descriptive statistics were chosen to present the quantitative data to provide a summary of the quantitative findings from this research. Descriptive statistics do not seek to provide any inference about the data in relation to the population but can be used to provide insight into the population of interest (Holcomb, 2016). Financial cost, clinical, travel and wait times were all assessed for the mean, mode and standard deviation in each.

Integrative data analysis

Integrative data analysis describes the analysis of multiple forms of data simultaneously. Otherwise known as 'recontextualising' of the data, integrative data analysis, has been described as:

> *'… a return to the original context in which the observations were made by relating statistically derived outcomes back to select indicated quotes to generate stories that 'give voice' to the very people who stated them' (Castro et al., 2010 p. 354 p. 354).*

Through this analytic process, the data corpus was re-read again in its entirety. This allowed for the re-integration of outliers to be examined in context to the experience of the participant. This was seen as significant, as according to Gelo, Braakmann, and Benetka (2008), it is important to acknowledge and learn from what is being described by any outliers.

In the final phase of data analysis, themes that had been previously derived from qualitative analysis were contrasted against findings from the quantitative data. This was integrated through the use of individual cases and story lines to narrate and contextualise the student experience. The final integrative analysis will be presented in chapter five.

Chapter Summary

This chapter has provided a detailed account on the methodology and specific methods used to conduct this research. Mixed methods research is an emerging paradigm that can better address complex sociological questions and phenomena than traditional methods. A description and justification of the use of mixed methods to support the research question has acknowledged the complex but rigorous use of this approach in the social sciences. Ethical considerations have been acknowledged, with an emphasis on student safety, and data collection and analysis techniques have been described and justified. The following chapter will present the findings of this research.

Chapter Four: Findings

As described by Bui (2013), the findings, or results chapter is an application of the previously described methods into a meaningful discussion and synthesis of ideas drawn from the data collected. In this chapter, participant characteristics and demographic information will be presented. Following this, both qualitative and quantitative data will be presented concurrently.

Students enrolled in midwifery programs in two universities in South Australia were invited to participate in this research. It is estimated that cumulatively, 400 students were enrolled across all three years of these programs at the time. Survey responses were collected from 70 students, with 12 consenting to continue with diary collections from clinical experience in CoCE. A total of 74 diaries were returned, with 518 episodes of care documented. For the purpose of understanding the student experience, all episodes of care were included for analysis. However, for the purpose of the quantitative analysis, only those CoCE that met the program requirements were retained. Students in this study attended on average 4.67 antenatal appointments, the birth and 2.64 postnatal appointments.

Survey Data and Participant Characteristics

Of the 70 respondents to the demographic survey, 48.6% were enrolled at Flinders University, while 51.4% were enrolled at the University of South Australia. The majority of students were in an undergraduate program, with 82.9% in the direct entry program and 17.1% in the registered nurse entry pathway. Most students were in their first or second year of study (45.7% and 44.3%), with 10% in third year. No distinction was made between those undertaking full-time or part-time study loads. Students reported between zero and 39 CoCE had been commenced at the time of the survey. Completed CoCE ranged from zero to 28. All students in this study were required to undertake 20 CoCE, however when responding to the question of how many they believed they need to do, students reported requiring between six and 100.

A small number (4.2%) of students reported their age as 17 years or younger, however most students fell between the ages of 18 and 39 (82.9%), with students over the age of 39

accounting for 12.9%. Relationship status was recorded and 32.9% of students reported being single, while 54.2% reported being married or in a domestic relationship (35.7% and 18.6%). The remaining respondents reported being separated, cohabitating and divorced (2.9%, 7.0% and 2.9% respectively).

The number of students with and without children living at home with them was very similar, with 51.4% having no children in their care, and 48.6% having at least one child living with them at home. Of those with children, a majority reported having two children (44.1%) followed by one child (29.4%), three children (14.7%) and four children (11.8%). Most children were reported to be aged 5-12 years (44.4%), followed by 1-4 years (30.6%) and 12-18 years (22.2%). Only two reported children to be under the age of one (2.8%).

The 12 participants who consented to undertake the diary were a sub group of the 70 who responded to the initial demographic survey. To maintain privacy and confidentiality, students were asked to provide their own study code. Seven of the 12 participants provided a study code that enabled their data to be linked (see table three) which limited the ability to compare experiences between demographics.

Table 3: Participant data who participated in both the survey and diary components

Participant Number	Program Pathway	Year Level	Marital Status	Age	Number of Children	CoCE Commenced	CoCE Completed
1	Direct Entry	2nd	Domestic relationship	40-49	2	18	16
2	RN Entry	2nd	Single	21-29	0	23	12
4	Direct Entry	1st	Single but cohabitating	18-20	0	2	0
6	Direct Entry	1st	Single	21-29	1	3	0
5	Direct Entry	1st	Married	30-39	1	2	0
7	Direct Entry	1st	Domestic relationship	40-49	2	1	0
10	Direct Entry	1st	Domestic relationship	30-39	1	3	0

Themes

The themes and associated sub-themes identified in the analysis are shown in table four below. The findings will be described using the headings of: 'the CoCE experience', 'personal safety', 'impact on self and family', and 'professional relationships'. Many of these concepts are interrelated, and as such, will be reconstructed using integrative analysis in the following chapter.

The students' perception of CoCE was initially described through the survey, followed by the diary entries. In both the survey and the diaries, apprehensions regarding personal safety was noted, with participants focusing on aspects such as car parking, driving tired, as well as being physically and mentally fatigued after spending long hours with women. The impact of undertaking CoCE on the student themselves, as well as their family featured significantly, and highlighted issues surrounding relationships, finances and employment, as well as psychological impacts. The role of the student in the team environment was noted, as well as their professional role when supporting the woman, including issues regarding professional boundaries. Space was provided in the diary for 'other comments', and this was used in many instances to continue describing feelings associated with professional behaviours.

Table 4: Findings: Themes and sub-themes

Theme	Sub-themes
Undertaking CoCE	Positive perception
	Negative perception
	Achieving numbers
Personal safety	Fatigue
	Parking
Impact on self and family	Switching Off
	Family Relationships
	Child care
	Financial Impact
	Time
Professional relationships	Working Together
	Professional Boundaries

Undertaking CoCE

The initial survey posed two open ended questions; 'Do you have any concerns currently about the Continuity of Care Experiences?' and 'Do you have any other comments you would like to provide about the Continuity of Care Experience? If so, please explain'. In response to this, the student's perceptions of undertaking CoCE were generally positive, with many students describing learning opportunities and professional skills development through these interactions. Despite this however, there were significant concerns regarding the number of experiences required, difficulties with recruitment, the challenge of juggling commitments, as well as the time and financial pressures experienced.

Positive Perception

Positive experiences as described by the students included the opportunity to improve knowledge and clinical care, as well as to enhance communication and educational experiences. This was reflected in the response of one student who noted:

> *It is a great way to provide care to the pregnant women and I found I have built up better trust relationship with the lady and her family. Also, it gives me a lot of chance to improve my knowledge and skills especially providing information and education (SR9[1]).*

The opportunity to build rapport and form professional relationships with the women was also commented on in multiple responses. One student commented:

> *I think it is an amazing opportunity and you learn so much from it, also helps to build clinical and communication skills' while another student provided the statement 'Overall it's a great idea, the women and families I have met have been lovely, and it has been educational and rewarding (SR66).*

[1] SR refers to the survey respondent. DR refers to the diary respondent

These comments indicate the educational benefits of CoCE as well as the students' ability to engage with this component of the midwifery program.

Negative perception

Not all students felt the CoCE had educational benefits. One student commented *'I have learnt so much more on placement and in class then I have learnt through COCE'* (SR43). This statement may indicate a lack of philosophical awareness of the CoCE program, as well as dissatisfaction with this aspect of the midwifery program. Further to this, some students felt the educational benefits of undertaking CoCE were not significant enough to make up for the time, financial and social costs. This was reflected in the statement:

> *I really enjoy the continuity of working with the same women and giving them support, but I often don't feel it is worth the sacrifices I am making in other areas (SR28).*

Other students felt it would be more beneficial to reduce the number of CoCE required to make the experience more reflective of the philosophy of continuity of maternity carer. One student highlighted this well in her comment:

> *I love being able to share in the woman's experience of pregnancy and labour, I feel like we would be better served doing less CoCE, but with more required visits for each woman (e.g. 6 antenatal) to actually show REAL continuity of care (SR40).*

Several students indicated that working in a fragmented model was a negative factor in their ability to meet their learning objectives. When referring to their learning support requirements, one student made the comment: '[It is a] *lack of continuity when it comes to how we are treated by staff/what we are allowed to do etc'. (SR11).* This quote explores the need for students to be supported by individuals who are aware of the philosophy of continuity of care, but also those who are able to facilitate the students learning as they develop skills and knowledge through CoCE.

Achieving Numbers

The pressure for students to 'achieve numbers' was reflected in many of the student comments. This ranged from concern over how they would be able to recruit the required number of women, to geographical issues and a lack of birthing women in their local

community leading to increased travel times and associated costs. In addition to this, several students felt the pressure to achieve the 20 CoCE forced the focus to skills and having paperwork signed off rather than involving themselves in the care of the woman and her individual circumstance. One student remarked,

> Some women [students] are so concerned about this portfolio that the care of the women is bad, and they just want to get *things* signed off *(SR 57).*

While another student commented,

> …. the excessive number creates more so a 'numbers game' in one's head and removes them from thinking solely of the relationships *(SR5).*

One student alluded to the issue that some students are selective with the women they follow to minimise the time commitment, such as recruiting women late in pregnancy.

> *In order for it to be a true CoCE I think we would be better off having to follow only 2 women throughout the year, but it be a requirement that we have to start following them before 20 weeks gestation. That way, it really is providing COC as you are with them for a long period and not just following women later on in pregnancy to get your numbers up. (SR43)*

Recruitment was seen as a significant barrier to achieving the required number of CoCE with students recounting their experiences as confronting, time consuming and ethically challenging. One student commented on her apprehension to approach women, stating '*The recruiting process makes me feel sick, seems so intrusive in many ways*' (SR19). While another student provided the reflection *'I don't understand why more support isn't given to students and more information isn't given to women*' (SR59). Several suggestions were made by students to overcome the issue of recruitment, requesting further assistance from the university, as well as increasing awareness for women on CoCE. The use of roleplay to develop communication and recruitment skills was offered as one possible solution.

Some students felt they were not well prepared by the university to undertake CoCE. One student commented that she felt she needed further instruction on what to talk to women about during recruitment, while another student was unsure who to approach for assistance regarding CoCE, feeling she needed further explanation of the process, stating '*…not sure when to start and how to go about it and who actually helps us with it*' (SR72). This highlights

the frustrations experienced by students and indicates a need for additional support and direction.

At the time of undertaking this study, the requirement for CoCE was for the student to attend a minimum of three antenatal appointments, the birth where possible, and two postnatal appointments to complete the continuity requirements. Students in this study often commented on the difficulty they faced trying to achieve two postnatal appointments. Students remarked that it was difficult to get in contact with the woman once she had left the hospital, and that arranging to meet the community midwife for domiciliary visits was challenging, as appointments were arranged with minimal notice and often subject to change. One student summarised this well by commenting:

> *Currently it's extremely hard to follow continuity of care women for postnatal visits. If you are unable to do two visits in the hospital, it is really hard to coordinate with the midwives' visits to their homes because more often than not the midwife turns up early or very late and you miss it, plus if the woman is coping well they may only visit a couple of times. (SR35)*

When analysing the quantitative data entries, it became more apparent that students were not able to meet the postnatal requirements, with many entries excluded from the primary analysis due to not recording the second postnatal appointment. This may reflect the increase in early discharge from hospital care back to the community, as students are not allowed to visit the women without the presence of a midwife. However, it is clearly an issue for students and their ability to complete the CoCE requirements. In this study, it was found that a majority of student attended only the minimum number of postnatal appointments, though this ranged from two to six visits, with an average of 2.64 appointments per completed CoCE.

