What factors influence midwives' practice in relation to women's oral intake during labour?

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This thesis is submitted in fulfilment of the requirements for the degree of

Master in Midwifery

College of Nursing and Health Sciences

Flinders University

December 2017

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ACKNOWLEDGEMENTS

I would like to acknowledge the people who have supported me to complete this thesis.

Firstly, I would like to thank my supervisors, Associate Professor Linda Sweet and Kristen Graham for great support, guidance, patience and time as they supervised my research project. I would also like thank them for the professional knowledge, passion for midwifery and compassion that they have shared with me throughout the study. Secondly, I wish to express my deep gratitude to my English tutor, Dr Irene Belperio for your support, encouragement and reassurance. Thirdly, I would like thank Dr Robert Muller for editing my thesis. Finally, I express my thanks to the registered midwives in Australia who have participated in the study and shared your experiences, thoughts and opinions with me.

I would like to acknowledge my gratitude to my family, relatives and friends in Japan who supported my study journey in Australia. I have also been supported by friends in Australia, thank you to Emma Rajic, the Japanese nurses and the class mates for encouraging and supporting me during my degree.

ABSTRACT

The study explores what factors influence midwives' practice in relation to women's oral intake during labour. Labouring women's food and fluids consumption is a controversial topic worldwide since Mendelson's Syndrome was identified in 1946. For this reason, restriction of women's oral nutrition in labour has become a common practice universally. However, improvements in anaesthetic techniques and pharmacological management have decreased maternal mortality related to Mendelson's Syndrome dramatically. A large number of current studies report that women's oral intake during labour does not influence any maternal and neonatal birth outcomes. Furthermore, women's birth experiences impact on their parenthood and lives significantly. Starvation during labour leads to women's discomfort, anxiety and stress which are associated with obstruction of the normal process of labour. Even though clinical guidelines state that normal uncomplicated labouring women should not be limited in their oral intake during labour, midwives still make decisions to reduce or discourage women's oral nutrition in labour. Accordingly, this study investigates the influences which affect midwives' decision-making in relation to women's oral intake in labour. The findings may help to understand evidenced based woman-centred care and enhance women's birth experiences. The literature review focuses on the broad context of midwives' decision-making, and explores what factors influence midwives' decision-making regarding labour management. Institutional and human environment, midwives' professional autonomy, knowledge of practice and values and beliefs, and women's desires and behaviours during labour and their culture, were identified as factors which influence midwives' decision-making in regards to management of labour. However, factors which influence midwives' decision-making regarding women's oral intake during labour have not been identified specifically.

A qualitative design using interpretative descriptive approach (Thorne 2008) was chosen as the best methodology to gain an in-depth understanding of midwives' experiences and thoughts of their practice regarding women's oral nutrition in labour. Purposive sampling and snowball sampling were used to recruit a variety of participants into this study. Twelve registered midwives who currently provide labour and birth care in Australia participated in semi-structured interviews which lasted 30 to 50 minutes. Audio recording were transcribed and the thematic analysis (Braun and Clark 2012) was undertaken for data analysis with the assistance of NVivo version 11 software.

As a result of the analytic process, four themes were identified. The participants understood that women's food and fluids intake during labour should not be restricted, but four competing factors influenced their practice of supporting or inhibiting women's oral intake in labour. Midwives' practice was affected by their knowledge and values developed from professional and personal experiences of labour, their context of practice and work environment such as, public or private systems, and models of care, the clinical guidelines and policies, and obstetric control, and women's choice and comfort. These factors that influence midwives' decision-making when managing women's oral intake during labour create tension and are all interrelated. The study provides an understanding of factors which influence midwives' decision-making regarding women's oral intake during labour. Therefore, the study suggests that awareness of these four factors and their inter-relation to practice are significant for midwives to provide woman-centred care and support women's positive birth experiences.

DECLARATION OF AUTHORSHIP

I certify that this thesis does not include without my acknowledgement, any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by a person except where reference is made in the text.

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August 2017

CHAPTER 1: INTRODUCTION

1.1 Introduction

The aim of this qualitative study has been to investigate the influences on midwives' clinical practice and management in relation to labouring women's oral food and fluid intake. The primary research question is: What factors influence midwives' practice in relation to women's oral intake during labour? An analysis of the beliefs, experiences, and practices of midwives who work across various practice settings, including tertiary public hospitals, private hospitals, and Midwifery Group Practice (MGP) in Australia, was used to answer the research question.

Chapter One provides an overview, and an outline of the purpose of the study. The background to women's oral intake during labour is described, and the significance, aims, and objectives of the study are stated. The structure of the thesis is then outlined.

1.2 Overview (Background)/ Purpose of the study

In Australia, women have multiple choices of birthplaces, including giving birth in public or private hospitals, and at home (Government of South Australia 2015). The four models of care available to them include public hospital care, private maternity care, shared maternity care, and combined maternity care (Australian Government Department of Health 2011). MGP provides maternity care in hospitals and in the community, and these services are included in the public hospital care system (Australian Government Department of Health 2011). Models of care can be defined by how care is managed, who is providing it, and how health professionals offer it (Queensland Centre for Mothers & Babies n.d.). Furthermore, midwives work within diverse models of care, and within varied environments, which affects their practice significantly (Freeman et al. 2006, p. 98).

At the forefront of midwifery care is women's physical and psychological well-being during labour and birth (Nursing and Midwifery Board of Australia 2006, pp. 5-6). At this time, the provision of information, effective decision-making, and the critical assessment of women's progress during labour and birth are important (Nursing and Midwifery Board of Australia 2010, pp. 5-6). These have been found to be essential to safe midwifery practice (Nursing and Midwifery Board of Australia 2010, pp. 5-6). Midwives' decision-making is therefore a crucial part of the assessment and management of labouring women (Pairman et al. 2015, p. 95).

Oral food and fluid intake during labour is needed for women's physical energy requirements, and for their stability, contentment, and control in labour, even though gastric emptying is delayed in labour (King et al. 2011, p. 674). In 1946, Dr Curtis Lester Mendelson found that some women who consumed food and fluid during labour suffered pulmonary aspiration while having a caesarean section under general anaesthesia, which increased the risk of maternal death (Mendelson's Syndrome) (Hunt 2013, p. 499). Because of this, the restriction of women's oral intake during labour has become routine practice around the world (Hunt 2013, p. 499). However, the progress of anaesthetic technique and management, and using H2 antagonists and proton pump inhibitors, have resulted in a dramatic decline in maternal mortality related to Mendelson's Syndrome (King et al. 2011, p. 674).

A previous systematic review of the literature has identified that women's oral fluid and food intake in labour does not negatively affect any significant birth outcomes, including the incidence of maternal ketosis, nausea and vomiting, the rate of augmentation of labour, instrumental birth, caesarean section, the use of epidural anaesthesia and other narcotic pain relief, neonatal Apgar scores, and the incidence of admission to neonatal intensive care units (Singata, Tranmer & Gyte 2013, pp. 10-12). Furthermore, there were no reports of maternal mortality caused by Mendelson's Syndrome in Australia from 2006 to 2010 (Australian

Institute of Health and Welfare 2014, p. 16). According to the World Health Organization (2015, D6), labouring women should be encouraged to consume nutritious food and fluids during labour as desired. However, medical practitioners' and midwives' concerns about pulmonary aspiration can lead to the persistent limitation of women's oral intake during labour (King et al. 2011, p. 674).

The principal researcher for this study is a Registered Nurse Midwife from Japan who has worked in a tertiary hospital in Japan, and who then undertook a Bachelor of Midwifery degree in Australia which included clinical practice. When looking after labouring women in Japan, the author always advised women to eat and drink as they wished to maintain their energy. According to Kataoka et al. (2012, p. 278), women's oral food and fluid consumption should not be restricted, but rather strongly encouraged to prevent prolonged labour caused by a lack of energy. Women's desire for oral intake during labour should be respected (Kataoka et al. 2012, p. 278). However, when on placement as a midwifery student in Australia, it became evident that midwives have different points of view and practices regarding women's oral nutrition during labour. This difference in midwifery practice warranted exploration.

This thesis is concerned with low-risk women's oral intake during labour. The definition by King et al. (2011, p.677) of women's oral intake during labour is used within this thesis: women who eat food and drink water, ice chips, isotonic sports drink, fruit juice, tea or coffee during early, first, second stages of labour. The term 'low-risk uncomplicated labouring women' is defined as women within 37 to 42 weeks of pregnancy who do not have any diseases or illness (including hypertension, pre-eclampsia, eclampsia, diabetes, a previous abdominal operation, neurological disorders, oesophageal diseases, placenta previa, and fetal complexity) with the normal progress of labour (Sarts-Hopko 2010, p. 202).

There are only limited studies which have explored midwives' practice or management regarding oral intake during labour. This study may be important to illuminate midwives' contemporary practice in relation to food and fluids in labour, raise the awareness of current best evidence, and to facilitate future labouring women's positive birth experiences.

1.3 Aims and Objectives of the study

The aim of this study is to investigate the influences that affect midwives' clinical practice and management in regards to labouring women's oral food and fluid intake. The research question is "What factors influence midwives' practice regarding women's oral intake during labour?"

The objectives of the study are:

1. To identify which factors affect midwifery practice regarding women's oral intake during labour.
2. To explore the relationship between the influencing factors, and midwives' attitudes and practices relating to oral intake during labour.

1.4 Structure of the thesis

This thesis consists of six chapters. Chapter One has presented the background of the study and stated the research aim and objectives, and the research question. Chapter Two will present a review of the literature and will identify what we currently know about factors that affect midwives' decision-making and practice in relation to labour and birth from published journal articles. The search strategy, method of analysis, and evaluation of the rigour of each article will be presented. The major themes will be discussed based on a review of the articles. Chapter Three will explain the research methodology and methods of the study. The qualitative descriptive approach, the inclusion and exclusion criteria for the research participants, the setting, the sampling strategy, data collection (semi-structured interviews)

and analysis techniques (thematic analysis) will be described. Chapter Four will present the analysis of the findings of the study according to the research objectives. The main themes based on a thematic analysis in relation to the factors which influence midwives' practice or management of women's oral intake during labour will be stated. Chapter Five will discuss the study's findings in relation to previous research findings. The strengths and limitations of the study, and the implications of the study findings for midwifery practice will be discussed. Further recommendations for future research will also be established. The final chapter will summarise the study and conclude the thesis.

1.5 Chapter conclusion

Eating and drinking during labour assists women's birth experience and does not significantly enhance the risk factors. This chapter has introduced the thesis and explained the background information of the study. The purpose, aim, and objectives of the study have been presented. The following chapter will present a review of the relevant literature.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter presents an integrative review of the literature in relation to the factors affecting midwives' decision-making for labour and birth management.

Midwives are identified as competent and responsible professionals who work with women and provide essential support, care, and advice during their pregnancy, and for the intrapartum and postpartum periods (Nursing and Midwifery Board of Australia 2013, p. 1). Autonomy is important in this role in order to be the most relevant caregivers for women's normal birthing, and to promote new-born and family health (International Confederation of Midwives (ICM) 2017). Women have a right to make decisions for their midwifery care and birth (Nursing and Midwifery Board of Australia 2013, p. 1). Therefore, midwives allow them to make decisions freely and have a responsibility to provide them with sufficient information (Nursing and Midwifery Board of Australia 2013, p. 1). Additionally, midwives should be aware that their decision-making and professional roles are restrained by their surrounding situations (Nursing and Midwifery Board of Australia 2013, p. 1). Midwives' decision-making and enabling of informed choices for women are significant factors that facilitate the relationship between women and midwives (Noseworthy, Phibbs & Benn 2013 p. 42).

Research into midwives' decision-making for women's oral intake during labour is limited (Tillett & Hill 2016, p. 86). For this reason, this review of the literature focuses on the broader context of midwives' decision-making for labour and birth management. The aim of the review is to explore the factors that influence midwives' decision-making and practice in the management of labour. This literature review discusses the available data and research methods used.

2.2 Search method

A structured search of the current evidence was undertaken using the CINAHL, Scopus, Medline, and PsycINFO databases. These databases cover a large number of journals which are related to medical, health, and nursing and midwifery practice areas (Hill 2009, p. 313). The search was undertaken using the following key words: *midwives, midwifery practice, midwifery care, labour management, oral intake, labour, decision making, influence, impact and effect.* The inclusion and exclusion criteria are presented in Table 1.

Table 1: Inclusion and exclusion criteria for literature review

Inclusion criteria	**Exclusion criteria**
English articles	Non-English articles
Published articles	Non-published articles
Original full-text articles	Abstracts
Primary sources	Secondary and tertiary sources
Publication year 2004-2016	Publication year prior to 2004
Decision maker: Midwives working in any model of care and environment	Decision maker: Obstetricians Anaesthetists Obstetric nurses Student midwives Women Women's families
The place of conducting research ·Australia ·Northern European countries ·New Zealand ·USA	The place of conducting research Other countries
Decision making: Labour management	Decision making: Antenatal and postnatal periods

Developing inclusion and exclusion criteria is an important step in a literature review. Polit and Beck (2017, p. 88) suggested that primary articles, which are actual research papers written by the researchers who conducted the studies, should be used for a literature review to

gain important and relevant information regarding the selected topics. Secondary resources, which are descriptions of research which have not been undertaken by the author(s) of the resource, are not as appealing as they do not attend to the minute details of the research, and are often subjective (Polit and Beck 2017, p. 88). As a result of these factors, only primary articles were selected.