Antenatal appointments were not viewed as being as difficult to achieve, with students regularly attending more than the required three appointments. Attendance ranged from three (minimum requirements), to nine, with a majority attending four, and an average of 4.67 antenatal appointments per completed CoCE.

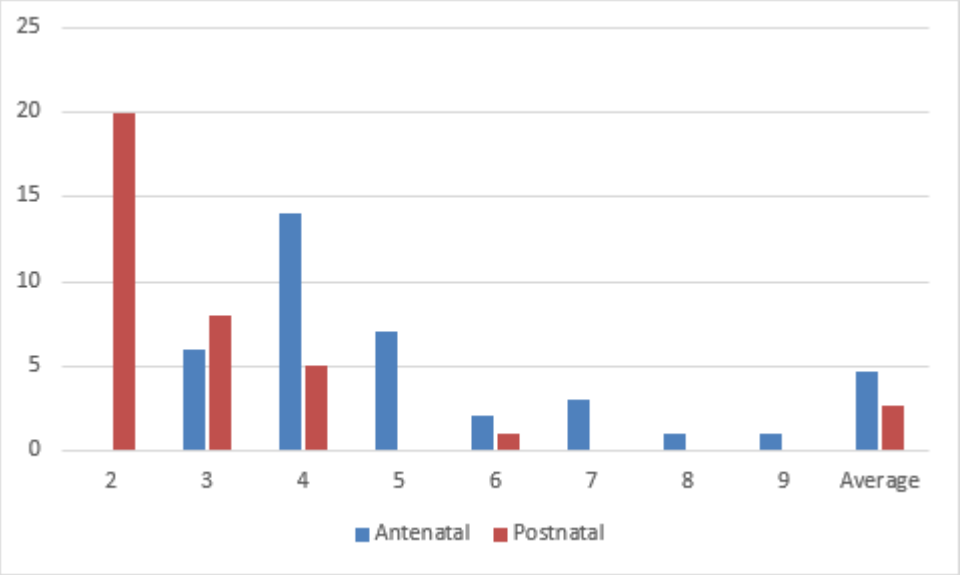

Figure 1. Mean Number of Appointments Attended

One student recorded nine antenatal appointments in one CoCE, as well as the two postnatal appointments required to complete the continuity experience. This student reflected on the importance of her role in the woman's care through continuity stating:

> *Feel I have made a real difference for the woman. Her care has been extremely disconnected (rural v's city) but I feel I have been able to provide come continuity and comfort which is nice. DR 10*

The feelings and actions of this student may indicate the sense of professional responsibility felt towards the woman. This may be heightened especially when the woman is receiving care outside of a continuity model. This may have influenced the number of appointments the student attended, and how they view their role in the care of the woman.

Personal Safety

Issues of personal safety were noted in many of the episodes of care, particularly in relation to fatigue and parking safety. Although fatigue was more commonly described during intrapartum episodes of care, it also related to general feeling of tiredness, possibly related to the birth and other personal factors that were influencing the students' ability to cope at that specific time point.

Fatigue

Multiple students described travelling long distances to attend births. Often, multiple trips would be undertaken in a 24-hour period due to induction of labour process, or multiple hospital presentations for the woman in the one day. Students located in rural areas, or with significant distance were further impacted.

> *I just feel exhausted. I've made six one-way trips from home [rural town] to [city hospital] in the last 24 hours. I am just worn out. I'm sure the energy drink consumption is the only thing that has made me safe to drive. So tired. (DR10)*

The policy at Flinders University is that the maximum number of consecutive hours that a student may provide care is 12 hours, which includes any work completed immediately prior to the commencement of clinical care. This is in place to minimise the likelihood of fatigue, to maintain safe practice and clinical care. Despite this, it was reported that students often felt pressured by the midwife to remain at the hospital to continue their care, even if they had already completed 12 hours. This contributed significantly to the level of fatigue experienced.

> *[I] wanted to go home after 12 hours, but a midwife commented that '[I'd] miss the birth' and I 'wouldn't want that'. So [I] felt obliged to stay and slept for a brief time in the hospital. Severe was fatigue experienced during drive home. [I] won't go over 12 hours again as it was a horrible experience and took 2-3 days to get over being awake for nearly 36 hours. (DR6)*

Not all fatigue was related to birthing hours however, with some students noting early starts, long days, or simply being generally 'burnt out'. One student who was having significant personal issues at the time, as well as being present for her first clinical emergency was denied signatures to complete her continuity episode. Although it is difficult to establish why the signatures were not provided, the student indicated in her diary that the midwife was '*not very obliging'* and that she (the student) was '*finding it difficult to be firm enough to request them'* (DR10). She wrote, '*Just feeling exhausted. Can I even do this?!*' (DR10). In the context of the completed diary entry for this episode of care, her feelings may relate to a joint emotional and physical fatigue.

Parking

Unsafe car parking facilities was a considerable personal safety concern described by students. One student reflected on a birth that she was called to late at night; '*very nervous again about parking in the big empty carpark at FMC at night and walking in'* (DR10). Walking with other staff was viewed as a protective factor, as was support from hospital security staff, although this was also seen as confronting. As a student explains:

> *Leave late at night and am terrified of the dark. Had to call security to take me back to my car which was embarrassing. I was even a bit nervous about getting into a car with a strange man at night (DR10).*

This issue was often compounded by the financial impact of parking costs, with students feeling they had to sacrifice the safety of the undercover carparks, for the free parking around parklands, or on back streets. This aspect has been highlighted in one student's response with the comment:

> *High rise car park available but quite expensive if staying longer than one hour. A couple of times I got a park in the backstreet however leaving after dark (after birth) wasn't very safe. Not much lighting on the back streets, not many houses, unsafe neighbourhood (DR12).*

Impact on Self and Family

The personal and social impacts as described by students included aspects of family relationships, financial pressures, as well as child care issues. Further to this, academic achievement and impacts on study time were highlighted, as were negative psychological impacts. The cascading interwoven nature of the psychological stress could be seen in many of the comments especially regarding family relationships, processing difficult situations, as well as coping with competing demands. The conflicted nature of the comments could possibly indicate the struggle the student is experiencing with managing multiple facets of life. The benefits and family impacts are balanced well in the comment by one student who stated, *'I do enjoy this part of the program and I do learn a lot, it just creates a lot of stress and pressure when managing a family as well'* (DR3).

Switching Off

Several students identified that it was difficult at times to re-focus their attention after a birth or a challenging clinical experience. One statement related to the excitement and anticipation of attending a birth by stating; '*…unable to focus on anything much else. I am always prepared, I have everything ready to go but I must learn how to switch off'* (DR10). In a separate clinical experience, the same student later commented, '*CoCE [woman] was very upset today, and I can't seem to switch off. Learning fast that I can't fix things for people. Hard lesson. Feeling emotional'* (DR10). In a similar experience, another student commented, '*Sometimes it can be emotionally draining when things go wrong as you are more connected with the women' (SR50*). These examples may indicate a strong engagement of the student with the CoCE program and feelings of personal responsibility to the woman. It may also however indicate a lack of skill to separate professional from personal life.

One student commented on burning out, and that she needed to take time away from CoCE to recuperate. Although she felt better after this time away, she felt again the pressure of being behind in her course requirements:

> *I took the summer off to have no COCE women and feel much better about it now, ready to go for second year, although this has put me behind in my numbers, so I'll have to recruit a lot of women in the next couple of months to catch up! (SR31)*

Family relationships

For students with young children, the family was a pivotal support to them. Students described the care and understanding provided by family members, particularly regarding caring for children, and modification of family norms. The following quote describes the benefit of the family support and how CoCE has impacted on the running of the household.

> *Family has been exceptionally understanding and supportive. Housework has most definitely dropped several notches and I'm dropping the ball and forgetting dates etc much more than usual as I adjust to this. (DR5)*

Despite this support, students also highlighted the significant strain CoCE caused to their relationships with partners and children, with one student recounting:

> *Late last year I felt a sense of resentment towards the COCE, because of what it was taking from my family. I realise my situation is not "normal" but a lot of women in the course are similar age to me, and even if partnered, it is still taking a lot of time away from them and their children. (SR31)*

These statements provide valuable insight into the disruption to the entire family unit due to the demanding nature of CoCE and the support that is required by family members for the student to be successful.

Although it is not uncommon for parents to experience a sense of guilt when they return to work or study, the nature of midwifery programs and CoCE creates a vastly different set of complicating factors. Relationships with children were said to be impacted due to fatigue, as well as difficulties in processing experiences. One student commented '*So tired the next day and had to function as a mother'* (DR11). Another student related the fatigue and experience to the manner she was able to relate with her child; *'Due to fatigue of labour and birth, student grumpy with child and less engaged with her daughter. Struggled to connect due to tiredness'* (DR6).

Following difficult experiences, one student reflected on the manner it affected interactions with their children:

> *I would be at home with my own children, but totally pre-occupied with evaluating and reflecting on my role at the woman's birth and the family's (and my) experience of it. (DR1)*

This statement was made by a first-year student who had attended her first birth. It indicates the early reflective behaviours of the student, and the personal responsibility felt regarding the woman's care. The statement could highlight the need for early debriefing for the student to process the experience.

Multiple diary entries highlighted feelings of guilt associated with what students perceived as 'putting myself first'. One student made the comment that she was not sure she was able to balance the competing demands by sharing:

> *I had to leave an activity with my daughter early to attend an appointment. I feel guilty about this as I feel I'm putting myself before her, the preschool years go so quickly, and I'll never get these opportunities with my children*

> *again (not the first time I've missed out/not gone to my own children's activities, so I can attend an appointment). (DR3)*

This feeling was also shared by another student who commented, *'My 4-year-old was distraught when I left for today's postnatal appointment.... I feel so selfish and guilty'* (DR10).

The above statements indicate the invasive nature of CoCE on the students personal and family lives, and the significant strain it can place on relationships. The psychological impact and inability to switch off, as well as taking on the emotional support of the woman are all indicated as having a negative impact on this aspect of their life.

Child care

The cost of child care was included in the 'other' section of the diary and is therefore difficult to establish a true cost for each episode. Additionally, due to government rebates, the cost experienced by each family differ. Regardless, the cost of child care has been documented as a high impact on family finances by multiple students in this study. Qualitative comments report that students in this study paid around $50 for an episode of child care to attend a single CoCE visit. In combination with other expenses, child care has been found to be a considerable financial burden in CoCE. One student shared her experience with child care describing the issue by noting, *'Stressed out funding care for kids to attend appointments, especially births that I can't plan in advance'* (DR3). An additional factor regarding the timing of the appointments and the change to the cost of child care was highlighted by one student who stated:

> *I need to use child-care which is around $35 for 1/2 day or $85 for full day (if I am away for an appointment over 12pm I have to pay for whole day of care as it falls in both the morning session and afternoon sessions). There are rebates, but I am still out of pocket for approx. $15-40 each time ..... this adds up quickly when you have to follow so many women and go to a minimum of 4 appointments - usually more + birth (SR74).*

The cost of child care was not the only concern for students with young children. Juggling favours with other parents was noted, as well as using family members to help when possible. Further to this, the unpredictable nature of birth and needing to leave children in the middle of the night or trying to find last minute child care caused considerable stress to students.

> *Childcare arrangements are my main concern. Having to drop everything to attend births and organise childcare at short notice is intimidating as I have few resources to help (with grandparents either living away from Adelaide or working full time). (SR70)*

Recognising the large proportion of students who reported having children under 12 years of age (77.8%), it is not surprising that many students were concerned about finding child care with limited or no forewarning due to being on call for birthing women. Students reported that this caused significant stress, with one respondent noting that is was difficult to juggle commitments while always having a 'plan B' in mind in case the woman went into labour. Another students described this impact well by stating:

> *Arranging for child care stresses me. I feel guilty continually having to ask friends for baby sitting favours and feel very guilty when I'm not in a position to return the favour and have to say no. I find this part of the course way more stressful than any part of the study, including exams. If I didn't have kids I think I would be fine. I feel particularly stressed leading up to a due date thinking about what I will do if I get "the call "during the day when my husband is at work and I have our 3 year old, or if its night time and he has to go to work at 07:00 what if I'm not finished - the baby is not born? (DR 3)*

These statements reflect not only the stress on the individual student, but also the impact this can have on the broader family and social support systems. As described by the student above, this is one of the primary concerns for many students with young children; a factor which represent most of the student cohort.