An appropriate range of publication years is generally considered to be the past 5 to 10 years, to provide up-to-date and reliable information (Cronin, Ryan & Coughlan 2008, p. 40). However, a publication range of 2004 to 2017 was included in this review, because there were a number of articles which met the inclusion criteria just prior to 2007, and as well, the overall numbers were low.

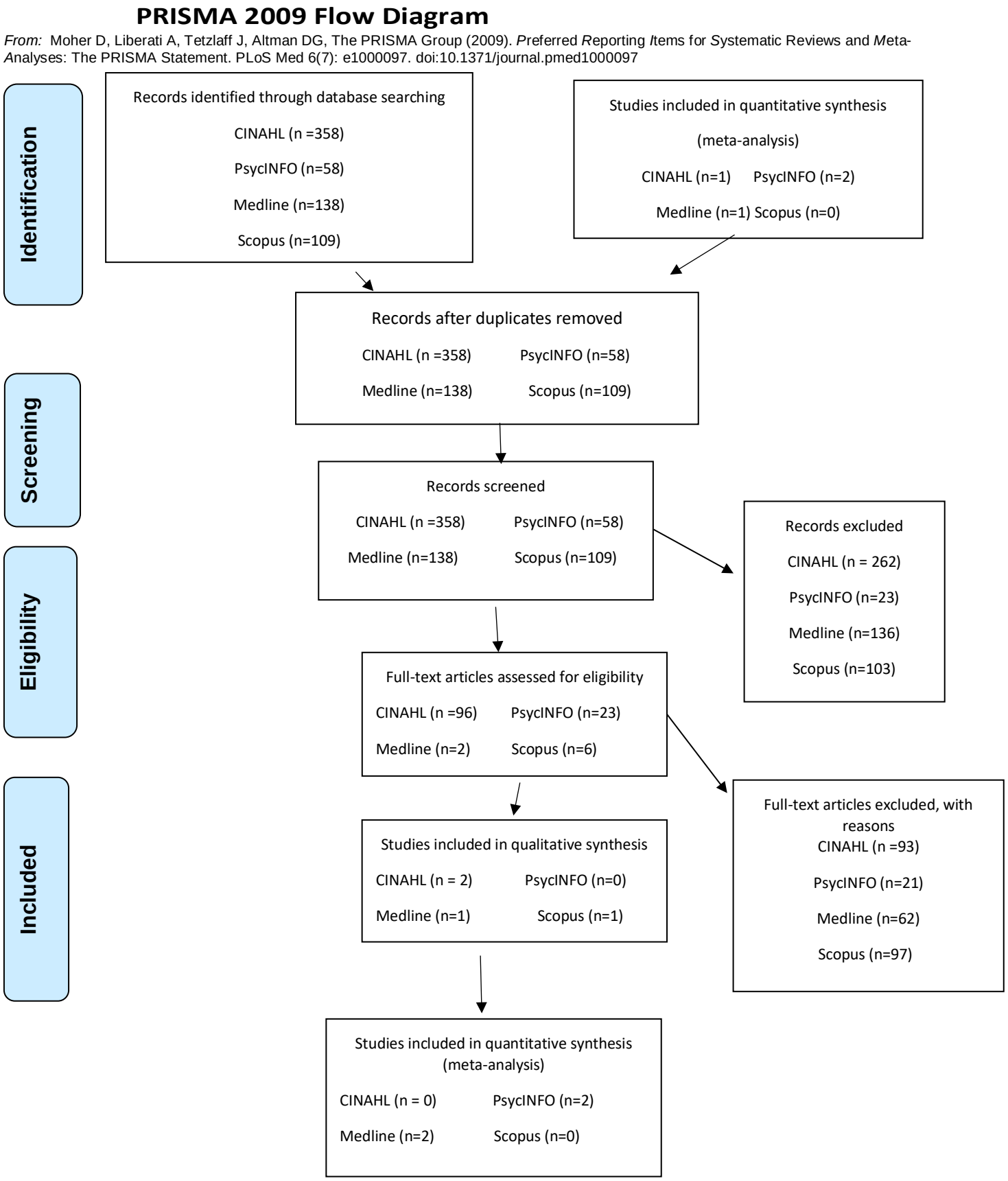
The aim of the literature review is to focus on midwives' decision-making, so articles that focused on obstetricians, anaesthetists, women and their families, student midwives, and obstetric nurses were excluded. With regard to place of birth, the midwifery model of care and maternity services in Australia, New Zealand, the United Kingdom, and other Northern European countries are similar (Taylor 2010, p. 2). The obstetric private model of care is common in the United States and, in this model, the roles of midwives and obstetric nurses are different (Taylor 2010, p. 2). However, midwives usually provide midwifery care for public patients under the obstetricians' supervision in the United States (Taylor 2010, p. 3). For these reasons, midwives who work in Australia, New Zealand, Northern European countries, the United Kingdom, and the United States were included. However, studies about obstetric nurses in the United States were excluded.

The initial search in CINAHL found 358 articles; however, 262 were later excluded because of the publication year limits. The titles and abstracts of the 96 remaining articles were skim-read, with only 2 being identified as meeting the inclusion criteria. The search in PsycINFO

found 58 articles, with 2 meeting the inclusion criteria. In Medline, 138 articles were found and their titles and abstracts read. In total, 3 articles were relevant for the aim of this review specifically related to labour management. Finally, 6 articles were found in Scopus, with 1 being selected according to the inclusion criteria.

The search outcomes are described in a PRISMA flow diagram (Figure 1). The PRISMA framework helps to describe the processes of searching literature in a systematic way and organises the inclusions and exclusions logically (PRISMA 2015). From this process, 8 journal articles were identified for this review.

Figure 1: Literature search results



A total of 8 relevant journal articles were found, including 4 quantitative and 4 qualitative studies. The inclusion of both quantitative and qualitative studies is important for a comprehensive and in-depth review (Coughlan, Cronin & Ryan 2013, p. 96). The 8 articles have been summarised in Appendix A. These articles pointed to a number of influences that have an impact on midwives' decision-making in labour management, including the work environment, midwives' autonomy to practice and women's expectation of care. These influences will be discussed as part of this review.

2.3 Critical appraisal and critique

Critiquing research is essential for determining the strengths and weaknesses of studies to identify the value of the presented evidence (Coughlan, Cronin & Ryan 2013, pp. 70-71). The Critical Appraisal Skills Programme (CASP) (2013) was used as a tool to measure the reliability of each paper and to improve the understanding of the research findings (Singh 2013, p. 76).

The methodological approaches used in the 4 qualitative studies included descriptive qualitative methods (Blix-Lindström, Johansson & Christensson 2008; Cheyne, Dowding & Hundley 2006; Noseworthy, Phibbs & Benn 2013) and grounded theory (Everly 2012). Guest, Bunce and Johnson (2006, p. 79) stated that 6 to 12 interviews is an adequate number to attain study aims and objectives, and is also suitable for data saturation in qualitative research. The 3 descriptive qualitative studies used between 8 and 20 participants for the data collection, which are adequate numbers to ensure rigour. Moreover, these 3 studies used formal processes of data collection and explained these in a step-by-step manner, which also enhanced their reliability (Schneider et al. 2016, p. 137).

Everly (2012) used grounded theory to explore the factors that influence midwives' decision-making in relation to the management of labour. In total, 10 participants were interviewed for

the data collection. The aim of grounded theory is to develop a new theory with strong, accurate, and reliable data, so at least 20 to 30 participants are required (Creswell 2013, pp. 148-149). As a result, Everly's (2012) findings might not generate robust theory as there were only 10 participants. However, 7 participants in the study reviewed and assessed the findings for credibility, which did enhance the trustworthiness of the interpretation and analysis processes (Everly 2012, p. 50).

The relationship between researchers and participants should be considered and identified, because this can also affect the data collection and the findings (CASP 2013). None of the qualitative studies stated the relationship between the researchers and the participants. However, the 4 qualitative studies did satisfy the screening questions from the CASP critical appraisal tool. Overall, the 4 qualitative studies had several limitations, but also had a relatively high level of rigour based on the CASP critical appraisal tool (2013).

All of the 4 quantitative studies used a survey methodology (Freeman et al. 2006; Martin & Bull 2005; Parsons 2004; Toohill et al. 2017). Freeman et al. (2006, p. 97) used a survey with questionnaires, with the participants consisting of 104 midwives and 100 primipara women. Survey research establishes the connection, distribution, and prevalence of phenomena for a target group (Polit & Beck 2016, p. 243). This study used a variety of participant populations; however, midwives provided the answers to the 'what' rather than the 'why' questions (Freeman et al. 2006, p. 104). Due to this, the findings produced a shallower explanation of the relationship between midwives' decision-making and labour management.

Martin and Bull's (2005, p. 122) study methodology was the Social Influences Scale for Midwifery (SIS-M). Nulty (2008, p. 307) demonstrated that a survey response rate of 50% is satisfactory to achieve most study aims. The number of participants in Martin and Bull's (2005, p. 122) study was 209 midwives from 7 hospitals and the response rate was 65%,

which is therefore adequate. However, the authors suggested a limitation of the study being that the researcher (interviewer) was a more experienced midwife than the participants (midwives). The interview questions included the effects of seniors' directions on junior midwives' decision-making; therefore, they suggested that the participants may have been unwilling to answer the questions openly. Participants are influenced by the relationship between researchers, interview questions, and their own feelings (Gerrish & Lacey 2010, p. 355). This might have affected the rigour of Martin and Bull's (2005) study. In Parsons' (2004) study, the response rate was 46%, which was relatively poor. For this reason, the findings of this study may be less reliable. Furthermore, Freeman et al (2006), Martin and Bull (2005) and Parsons' (2004) studies are beyond the recommended 10 years old. However, Parsons' article was the only one to focus on the factors that affect midwives' decision-making in relation to women's oral intake during labour. As a result, this article is still useful for this review. Studies which explore the relationship between midwives' decision-making and their practice are quite limited. For this reason, Freeman et al. (2006) and Martin and Bull's (2005) studies are still appropriate to use for this review of the literature.

Appropriate measuring instruments can promote a study's reliability and validity (Schneider et al. 2016, p. 199). Toohill et al's (2017) study developed their original measurement tool, Best Uptake of Maternity Practice Survey (BUMPS), to evaluate midwives' awareness of the barriers to the understanding of evidence-based midwifery practice. However, 80.7% of the participants (midwives) worked in the public sector and 12.9% in the private sector (Toohill et al. 2017, p. 3). Thus, as the number of midwives in the private system was small, this may have influenced the rigour of the study.

In short, the 4 quantitative studies had relatively high levels of rigour based on the CASP critical appraisal tool (2013). Overall, there is a shortage of literature in relation to the interaction between midwives' decision-making and their practice, especially in labour

management, so the 8 articles were deemed useful for the aim of the literature review. The critique of each of these articles using the CASP critical appraisal tool (2013), and the summary table of the literature, are attached as Appendices B and C respectively.

2.4 Thematic analysis process

Thematic analysis is a useful approach for summarising and synthesising research findings (Coughlan, Cronin & Ryan 2013, p. 96). This method focuses on creating a summary, rather than investigating a new vision or knowledge (Coughlan, Cronin & Ryan 2013, p. 97). Through the use of thematic analysis, the most essential, fundamental, and recurring themes from the literature are determined (Coughlan, Cronin & Ryan 2013, p. 97). Themes are effective concepts to outline and formulate the variety of topics, experiences, views, and beliefs evident in the selected articles (Green & Thorogood 2014, p. 210). The process of analysis for this thesis will identify the factors that affect midwives' decision-making and practice in labour management and practice from the existing literature.

Firstly, the aim of the literature review is to find relevant themes (Coughlan, Cronin & Ryan 2013, p. 97; Richardson-Tench et al. 2014, p. 211), with the initial step being the coding (Coughlan, Cronin & Ryan 2013, p. 97). Words which are related to the factors that affect midwives' decision-making and practice will be collected and classified into categories. Secondly, the collected sub-themes will be compared in order to find similarities and differences for categorising (Green & Thorogood 2014, p. 210). The next step is to generate themes from the categorising of the codes (Coughlan, Cronin & Ryan 2013, p. 97) Similar codes will be gathered together, while different codes will be separated, a process which helps to determine key themes to answer the aim of the review (Coughlan, Cronin & Ryan 2013, p. 98; Green & Thorogood 2014, p. 214). This process of thematic analysis has developed three themes which explain the elements that affect midwives' decision-making

and practice in labour management from the reviewed literature. The codes and themes from the analysis are attached in Appendix D.

2.5 Findings

From the process of the thematic analysis, the following three main themes were identified, along with a number of sub-themes. These factors were associated with midwives' decision-making and practice in labour management.

1. Work environment
   -Institutional environment
   -Human environment
2. Midwives' autonomy to practice
   - Midwives' professional autonomy
   - Midwives' knowledge of practice
   - Midwives' values and beliefs
3. Women's expectation of care
   - Women's desires and behaviours during labour
   - Women's culture

2.5.1 Work environment

The reviewed studies highlighted the influence of both the institutions in which labour care occurs, as well as the human resources within these venues, on midwives' decision-making and practice.