One suggestion by a student noted that currently in South Australia the hospital creches are not available for students to leave their children while they attend appointments. It has been suggested that making these services available to students is one possible way to alleviate the financial pressure on those with young children.

Financial impact

The financial cost of undertaking CoCE was extensive. Documented costs ranged from child care expenses, petrol and travel, as well as food and drinks when unexpectedly called into births. Finances were further impacted as students described needing to leave work early, call

in ‘sick’ from paid employment, or call their partners home from work to meet appointments and birth requirements. The true financial cost was noted by one student who commented:

> *Midwifery is an expensive course in time, fatigue, money, printing paperwork, fuel, child care, food if staying out longer than expected, car running costs. (DR6)*

Quantitative data collected from diaries related to car associated costs, public transport, parking, or ‘other’ costs. Other costs related lost income, child care, food and parking fines. The costs for each type of interaction and totals are shown in Figure 2. From this graph it is clear that ‘other’ cost was substantial, however what the ‘other’ cost was were not able to be differentiated unless correlated with qualitative comments through each episode of care.

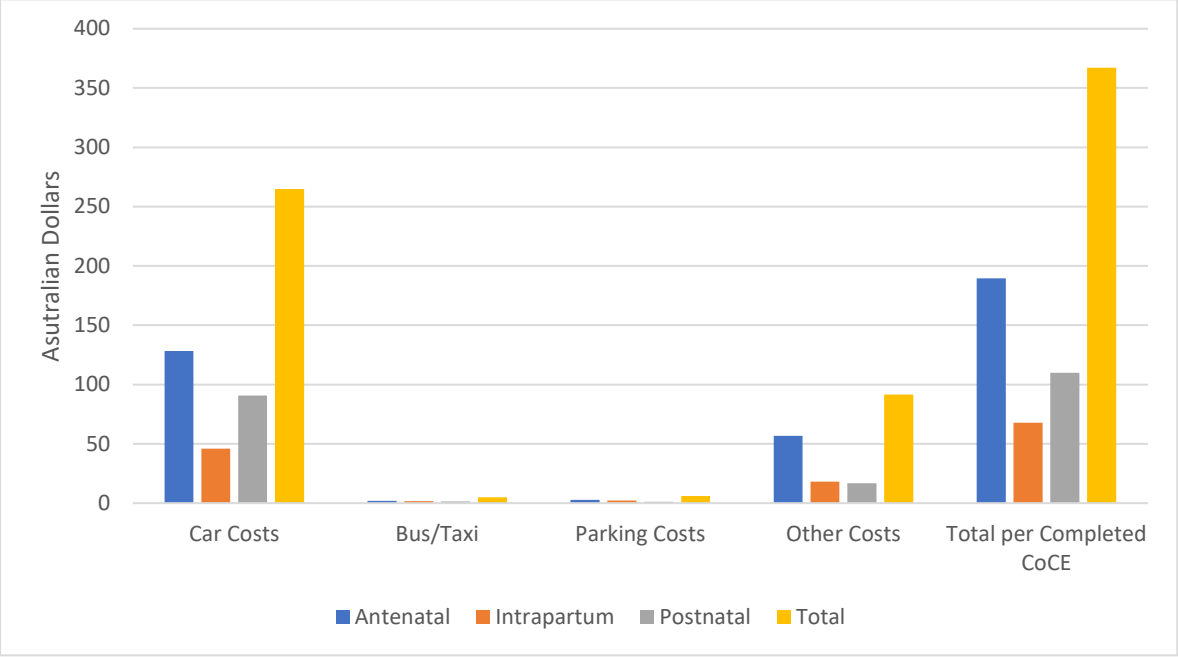

Figure 2. Mean and Total Cost per Competed CoCE

The average cost of each completed CoCE was $367.19 based on the average from this study of 4.67 antenatal episodes, the birth, and 2.64 postnatal appointments. At the time of undertaking this study, students were required to undertake 20 CoCE through their program, making the total average financial cost based on these statistics to be $7343.80 across the thee year degree. If these costs are applied to the minimum expectations of the only three

antenatal and two postnatal episodes of care, as well as the birth, the total cost would be $272.78 per completed CoCE, and $5455.60 over 20 completed CoCE.

Earlier, one student's experiences were described where she reported undertaking nine antenatal appointments, as well as two postnatal appointments, but was not able to attend the birth. This one completed CoCE would have come at a cost of approximately $448.24 and is reflective of the large variation is cost associated with undertaking each CoCE.

Interestingly, the financial cost was perceived differently depending on the experiences or learning that occurred. For one student, a negative experience and a financial loss caused significant personal impact stating, *'For one signature and a 30 min appointment where I learnt nothing our family has lost over $100 this week'* (DR10). Later this student went on to state '*Uncertain my priorities are right'* (DR10). Conversely, another student who had a positive experience seemed better able to mitigate the financial cost as reflected in her diary entry stating: '*It cost me $52 in child care to attend this birth (Luckily it was a good experience!)'* (DR3).

The issue of maintaining paid employment while undertaking CoCE featured often in student responses to both the survey and the diary entries. Many students were unable to continue employment or maintain the level of employment they were engaged with prior to undertaking the CoCE component of study. Students described having to call in sick for shifts or leave early to make CoCE appointments or births. Some students identified feelings of guilt at having to choose between their financial need to work, but also their obligation to the woman to attend appointments or the birth. One student commented on how choosing to attend a CoCE appointment or birth over work could lead to tension in her workplace, by commenting '*It is a financial burden at times as we have to give up work to go to births and are sometimes then on bad terms with our workplace for missing shifts'* (SR7). Further to this, students noted multiple times that their partners would often have to leave work early to look after children if required. This would often put a strain on the relationship, but also impact significantly on finances. One diary entry summarised this by stating: '*My partner missed 5 hours of work (for the 2nd time) today to have our son whilst I went to an antenatal appointment. He is understandably annoyed'* (DR10). Later, the same student experienced a similar event, losing additional money due to attending another antenatal appointment. She

wrote '*Financial impacts becoming huge on our family. Another loss of $69 of my partners wages today. May not sound like much, but it is a lot to us'* (DR10). This highlights the conflict of time and resources the students must manage and how these impacts on other aspects of their personal and professional lives. The interwoven nature of financial pressure on personal relationships is evident through these accounts.

The students' own ability to continue working was impacted significantly, with some students needing to leave their paid work to keep up with the demands of the CoCE program. The impact of leaving paid employment meant one student had to find alternative living arrangements to continue her studies. This was reflected in the statement:

> *During first year I was able to work 1dpw to supplement Centrelink parenting payment single (I have a previous degree and was earning >$40ph in my professional role, as a casual), and 3 of my 5 births last year landed on the day I worked, so each birth cost me over $300 in lost income, as well as the fuel costs to travel 70km each direction. This year I am unable to juggle work with my study so am surviving by living with my parents and Centrelink. (SR32)*

The impact of this travel is not only related to the time spent, but pointedly on the cost of fuel and parking and this was a financial concern for many students. Travel costs were calculated using the Australian Taxation Department (2018) figure of $0.68 per kilometre. In total, each completed CoCE cost approximately $264.76 (n=34) in travel, accounting for 72% of the total cost. Avoiding this cost was not an option for many students as public transport was not a viable alternative, especially when needing to attend births quickly or late at night. Taxis were not featured highly in the data collected, however when necessary, this cost was significant, with a one-way fare costing from $20-30. One student who had commented: *'Juggling transport with all four family members needing to be in different places at the same time caused stress and anxiety and cost more with taxi kms…' (DR5).* Another student reported a $12,999 cost in her diary as she needed to replace her car. Although this was removed from the initial data set as an outlier, it is an important consideration of the student's ability to successfully meet the requirements of the course.

In one example, the student under estimated the impact of travel distances on her ability to provide continuity to a woman. After several appointments, she opted to drop out of this CoCE, leading to feelings of stress and guilt.

> *Long drives (three hours each [trip] good traffic) was a large financial cost. I was very disappointed and upset with myself for it not working out. I felt like I had let her (the woman) down (DR12).*

In this situation, the student was travelling 124 kilometres, taking 1.5 hours each way to attend a 15-minute antenatal appointment. The student was only able to attend two appointments before realising this amount of travel would not be a feasible option for her due to the financial and time cost. The emotional aspect is well described, as the student felt she had let the woman down and that she had damaged her professional relationship with the woman. In addition to the emotional cost, based on the calculation of $0.68 per kilometre of car travel the financial cost of these two appoints alone would cost the student $168.64. This is a significant burden given that incomplete CoCE are not recognised, meaning students undertake additional hours and costs over what is actually credited towards meeting program requirements.

Time

The time factors recorded in this study can be found in Figure 3, and included clinical time, waiting times, non-clinical time to account for meeting time with facilitators and associated paperwork, and travel time to and from appointments. Total time was again calculated using the average of 4.67 antenatal appointments, the birth and 2.64 postnatal appointments. The average total time spent through each completed CoCE was 22.20 hours (1332.15 mins), with travel time accounting for 48% of the total time spent. This was followed by clinical time (30%), wait time (16%) and non-clinical time accounting for 6% of the total time spent in each completed CoCE. Based on the minimum requirements at the time of 20 CoCE across the program, this would account for approximately 444 hours over three years full time, or part time equivalent. Based on the minimum calculation of attending only three antenatal appointments, the birth, and two postnatal appointments, this figure would adjust to 17.14 hours (1028.95 mins) per completed CoCE, or 342 hours to complete 20 CoCE.

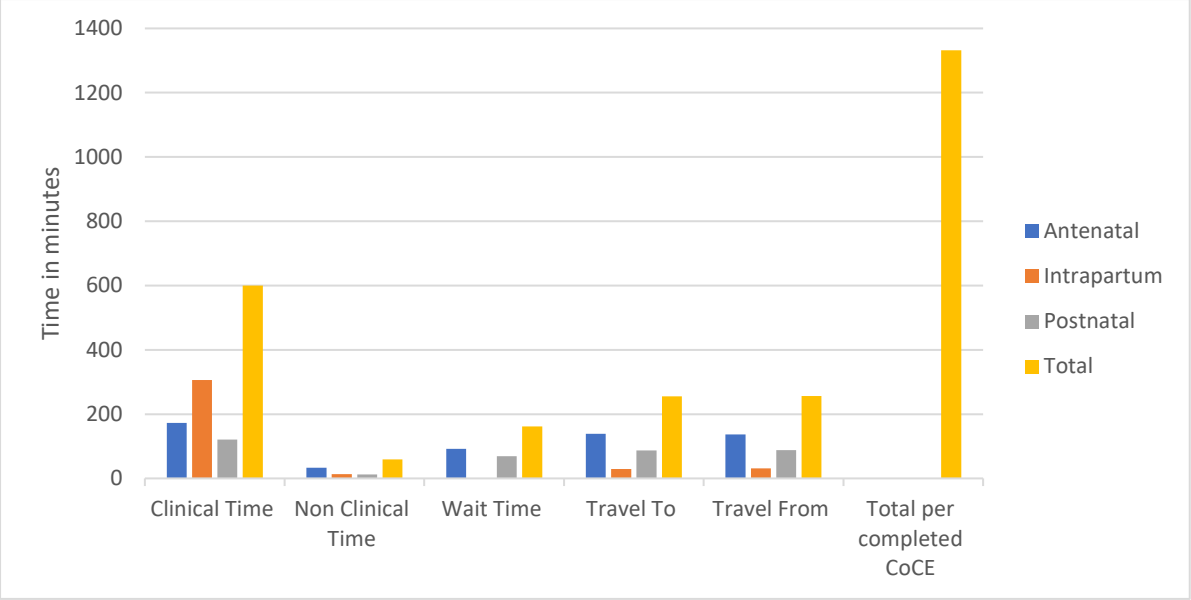

Figure 3. Mean Total Time Spent (in minutes) per Completed CoCE

Clinical Time

Clinical time is displayed in figure 3 as categories to describe the mean of each type of episode of care, as well as the mean (in minutes) for each completed CoCE. The most amount of clinical time was spent in intrapartum care. This accounted for just over half of all clinical time spent (50.96%), followed by antenatal (28.85%) and postnatal (20.19%). These figures correlate with the expected findings related to clinical care due to the requirements of undertaking more antenatal appointments (minimum of three) than postnatal appointments (minimum of 2) and up to a maximum of 12 hours for intrapartum care. Several students recorded a range of zero to 790 minutes of clinical care. This is an interesting finding as the student had recorded attendance at a clinical event (antenatal, intrapartum or postnatal), though they did not document or recognise there was any clinical time associated. This may be a limitation of the data collected but may also reflect how the student perceived their role in the episode. Several students mentioned that at times they were not directly involved in the hands-on care of the woman, and that they were in observer roles only. This may have led the student to classify this as not having any clinical hours associated.