2.5.1.1 Institutional environment

Firstly, the institutional environment includes the work place, guidelines and policies, and models of care, all of which influence midwives' decision-making (Blix-Lindström, Johansson & Christensson 2008; Cheyne, Dowding & Hundley 2006; Everly 2012; Freeman et al. 2006; Martin & Bull 2005; Parson 2004; Toohill et al. 2017). Midwives reported feeling

that hospital guidelines and policies limited the options of midwifery care for women, which impacted on their decision-making in labour management (Blix-Lindström, Johansson & Christensson 2008 p. 193; Cheyne, Dowding & Hundley 2006, p. 631; Everly 2012, p. 103). Moreover, multiple models of care, including the standard hospital model, birth centres, and medical models have all been shown to affect midwives' decision-making (Everly 2012, p. 51; Freeman et al. 2006, p. 104; Toohill et al 2017, p. 6). For instance, in medical models, continuous electronic fetal heart rate monitoring was provided routinely, even though midwives had the confidence to utilise intermittent fetal heart auscultation and to perform palpation of contractions (Everly 2012, p. 51). Because of this, midwives felt obligated to use medical interventions, including those that promoted the fast progression of labour (Everly 2012, p. 52). The models of care determined midwives' autonomy to provide labour management (Parsons 2004, p. 79). For instance, midwives who had worked in a midwifery model of care encouraged women's oral intake during labour, rather than midwives who had experience working in a hospital-based model of care which was based on the level of autonomy in diverse types of midwifery models of care (Parsons 2004, p. 76). Parsons (2004, p. 79) also argued that midwives' decision-making was shaped by their experiences of different models of care. The place of work and environment affect midwives' feelings, including their confidence and concern, which can also be factors in midwives' decision-making in relation to clinical practice and management (Everly 2012, p. 51; Toohill et al 2017, p. 6).

Furthermore, the strain of the workload, including shortages of labour and birthing beds as well as staff, influenced midwives' decision-making (Blix-Lindström, Johansson & Christensson 2008 p. 193; Cheyne, Dowding & Hundley 2006, p. 631). Midwives reported that they were pressured and forced to quicken the birth to make beds available for other labouring women (Blix-Lindström, Johansson & Christensson 2008 p. 193). Cheyne,

Dowding and Hundley (2006, p. 63) found that midwives felt pressure to keep women at home, if they were not in active labour, when there was a lack of staff on a shift.

2.5.1.2 Human environment

A notable factor impacting on decision-making was the human environment, including obstetricians, senior midwives, and team members that affected midwives' decision-making processes (Blix-Lindström, Johansson & Christensson 2008; Everly 2012; Martin & Bull 2005; Toohill et al. 2017). According to Blix-Lindström, Johansson and Christensson (2008, p. 194), midwives reported that when obstetricians offered direction for women in labour management, midwives felt obligated to follow these. According to Toohill et al (2017, pp. 6-7), midwives who were employed in private hospitals were less influenced by guidelines, as the private obstetrician's preferences and management were more prioritised. Moreover, midwives' management of labour has been shown to be significantly impacted by their peers, because of different experiences, points of view, and opinions (Everly 2012, p. 50). Martin and Bull (2005 p. 125) have shown senior colleagues to be influential in midwives' decision-making, especially for junior midwives who perceived seniors as having more authority and power, resulting in perceived pressure to comply with them. The relationship between midwives and their colleagues is a noteworthy issue which impacts on midwives' decision-making in labour management (Martin & Bull 2005 p. 125).

2.5.2 Midwives' autonomy to practice

The second point refers to midwives' self-efficacy to practice autonomously, and their values and attitudes about labour care influencing their decision-making.

2.5.2.1 Midwives' professional autonomy

The professional persona of midwives, including their experience and knowledge, was shown to have a significant influence on decision-making during labour management and practice (Blix-Lindström, Johansson & Christensson 2008; Everly 2012; Noseworthy, Phibbs & Benn

2013; Parson 2004 & Williams et al. 2013). Midwives recognised that they are specialists in the care of women in labour, so some argued that they have sufficient knowledge, skills, and experience to understand women's needs more so than other medical professionals (Blix-Lindström, Johansson & Christensson 2008, p. 195). Furthermore, midwives who have experienced multiple, and different, models of care, felt that their working experiences positively influenced their level of autonomy to advise women about eating and drinking during labour (Parsons 2004, p. 76).

2.5.2.2 Midwives' knowledge of practice

Midwives' clinical knowledge and skills are factors which influence midwives' decision-making for labour management (Freeman et al. 2006; Parsons 2004). Midwives monitor women's progress of labour by performing vaginal examinations, fetal heart rate monitoring and abdominal palpation, and they provide labour care based on their knowledge and assessment (Freeman et al. 2006, p. 102). Additionally, their level of knowledge and clinical experiences are related to their care and management, as less experienced midwives have far less confidence in managing complications and unexpected situations (Parsons 2004, p. 77). Therefore, midwives' decision-making around managing labour, including women's oral intake, are influenced by their individual abilities of midwifery practice and risk management (Freeman et al. 2006, p. 103; Parsons 2004, p. 78).

2.5.2.3 Midwives' values and beliefs

Labour and birth are natural processes, and a midwifery philosophy trusts the normal progress of labour (Everly 2012, p. 50; Noseworthy, Phibbs & Benn 2013, p. e45). Due to this, Everly (2012, p. 50) concluded that their beliefs of the normal mechanism of birth was an indispensable factor in managing labour and birth. The midwives indicated that they expect to avoid unneeded interventions and promote the natural progress of birth (Everly 2012, p. 50).

Furthermore, midwives' previous experiences, beliefs, and values impacted on their decision-making to provide information to labouring women (Noseworthy, Phibbs & Benn 2013, p. e44). Parsons (2004, p. 79) explained that midwives provided midwifery care for labouring women in different ways because they have experiences of different models of care, hospital guidelines and/or policies, and environments.

2.5.3 Women's expectation of care

It has been shown that women, both individually and socially, influence midwives' decision-making practices in labour.

2.5.3.1 Women's desires and behaviours during labour

Midwives' decision-making was influenced by not only women's expectations and desires, but also by a number of physiological and psychological factors during labour (Blix-Lindström, Johansson & Christensson 2008; Cheyne, Dowding & Hundley 2006; Everly 2012; Freeman et al. 2006; Noseworthy, Phibbs & Benn 2013 & Williams et al. 2013). According to Noseworthy, Phibbs and Benn (2013, p. e43), women's desires for, and expectations of, labour and birth were essential factors which influenced midwives' decision-making to develop good rapport with women and promote their satisfaction. For example, women brought with them birth plans to make their own decisions about care (Blix-Lindström, Johansson & Christensson 2008, p. 194). For these reasons, women should be encouraged to work with midwives (Blix-Lindström, Johansson & Christensson 2008, p. 194; Everly 2012, p. 50), otherwise, midwives' decision-making, without considering the women themselves, could lead to stress or negative effects on women in labour (Blix-Lindström, Johansson & Christensson 2008, p. 196).

Moreover, midwives include consideration of women's appearance and behaviours to assess their coping abilities with their labour (Cheyne, Dowding & Hundley 2006, p. 632). Midwives try to ensure that the women are comfortable and controlled (Freeman et al. 2006,

p. 103). In short, women's requests, desires, and behaviours are important influences which should be considered in midwives' labour management (Everly 2012, p. 50).

2.5.3.2 Women's culture

Women's culture was also an essential factor in influencing midwives' decision-making and their provision of labour management (Noseworthy, Phibbs & Benn 2013 p. e47). Women's culture affected their beliefs, behaviours, and desires which impacted on women's coping processes of labour, including physical signs and emotional aspects, such as fear, anxiety, and comfort (Cheyne, Dowding & Hundley 2006, p. 629). For example, in relation to Maori culture, that of the indigenous people of New Zealand, Maori people consider the placenta to be sacred (Noseworthy, Phibbs & Benn 2013 p. e47). Because of this, most women in New Zealand expect the midwives to treat their placenta as important; therefore, midwives include cultural background in their decision-making to provide appropriate and respectful midwifery care (Noseworthy, Phibbs & Benn 2013 p. e47).

2.6 Discussion

There is a lack of primary research in relation to midwives' decision-making in labour management. The main limitation of this review is that each of the selected studies focuses on different midwifery practices of labour management in regard to midwives' processes of decision-making, such as the augmentation of labour, the diagnosis of labour, and women's oral intake during labour. One of the studies specifically explained the relationship between midwives' decision-making in labour management, the birthplace, and models of care. For these reasons, the findings may not be consistent. Only a single article, Parson's (2004) study, examined midwives' decision-making about women's oral intake during labour. However, this study is now over 10 years old, and influences on decision-making may have changed over this period. Due to this limited depth of understanding, further exploration related to this specific issue is required.

In exploring the factors that influence midwives' decision-making during labour management, three main themes and seven sub-themes were found, including the themes of environment, midwives, and women, and the sub-themes of institutional and human environments, midwives' professional autonomy, midwives' knowledge of practice, midwives' values and beliefs, women's desires and behaviours during labour, and women's culture. Among the factors that have been identified, the most significant in the literature review was the environment.

The environmental factor consists of both the institutional and the human environment. The institutional environment includes the workplace's guidelines and policies. These governmental and institutional guidelines, or frameworks, limit midwives' abilities to make decisions which should be able to be made with greater autonomy (Cheyne, Dowding & Hundley 2006, p. 631). They directly affect their decisions since they may comply with them to provide woman-centred and evidence-based care (Everly 2012, pp. 52-53). On the other hand, the human environment includes the influences that midwives face from obstetricians and senior midwives. Obstetricians are a significant influence on midwives' decision-making as they are obliged to follow and cooperate with obstetricians' instructions (Blix-Lindström, Johansson & Christensson 2008, p. 194). In addition, junior midwives feel pressured and constrained while making their decisions, as they try to conform to the expectations of the senior midwives (Blix-Lindström, Johansson & Christensson 2008, p. 194; Martin & Bull 2005, p. 125).

Secondly, midwives' professional autonomy, their knowledge of practice, and their values and beliefs about the natural process of labour and birth affect their decision-making during labour management. Midwives believe that they specialise in normal birth and trust the natural progress of birth (Blix-Lindström, Johansson & Christensson 2008, p. 195; Everly 2012, p. 50). Furthermore, they work with women more closely than do obstetricians (Blix-

Lindström, Johansson & Christensson 2008, p. 195). Midwives' confidence of their understanding of women influences their decisions in providing care, which includes respecting women's desires about their birth (Blix-Lindström, Johansson & Christensson 2008, pp. 194-195). However, the degree of midwives' knowledge, experience, and autonomy affect their individual capacity to manage women's labour (Parsons 2004, p. 79).

Finally, women's desires and behaviours during labour, and their culture, affect midwives' decisions (Noseworthy, Phibbs & Benn 2013, p. e44). The decisions made by the midwives should reflect the women's expectations, birth plans, and desires to boost woman-centred care and satisfaction with the birth (Everly 2012, p. 50). Women's culture also influences their desires and behaviours which are significant factors affecting midwives' decision-making to support women and develop a good rapport (Noseworthy, Phibbs & Benn 2013, p. e47).

2.7 Chapter conclusion

This chapter has explored the factors that influence midwives' decision-making and practice in labour management. The four qualitative and four quantitative studies were critiqued using the CASP critical appraisal tool (2013). From these articles, three themes and seven sub-themes were identified; environment, including institutional and human environment; midwives, including midwives' professional autonomy, midwives' knowledge of practice, and midwives' values and beliefs; and women, including women's desires and behaviours during labour, and women's culture. These themes and sub-themes were identified through the thematic analysis process as being significant factors in midwives' decision-making around labour management.

Both the institutional and human environment restrict midwives' autonomy in midwifery care. Midwives' knowledge and experience, and their trust of the natural process of birth,

have an impact on their midwifery care. Moreover, women's desires and culture are significant factors in midwives' decision-making to support woman-centred care. The findings provide a general understanding of the main elements that influence midwifery practice. However, there are only limited studies which are related specifically to the provision of oral food and fluid intake in labour, with only one out-dated study exploring the relationship between midwives' decision-making and women's oral intake during labour. As a result, further research on this topic is required. The next chapter will present the research methods.

CHAPTER 3: METHODS

3.1 Introduction

This chapter will present the research methodology and methods. It will explain the paradigm, methodology, the setting and sampling strategies, and describe the data collection and analysis techniques. A qualitative approach with interpretive description was chosen as the best method to answer the research question as this methodology can be used for understanding the holistic real-world (Polit & Beck 2017, p. 463).

3.2 Paradigm identification

Midwives' practice can be defined as collaborating with women to provide support, advice, and care during pregnancy, labour, birth, and in the postnatal period (Nursing and Midwifery Board of Australia 2013, pp. 1-2). Midwives are responsible for preventing and detecting complications, and facilitating the normal progress of labour and birth, through the use of appropriate assessment skills, decision management, and sound implementation (Nursing and Midwifery Board of Australia 2013, pp. 1-2). For these reasons, this study requires in-depth and detailed information about midwives' practices in relation to women's food and fluid intake during labour. Midwifery practice regarding women's oral intake during labour is associated with the subjective nature of decision-making and the many factors that may influence it. To achieve this, a qualitative approach was used to answer the research question.

The aim of the qualitative paradigm is to comprehend the meaning of various phenomena through participants' experiences, opinions, values, and perceptions (Schneider et al. 2016, p. 94). A qualitative study, by its very nature, includes human subjectivity and consciousness, and it appraises humans and their experiences (Richardson-Tench et al. 2014, p. 9). Additionally, this approach is used to establish rich and in-depth explanations and/or to develop theories (Schneider et al. 2016, p. 94). This approach can assist the researcher to gain an understanding of the factors that influence midwives' practice in relation to women's oral

intake during labour through midwives' perceptions, opinions, thoughts, beliefs, and values to investigate the significance of their experiences.

The concept of midwifery practice is unique and complex (International Confederation of Midwives 2014). A qualitative approach can be used for broad and complex situations, so the paradigm is appropriate for this study. Furthermore, the purpose of the study is to explore the factors that affect midwifery practice in relation to women's oral intake during labour. How women's oral intake during labour is managed by midwives and the reasons for their practice have not been recently explored. Hence, it is important to find the association between midwives' knowledge, behaviours, attitudes, and opinions which influence midwives' practice. A qualitative paradigm can describe these contextual relationships.

3.3 Methodological approach

An interpretive descriptive approach, as described by Thorne (2008), was selected for the study. This approach can assist with the development of appropriate knowledge for the clinical context of health practice, which is fundamental to comprehending how targeted groups behave and what comprises the central nature of the human experience (Hunt 2009, p. 1284; Thorne 2016, p. 27). Moreover, it seeks to maintain a practical application, whilst acknowledging the various conceptual frameworks of different disciplines (Thorne 2016, p. 28). Furthermore, this methodology applies to real-world questions, establishes what we do and do not know based on midwives' practices and beliefs, and helps the researcher to understand the contextual and conceptual areas in which the target population is positioned (Thorne 2016, p. 40).

The restriction of women's food and fluid intake during labour is still common practice in Australia, even though state guidelines, such as the South Australian Perinatal Practice Guidelines (SAPPGs), state that uncomplicated pregnant and labouring women should not

have their oral intake limited during labour (SAPPGs 2015, p. 10). For this reason, this methodology can help us to explore the natural phenomena around women's oral intake during labour to understand the practical importance of the topic. If a research question is related to a certain objective of practice, and a comprehension of both unclear and clear empirical evidence, this methodology is warranted, as is the case here where midwifery practice can be considered as 'unclear', while the effects of women's oral intake during labour on birth outcomes is 'clear' (Thorne 2016, p. 36). The evidence has indicated that limiting low-risk women's oral intake during labour is not beneficial, and may in fact be harmful (Singata, Tranmer & Gyte 2013 p. 12). However, midwives' opinions, or points of view, about this are uncertain (King et al. 2011, p. 685). This study investigates and seeks to understand midwives' views and practices in relation to women's oral intake during labour.

Other methodologies were considered for this study. Phenomenology is another qualitative methodology, and is used to understand the meaning of human phenomena through individual experiences (Schneider 2016, p. 95). Moreover, personal feelings, thoughts, understandings, and behaviours can be explored through this methodology (Schneider 2016, p. 97). However, this methodology was considered inappropriate for this study, because the meanings that midwives ascribe to providing women's oral intake during labour could not answer the research question. The aim of the project is to understand practice and its influences, rather than its significance or meaning for midwives.

Grounded theory is another methodology in the qualitative paradigm. This methodology seeks to develop or discover new theories from a particular field of inquiry (Creswell 2013, p. 104). In relation to this, a variety of participants may experience a specific event or process, so a new theory of movement or action is generated through the views or opinions of a great number of participants (Creswell 2013, p. 83). This methodology would aim to generate a theory to understand or explain the factors that affect midwives and how they behave or

provide midwifery care in relation to women's oral nutrition during labour. Nevertheless, this design requires a large amount of data, including at least 20 to 30 participants to establish a theory (Creswell 2013, p. 149). Whilst possible, the timeframe of the study was only 12 months, so grounded theory was not considered to be practical, but is certainly worthy of consideration for future studies exploring this topic.

3.4 Methods of the study

3.4.1 Setting

The setting of this study was metropolitan and rural maternity services including public and private hospitals as well as Midwifery Group Practices in Australia. Midwives from any maternity services which provide labour and birth care were eligible to be included, because the inclusion of a variety of settings promotes the trustworthiness of such research (Schneider 2016, p. 115).

3.4.2 Sampling strategy

Purposive sampling and snowball sampling were used to recruit participants for this study. A purposive sampling method is used to recruit individuals who have specific experiences, knowledge, and skills in relation to a particular research question (Schneider et al. 2013, p. 114). Furthermore, snowball sampling was used for participants to invite their colleagues who met the inclusion criteria to participate in the study (Schneider et al. 2016, p. 113). Registered midwives with recent experience in providing care for women in labour were sought for the study. The inclusion criteria sought prospective participants who were English-speaking registered midwives, who currently provided labour and birthing care. The exclusion criteria were midwifery students who did not have final decision-making capacity for women's care, as they look after women under the supervision of qualified midwives.

3.4.3 Sample size justification

In terms of qualitative research, the collection of rich in-depth data is the most important consideration rather than the number of participants (Schneider et al. 2016, p. 113). Guest, Bunce and Johnson (2006, p. 79) concluded that six to twelve interviews are sufficient to achieve most qualitative studies' research aims and objectives. Additionally, these numbers are appropriate for achieving data saturation (Guest, Bunce & Johnson 2006, p. 79). For this reason, twelve participants were sought to participate in semi-structured interviews to achieve the research aims through the collection of rich data.

3.4.4 Ethical considerations

The research proposal was given ethics approval by the Flinders University Social and Behavioural Research Ethics Committee (SBREC). Informed and voluntary consent was obtained from all participants and a letter of introduction, an information letter, and a consent form were provided (see Appendices F, G & H). A benefit and risk assessment of the study has been considered, including physical, psychological, social, and financial aspects (Polit & Beck 2017, p. 142). Only minimal burden for the participants was anticipated for this study. During the interview process, the participants were informed of their right to cease the interview, or to have an intermission in the interview, if they felt distressed or in any discomfort. Also, the interview was only continued according to the participants' wishes in cases of intermission. Moreover, the risk of discomfort was managed through reassuring the participants that their confidentiality and anonymity would be maintained. Individuals and their place of employment were not identified.

3.4.5 Participant recruitment

The school in which the study took place had a database of emails of registered midwives associated with the university. The registered midwives on this database were contacted by an administrator via email, inviting them to participate in the study or to forward the request to

colleagues who may meet the inclusion/exclusion criteria. An information sheet and consent form were included in the email to provide the potential participants with the requisite detail to give informed consent. Individuals willing to participate were then required to contact the researcher, thereby reducing any risk of coercion. It was also important to recruit midwives from a variety of clinical practice settings, and therefore, the snowball technique proved to be very useful. Using this recruitment approach, a total of 12 participants was achieved, from public, private, and rural maternity services.

3.5.6 Data collection and analysis techniques

3.5.6.1 Semi-structured interviews

Interviews are a relevant method to collect data in an interpretive descriptive approach which focuses on human experiences (Thorne 2016, p. 86). Consequently, Thorne (2008, p. 87) suggested that they can be used to understand the themes and patterns of human experiences. In this study, the relationships between participants' experiences and their behaviours in relation to women's oral intake during labour were explored. Semi-structured interviews are a beneficial way of achieving research objectives, as participants are able to speak about their experiences through the interviewer's guiding questions (Schneider et al. 2016, p. 116). Additionally, open-ended questions allow participants to talk about their perspectives freely in relation to the research topic (Polit & Beck 2017, p. 270). Hence, semi-structured interviews with open-ended questions in an interpretive descriptive design were deemed appropriate for an in-depth identification and understanding of midwives' responses, including their knowledge, behaviours, and beliefs regarding women's oral nutrition during labour (Thorne 2016, p. 87). As well, Polit and Beck (2017, p. 508) have recommended that interviews be recorded and then transcribed rather than taking notes, because notes may not be able to reflect participants' replies verbatim.

To assist the quality of the outcomes, it is important to conduct rigorous interviews, including being well-organised, choosing an appropriate environment, establishing a good relationship with the participants, and balancing guidance and flexibility (Gerrish & Lacey 2010, p. 345). These issues are necessary considerations to enhance participants' natural manner to articulate themselves for the sake of gathering rich data (Schneider et al. 2016, p. 116). For these reasons, the principal researcher (who conducted all the interviews) underwent training to develop her interview skills for appropriate and quality data collection. The principal researcher uses English as her second language; hence, she underwent an interview practice session with the research supervisors to enhance her communication abilities, and to confirm the flow and content of the interview questions.

It is known that interviews that last for more than one hour makes the participants tired (Schneider et al. 2016, p. 118). The interviews for this study took between 30 and 50 minutes for each participant. It is essential to choose venues that are quiet, private, and comfortable to prevent interruptions to the interview process (Schneider et al. 2016, p. 116). An inappropriate place may affect participants' willingness or open-mindedness to have conversations freely (Gerrish & Lacey 2010, p. 352).

For this study, face-to-face interviews were held in convenient private spaces, including private rooms at the University and in the hospitals, with some interviews being conducted via phone or Skype. The interview schedule was developed by the principal researcher and the supervisors. Five demographic questions and 13 interview questions, which were related to women's oral intake during labour, were developed to ask the participants' opinions, thoughts, and experiences in relation to labouring women's oral nutrition. The interview questions are attached in Appendix G. All interviews were audio-recorded with full consent.

-3.5.6.2 Transcribing

Transcription of the audio-recorded data from the semi-structured interviews was the first step in preparation for the data analysis (Green & Thorogood 2014, p. 208). The interview recordings were transcribed and all information de-identified to maintain confidentiality and anonymity (Richardson-Tench et al. 2014, p. 210). The transcription process was undertaken by the principal researcher. Spelling and punctuation affect the data analysis; therefore, it is important to create transcripts with the interviewees' verbatim words including their structures, slang words, pauses, and stress to enhance the reliability of the study (Green & Thorogood 2014, pp. 208-209). Moreover, the collected words and phrases of the participants can describe their mindset, so in this process, it is essential to reflect on why this situation occurs (Thorne 2016, p. 139). Therefore, the recorded interviews with the 12 midwives were transcribed following this process to ensure reliability.

- 3.5.6.3 Thematic analysis

According to Thorne (2016, p. 141), an interpretive descriptive approach requires the use of, and adherence to, a clear process of data analysis, which can investigate in greater depth and detail the information gathered and can identify why the present phenomena have occurred. The interpretive descriptive design described by Thorne (2016) does not outline a particular process for analysis. Due to this, the thematic analysis described by Braun and Clark (2012) was selected for this study. This type of analysis can identify, arrange, and propose understandings of patterns of meaning from the data (Braun & Clark 2012, p. 57). This approach seeks to develop common meanings based on peoples' experiences regarding a particular topic (Braun & Clark 2012, p. 57). Moreover, a specific aspect of a phenomenon and apparent meanings in the data can be analysed and found (Braun & Clark 2012, p. 58).

The process of coding can identify themes from qualitative data consistently which can be connected to theoretical issues (Braun & Clark 2012, p. 58). Thematic analysis and coding

processes are also the common methods for a qualitative descriptive study and these methods can identify themes, concepts, and patterns from the participants' words which are related to the research topic (Richardson-Tench et al. 2014, p. 210). According to Liamputtong (2013, p. 375), words are more effective than numbers; therefore, thematic analysis does not focus on counting how many times the words appear; this is referred to as content analysis. Instead, thematic analysis, for this study, will assist with the exploration of the meaning of midwives' decision-making in relation to women's oral nutrition during labour, through their own words.

The thematic analysis involved a six-phase process (Braun & Clark 2012, p. 60). Firstly, the audio-recorded interviews were listened to while reading the transcripts many times to understand the participants' words in order to find the inherent meanings (Braun & Clark 2012, pp. 60-61). The purpose of this initial process was to become familiar with the content of the data and to recognise various aspects appropriate to the research question (Braun & Clark 2012, p. 61). The second step was coding the data (Braun & Clark 2012, p. 61). Coding describes the initial levels of meaning in the data and establishes connections between the participants' experiences (Braun & Clark 2012, p. 61). The words which were related to the research questions, including midwives' knowledge, experiences, opinions, thoughts, beliefs, perceptions, and values regarding this topic, were identified as codes. Computer software (NVivo Version 11) was used to manage the data and organise the codes, which is a useful and effective technique for managing coding (Braun & Clark 2012, p. 62). The next step was to identify the emerging themes (Braun & Clark 2012, p. 63). A theme is a consequence of coding which is crucial for linking to the research question and to show meaningful patterned responses from the data (Braun & Clark 2012, p. 63; Saldana 2013, p. 14). Various codes were compared and gathered or separated into categories and then into themes (Green & Thorogood 2014, p. 210). Moreover, this process included revising the codes to determine

similarity (Braun & Clark 2012, p. 63). In such research, themes should be adequately specified and the entire data should be coded to deconstruct the data to find connections between the diverse codes (Green & Thorogood 2014, pp. 213-214; Liamputtong 2013, p. 375).

The identified themes were revised based on the coded data and referred back to the entirety of the data, which is a necessary process to check quality (Braun & Clark 2012, p. 65). It is important to ensure that the themes are related to the data to enhance relevance and trustworthiness (Braun & Clark 2012, p. 65). Specifying and naming themes is the next part of the process in order to interpret and describe the meaning of the data (Braun & Clark 2012, p. 67). Categorising the data in this way helped with investigating the factors which influence midwives' practice in relation to women's food and fluid consumption during labour. Moreover, the themes facilitated an understanding of the contextual meanings and relationships between influences and midwifery practice. In this way, rich, comprehensive, and detailed findings were established (Green & Thorogood 2014, p. 215). Finally, the findings from all phases of the data analysis were written up and reported on (Braun & Clark 2012, p. 69). The processes of the study and the findings based on the thematic analysis are reported in Chapter Four of the thesis.