Wait time

Time spent waiting for appointments was noted by students in qualitative findings as one factor contributing to frustration while undertaking CoCE. This frustration was supported by the findings of quantitative data which identified 2.68 hours (161.64 mins) of wait time per completed CoCE. Wait times were most significant when undertaking antenatal appointments, with students spending a mean time of 1.5 hours (91 mins) per completed CoCE in the antenatal environment. This was followed by postnatal wait times of 1.15 hours (69 mins) Understandably, no wait time was recorded for intrapartum episodes of care.

Prolonged wait times caused stress for students as they felt this was 'wasted' time, more so for younger students who felt they were not able to relate well enough to the woman to sustain conversation for extended periods of time. One student reported this period of waiting with the woman as stressful, staging she felt quite confronted by the experience

> *I am only an 18-year-old young girl who has only just left school and has no children herself, thus my life experience is quite little. I found it a massive confrontation and often hard to maintain conversation with women whom I do not know when at time I have to wait 40 minutes for an appointment. (SR4)*

Some students have reported up to a three-hour wait and feel that the wait does not always justify the amount of clinical care they are then able to provide. When reflecting on the time impact, one student made the comment: '*it takes 30 minutes for me to get to appointments minimum. On top of this I have waited an hour for a 10-minute appointment'* (SR4).

Non-clinical time

Non-clinical time accounted for almost one hour (59.07 mins). Although this section was allocated to meeting with clinical facilitators for debriefing and associated paperwork, it is not clear how this time was spent between these factors, nor if it included the final reflection and documentation of each CoCE. Regardless of how this time was spent, the additional hour is an important consideration when recognising the time spent on each completed CoCE.

Travel time

Travel time accounted for 8.525 hours (511.5 mins) for each completed CoCE accounting for almost half of the total time spent on CoCE. Qualitative data highlighted the impact of this with one student commenting: '*living outside of the city the kms are adding up and getting to me. I feel like all of my money is being spent on fuel - frustrating*!' (DR10). Another student from a country location commented:

> *Living in the country with limited numbers of women to follow is quite difficult, as well as costs of travel (since the hospitals can be up to 90km's away) and time taken to travel for one appointment. When I am sent to the city for placement I am unable to make any COCEs appointments or births because it is just too far to travel. (SR7)*

Multiple students reported attending hospitals for births, only to be told to return when the woman was further progressed in labour, resulting in extended travel time and distance. One student from a rural location stated,

> *Oh my goodness! - two false starts for this birth! I am such a rookie at all this. If this birth happens soon I will have travelled 826.8 kms in 24 hours - I could have driven to Melbourne! (DR10)*

As in the previous example, the additional financial and time cost of this episode is not often recognised but impacts heavily on the student.

Professional Relationships

Students identified that they were often asked to work outside of their scope of practice, particularly around administering drugs. Although some students stated they were confident enough to say no, or seek assistance, multiple students reported near misses when giving medications. This was highlighted by one student who commented,

> *First experience in theatre and was asked/ordered to do tasks students unable to do at that time. Often asked to administer drugs. Asked by other staff to do meds etc which student not capable of - makes it awkward. (DR8)*

These comments may indicate a lack of awareness of other staff regarding the scope of the midwifery student and her role in the care of the CoCE woman but become a stressor for the students.

Students described being left alone with labouring women for extended periods of time and were concerned they would not know what to do if something went wrong, or they were unable to identify a potential complication. This aspect of professional safety was described by one student who stated: *'[I was] left alone with woman and her partner for long periods of time - concerned should something go wrong or identifying any precursors to problems' (DR6).*

Working Together

Several professional relationships were mentioned through this study; student-midwife, student-woman, and student-student interactions. Although many aspects of the professional relationships were identified as positive, students often felt 'outside of the team' and as though their relationship with the woman was not understood or professionally respected. This aspect was well described by the following reflection:

> *Have put in a lot of effort and time with 'Janet'. Midwife does not seem to appreciate that I have gone above and beyond what is required of me for a CoCE. (DR7)*

Positive aspects were also acknowledged with team work that focused on the woman's needs being more conducive to learning for the student. One student commented, '*The midwives' doctors and woman were all very professional, caring, woman-centred and student friendly. It was an inclusive atmosphere'* (DR1).

Understanding of the student-CoCE woman relationship by the midwives was identified as a key frustration for midwifery students. Many times throughout this study students described waiting for appointments that had been cancelled by the midwives without the student's knowledge, as well as not being adequately informed of how women were progressing in labour. This led to students missing births, not completing required paperwork, as well as having feelings of self-doubt, guilt and anger. Additionally, the lack of understanding made it difficult to achieve the requirements of the CoCE. One student made the statement:

> *Midwife sees CoCE woman before reaching the office so begins appointment, leaving me waiting in the office. Midwife has no regard for my time and effort to attend the appointment. (DR9)*

Further to this, another student commented:

> *While I value every opportunity to learn, I'm concerned about the time I invest going unrewarded when I'm not able to get an NVB signed off simply because the person supervising me was obstructive to the continuity of care experience. These experiences are very rewarding when continuity is allowed and appropriately supported. (SR12)*

Differences in teaching capabilities of clinical staff had the ability to influence the students' perception of the experience, and in some circumstances also the woman's experience. Multiple students commented on the how the woman was aware of negative interactions. One student remarked: *'CoCE woman expressed concern at how I was treated by hospital staff. She said, "I don't like how you were spoken to*" (DR1). In a separate incident, the same student commented:

> *At times, I felt like this woman was supporting me as a student navigating a hostile environment, and this was very upsetting as my objective was to support the woman while learning clinical skills. The treatment I received impacted negatively on my woman who wanted me there and wanted everyone to be nice and professional. (DR1)*

Both experiences provide examples of how it is important for the team to work together to meet the needs of the woman, and how negative behaviour if directed to the student can influence the woman's experience.

Professional Boundaries

Several students made reference to professional boundaries and a need to stay within their scope of practice. Often this was regarding phone calls and messages from CoCE women, which ranged from emotional support to seeking medical advice. One student commented, '*Many encouraging and supportive texts to woman through her pregnancy - developed a good relationship, but aware this may blur boundaries of student/midwife relationship'* (DR6). Another student reported on a lack of understanding of the student scope of practice and how this influences professional boundaries. She wrote '*CoCE women not understanding our involvement properly and calling/texting with concerns frequently and wanting medical*

advice from me' (DR43). Both statements indicate that women are not always aware of the scope of the student, and how this can impact on the student.

Chapter Summary

This chapter has presented the findings of this research. The themes have been described under the four main headings of: 'undertaking CoCE', 'personal safety', 'impact on self and family', and 'professional relationships'. These findings provide evidence to the broad and significant impacting factors experienced by students who are undertaking CoCE. Time and financial pressures are clearly of concern to students, as well as the impact of fatigue, maintaining relationships and self-care. The following chapter will provide a discussion of these findings in combination with previous literature. It will also discuss the role of social interdependence and some possible strategies to assist students to succeed in CoCE.

Chapter Five: Discussion and Recommendations

Introduction

This chapter provides a critical discussion of the findings of this and previous research. The initial discussion will be presented based of the educational theory of social interdependence. Social interdependence refers to the meeting of an objective or goal, and the influence of team members on that achievement (Johnson & Johnson, 2009). The key in this theory is that all participants must be motivated to work towards a common goal to be successful in meeting the team objectives (Hmelo-Silver 2013).

Positive interdependence is based on the skills within a team that focus of communication, skills development, sharing of resources and knowledge, as well as engagement with the common goal. Four key strategies to support positive interdependence have been suggested by Johnson and Johnson (2009). These strategies include: pre-instructional decision making and planning, strategic teaching encompassing accountability, social skills and criteria for success, monitoring effectiveness of the group members and the team as a unit, as well as reflection and evaluation. In the context of students completing CoCE, there are many relational factors that have been shown to help and hinder student success. Using the four keys steps to positive interdependence, discussion and recommendations will be presented to strengthen the use of CoCE as an educational aspect of midwifery programs, while improving capacity for student success.

The social interdependence model has been chosen as it is important to recognise the team effort that is required for the student to meet their objective of supporting a woman to achieve her pregnancy and birthing needs during CoCE. The team in this instance should include the student, the university system, the students' support systems, the health service, as well as individual practitioners. The role of each system or individual may influence the outcome for the woman, as well as the educational opportunity for the student. The woman should remain at the centre of the care, with her pregnancy and birthing goals to be the primary focus of all involved.

The educational and supportive value of the CoCE cannot be over appreciated, however as discussed in previous chapters, there are significant issues that require further attention and consideration to maximise the benefits of this educational experience. The issues do not seem to be reserved to any one university, and it is therefore appropriate to make general statements when discussing the recommendations for supporting students through their midwifery degree. Furthermore, it is important to recognise there are many different strategies that have been implemented in different universities, which are at varying stages, and with varying results. Examples include the strategies described by McKellar et al. (2014) and Sidebotham (2014). Without thorough knowledge of the CoCE development in other universities, the following is a discussion of some possible strategies to assist students to succeed. This is in alignment with the study aims of identifying the factors impacting students' ability to successfully undertake the CoCE component of their midwifery program to formulate means to minimise barriers and improve outcomes.

The Social Interdependence Theory

In the 1950s and 60s the first concept of collaborative learning as a theory emerged (Bruffee, 1984). Collaborative learning is a term used in education that refers to individuals learning with and from each other (Barkley, Cross, & Major, 2014). Postgraduate medical education was the initial field to evaluate the use collaborative learning, where students were found to develop clinical awareness and decision making faster in groups than those working individually. Social interdependence is one of the concepts underpinning collaborative learning and refers to the impact of individual influence on goal achievement (Johnson & Johnson, 1989). According to Laal (2013), there are three main ways in which a person may influence the actions of others and ultimately the success of a goal or objective. These include the capacity to '*assist the success of others, block the success of others, or have no impact on the success or failure of others*' (p.1433). As Laal explains,

> *In a collaborative setting, the success of one person is dependent on the success of the group; this is referred to as positive interdependence. All members should rely on one another to achieve the goal and need to believe that they are linked together to succeed (Laal, 2013 p. 1433).*

The early works of Deutsch (1949) describe two different types of social interdependence; promotive and contrient. These terms have also been described as positive and negative

interdependency (Johnson & Johnson, 2009) and for the purpose of this thesis and ease of reading, the latter terminology will be used. Positive interdependency occurs when all involved in a group situation or learning activity expect the individual and team goals to succeed when performed through collaboration (Johnson & Johnson, 2009). Conversely, through negative interdependency, the goals of the team are over taken by individual ego, individual goals, or real or perceived rivalry (Deutsch, 1949; Johnson & Johnson, 2009).

Social Interdependence in Midwifery

The very foundation of good midwifery practice is essentially one of social interdependence. In a context of midwifery and midwifery education, it has been stated that '*Even a natural task like childbearing involves interdependence between mother and midwife*' (Alexander 2001, p. 318). The team in this manner could be considered the woman, the student, midwives, doctors, other health care practitioners, as well as the university, and the health care service, or any combination of the above. The aim or goal of this team should be to meet the needs of the woman who is central to the team efforts. In positive social interdependence, the team should work together, setting aside ego and individual goals, to address the primary aim of the team. This requires individual accountability to the goal, and other members of the team, trust, sharing of information, as well as the ability to question conclusions and challenge different perspectives of the team in order to best reach the goal (Johnson & Johnson, 2009). This sentiment is defined well by Helen Block Lewis who states:

> *A minimum requirement for cooperative behaviour is not physical togetherness, nor joint action, nor even synchronous, complementary behaviour, but a diminution of ego demands so that the requirements of the objective situation and of the other person may function freely (Block Lewis, 1944, p. 115 in Johnson & Johnson, 2009).*

To maintain success both individually and as a team, evaluation and reflection of achievement of the goal must occur. A diagram of social interdependence, based on the previous work of Johnson and Johnson (2009) is shown as Figure 4, detailing the interwoven nature of social interdependence in CoCE. From this diagram, it is clear to identify that CoCE can function only within positive or negative social interdependence as it cannot occur in isolation to another individual.

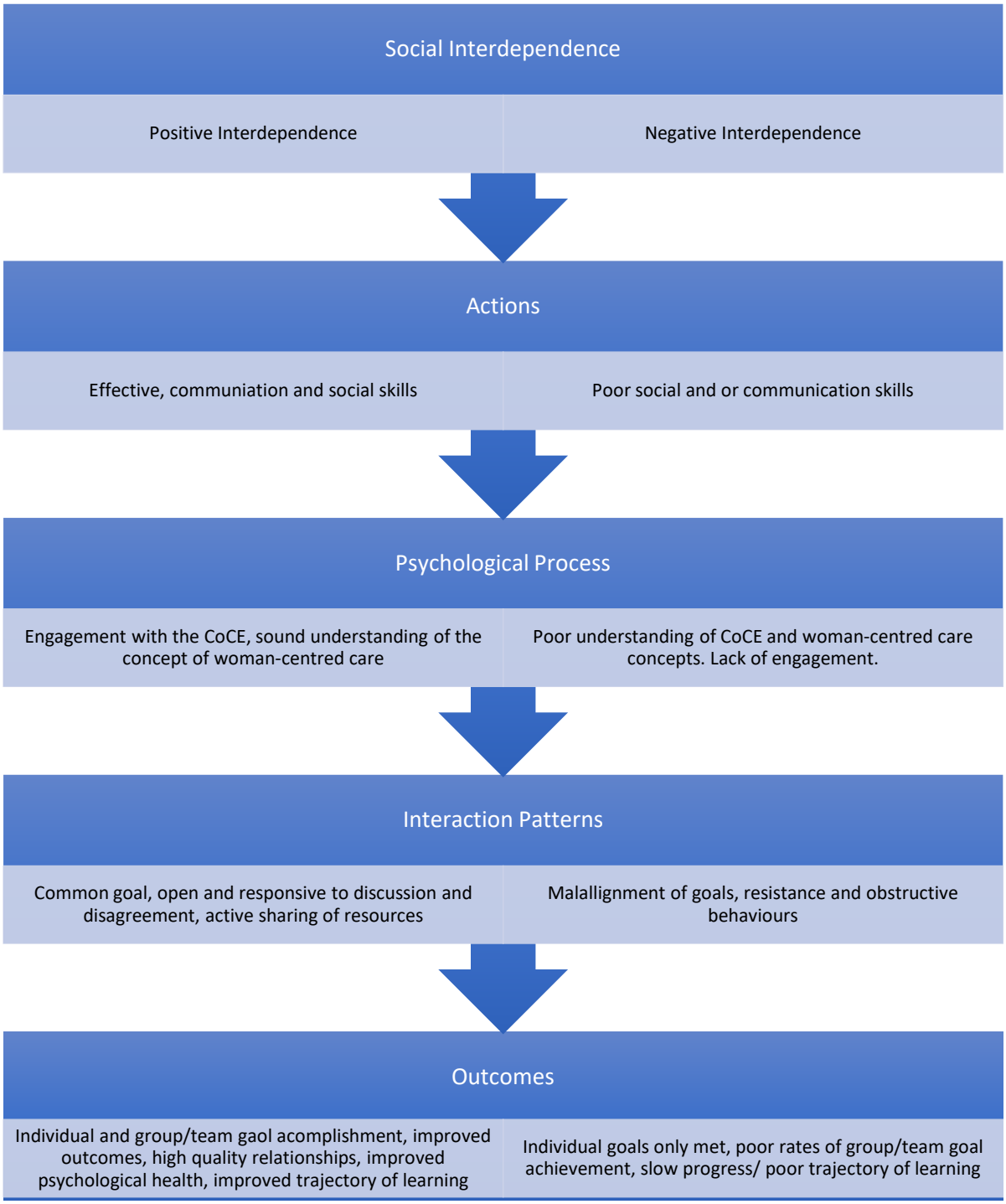

Figure 4. Social interdependence model

The ability for cooperative learning to occur is dependent of two factors: effectiveness and efficiency. As previously described, effectiveness is the ability for the team to meet the end goal, however efficiency relates to the satisfaction of each of the team members (Deutsch, 1949). Through CoCE, the primary goal of the team should be to support the pregnancy and

birthing choices of the woman. Concurrently, the goal of the student should be to support the woman while undertaking learning activities and experiences to meet the requirements of the CoCE and midwifery program. If the student is not able to achieve their individual goal, which should be supported by the other team members, there will be a lack of efficiency, which will impact on the group function and may limit collaborative efforts.

It should be recognised that in the context of CoCE, all individual members will have their own goals, which therefore leads to multiple points for disfunction to occur. As Deutsch (1949) explains, due to our complex social systems, it is near impossible to encounter a situation in which the team members are either completely positive or negative. It is regularly seen that individuals may be positively interdependent with the team goal, and negatively interdependent with the goal of an individual. This has been highlighted through the findings of this study when the midwife was providing care for the woman but did not understand or support the learning needs of the student involved in the CoCE. In this manner, the midwife was meeting the group objective and is therefore *effective*, however overlooks the goal of the student and is therefore not *efficient* as the student may not be satisfied with their individual outcome.

Examples of positive interdependence in CoCE have been provided through this and previous research, with students citing the manner they are able to work with the woman to assist her to achieve her pregnancy and birth goals, with the support of other factors such as university supports, midwives and doctors. Also involved in this is the students' family to support them to achieve their role in the team.

Despite the examples provided above demonstrating how positive interdependence can meet the needs of women and students, instances of negative interdependence have also been evidenced through this study. Students not being called in for births, as well as being excluded from the woman's care, indicate a lack of awareness of individual goals, as well as the primary goal of working together to assist the woman to meet her pregnancy and birthing goals.

Pre-instructional Decision Making and Planning

According to Johnson and Johnson (2009), pre-instructional decision making and planning is the first step in the application of positive interdependence. It refers to the setting of

objectives of what is to be achieved through the interactions, as well as the roles and functions of each member within the group. In the context of midwifery education and CoCE, it is important to recognise the university's obligation to engage students with the concepts and philosophies of the CoCE program, as well as providing formal structures in place to support students prior to commencement of CoCE. The exact role of the student, as well as the professional boundaries and capabilities should be clearly described to any institutions and individuals involved in supporting students with these experiences.

The findings of this research indicate that students do not always feel they are adequately prepared for the demands of undertaking CoCE. Students must be more aware of the demands of the midwifery course prior to enrolling. Extensive counselling prior to enrolment could mitigate a lack of awareness of the course demands. A screening or lifestyle tool for students to determine if midwifery, particularly the CoCE aspect, could fit with their current lifestyle could be developed. Additionally, this study has identified significant costs associated with undertaking CoCE and this must be appropriately communicated to students prior to enrolling. Addressing these issues may assist with attrition, but also minimise the 'shock' of expectations and requirements of the degree. It could also provide the student additional time to evaluate the supports and formulate plans as to how they will address each possible contingency as it arises.

Despite positive responses regarding the educational benefits of CoCE, some students remained disengaged with the educational model. The philosophy of continuity of care and placing the woman's pregnancy and birthing needs as the primary focus of the program should be clear early in the program. This should occur prior to students attempting to recruit women and may assist students to better recognise their role in the care of the woman, and the importance of the team in working towards the woman's pregnancy and birthing goals.

Strategic Teaching

It has been noted by Johnson and Johnson (2009), that team members must be provided with specific instruction and time to acquire skills that will assist them in succeeding in meeting their individual and team goals. In the context of supporting students to succeed in CoCE, this refers not only to the manner they are able to communicate and work within a team, but also the promotion of self-care and good psychological health.

Recruitment of women into the CoCE program was highlighted by several students in this research as difficult to achieve. Younger students in particular, identified that it was often quite difficult to make contact with women, and that they felt uncomfortable trying to make conversation. Communication with the woman was also identified through the literature review as a factor that could hinder the building of professional relationships between the woman and student. It is important to ensure the student is supported in developing sound communication and interpersonal skills prior to attempting recruitment. Further to this, if the student is aware of their role in CoCE as well as the benefits to the woman, it may be easier for them to approach and recruit women.

A lack of communication may also impact on women's understanding of the role of the student and may influence professional boundaries. Lack of professional boundaries have been described by students in this study, with women asking clinical questions or providing sensitive information that the student might not be capable of acting on. Although many universities offer information detailing the role of the midwifery student, it is important that woman are aware of the scope of the student. Students should be prepared to explain this at the recruitment stage, and role playing was suggested by students in this study as a method that could be used to further develop skills when responding to women when situations falls outside of their scope of practice. McKellar et al. (2014) have suggested that role playing may be a possible strategy to increase confidence in recruiting women, and this may be an opportune time to introduce how the student can discuss boundaries also.

Education should not focus only on the student, but also on other team members. The findings of this study support the work of previous research which identified a lack of cohesion between students, midwives and health care services, increasing the chance of the team not reaching the goal of supporting the woman (Browne et al., 2014; Gray et al., 2012; McKellar et al., 2014). Additional information regarding CoCE, the role of the student in care, as well as working with students and providing effective clinical teaching, may assist the health care providers to include students in the team in a more effective way. It may also strengthen an appreciation of the relationship between the student and the woman, and value the student can bring to the team. Students often feel they are not valued for the role they play in the woman's care, and this was reflected in multiple quotes through this study. This lack of awareness and understanding further clarifies the need for additional education in the clinical

environment to better meet student needs, and ultimately the needs of the woman. An increased understanding in the roles of each team member could provide additional cohesion to the team which supports the progression toward positive interdependence.

This was the first study identified to purposefully seek real-time experiences regarding the psychological impact of undertaking CoCE on midwifery students. Students described women relying on them for emotional support, as well as students having an inability to 'switch off' after experiences. Additionally, some students reported missing family events and feeling guilty and stressed if they could not attend due to their responsibility to their CoCE women and being on call. One aspect that should be taught to students is the need for 'down time' and times that it is appropriate to not be on call. There is no other educational program that would expect students to remain on call 24 hours a day 365 days of the year, yet this is what students often described.

This study reported significant levels of fatigue, as well as the negative impact of being on call for CoCE on social and family events. To address this issue, it could be suggested that students need to retain a specific amount of time to be off call and not available to women. Holiday time has been found to improve wellbeing in the general population (Strauss-Blasche, Ekmekcioglu, & Marktl, 2000), and this is important for student resilience as well as good mental health. Students should be afforded space in their year to rest and rejuvenate themselves. As previously described, compassion fatigue is present in midwifery students (Beaumont, Durkin, Hollins Martin, & Carson, 2016), and it cannot be expected that they can continue to give from 'an empty cup'. By providing students the 'permission' to be off-call, together with education about self-care, we may see improvements in resilience and student wellbeing. Introducing scheduled time away from CoCE is reflective of a working model in which the employee would have annual leave. By promoting a healthier work/life balance for continuity models, students may consider working in these positions following registration. Another possible solution to this could be the students working in partnership similar to that of a midwifery group practice model. In this model, the students would be able to 'back up' each other to allow for off call times and holidays. This concept has been trialled in other states and while preliminary data is promising, further research is required for full evaluation of this model in midwifery education.