3.6 Strengths and limitations of the methods

Hunt (2009, p. 1289) argued that the interpretive descriptive approach is a comparatively new methodology, so there are few studies which explain how to conduct research based on this methodology. The purposive sampling strategy is a persuasive method for recruiting particular groups of people who can provide rich and in-depth information for a particular study (Schneider 2016, p. 112). However, this strategy may have limitations. For instance, this strategy is considered to be rather subjective, as there is no equal opportunity for people to participate in the study (Luborsky & Rubinstein 1995, p. 99). Due to this, applicable

people for the study may not be able to be recruited to participate. To minimise this issue, this study used a snowball sampling strategy to recruit eligible participants.

In addition, it may be impossible to describe, compare, and explain data without a thematic analysis (Liamputtong 2013, p. 375). Nevertheless, according to Braun and Clarke (2008, p. 79), there is no established and clear definition, or steps, for data analysis within the thematic analytical approach. As a result, the data analysis may be influenced by the researchers' ability and perspective (Stables 2014). To ensure rigour in this study, the data analysis processes have been reviewed by the supervisors for accuracy and trustworthiness.

3.7 Rigour of the study

Lincoln and Guba's framework was used to ensure the trustworthiness of the study (cited in Polit & Beck 2017, p. 559). There are four criteria, credibility, dependability, confirmability, and transferability, to ensure the rigour of a study (Polit & Beck 2017, p. 559). Credibility is ensuring that the data is accurate and reliable, especially the views of the participants (Liamputtong 2013, p. 67; Polit & Beck 2017, p. 559). In this study, the transcriptions of the interviews, and the data analysis and findings were reviewed by the researcher's supervisors, which enhances the credibility of the findings. Additionally, it was crucial to ensure that the principal researcher discussed the coding steps and themes with the supervisors to ensure the reliability of the findings (Green & Thorogood 2014, p. 213). Dependability refers to the preciseness of the information and data over time and situation (Polit & Beck 2017, p. 559). The data collection and analysis followed coherent steps and processes, as described by Braun and Clarke (2012). All the processes for the study were reviewed and assessed by the supervisors to ensure confirmability, which required agreement between two individuals regarding the accuracy of the data (Polit & Beck 2017, p. 560). Finally, sufficient detail should be described and assessed to establish research which is transferable (Polit & Beck 2017, p. 560). The study collected data from a range of registered midwives, facilities, and

models of care. Hence, the study obtained a variety of in-depth and detailed data to develop findings which can ensure the transferability of the study findings.

3.8 Chapter conclusion

In this chapter, the methodological approach and methods have been presented. A qualitative paradigm with an interpretive descriptive approach, as described by Thorne (2016), has been used for the study. Twelve midwives who met the inclusion criteria were recruited to participate in the study through purposive sampling and snowball sampling strategies. Participants participated in semi-structured interviews; this was the principle method of data collection. Transcripts were made of the audio-recorded interviews to enable detailed analysis of the data. Thematic analysis, as described by Braun and Clark (2012), was followed to interpret the findings. Finally, Lincoln and Guba's framework was used to ensure the trustworthiness of the study. This methodology and method provide an appropriate structure from within which to find the interaction between influences and midwifery practice regarding women's food and fluid intake during labour. The next chapter, Chapter Four, will present the findings from the thematic analysis of the data collected from the interviews which identified three core themes and related sub-themes.

CHAPTER 4: FINDINGS

4.1 Introduction

This chapter will present the findings of this study on the factors influencing midwives' practice in relation to women's oral intake during labour. Firstly, the participants' demographic information will be presented, after which the findings of the interviews will be described, including examples of participant responses as quotations. The thematic analysis of the data resulted in the emergence of four main themes, including midwives' knowledge, the work environment, clinical policies/guidelines and directives, and women's expectations of care. These four main themes encompass the factors which influence midwives' practice in relation to women's oral intake during labour.

4.2 Participants' demographic characteristics

As outlined in the methodology chapter, 12 registered midwives from Australia participated in semi-structured interviews for this study. Demographic data was collected at the beginning of each interview to provide an understanding of the participants' backgrounds and the contexts of care which affect midwives' practice in a variety of hospital settings. The participants' characteristics are presented in Table 2.

The recruitment strategy resulted in a diverse group of participants. Eleven of the participants were female and one was male. The participants varied somewhat in age; one was between 21 and 30 years, three were between 31 and 40, five between 41 and 50, and three were aged between 51 and 60 years.

The number of years of experience as a registered midwife also varied. Six participants had worked as a midwife for between 1 and 9 years, three had 10 to 19 years of experience, and three had between 20 and 31 years of midwifery experience. Six of the participants were also Registered Nurses. Of the 12 participants, four worked in rural locations and eight in

metropolitan locations. Three of the participants worked in private hospitals, while nine worked in the public system. Of those in the public system, seven worked in standard hospital care models, and two in a midwifery group practice (MGP) model.

The participants' midwifery qualifications are as follows. Two of the participants completed a one-year hospital-based midwifery course, while ten qualified with a three-year Bachelor of Midwifery. Two midwives had undertaken further postgraduate studies by completing a Master of Midwifery, while another was currently enrolled in a Master of Midwifery program. Ten of the participants worked in South Australia (SA), while two worked in New South Wales (NSW).

Table 2: Participants' demographic information

Participant No.	Pseudonym	RN	Years of RM	Context/Model of care	Type of qualification	Age
1	Sue	Y	6	Country rural (public)	Bachelor of Midwifery Master of Midwifery	39
2	Thomas	Y	26	Midwifery Group Practice (public)	Hospital based course (1 year)	54
3	Sarah	N	10	Tertiary (public)	Bachelor of Midwifery	54
4	Laura	N	2	Midwifery Group Practice (public)	Bachelor of Midwifery	24
5	Amy	N	3	Private	Bachelor of Midwifery Master of Midwifery (present)	41
6	Anne	Y	31	Country rural (public)	Hospital based course (1 year)	54
7	Kelly	Y	21	Tertiary (public)	Bachelor of Midwifery Master of Midwifery	47
8	Lisa	N	4	Country rural (public)	Bachelor of Midwifery	33
9	Olivia	N	10	Country rural (public)	Bachelor of Midwifery	48
10	Hannah	N	5½	Tertiary (public)	Bachelor of Midwifery	34
11	Emma	Y	4	Private	Bachelor of Midwifery	48
12	Kate	Y	16½	Private	Bachelor of Midwifery	42

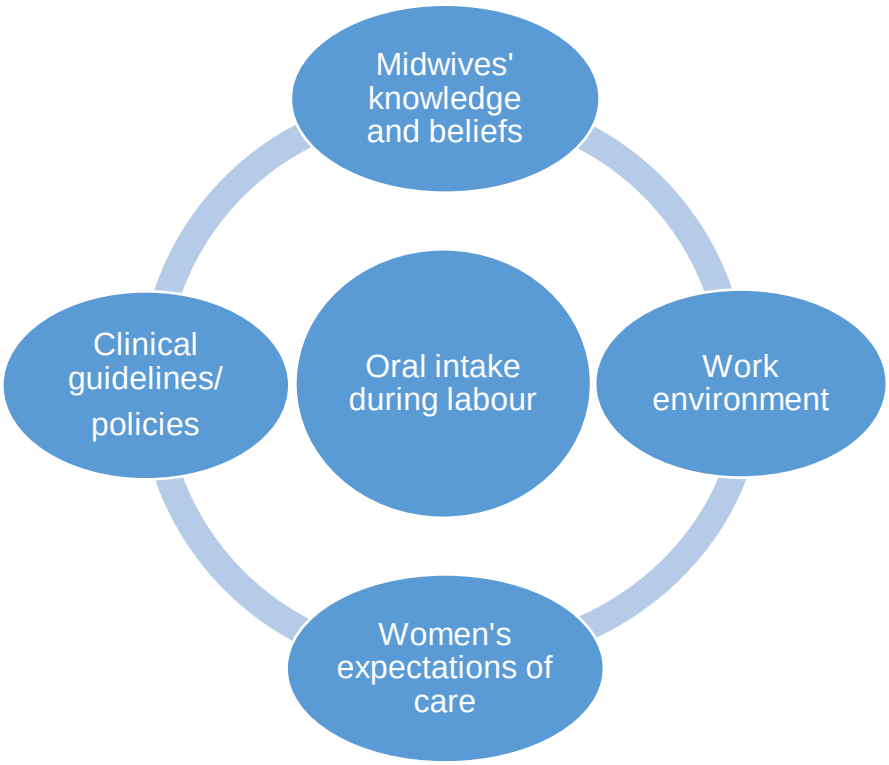
4.3 Thematic Findings

The participants identified a variety of factors which affect their decision-making in relation to women's food and fluid consumption during labour. Four themes were identified that explain these influences, being:

1. Midwives' knowledge and beliefs
2. Work environment
3. Clinical guidelines/policies
4. Women's expectations of care

These four themes are inter-related and help us to understand the complexities of midwives' decision-making and practices regarding women's oral intake during labour (see Figure 2). These themes will be discussed in the following sections.

Figure 2: The four main themes which influence midwives' practice in relation to women's oral intake during labour



4.3.1 Midwives' knowledge and beliefs

The first theme is "Midwives knowledge and beliefs". All the participants identified that knowledge gained from their pre-registration education, continuing professional development courses, and personal and professional clinical experiences influenced their practice. This core theme was organised into three sub-themes. These sub-themes are shown in Table 3.

Table 3: Theme one: midwives' knowledge, values and beliefs and related categories.

Theme 1	Sub-themes
Midwives' knowledge and beliefs	1.1 Education
	1.2 Safe practice
	1.3 Clinical and personal experiences

Sub-theme 1.1: Education

Participants' pre-registration midwifery education and their graduate year influenced their decision-making regarding women's oral nutrition in labour. Participants described learning the importance of supporting women's oral intake during labour as they wish. However, they also learned that there exists a minimal risk of pulmonary aspiration under general anaesthetic. While the majority of participants had difficulty remembering exactly what they were taught about in relation to women's oral intake during labour, they believed that it was included in their initial midwifery education in topics focusing on women's normal progress of labour and birth. Six of the participants recalled previously discussing the issue of women's oral intake during labour with other midwives while on clinical placement as a midwifery student. Participant 5 learned about many aspects of midwifery practice from midwives during her placement, despite the midwives having differing views. She was able to make her own decisions about women's oral nutrition for women in labour. Similarly, Participant 4 explained how she obtained her knowledge of this issue:

> *"I think it's probably most of Uni. It must not be a kind of a topic that I have gone into research myself anything like that. I have just gone by what I learned in Uni and what I have been told. Picking up just working" (P.4).*

The participants had learned from varying educational experiences that women's oral food and fluid consumption is important for maintaining their hydration, which can normalise their labour and birth. Furthermore, some of the participants commented that they also understood that all women in labour have a potential, but minimal, risk of pulmonary aspiration under general anaesthesia. The participants' theoretical and clinical educational experiences, which promoted the idea that women's oral intake during labour should not be restricted to maintain their hydration and energy as well as women's comfort, impacted upon their decision-making. However, midwives have also recognised the minimal risk of aspiration, which generated tension around whether they should allow women to eat or drink during labour. Six participants also had experience working as a university lecturer, clinical facilitator or preceptor, and therefore, had gained the most recent information regarding women's oral intake during labour from the research literature and the midwifery guidelines, to provide current evidence-based practice education to midwifery and medical students. However, they acknowledged that the information they taught to students about women's oral intake during labour was not the same as what they practiced. They taught women's oral nutrition in labour should not be restricted as it is the midwives' role to promote normal labour and birth. However, these participants spoke of the influences of institutional culture and obstetricians' preferences which limited their capacity to support women's oral intake during labour. These practices were sometimes in conflict with the latest evidence, and midwives' knowledge might not be valued in the decision-making process relating to women's oral intake during labour.

Interestingly, three of the participants, who are also Registered Nurses, reported that their nursing background influenced their decision-making in relation to women's oral nutrition during labour, as they were more concerned with the possible complications resulting from women eating and drinking during labour. The study found that these nurses/midwives did not limit women's oral intake during labour; nevertheless, they did not encourage women's food and fluid consumption in labour. Registered Nurses/Midwives' nursing education and experience appeared to increase their consideration of the pathological aspects, and risk, of pulmonary aspiration in their midwifery care decision-making. These participants were therefore less likely to encourage, or allow, women to eat and drink during labour.

> *"I actually think since I have done my nursing, I have become more cautious when it comes to those sorts of things … [In midwifery] There is lots of focus on natural and normal. You are not really thinking about the pathological science of things, dehydration, things like that as much as you are when you have a nursing background, since I have completed my nursing. I do, I sometimes I am thinking about the nursing point of view as much as midwifery point of view. So yeah, that is a very interesting question. Yeah it has come to my mind a few times" (P.11).*

Nursing practice focuses on an illness model of care with preventative and curative elements (Nursing and Midwifery Board of Australia 2016); therefore, midwives who are also trained nurses may pay more attention to the risks, or side-effects, of interventions. Previous nursing education and experience therefore appears to influence midwives' perceptions of the risk of women eating and drinking during labour in relation to possible pulmonary aspiration under general anaesthesia, and therefore, this influences their decision-making.

Sub-theme 1.2: Safe practice

The majority of participants indicated that their understanding of the risks, including instrumental birth, or emergency caesarean-section under general anaesthetic, influenced their decision-making. Risk management was a significant consideration regarding women's oral intake during labour. Some participants reported that they were concerned that freely

allowing women to eat and drink during labour was a risk, because they cannot predict the labour progression and birth outcome:

> *"You know, especially when you've got primips most in mind, that you know, … if they go to section, you know you've got that potential for aspiration, especially if they have a first section, you need to do GA [general anaesthetic]. I think that's very important to ensure that you definitely know when is the last time they have eaten. And you know if you're doing an induction, you know, we always err on the side of caution in regards to food. Because you just don't know what is going to happen" (P.11).*

Although pulmonary aspiration resulting in significant maternal morbidity or death is extremely rare, the participants indicated that, as they know it is a possibility, they are still worried about the associated risk of eating and drinking during labour. The midwives' practice of limiting women's oral intake during labour for women who have a high risk of emergency caesarean section reflected their concern. Hence, the participants spoke about reducing, and even limiting, women's food and fluid consumption during labour, if they were worried about a high risk of caesarean section.

In addition, women's stages of labour also influenced midwives' decision-making. The study participants considered a woman's stage of labour when providing advice regarding their food and fluid consumption. Half of the participants commented that they encouraged women to eat and drink in the latent/early and active stages of labour. The remaining participants did not encourage women to eat during the active stage of labour due to the potential risk of imminent instrumental birth and caesarean section.

> *"I encourage the normal women in labour, I do not tend to restrict them in what they can eat, early on and then even when they're in the active stage … Over the years, I have watched them and I tend to find they don't tend to go to anything heavy. So it is not like I'm discouraging it … They will always ask me, they'll say, "Am I allowed to eat?" I guess that's when I do say "Anything small, so crackers and lollies, anything like that," and they say, "Yeah," and they quite often say, "Yes that is, you know, that is all I feel like." So that makes me feel good knowing that, that's all they feel like. I am not restricting them too much, so that is good. So, I am quite happy" (P.12).*

All the participants indicated that they encouraged fluids rather than food for labouring women to maintain their hydration, and minimise the risk of having a full stomach. The participants were aware that dehydration could result in maternal exhaustion and fever, prolonged labour, and fetal tachycardia (Pairman et al. 2015, p. 634).

> *"I encourage, um, fluids intake throughout their labour and on a regular basis, so I am sure they are drinking sufficiently to maintain their hydration" (P.7).*

Participant 2 spoke of encouraging fluid rather than food for women during labour:

> *"I would encourage them to drink water. I would say 'keep your fluids up! You need to keep your fluids up, because you can become dehydrated.' And you know, you are going to be working hard like running a marathon" (P.2).*

Some of the participants reported that they tried to prevent full stomach contents with food because of the risk of nausea and vomiting, as well as the risk of aspiration, because of the potential for caesarean section.

> *"If I got a lady who is looking like she is going to get an epidural. She is probably not progressing well. She got the Synto (Syntocinon) going, and we are in the last phase of 'are we going to deliver vaginally or not?' Then, at this point, I would probably discourage eating and drinking, and having enough drink (usually we have got fluid going) (P.1).*

The comments from the participants show that midwives' decision-making in relation to women's fluid and food consumption is affected by their professional responsibility to provide safe practice, including the management of the risk of dehydration as well as pulmonary aspiration. There was some uncertainty about risk status, and so the participants often took a conservative approach to supporting fluids, but not food, for women in labour.

Sub-theme 1.3: Clinical and personal experiences

Midwives' clinical professional and personal experiences are also a factor that influence their decision-making in relation to women's food and fluid consumption during labour. All the

participants indicated that they had not provided care for a woman who had suffered from Mendelson's Syndrome. Despite this lack of direct experience, they all understood that it was a genuine risk. Many of the participants shared stories of women eating and drinking during labour without negative effects. Participant 9 shared her clinical experience, which influenced her decision to support women's eating and drinking behaviours.

> *"We had a multi who broke her waters in the morning. She had contractions for a couple of hours and they stopped. In the meantime, because no-one had gone to see her, her lunch was delivered to her room, she ate her lunch, and had a baby one hour later. I always remember this story forever and ever" (P.9).*

The participants' perception of the minimal risk of Mendelson's Syndrome, as opposed to their positive experiences of women's eating and drinking during labour, influenced their decision-making to allow, or encourage, oral intake. Furthermore, Participant 12 explained that her knowledge of preventative measures was through the administration of the prophylactic Ranitidine. The development of drugs and anaesthetic techniques which can prevent Mendelson's Syndrome also influenced midwives awareness of the minimal risk of pulmonary aspiration.

A few participants indicated that their own negative birth experience regarding the restriction of oral intake during labour influenced their current midwifery practice. These participants spoke of the detrimental effects of being denied oral intake during labour. They remember feeling very hungry during labour and this experience positively affected their decision-making to allow women to eat and drink as they wished. Participant 8 explained that her oral intake during her own labour was limited, which she recognised influences her decision-making regarding women's food and fluid consumption in labour.

> *"My main influence is my own experience of not being allowed to eat in labour. I ate a chip and a midwife yelled at me. Because my husband was eating chips. And I ate one, then she said 'You're not allowed to eat that!' And she worried about it, because I ate a chip. I had such a terrible midwifery experience" (P.8).*

Participant 3 also described how her during own labour, her oral intake was also restricted:

> *"When I had my first baby, I had a really long labour and they would not allow me to eat. This baby was born in America, but they were really strict. They would not let me eat. I was starving. I kept saying 'Please, can I have something to eat?' All I was allowed to have were ice chips. That's it. That was horrible. When my baby was born, I did not even want to look at my baby. All I wanted was just food. … So, I remember that I guess, that probably is what directs my practice as well" (P.3).*

As a result of these experiences, these participants described encouraging oral intake for women in their care. It is evident from the participants' comments that their lack of empowerment to make their own decisions regarding their oral intake during labour impacted on their current practice as they now strive to promote positive birth experiences for women in their care.

Theme summary

Midwives' knowledge from their education, such as their studies at university, or in ongoing professional training programs, influenced their decision-making to allow women to eat and drink during labour. None of the participant midwives had ever experienced a woman who deteriorated due to pulmonary aspiration due to having full stomach contents under general anaesthesia, and therefore considered this to be a low risk. However, midwives' philosophy of providing safe practice affected their consideration of the risks of aspiration, which led them to reduce, or discourage, women's oral intake, especially food, in the active stage of labour. A number of participants with nursing backgrounds considered women's oral nutrition carefully in their labour care decisions, through an increased perception of associated risk. Conversely, participants' positive clinical experiences regarding labouring women's oral intake, and their own negative birth experiences in relation to limitation of their food and fluids intake during labour, influenced their decisions to encourage women's oral intake during labour. There was apparent tension between supporting women's oral intake and being cautious to minimise the potential risk of complications.

4.3.2 Work environment

The second theme, 'work environment', consists of three sub-themes; 'locations', 'systems', and 'colleagues/peers'. All participants identified their work environment, including the model of care in which they worked, and their midwifery and obstetric colleagues, as influences on their practice in relation to labouring women's oral nutrition. The sub-themes are shown in Table 4 and will be described individually.

Table 4: Theme two: place of work and related categories

Theme 2	Categories (sub-themes)
Work environment	2.1 Locations
	2.2 Systems
	2.3 Colleagues/peers

Sub-theme 2.1: Locations

The participants' places of work included metropolitan and rural hospitals, which influenced the size of the birthing unit, the number of births they experienced, as well as the number and mix of staff. Participant 6 worked at a country hospital in South Australia. She explained that in rural areas, the hospitals are small and generally manage only low-risk pregnant women, as they have a small number of professionals and only limited resources to manage high-risk complicated births compared to metropolitan hospitals. In rural hospitals, they have referral guidelines, and regularly meet with co-workers (obstetricians and midwives) to judge whether it is appropriate for a woman to be cared for in their facility, or if they should refer those considered to be high-risk to tertiary hospitals for their ongoing management. Participant 3, who worked in a tertiary public hospital reported that they care for a large number of high-complication pregnant women. This situation influenced her to make decisions regarding women's oral intake during labour.

> *"I guess you are going to a look at demographic at (name of the hospital). We have a very, very high number of what we consider high-risk women. We take the highest risk women in the state. The caesarean rate is enormous. So, all of those factors affect to make my own decisions" (P.3).*

MGP services are part of the public system. For example, in South Australia, MGP operates in tertiary public hospitals in urban areas. Participant 2 who worked through the MGP commented about their practice regarding women's oral intake during labour.

> *"I think that the culture of MGP is quite different to the rest of the hospitals. We would be encouraging women to eat. I think I would be consistent with what Group Practice do. They are encouraging people to eat and drink, and certainly not restricting their food" (P.2).*

MGP, which operates through a midwife-led care model, usually take low-risk uncomplicated pregnant women, and provide midwifery care independently. If the women need further consultation, these midwives seek obstetric registrars' instructions. The location of the MGP did not influence midwives' decision-making during labour, and overall, these midwives have more autonomy to practice.

All the participants who work in private hospitals are located in the metropolitan area. They look after women in labour, and women's obstetricians are not always on the ward. Participant 12 explained that she kept contact with the women's private obstetricians to ensure that their instructions were noted.

> *"It is really important keeping in contact with them, in communication with them to say 'This is what is happening, are you happy with this happening?' I cannot see them changing their practice. It's just a standard thing for them to say" (P.12).*

She said that women's oral nutrition during labour is the same as other midwifery practice. Due to this, she needed to ensure that women's private obstetricians would allow them to eat and drink during labour, which influenced her decision-making regarding women's oral

intake during labour. The study found that the location of private hospitals was not related to midwives' practice in regards to women's oral nutrition during labour.

On the other hand, the participants who worked in small rural hospitals said that there were only one or two midwives allocated per shift. Participant 6 explained that, as a result, these midwives have more autonomy to make decisions and to promote woman-centred care in relation to women's oral nutrition during labour.

> *"We were able to, you know, I guess be independent in our roles in midwives to decide or not to decide. Like um how you should manage women this food and drinking in labour, rather than having some sort of guidelines or posey doctors say something … So, I think it is good that people trust your judgement as toward what they eat and drink in labour" (P.6).*

Participant 9, who worked in a rural hospital, discussed her previous experience at a tertiary public hospital. Her limited autonomy in her previous place of work influenced her current process of decision-making in the rural hospital:

Midwives who work in metropolitan hospitals take care of a large number of high-risk complicated pregnancies and the rate of caesarean-section in these hospitals is higher than in rural hospitals. Furthermore, a greater number of medical professionals work in the metropolitan public hospitals. As a result, the participants in the tertiary public hospitals tend to be guided by these professionals to make decisions in relation to women's oral intake during labour. Notwithstanding, midwives who work in rural country hospitals are able to make their decisions independently because they mainly look after low-risk uncomplicated women, and there are fewer health professionals who work with a midwife during the shift as a source of influence. Additionally, GPs and midwives often share their points of view about the women's care in their meetings. Because of this, they understand different perspectives of practice, including both medical and midwifery views. Midwives who work in rural hospitals have more decision-making responsibilities and autonomy in the management of women's

labour and birth, and are less likely to be unduly influenced by other health professionals. The study found that those who worked through the MGP and in metropolitan private hospitals were not influenced in their decision-making by the geography of the hospitals. The MGP and private hospitals have a different context of maternity care; that is, a midwife-led care model and the obstetric model of care, respectively. Because of this, these participants' practice regarding women's oral nutrition in labour were affected by models of care rather than the hospital location.

Sub-theme 2.2: Systems

The participants worked in different health systems and models of maternity care. Many women choose to have their maternity care provided by a private obstetrician. Private obstetricians then become the lead provider throughout a women's pregnancy and birth, regardless of whether they give birth in a private or public hospital. Even though midwives provide labour care for these women, the final decision is made by the woman's private obstetrician. By comparison, in the public sector, midwives look after labouring women and, in consultation with the duty obstetric registrar, make decisions for the management of labour and birth.

Participant 10, who works in a tertiary public hospital, indicated that:

> *"I do not feel great about that (practices regarding women's oral intake during labour). I wish I could practice more, yeah. So, lot of different things to do that our challenge being, um, a midwife in such a big public hospital … I am operating about 25%, hahaha, what I would like to be doing and 75% what the hospital would like" (P.10).*

Participant 11 described the culture in her private hospital regarding women eating and drinking during labour:

> "*We all pretty much practice the same way. We are all bound by the individual likes and dislikes of the obstetricians who work there. Essentially, obstetricians bring women to the hospital, so we do have to give them a lots of respect, but we will always*

> *advocate for what women want. That's a job as a midwife! Most of us midwives in the labour ward, we are on the same page, as far as that is concerned. We respect individual orders of obstetricians who work there" (P.11).*

Midwives in the MGP independently provide continuity of midwifery care, including labour and birth management for women, and are highly autonomous in their decision-making. However, if women require a medical referral, the MGP midwives will continue to provide care in collaboration with the medical team or obstetrician.

Participant 4, who works through the MGP, commented on her autonomous decision-making for women's care. However, midwives' decision-making in the public sector, except for the MGP, is different.