Burn-out is not uncommon in midwifery and has been described as 'the cost of caring' (Leinweber & Rowe, 2010). Burn-out has also been found in midwifery students through the works of Beaumont et al. (2016), who identified over half of their sample experienced above average scores for burnout. It has been suggested by Pryjmachuk and Richards (2008) that the introduction of stress management education and self-care could improve the stress levels of midwifery students. This has been furthered by Regehr, Glancy, and Pitts (2013), who identified that interventions focusing on cognitive, behavioural and mindfulness techniques were effective in reducing stress and anxiety in medical students. Introduction of these services into the midwifery program may assist students to better cope with difficult situations experienced through CoCE, but also in their ongoing profession and should be considered when addressing midwifery curriculums.

Monitoring Effectiveness

At times, it may be necessary for additional teaching or education to occur for the group to continue in a trajectory that will support the goal of the woman. This may be related to a soft-skills such as communication and team work, or it may relate to a clinical or 'hard' skill. Regardless of the deficit in the team, monitoring and moderation of the team efforts can be used to ensure the group continues to work in a manner conducive to meeting the goal (Johnson & Johnson, 2009).

Often, midwives are expected to undertake teaching of students, however, they are not always provided the skills or support to do so effectively or efficiently. Several students in this study found vast differences in the capability of the clinical staff member to appropriately facilitate their learning. This impacted negatively on their ability to provide care to the woman, as well as to meet their educational requirements. If required, staff could have access to education that will assist them to meet their professional obligations of supporting students. Education could be provided by university staff, allowing for an increase in transparency between organisations, and a symbiotic relationship. By providing further education and increasing capacity of the midwife, the student may be better supported in the clinical environment to meet their individual goals. As described by Deutsch (1949) one of the key factors of positive interdependence is one person facilitates the movement of another of the team towards their goal, then he facilitates his own path towards the goal also. Here we

can see how the university system is able to facilitate the movement of the clinical staff towards a goal of meeting professional standards, while also supporting the student to meet their, and ultimately, the goal of the woman.

Evaluation and Reflection (of the experience)

Reflection is one of the cornerstones of midwifery education. Embo, Driessen, Valcke, and van der Vleuten (2015) state that reflection has the ability to improve clinical performance, while Carter, Creedy, and Sidebotham (2018) identified increased critical thinking following the use of reflection on practice. Following team work, Johnson and Johnson (2009) state that it is important to evaluate the role of the individuals within the group. Further to this, it is stated that the student should be supported and carefully evaluated with formal feedback to guide learning.

As previously noted, at times students were not always sure of their role, or who to contact regarding CoCE. Although further education may assist students, the role of a dedicated person to facilitate CoCE could also be considered. The role of the CoCE facilitator is a supportive person who is employed to act as an interface between the students, women and the hospital venues. From the available literature, this role has been implemented in several universities across Australia, with varying degrees of success (Gray et al., 2012; Sidebotham, 2014). Although it is important that all midwifery staff are clear on the role and scope of the student providing care through CoCE, the use of one dedicated role to support this aspect of practice could be of benefit. This role may require additional learning regarding understanding educational pedagogy in the context of CoCE. Using a dedicated CoCE facilitator could promote streamlined feedback and communication enhancing response time and reactivity to any issues as they arise. The student could be provided with a point of reference, as could the health care service.

Although a dedicated person for students to contact regarding CoCE may be beneficial, It is proposed that all academic staff hold adequate knowledge of the program. This should include a detailed understanding of the theoretical educational underpinnings, the benefits and limitations on students' learning, as well as the issues students may face when undertaking CoCE.

At present, midwifery programs in Australia use reflection to assist and guide the student to make sense of the experience they encounter through the CoCE. Many different forms of reflective frameworks have been used, such as the Gibbs (1988) and Bass, Fenwick, and Sidebotham (2017) reflective cycles. Anecdotally, students find this stage to be frustrating as they feel their own reflection is personal and should not be graded, however as a component of the course it must be evaluated for successful completion and to meet ANMAC requirements. Although concerns regarding reflection were not established in this study, evidence of reflection is a requirement of the ANMAC accreditation standards (ANMAC, 2014). Gray et al. (2012) and Seibold (2005) both identified that students find the documentation around CoCE to be overly complicated and requires further guidance. It could be proposed that through a model of social interdependence, the student is able to establish what is important to the woman as her goal, and then establish how the positive and negative interdependence influenced the final outcomes. Providing a tangible process for the student to follow while evaluating their own, and the group functions in relation to the goal, could remove some of the ambiguity from this part of the program, leading to a more cohesive learning experience for the student. This concept is also supported by the Nursing and Midwifery Board of Australia's (NMBA) 'Midwife Standards for Practice' which states the midwife; '*evaluates and monitors progress towards planned goals and anticipated outcomes*' (NMBA, 2018).

Evaluation and Reflection (of the educational model)

Although it is important for students to reflect and evaluate their own practice, the task itself should also be evaluated. At this stage, it is vital that the CoCE continues to be developed and modified in response to consumer, student as well as university/academic feedback. As CoCE remains a point of discussion in midwifery education, it would be remiss to discount reflection of the tasks expected, particularly in relation to student outcomes.

The number of experiences that must be undertaken to fully appreciate the complex and dynamic nature of continuity in maternity care is in fact an arbitrary number that is not based on evidence. Recognising this, there is scope for an argument that students should have the capacity to negotiate their own caseload of CoCE. As previously described, students undertaking midwifery programs in the UK can negotiate continuity numbers based on their

personal and academic situations. Students in this study have expressed that they do not believe what they are providing, in most instances, true continuity. Rather, they feel they are simply trying to achieve a requirement, limiting their actual engagement with the underpinning midwifery philosophies. An increase in hours allocated to each individual continuity case could provide better understanding, enhance learning and lower levels of stress.

It is important to evaluate if the CoCE program continues to meet the expected learning outcomes for students. One of the more significant findings of this study is the number of appointments the students attend. Students in this study undertook on average 1.67 more antenatal, and 0.64 more postnatal appointments than the minimum. In addition to this, many instances were recorded where the student was not able to count the experience towards their program requirements, leading to many unrecognised hours and expenses. This has led to a disengagement with the process, as well as a significant amount of stress and frustration on the student and may promote the achievement of numbers over the educational and supportive benefit of the experience. This is a significant amount of time and cost that is not currently accounted for, and it must be taken into consideration when reviewing the CoCE program. Similarly, as many students consistently undertake more CoCE than required, it may be appropriate to review the number of births required to complete the program.

Limitations

There are several limitations of this study, primarily the low number of students who participated. Out of a cohort of approximately 400 potential students, only 70 provided responses to the demographic survey, while only 12 went on to participate in the collection of diary data. Despite the low numbers, those who did provide information, detailed a plethora of data to inform this study.

Data represented from two universities is a strength of this study, however data collection in a single Australia state remains a limitation. As previously described, other universities have different strategies in place for undertaking and supporting CoCE and midwifery students. Evaluation of other perspectives from different states could have provided further insight into the experience of midwifery students undertaking CoCE. One significant limitation of this

study is the detail within the data collected. While some students provided very clear descriptions of their experiences, others were vague and provided only one aspect of their experience. Additionally, further detail within the diary could have provided further insight to the true time and financial impact. While it is not practical to allocate space of all individual expenses to be collected, more specific information regarding child care and lost income for the family could have added significantly to the completeness of this study. This is also true when assessing aspects of 'non-clinical' time and how this time was used.

A final limitation of this study is the lack of generalisability and transferability due to conflicting requirements at each institution. This could be viewed as less of a limitation of the study however, and more a limitation of the programs and the inconsistent numbers between institutions.

Chapter Summary

This chapter has introduced the theory of collaborative learning and social interdependence. Through positive interdependence, teams work together to meet individual as well as common goals, leading to increased productivity and improved achievement of goals. The goal in the case of CoCE being that of the woman's needs. Using the four steps to implementing effective social interdependence, potential solutions to barriers and personal costs have been discussed. Further education to all members of the group should be considered including the student, faculty, health services and the woman. Through this education professional relationships could be enhanced, allowing for improved team work and collaboration. Additionally, students should be supported to have some time away from CoCE commitments, allowing for rest and recuperation. This has the capacity to improve student resilience and psychological safety. A new model of reflection focusing on the achievement of the woman's goal and social interdependence has been proposed, though further evaluation of this is required. Finally, it is important that the CoCE as an educational model is evaluated regularly to ensure it continues to meet the expected learning outcomes. The final chapter of this thesis will present a summary of this research, as well as the key findings and recommendation.

Chapter Six: Conclusion

Midwifery education has undergone significant changes over the past 20 years and continues to develop with new evidence, student and professional feedback. The introduction of CoCE as an educational model has also faced review, and is a constant source of contention amongst students, academics and professional bodies. This has led to a reduction of required numbers since it was first introduced in 2002 from 30, to the current minimum of 10. This reduction in numbers was based on the concerns of academics, service providers and students, and emerging evidence of significant impacts on student's personal and academic life. It is hoped that a decrease in requirements could increase engagement and minimise barriers to successful completion of the midwifery program. Despite this, debate continues regarding what should be classified as an appropriate number of experiences, with individual universities continuing to set their own requirements above that of the national standards.

Despite the ongoing controversy regarding appropriate numbers of CoCE, it has been found to be a valuable educational component of the Bachelor of Midwifery. Students report increased awareness of woman-centred midwifery care, as well as an enhanced sense of profession. In addition to this, the learning experiences afforded to students undertaking CoCE have been identified as one of the key benefits of the model. Women experiencing continuity from a student have described an increased satisfaction with their maternity care. Despite these benefits, students have also reported significant barriers to successful completion of their midwifery program, in particular the CoCE component. Barriers described include time, cost, academic stressors, impact on family, as well as fatigue.

The aim of this research was to identify the factors impacting students' ability to successfully undertake the CoCE component of their midwifery program to formulate means to minimise barriers and improve outcomes. Using a mixed methods approach, real-time information was sought to identify the personal costs of undertaking CoCE as described by midwifery students. Qualitative and quantitative data were collected using a survey and diary entries to describe the completed continuity experience and provide understanding of the impacting factors.

Key Findings

Findings of this research add to a body of knowledge surrounding the impact of CoCE on students, while providing a valuable insight into how this is experienced over time, with competing personal, professional and academic demands. Child care, employment and financial stressors were all described as a considerable impact on student's ability to remain engaged with CoCE, while psychological stress and self-blame was also raised. Personal relationships, including partners, family and friends has been illustrated as pivotal to the student's ability to continue the program, though the impact on these relationships was often strained due to the extensive expectations on the student's time. Professional relationships had the potential to either help or hinder the student learning experience. Positive relationships and successful teaching moments were reflected on as significant to continuation and success, however negative interactions caused students to question their entrance into the midwifery profession. The financial cost to students was found to be significant, with each completed CoCE found to cost on average $367.19, while the time spent was on average approximately 22.20 hours, including travel and wait times. Only approximately 30% of these hours were related to clinical contact with the woman, indicating a significant portion of time that is not often considered or recognised. Also, of important consideration is that many students undertake more than the minimum of appointments, meaning cost could be substantially higher than the final estimate provided.

Summary of Recommendations

Using a model of social interdependence, the interwoven nature of relationships, team work and goal achievement in CoCE was explored and described. By using this theoretical model, several strategies to minimise impacting factors have been identified and critically discussed. In accordance with successful implementation of a social interdependence framework in CoCE, four key aspects have been introduced with associated recommendations:

Pre-instructional decision making and planning

- Pre-enrolment education to increase awareness of course demands
- Increased education to clinical venues on the rationale of undertaking CoCE and the role of the student in the woman's care

- Increased visibility of universities in clinical venues

Strategic teaching

- Early education for students regarding communication, collaboration and team work
- Enforced 'down time' to allow students to unwind and rejuvenate
- Stress management education and support to promote good mental health
- Increased education to women regarding the role of the student

Monitoring for effectiveness

- Education to clinical staff regarding effective clinical teaching, working with students and providing feedback
- The role of the CoCE facilitator as an interface between students, clinical venues and the university

Evaluation and reflection.

- Review of the CoCE numbers and alternative methods of achieving continuity
- Review of reflective processes to better engage students with the philosophy of woman-centred care and social interdependence

CoCE is a highly valuable, but often challenging component of midwifery education. For students to truly engage with the educational process and underpinning philosophies of CoCE, we must be aware of how to best support them. Simply being aware of the barriers is not enough. The students in this study demonstrated commitment to the women in their care as well as the midwifery profession and it is imperative that they are supported to become practitioners who continue to uphold this philosophy. If the challenges are not able to be mitigated or addressed, it may lead to continuing attrition and future impact on the midwifery workforce. Students must have a strong social support system, as well as professional guidance to succeed in their midwifery education and to continue recognising CoCE as a valuable part of their midwifery program. As educators, it is of utmost importance that we nurture the passion of our students, and recognise the considerable time, resources and energy they require to meet their course requirements, particularly CoCE.

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Appendix 1: Search Strategy Outcomes

Scopus (English, peer reviewed article, Australian context, nursing)

Search Number	Term	Results	Included	Authors
1	Continuity	860		
2	CoCE	5	1	McKellar
3	Follow through	4010		
4	Caseload	201		
5	Midwife OR midwifery OR midwives	5720		
6	Student/s	4321		
7	5 AND 6	230		
8	7 AND 1	43	6	McKellar, Dawson, Browne, McLachlan, Gray (2013), Gray (2012)
9	7 AND 3	36	7	Dawson, McKellar, Browne, McLachlan, Sweet, Gray (2012), Gray (2013)
10	7 AND 4	77	4	Dawson, Browne, McLachlan, Gray (2013)

Medline (OVID) (English, peer reviewed article, Australian context, human)

Search Number	Term	Results	Included	Authors
1	Continuity	8569		
2	CoCE	56	1	McKellar
3	Follow through	984		
4	Caseload	425		
5	Midwife OR midwifery OR midwives	2379		
6	Student/s	11101		
7	5 AND 6	49		
8	7 AND 1	0		
9	7 AND 3	0		
10	7 AND 4	1		

CINAHL (English, peer reviewed articles, Australian & New Zealand context, education)

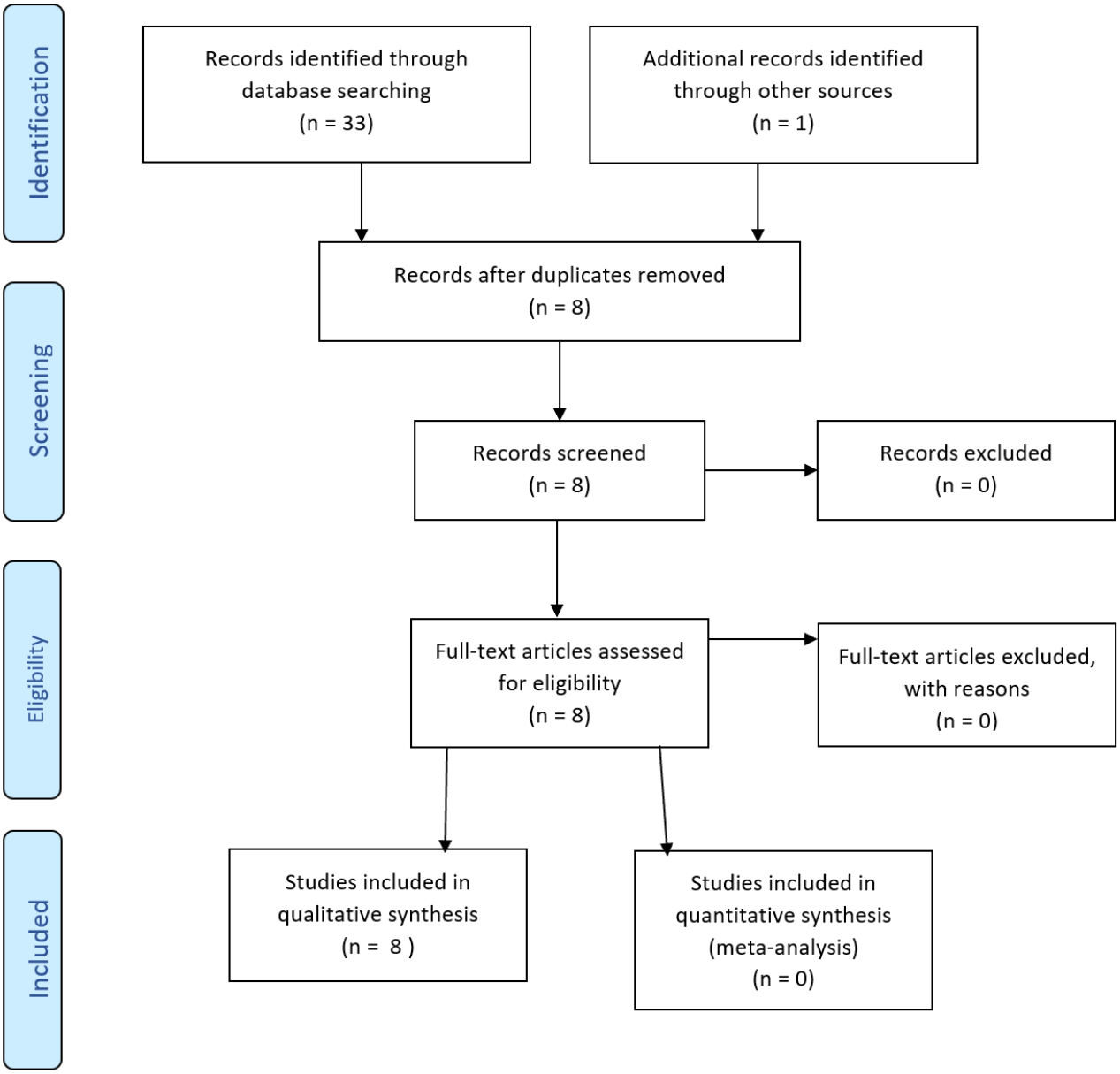
Search Number	Term	Results	Included	Authors
1	Continuity	460		
2	CoCE	5		
3	Follow through	331		
4	Caseload	72		
5	Midwife OR midwifery OR midwives	485		
6	Student/s	1627		
7	5 AND 6	45		
8	5 AND 6 AND 1	0		
9	5 AND 6 AND 3	0		
10	5 AND 6 AND 4	202	1	Dawson

PubMed (English, full text, humans)

Search Number	Term	Results	Included	Authors
1	Continuity	24101		
2	CoCE	19	1	McKellar
3	Follow through	825287		
4	Caseload	1641		
5	Midwife OR midwifery OR midwives	26273		
6	Student/s	156303		
7	5 AND 6			
8	5 AND 6 AND 1	44	7	Dawson, McKellar, Browne, McLachlan, Gray (2013), Gray (2012), Sweet,
9	5 AND 6 AND 3	97		McLachlan, Gray (2012), Gray 2013)
10	5 AND 6 AND 4	11	5	Dawson, Browne

Appendix 2: Prisma Diagram

PRISMA 2009 Flow Diagram



Appendix 3: Summary of articles selected for review

Reference	Purpose	Methods	Summary of findings	Limitations	Strengths	Themes
Dawson, K., et al. (2015). 'Exploring midwifery students' views and experiences of caseload midwifery: A cross-sectional survey conducted in Victoria, Australia.' Midwifery 31(2): e7-e15.	Identification of the experiences of student midwives in caseload models of care and their intentions to work in this model	Cross sectional survey design Convenience sample Students attending a seminar regarding employment options post were approached Students (n=129)	A majority of students found the CoCE aspect of their program to be of benefit to them. 67% felt CoCE made them want to work in caseload models. Perceived barrier to wanting to work in caseload included being on call, not compatible with family life and work/life balance.	Potential for bias in respondents due to the employment seminar. This indicates that they have not yet been offered employment. Students who have not received offers may feel more negative towards the course, whereas those who did may view it more favourably. Limited specifically to Victoria -? not representative of all Australian States and Territories	Ethical approval confirmed 83% response rate Pilot test of survey Representation of multiple educational pathways (BMid, BNBM, Grad Dip) Large sample size	Positive student perception of CoCE on learning Personal impacts - Family - Difficult to work around academic commitments - Work/life balance
McKellar, L., et al. (2014). 'Access, boundaries and confidence: the ABC of facilitating continuity of care experience in midwifery education.' Women and Birth 27(4): e61-e66.	Identify the challenges and supports required of students undertaking CoCE as part of their midwifery program	Action research Focus groups with educators, facilitators and students (n= 6) Survey with students only (n= 69) Thematic analysis	Students identified significant challenges associated with undertaking CoCE especially regarding recruitment, professional boundaries and practice, as well as the supports they required in order to be successful in completing this aspect of their program.	Small sample size Limited to one institution only	Ethical approval confirmed The only study identified which included suggestions for improvement and supports required to meet requirements Diverse range of opinions	Positive student perception of CoCE - Learnt the philosophy and benefits of woman centre care - Focus on numbers rather than the experience of being with the woman Challenges experiences - Lack of support from clinical staff - Inconsistence understanding of CoCE - Recruitment - Relationship and role of the students professional boundaries - Being confident to engage Supports suggested - More awareness of clinical staff regarding the role of the student - Increased support from

						clinical staff - Guidelines - CoCE coordinator/facilitator
Browne, J., et al. (2014). ''Continuity of care' experiences in midwifery education: Perspectives from diverse stakeholders.' Nurse education in practice 14(5): 573-578.	Aims to gain further understanding of the perception of CoCE from students, clinicians and academics.	Qualitative findings only. Quantitative findings not presented. Methodology not provided Data collection via focus groups Students (n= 15) Registered midwives (n= 14) Unit managers (n=6)	Students identified positive experiences and unique benefits of undertaking CoCE such as woman-centred care. Significant challenges were also noted including time, finances and requiring assistance from family and friends in order to meet the program requirements.	Small sample size Limited to one venue and one university only	Ethical approval confirmed Range of opinions sought (students, practicing midwives and unit managers Use of verbatim quotes through the findings	Positive student perception of CoCE - Learnt the philosophy and benefits of woman centre care Personal costs identified - Paid employment sacrifices - Travel expenses - Child care Supports required - Clinical staff - Family and friends
Gray, J., et al. (2013). 'Students' perceptions of the follow-through experience in 3 year bachelor of midwifery programs in Australia.' Midwifery 29(4): 400-406.	Aims to explore the experiences of direct entry midwives with undertaking follow throughs as part of their midwifery program.	Qualitative methods – methodology not provided Survey and telephone interviews for data collection. Students attending any university in Australia undertaking follow throughs. SA, Vic, NSW Survey responses (n = 65) Interviews (n = 28) Thematic analysis	Students identified significant issues with recruiting women as well as the amount of time required to complete the experience successfully, the amount of support. They did however find the learning and overall experience to be beneficial to the developing practice.	Participants limited to direct entry only. It could have been of benefit to explore the experiences of postgraduate enrolments also.	Multiple states included (NSW, Vic, SA) All year levels of direct entry included Large sample size	Positive student perception of CoCE - Developing relationships - Professional behaviours Personal costs identified - Impact on family time - Impact on relationships - Time consuming Supports required - Hospital staff to understand requirements - University supports for recruitment Numbers that would be of benefit to learning – conflicting ideas from students.
Sweet, L. P., & Glover, P. (2013). An exploration of the midwifery continuity of care program at one Australian University as a symbiotic clinical education model. Nurse Education Today, 33(3), 262-267.	Aims to identify the strengths and limitations of CoCE against the symbiotic model to improve student outcomes	Qualitative methods – no methodology provided Data collection via focus groups and retrospective analysis of CoCE documentation from recent graduates	Students benefit from the relationships formed with women and midwives. Additional education and recognition of CoCE to enhance relationships with clinicians is still required to improve learning	Small sample size Limited to only one university First year students not included	Ethical approval confirmed Multiple focus groups across second and third years as well as academic perspective Use of verbatim quotes	Positive perception of CoCE - Development of professional identity - Enhanced relationships with women - Authentic and varied clinical learning experiences