> *"Well, I think because I am working in Midwifery Group Practice, it's a lot more focused on women's choices, woman-centred care, so I would imagine that most people would feel the same way that I do. In terms of … , definitely just the normal women, not complicated, you just let them eat and drink freely. We encourage fluid … as a hospital, we recommend you do not eat for these reasons blah-blah-blah. But of course, you have a choice … Outside of Group Practice, I think they would be a bit different. If I am going to make an assumption, I would say that midwives in a delivery suit who are not in Group Practice would say 'No, you cannot eat.' You know full stop!"* (*P.4).*

Whether one worked in the public or the private system, including the varying models of maternity care, also influenced the participants' decision-making processes in relation to women's oral intake during labour. Models of care determine who the responsible person for a woman's care is, with midwives playing different roles in the public and private systems. For example, MGP midwives who work within a woman-centred, midwifery-led care model enable women's oral intake during labour as they decide, as their autonomous role allows them to make final care decisions if women do not require further medical consultation. However, in private hospitals, midwives usually accepted obstetricians' preferences in their provision of midwifery care in relation to women's food and fluid consumption during

labour. The participants identified that private obstetricians in private hospitals, and obstetric registrars in public hospitals which work within obstetric models of care, dominate women's care. Due to this, a hierarchy of relationships exists which may result in midwives feeling significant pressure from obstetric control. As a result, the autonomy and empowerment to make decisions regarding women's oral intake during labour of these midwives may be lower than midwives who work within a midwife-led care model.

Sub-theme: 2.3 Colleagues/peers

The majority of participants identified their medical and midwifery colleagues and peers as influences on their management of women's oral nutrition during labour. The five participants who worked in a tertiary public hospital, including through the MGP, indicated that they had experienced being instructed to limit oral intake for women during labour by obstetric registrars and senior midwives. Participant 5, who works in a tertiary public hospital, commented:

> *"I think there is conflict. Yeah, because it also depends on the registrar or doctors who are there. You know, it depends on what they want. And then you sort of negotiate with them or explain to the women. Because the doctors just come in and go 'Oh I don't allow you to eat and drink.' And don't explain that. Then, you're explaining that. And then they might be really hungry now" (P.5).*

Participant 9 who works in a rural hospital also commented:

> *"Um, I think that is very well established; we do not have any restriction in our workplace. But I feel underlying, um, pressure from doctors, particularly if they look like they are going toward caesarean, I should limit food then, not so much the water part, but definitely if they are saying anything that looks suspicious or complicated. Then I know that they want me to reduce food or stop all together. But I easily sort of encourage them to eat something absorbed into water anyway, like jelly and Jatz and just a couple of light biscuits or something. But I do not think I have ever said do not eat anything" (P.9).*

Nonetheless, three participants who work in rural hospitals indicated that they had never experienced being directed to limit women's oral nutrition in labour by colleagues. This may be due to staffing, as one midwife works with each labouring woman per shift, while doctors

only come to the woman's room for the birth or in an emergency situation. The participants stated that midwives who work in rural hospitals have similar points of view and opinions about freely allowing women to eat and drink during labour as needed. For these reasons, these midwives had not experienced being directed by their peers. Participant 1, who works in a rural hospital, indicated:

> *"I think our GP is, um, because we do work as a team, I guess that is shared. Because you know sharing the care. Even though they [the doctor] are like the ultimate person who's responsible, they do not tend to have any stipulations about whether they should eat or drink or not. And so, we are not sort of told by the doctors or … You know, she needs to not eat or anything like that. They do not ever say anything about that so" (P.1).*

Participant 8, who has worked in two different hospitals, an urban tertiary public hospital and a rural hospital, described that their peers at each facility have similar points of view in relation to women's eating and drinking during labour.

> *"I think it is just because we all have quite similar views. When I was working at (name of the tertiary public hospital), I did find that sometimes things happened. I was thinking 'Why is she allowing her to eat now?' like everyone could see she is going to go to section and you are still getting a sandwich. I know the risk about aspirating. The risk of having general anaesthetic, aspirating is tiny. But it's like anything we do, it is risk management, is it not?" (P.8).*

Participant 10 reported that midwifery practice associated with women's oral intake during labour has changed over the past two decades, to where it is now considered that women's oral intake during labour does not influence any maternal or neonatal birth outcomes. However, experienced midwives may still believe that women's food and fluid consumption should be limited to minimise the risk of aspiration.

> *"I think they are very similar to me and know a lot of the senior midwives are more old-fashioned and agree they should not be eating. But I think my generation, and more recent graduates, might have the same thought (encourage or allow women to eat and drink during labour)" (P.10).*

The participant data also demonstrates that midwives who work in the same hospitals, including the same health systems and models of care, in both metro and rural regions, have similar views about women's food and fluid consumption during labour. For instance, midwives who work in tertiary public hospital medicalised models, and private hospitals, value private obstetricians' and obstetric registrars' instructions. On the other hand, in rural hospitals, midwives make decisions autonomously to allow, or provide, food and drink to women in labour. However, new midwives and experienced midwives may have different opinions on this issue in tertiary public hospitals. There is a greater number of graduate midwives in tertiary public hospitals than in private and rural hospitals. Furthermore, the culture of public hospitals also influences experienced midwives significantly so as to have a fixed view in which women in labour should not be eating and drinking. New graduate midwives at tertiary public hospitals, except those who work through the MGP, may experience conflict between their current knowledge, and the obstetric registrars' and senior midwives' instructions in making decisions about women's oral intake during labour. Nevertheless, midwives in private hospitals, the MGP, and rural hospitals are less likely to be influenced in their decision-making about women's oral nutrition during labour by senior midwives.

Theme summary

In summary, the findings under this theme demonstrate that midwives' work environment, including the location of the hospitals, models of care, public and private systems, and colleagues all significantly influenced their decision-making in relation to women's oral intake during labour. The participant midwives working in tertiary public hospitals, except through the MGP, and private hospitals in urban areas felt conflict between obstetric registrars' and private obstetricians' preferences and their own knowledge and their desire to meet women's needs in relation to freely allowing women to eat and drink during labour. The

study also found that new graduate midwives in tertiary public hospitals are more influenced by senior midwives. The different staff mix and the GP shared care model in rural hospitals results in midwives making more independent decisions and not being as influenced by obstetricians and peers. Because of this, these midwives are more autonomous in making decisions regarding women's food and fluid consumption during labour.

MGP midwives provide care within a midwifery-led care model, with the majority of women giving birth in public hospitals. As a result, MGP midwives also experienced receiving instruction from a registrar who limited women's oral intake during labour when the women had a potential high risk of an emergency caesarean section. Nevertheless, MGP midwives are the primary carers and often care for low-risk women within this continuity of care model; therefore, these midwives experience less direction from obstetric registrars than midwives working in the general public hospital model. For these reasons, MGP midwives make more autonomous decisions in relation to women's oral intake during labour.

4.3.3 Clinical guidelines/policies

All the participants indicated that clinical guidelines/policies influenced their midwifery practice. The South Australian Department of Health publish the online 'South Australian Perinatal Practice Guidelines' (SAPPGs) (2017) and the New South Wales Government provides 'Maternity policies and guidelines' (2017), which summarise the fundamental instructions for the management and clinical procedures for pregnancy, labour and birth, the puerperium period, and care of the newborn. The SAPPGs includes guidelines on women's oral intake during labour, while the New South Wales 'Maternity policies and guidelines' does not provide specific related information. However, each hospital may have their own clinical guidelines/policies. All the study participants stated that clinical guidelines/policies govern their practice for safety and maintaining the high quality of midwifery care. In relation to this, Participant 6 said:

> *"Oh, I think they [guidelines/policies] play a very important role. Because if you do not have those guidelines to look at and make sure that you are doing your work properly, then you know, you do not have any standard to follow. So they are very, very important"* (P.6).

Participant 7 also commented on the importance of midwives following clinical guidelines.

> *"I guess, certainly if I were to be challenged or questioned about what I was saying about nutrition and hydration during labour, I would, that would be a first place I would go to have a look and see what the guidelines say. I could back myself up and say 'Well, a guideline says this is what I am doing, so leave me alone'" (P.7).*

However, 10 of the participants were not aware of the actual content of the government or hospital guidelines regarding women's oral intake during labour. Participant 2, who works through the MGP in the public sector, commented:

> *"No, I do not know what they say [guidelines or policies]. I feel a struggle with women who eat and drink. I start to feel embarrassed that I haven't perhaps kept up with what is the policy, because it is an area where I tend to go with my own practice here … I am aware that policies that we should not be eating and it seems to me that very driven by anaesthetic views. I don't think that's reasonable"* (P.2).

Participant 5, who works in a private hospital, also said:

> *"I do not know what it is. But if I have too, if I worked in a tertiary hospital or a private hospital, I would think that they would know, it would be well known what the guideline is. If there is an issue, like they would … 'make sure you read this guideline'. But I have not really seen anything that specific. It is specifically about oral intake in labour. There might be, I do not know" (P.5).*

Participant 11, who works in a private hospital, commented that her clinical guidelines are basically the obstetricians' preferences and instructions.

> *"In our hospital, I do not think there is a guideline. I think that guidelines are unspoken words from the obstetricians. In private institutions, the obstetricians tend to let us know what they want and what they do not want from you. That can be difficult, because you know the midwives want to practice from the PPGs [Perinatal Practice Guidelines] and certainly a lot of our practice comes from the PPGs ... I guess you have to respect what they (obstetricians) want, so it affects me in a sense. If*

the woman really wants to eat, I will negotiate, but otherwise, I will follow what they want to do. They are their patients. I am looking after them for them" (P.11).

The participants who worked in private hospitals have described that they prioritise obstetricians' desires and their instructions or standing orders. Obstetricians' instructions, viewed as clinical guidelines, were the source of primary reference for these participants to ensure that they met the expected practice requirements for women's oral intake during labour.

Theme summary

All the participants knew that government and hospital guidelines/policies for general clinical midwifery practice existed. They stated that these guidelines/policies are very important to follow to ensure that their practice is appropriate. However, information about women's eating and drinking during labour may not be included in all of the government and hospital guidelines/policies in Australia. Even though the SAPPGs provide clinical guidelines of women's oral intake during labour, the majority of participants did not know what these instructions were. Furthermore, the participants who work in private hospitals spoke of the 'guidelines' being the obstetricians' instructions. In addition, differing models of care, health systems, and hospital locations did not influence midwives in understanding clinical guidelines in relation to women's oral intake during labour. The study found that regardless of the health systems and models of care that the participants worked in, their level of understanding of the clinical guidelines regarding women's food and fluid intake in labour was poor. Therefore, midwives tend to value obstetric instructions, or women's desires, rather than clinical guidelines, when making decisions about women's oral intake during labour.

4.3.4 Women's expectations of care

All the participants identified that women's expectations of care influenced their decision-making in relation to women's oral intake during labour, as they strived to encourage

women's empowerment and to respect their right to choose their care. Furthermore, the participants stated that women should have a right to determine whether they eat or drink during labour. Respecting women's right to make decisions, and promoting women's empowerment, lead to their better experience of labour and birth. These factors influenced the participants' decision-making in relation to women's oral nutrition during labour.

Two sub-themes related to women's expectations of care were identified; midwives' decision-making in relation to women's food and fluid consumption during labour is influenced by women's expectations of care, including women's choices/desires and their comfort/sense of control (see Table 5 below).

Table 5: Theme Four: Women's expectations of care and related sub-themes

Theme 4	Categories (sub-themes)
Women's expectation of care	4.1 Women's choices/desires
	4.2 Women's comfort/sense of control

Sub-theme 4.1: Women's choices

The participants identified that women's choices and desires about whether they want to drink or eat during labour influenced their decision-making, as they sought to meet women's needs and promote their empowerment. Midwives have a responsibility to recognise women's rights to self-determination, and the need to provide a high standard of midwifery care (Nursing and Midwifery Board of Australia 2013). At times, a woman's expectations and desires conflict with the health service culture and staff expectations, and this may necessitate midwives needing to empower women to make informed decisions and advocating on their behalf. Participant 4, who works through the MGP, commented:

> *"My main philosophy is working with giving women a choice and helping them make an informed choice, um, making sure they know that. They can choose again something as well. If they do not want, you know, … they do not want to follow the recommendation. That is okay as well that I support them. Women should have the choice to eat and drink. They should be educated about, um, you know, I guess the disadvantage or the potential risks might be very small" (P.4).*

Participant 11 suggested that women's levels of education influenced their empowerment to choose their care.

> *"We have antenatal classes, so we have got different levels of education that we provide. We normally talk about what you can bring, something nutritious … most of women come through our hospital, they are very educated women and they have got pretty much ideas of what they want to do" (P.11).*

Women are provided with education to prepare them for labour and birthing through antenatal education classes or midwifery antenatal visits. Six of the participants who work in private and rural public hospitals indicated that their hospital provides antenatal classes that include recommendations on what to bring to the hospital and what to eat and drink during labour. However, in the private sector, women's private obstetricians' preferences guide women's food and fluid consumption during labour. As a result, these midwives explain the more general concepts to the labouring women; for instance, that women can bring light snacks, such as biscuits, lollies, jelly, and nutritious drinks to the hospital. Two of the MGP midwives provided antenatal home visits in which they provided women with information about their oral intake during labour, if the women asked them. The other four midwives did not know if women were provided with this information, or they did not educate the women themselves about oral intake during labour throughout their pregnancy. One of the midwives in a tertiary public hospital explained that women have an option whether to attend antenatal classes or not. As each hospital may provide different education regarding women's food and fluid consumption during labour, women's levels of education may vary considerably, affecting their agency in determining what they eat and drink during labour.