		Academic and midwifery students attending one South Australian University Focus group Academics (n = 4) Focus group Students (n = 14) Review of CoCE documentation (n = 180)				Better relationships with other health care professionals is required in order to better support students
McLachlan, H. L., et al. (2013). 'Exploring the 'follow-through experience': a statewide survey of midwifery students and academics conducted in Victoria, Australia.' Midwifery 29(9): 1064-1072.	Aims to describe and explore the experience of the follow through experience form the perspective of academics, students and clinicians.	Cross-sectional design using a web-based survey. 7 universities all in Victoria Bachelor of Midwifery, Bachelor of Nursing/Bachelor of Midwifery double degree, Postgraduate Diploma of Midwifery and Masters of Midwifery (entry to practice) Students (n=401) Academics (n=35)	Students and academics agree the follow throughs are beneficial to learning and should remain in the course. Significant impacting factors of time, money, family relationships and child care. Also impacting on academic requirements and the ability to be successful in the course.	Only 40% response rate Findings are limited to one state in Australia only.	Ethical approval confirmed Large scale study coving all entrance pathways for registration. Qualitative and quantitative data provided	Positive perception of CoCE from both student and academic perspectives Personal costs identified - Not able to meet academic requirements - Paid employment - Impact on family time - Child care costs
Gray, J. E., et al. (2012). 'The 'follow-through'experience in three-year Bachelor of Midwifery programs in Australia: a survey of students.' Nurse education in practice 12(5): 258-263.	Aims to explore the experience of students and recent graduates undertaking follow through experiences 1. - What is the students' experience of the follow-through experience? 2. - What learning is associated with the follow-through experience? 3. - What is the value of the follow-through experience to students?	Qualitative study – methodology not provided Online survey Participants recruited from across Australia through the use of the ACM newsletter. 101 respondents; current students (n=93) recent graduates (n= 8)	Although challenges were described such as issues with documentation, recruitment and time pressures, a majority of respondents felt positive about the continuation of follow throughs as part of the midwifery curriculum.	No data supplied regarding location of respondents Subjectivity in questionnaire Potential bias in respondents due to	Ethical approval confirmed Large sample size Qualitative and quantitative analysis Pilot test of survey Survey available to all students in midwifery programs across Australia	Positive perception of CoCE - Professional relationships - Working with women awareness increased - Documentation need guidance Support required - Midwives - University Issues with recruitment Inconsistencies in understanding the CoCE between clinical and university
Seibold, C. (2005). 'The experiences of a first cohort of Bachelor of Midwifery students, Victoria, Australia.' Australian Midwifery 18(3): 9-16.	Aims to report on the experiences of the first cohort of midwifery students to graduate from the 3-year direct entry midwifery program in Victoria.	Mixed methods study – 'Utilisation focused evaluation study' Focus groups held at the start of each year Year 1 (n= 18)	This was a comprehensive student that evaluated the student experience through the three years. Students described factors they felt could be improved including better organisation with clinical placements and scaffolding of	There is a possibility that important data was not collected from students who dropped out of the course or went to a part time load. This could have provided valuable information on factors	Ethical approval confirmed	Positive perception of CoCE - Development of professional relationships - Making a difference to the woman

		Year 2 (n= 13) Year 3 (n=10) Survey questionnaires collected at the end of second and third years (no number of respondents provided)	subjects. In relation to follow throughs, students reported satisfaction with this aspect, but did feel 30 experiences was excessive and possibly a negative impact on their experience with the course. Mentors had the ability to help or hinder learning.	contributing to attrition or not being able to successfully complete the course.		Numbers – quantity over quality in some instances Recruitment was an issue Documentation was difficult, and expectations were not clear Supports required - Mentors were of high benefit

Appendix 4: Ethics Approval Letter

The Chair of the Social and Behavioural Research Ethics Committee (SBREC) at Flinders University considered your response to conditional approval out of session and your project has now been granted final ethics approval. Your ethics final approval notice can be found below.

FINAL APPROVAL NOTICE

Project No.:	**6421**
Project Title:	The Personal Cost of Continuity of Care Experience for Midwifery Students
Principal Researcher:	A/Prof Linda Sweet
Email:	linda.sweet@flinders.edu.au
Approval Date:	18 March 2014
Ethics Approval Expiry Date:	**31 December 2017**

The above proposed project has been **approved** on the basis of the information contained in the application, its attachments and the information subsequently provided.

2

[2] This is evidence of first ethics approval. Modifications and extension were then gained as required.

Appendix 5: Survey

COCE Personal Costs

1. Information Sheet:

Title: 'The Personal Cost of Continuity of Care Experience for Midwifery Students'

A/Prof Linda Sweet
School of Nursing and Midwifery
Flinders University
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Ms Kristen Graham
School of Nursing and Midwifery
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Ph: 08 8201 3918

Mrs Wendy Foster
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Description of the study:
As a Midwifery student you are required to undertake Continuity of Care Experiences (COCE) over the course of your study. Previous research has identified students are exposed to various time, financial and personal costs when undertaking the COCE. This project will investigate these personal costs for Midwifery students including: the time taken to travel to and attend appointments; the financial costs such as travel and parking; as well any personal concerns such as safety, professional relationships and impact on family.

Objectives are to:
1 Identify the financial cost of undertaking activities required for COCE
2 Identify the time demands of undertaking activities required during COCE
3 Identify real and potential safety risks for students undertaking activities required for COCE
4 Identify key areas of personal concern for students
5 Identify how demographic information may influence the experience of students

What will I be asked to do?
You are asked to first complete a brief online survey about yourself and your COCEs. This should take no more than 5 to 10 minutes. You are then asked to keep a diary of the time and costs spent on each COCE interaction. Additionally we ask that you record any safety, personal or professional issues that have impacted you or your family. These may take 2-10 minutes depending on the detail you wish to provide. A research team member may contact you throughout the year to see how your diary records are going and to answer any questions (provided you consent to this contact). At the end of the Academic year, contactable participants will be invited to a focus group to discuss the diary findings and discuss the personal impact of the COCE. A focus group usually take about 1 hour. All survey responses will be made direct into a secure online tool known as Survey Monkey, and once completed will be downloaded/removed and stored as a computer file. Diary sheets can be handwritten and returned to A/Prof Linda Sweet, via her room N323 at Flinders University or posted through the university internal mail via the school office. Focus Groups will be recorded and sent to a transcribing company for transcription.

What benefit will I gain from being involved in this study?
This study will identify key aspects of concern and personal cost as recorded by all participating students, allowing for us to better understand the issues and identify better ways to support students. The sharing of your experiences will be used to improve the planning and delivery of future programs.

COCE Personal Costs

Will I be identifiable by being involved in this study?
Participation in this study is voluntary. Participation may also be completely anonymous if you choose. At the end of the online survey you are asked to make yourself a study code - such as an avatar name or provide your real name. When choosing your study code, please bear in mind whether you want to remain anonymous or not. If you wish to remain anonymous, please ensure your chosen study code does not make you identifiable to us in any way. If you do not mind being known as a participant in the study and if you wish to be contactable to a member of the research team to check on diary completions you will need to provide some contact details such as an email or phone number along with your study code. Only contactable students will be able to be invited to the focus groups.

All of your data will be collated by your self-chosen study code. Any identifying information will be removed upon receipt of your data and allocated a non-identifiable code prior to file storage on a password protected computer that only the researcher team will have access to. Focus group participants will be known to A/Prof Sweet and the research assistant who will conduct the discussions, however all transcripts will be anonymised. As Kristen Graham is coordinating Midwifery Programs at Flinders University it is appropriate she be blinded from knowing of students participation, and therefore will only ever having access to non-identifiable study codes.

Are there any risks or discomforts if I am involved?
The researchers anticipate the only risk to be your time. However as you can see from the diary example we do not anticipate this to be too onerous. If you have any concerns regarding anticipated or actual risks or discomforts, please raise them with the researchers.

How do I agree to/ and participate?
Participation is voluntary and completion of this survey is the first step. We then ask that you commence a diary sheet for each continuity of care woman you follow throughout the year (These have been emailed to you, may be sourced by from the online course portal or you can collect printed sheets from Linda Sweet anytime). You may record dairy entries for all or some of your Continuity of Care Experiences and you are free to withdraw at any time without effect or consequence. You can submit your diary forms anytime whether the COCE case has completed or not. Indeed submitting regularly throughout the year is beneficial for the researchers. A consent form will only be required for those students attending the focus group (to be posted out with invite at the end of the year), as your completion of the online survey and diary forms are considered implied consent. We require all forms (complete or not) to be returned by the end of November 2014.

How will I receive feedback?
While no feedback will be provided to individual participants about the study results, it is anticipated that the outcomes from the project will be published and available to access both online and in print. If you will to discuss the project and your diary with any of the research team you are free to do this.

Thank you for taking the time to read this information sheet and we hope that you will accept our invitation to be involved.

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project number XXX). For more information regarding ethical approval of the project the Executive Officer of the Committee can be contacted by telephone on 8201 3116, by fax on 8201 2035 or by email human.researchethics@flinders.edu.au

I am willing to participate in this survey

- ○ Yes
- ○ No

2. Midwifery Continuity of Care Experiences

1. Please indicate your program of study:

- ○ a. Flinders University Bachelor of Midwifery (Pre Registration entry)
- ○ b. Flinders University Bachelor of Midwifery (RN Entry)
- ○ c. University of South Australia Bachelor of Midwifery (Pre Registration Entry)
- ○ d. University of South Australia Bachelor of Midwifery (RN Entry)

COCE Personal Costs

2. Please indicate you student year level

- a. First year (Pre Registration Entry)
- b. Second year (Pre Registration Entry)
- c. Third year (Pre Registration Entry)
- d. First year (RN Entry)
- e. Second year (RN Entry)

3. How many Continuity of Care experiences are you required to achieve in y midwifery program of study?

4. How many Continuity of Care experiences have you commenced to

5. How many Continuity of Care experiences have you completed to d

3. Personal Information about you

6. Which category below includes your age?

- 17 or younger
- 18-20
- 21-29
- 30-39
- 40-49
- 50-59
- 60 or older

7. What is your gender?

- Female
- Male

COCE Personal Costs

8. Which of the following best describes your current relationship status?

- Married
- Widowed
- Divorced
- Separated
- In a domestic partnership or civil union
- Single, but cohabiting with a significant other
- Single, never married

9. What is your usual residential postcode?

10. Do you have any children in your household that you are responsible for?

- Yes
- No

4.

10a. How many children, by age group, currently live in your household?

Less than 1 year old

1 to 4 years old

5 to 12 years old

13 to 18 years old

5. Personal thoughts on the Continuity of Care experiences

COCE Personal Costs

11. Do you have any concerns currently about the Continuity of Care Experiences?

12. Do you have any other comments you would like to provide about the Continuity of Care Experience? If so, please explain:

Please provide your chosen study code for data identification and col
If you wish to remain anonymous please ensure your study code does not
yourself by use of an avatar. If you would like to be contacted by the resea
throughout the year for support with your diary entries or if you wish to be in
end of year focus groups please ensure your study code can identify yo
provide a contact name, email or phone number along with your avata

Study code (avatar or name)

Email Address (optional):

Phone Number (optional):

We thank you for participating in this study.

A/Prof Linda Sweet
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Ms Kristen Graham
School of Nursing and Midwifery
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Appendix 6: CoCE Diary Template

Date	Time of day	Activity type				Time taken (in mins)					Financial costs			
		AN	L&B	PN	Other	Travel to	Wait time	Clinical time	Travel home	Other time taken	Total car travel in KMs	Bus/Taxi fare	Parking cost	Other such as childcare

Student Study Code: Continuity Woman No: G: P: EDB:

Safety

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Relationships

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Impact on family/self

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Other comments

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