Participant 11, who works in a private hospital, explained that women's level of education influenced their expectations of care.

> *"I think generally most of women come through our hospital, are very educated and pretty much they have got ideas what they want to do. Some women come with a specific birth plan. And you often wonder if their particular birth plan is going to work out with the private obstetricians looking after their needs … also they make us concerned about giving women a good birth experience and moving forward having a good and specific experience. But for private midwives, that is a massive challenge for their particular personal practice ... It is also very difficult to advocate with the obstetricians on behalf of women" (P.11).*

She also went on to comment that midwives who work in the private sector sometimes felt challenged when women's expectations and their obstetricians' preferences were different. They needed to negotiate with the women or the obstetricians to provide care in relation to women's oral intake during labour.

> *'Sometimes, it can be very difficult to explain to the women. Unfortunately, if the obstetrician doesn't want you to eat. They can be a difficult subject. But generally speaking, if we said to the women 'No, you are not allowed to have anything to eat', she is upset. Then the obstetricians say 'No, you know you're not allowed to have something to eat during labour', they will just accept it. Because they tend to, you know, to respect that authority level more … Also they (obstetricians) are quite open to discuss certain things' (P.11).*

Furthermore, five participants stated that women's cultural backgrounds influenced their desires to drink or eat during labour which, in turn, affected their own midwifery decision-making in this area of care. For example, some women bring their own special soup and rice to hospital, and eat these during labour, which is an important part of their traditional practice for childbirth. The midwives did not feel it appropriate to restrict these cultural practices in the context of labour care.

Participant 7 said:

> *"Some culture differences, you know, you also have a couple of different cultures based on any certain food and certain drinks during labour. So again, it is not up to us to restrict that you know. We have to acknowledge their cultural needs" (P.7).*

Participant 12 also commented:

> *"I think it is an, it is an individual thing. Labour is so individual, and cultural practices come into that. So we do have to be respectful. This is one of the most important times of their life, so I think we need to make them feel special ... I look after everyone with the same respect and dignity and care that I would expect, high level of care, but I think it just changes in regard to, yeah, what their cultural practices are, what their beliefs are so … It is an individual thing and I'm always learning" (P.12).*

Providing culturally safe care and respecting women's culture are an essential part of midwifery practice (Nursing and Midwifery Board of Australia 2008, p. 6). The participants identified that women's choices/desires are a significant factor in influencing midwifery care in relation to the provision of oral nutrition during labour, as they attempt to enhance women's positive birth experiences. Furthermore, they described how they respected women's decisions in relation to eating and drinking during labour in order to promote women's empowerment. Five participants stated that 'a woman's body can tell what it needs' and, as such, women who recognise their need to eat and drink can let their needs and expectations be known to the midwife. However, the participants who worked in private hospitals commented that they sometimes felt challenged when women's expectations and their obstetricians' preferences differed. They needed to negotiate with the women or the obstetricians to provide care in relation to women's oral intake during labour. Midwives are aware of the significance of respecting women's choices and desires. Nevertheless, midwives who work in private hospitals and in tertiary public hospitals, except for those who operate under the MGP, feel the strain between women's needs and obstetric control, when they make these decisions about nutrition.

Sub-theme 4.2: Women's comfort/sense of control

The majority of participants identified that women's eating and drinking during labour may be needed to maintain their comfort and their feeling of being in control. Women in labour often lose their appetite, feel nauseous, and vomit as a result of delayed gastric emptying (SAGGPs 2015, p. 10). In relation to this, eight participants stated that a disadvantage of women eating and drinking during labour is the discomfort caused by the nausea and vomiting. They did not usually offer an entire meal to women in labour and only provided light meals, including jelly, crackers, cheese, biscuits, and sandwiches. Participant 8 explained her concern about women vomiting as a result of their eating and drinking during labour. As a result, she usually offered only light snacks to women during labour.

> *"We would be more likely to say they (women) may have just small pieces to eat, because you could potentially vomit" (P.8).*

However, six of the participants said that nausea and vomiting may be a normal transitional component of birth. Because of this, they were more concerned about promoting women's nutritional or hydration status to prevent discomfort, stress, and exhaustion as opposed to preventing vomiting. These factors influenced midwives' decision-making in relation to women's oral intake during labour to promote the women's comfort.

Participant 8 commented:

> *"I would definitely encourage them to eat whatever they want to, as long as they are comfortable. I guess I would give them education as well. Lots of women are not very hungry in early labour and through labour, but just go with what they are feeling at that time" (P.8).*

Furthermore, most of the participants indicated that women's natural eating and drinking behaviour during labour supports their emotional and psychological feeling of being in control.

Participant 6 stated:

> *"That is the first one (benefit of women's oral intake during labour); they can feel in control in their labour. And they can feel that, yes, it is all about things they want to do. Secondly, obviously, they are going to be uncomfortable, so what is the point in being starving and hungry? If you are hungry, you should be able to eat ... It does make a woman more comfortable to be allowed to do what she wishes"* (P.6).

The participants who worked through the MGP, and in the rural hospitals, reported that they were actually able to offer and provide light meals, sandwiches, and fresh fruit juice, according to the women's needs. The study found that midwives promote women's oral food and fluid intake during labour as it can help women to feel normal, and to increase their sense of control. Considering women's comfort and sense of control in coping with labour and birth influenced midwives' decision-making to allow or encourage women to eat or drink during labour.

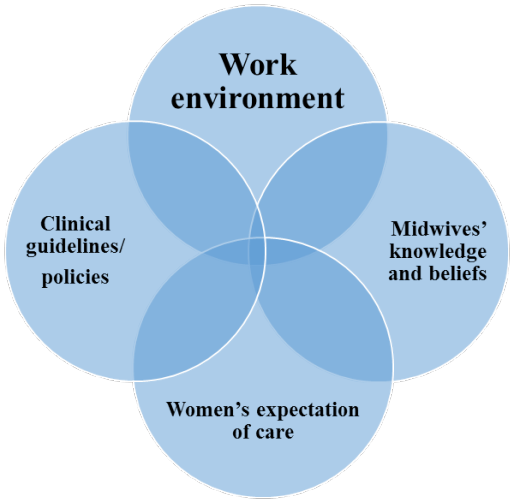
Theme summary

Women's choices and desires, including their level of education, and their cultural customs around labour and birth influenced midwives' decision-making in relation to labouring women's oral nutrition during labour, as midwives attempted to provide safe and satisfactory care for women. This did, at times, cause conflict between the labouring women's expectations, and the obstetricians' expectations and the institutional culture, in relation to women's oral intake during labour. An understanding of the physical and psychological effects of women's nutritional intake influenced midwives' decision-making in order to promote women's comfort and feeling of being in control of the situation. Nevertheless, the participants suggested that they struggled to make decisions regarding women's oral nutrition in labour when the maternal physical and psychological needs conflicted with obstetric control.

4.4 Chapter conclusion

This chapter has presented the demographic information of the 12 participants for the study and the findings from a thematic analysis of their in-depth interviews. The study participants have a diversity of characteristics including age, midwifery/nursing experience, educational qualifications, and place of work. This variety of data may demonstrate different points of view regarding women's food and fluid consumption during labour. The data analysis found a number of different factors that influence midwives' practice in this area. A thematic analysis of this data was conducted through four main themes, including midwives' knowledge and beliefs, work environment, clinical guidelines/policies, and women's expectations of care. The study found that these four factors are strongly related to each other and create conflict for midwives when seeking to make decisions in relation to women's oral intake during labour. From the study, the work environment was the most significant factor impacting on the tension experienced by midwives regarding women's food and fluid consumption during labour (see Figure 3).

Figure 3: Tension and interrelation of midwives' decision-making in relation to women's oral intake during labour



The next chapter, Chapter 5, will present a discussion of the findings in relation to the research question and the literature.

CHAPTER 5: DISCUSSION

5.1 Introduction

The previous chapter presented the findings of the study. In this chapter, the significant factors from this study's findings which influence midwives' practice in relation to women's oral intake during labour are summarised and discussed. The aim of the study has been to investigate the influences that affect midwives' clinical practice and management in relation to women's oral food and fluid intake during labour. The objectives of the study are to: 1. identify which factors affect midwifery practice in relation to women's oral intake during labour; and 2. explore the relationship between these influencing factors and midwives' attitudes and practices in relation to women's oral intake during labour. The first section will discuss the key findings of the study from the thematic analysis of the data which will also be contextualised within the current literature on the topic. The final section will present the conclusion to this chapter.

5.2 Summary of research findings

This study provides an understanding of Registered Midwives' experiences of providing midwifery care in relation to women's oral nutrition during labour in Australia. The study has found that the participants experienced strain and tension due to a variety of factors, including their autonomy to practice based on knowledge, clinical, and personal experiences, institutional medical domination, clinical guidelines, and women's needs for oral intake during labour which, in combination, influence midwives' decision-making. The participants generally learned about women's oral intake during labour as part of their pre-registration midwifery education, and also as part of their graduate year in which they are taught that women's hydration status should be maintained to normalise their labour and birth. However, their professional clinical experiences in their work environment, whether in metropolitan or rural hospitals, or public or private hospitals, along with other health professionals, including

obstetricians and midwifery peers, affected participants' decision-making regarding women's oral nutrition during labour.

The different models of care, including hospital-based care, midwife-led care, continuity of midwifery care (MGP), GP shared care, and private obstetric care determined who assumes ultimate responsibility for each woman in labour. Due to this, midwives felt obligated to follow the primary decision-makers' instructions, such as private obstetricians' preferences or experienced midwives' guidance. The hierarchy and power relationship between obstetricians and midwives influenced midwives' decision-making.

Policies and guidelines also had some influence on participants' perceptions of their decision-making. Not all of the government and hospital guidelines in Australia are explicit regarding women's oral intake during labour. However, the SAPPGs do provide clinical guidelines on this issue, as follows: "Diet and fluids are not restricted for women having normal, uncomplicated labours" (SAPPG 2015, p. 10). Furthermore, from a systematic review of over 30,000 women, Singata, Tranmer and Gyte (2013, p. 14) stated that food and fluid consumption for low-risk pregnant women in labour does not adversely affect maternal and neonatal birth outcomes. The participants in this present study indicated that they were not aware of the detail in the government and hospital guidelines regarding women's oral intake during labour. The participants who worked in the private sector prioritised private obstetricians' directions rather than the clinical guidelines, even though they recognised that there were clinical guidelines to follow. Given the low impact of clinical policies/guidelines on participants' decision-making, it is evident that other influences were more dominant in influencing their midwifery practice. Women's expectations of care, including their choices about whether to eat or drink during labour, affected participants' decision-making, as they sought to respect the women's rights to choose their care and promote their satisfaction of their birthing experience.

Additionally, women's understanding of labour care based on antenatal education classes and cultural background influenced their autonomy to identify their desired care during labour. Women with clear expectations also influenced midwives' practice. The participants indicated that their decision-making was influenced by considerations about women's comfort and sense of control, which should be maintained for women to have positive birth experiences.

It can be seen from the findings that no single factor influences the participants' decision-making, but rather the participants had to compromise with four primary influences to determine their course of action. Different contexts created different outcomes of midwifery care. The factors which resulted in an increase in midwives enabling women to eat and drink as they wished were MGP models of care, a rural midwifery environment, their positive clinical experiences and negative personal experiences of labour, and women's cultural norms and expectations. On the other hand, metropolitan hospitals, obstetric-lead care, private hospitals, and midwives with a nursing background often lead to judicious use of food or fluid in labour, often favouring fluids alone. The interrelatedness of the above factors are an important finding from this study (see Figure 3 on page 63).

5.3 Discussion of the findings

The participants in this study identified a tension in making decisions in relation to women's oral intake during labour. These factors were midwives' knowledge and beliefs, the work environment, clinical guidelines/policies, and women's expectations of care.

Clinical decision-making is a process which includes both clinical information and spontaneous recognition of environmental and psycho-social-spiritual influences (Jefford, Fahy & Sundin 2010a, p. 129). These factors affect clinical situations, and midwives' opinions and approaches (Jefford, Fahy & Sundin 2010a, p. 129). The process of decision-

making is complicated, and health professionals work in complex environments (Stubbings et al. 2012, p. 1444). Therefore, it is important for them to be aware of the process of decision-making to provide safe and appropriate practice (Stubbings et al. 2012, p. 1444). Midwives' decision-making influences women's outcomes of midwifery care; therefore, it is also crucial to develop good rapport with labouring women (Noseworthy, Phibbs & Benn, 2013, p. e42; Stubbings et al. 2012, p. 1444). The study found that significant factors which affect midwives' decision-making in relation to women's oral intake during labour were the work environment including health systems, models of care, and private obstetricians and obstetric registrars. Midwives attempt to promote effective interpersonal relationships between midwives and private obstetricians and obstetric registrars in order to facilitate woman-centred care. As a result, midwives feel the strain of making decisions about women's oral intake during labour.

5.3.1 Health systems and models of care

Hospitals which provide maternity services are located in both metropolitan and rural areas across Australia. For instance, in South Australia, there are three tertiary public hospitals that provide maternity care, one located in the north of the city, one in the southern metropolitan area, and one in the city itself, and many other secondary care hospitals in rural areas (Government of South Australia 2012). These tertiary public hospitals are large and well equipped to provide high-risk and safe obstetric healthcare (Government of South Australia 2012). Country hospitals work with General Practitioners (GP) at their clinics, and hospitals to run acute medical services, including obstetrics (Government of South Australia 2012). The study suggested that midwives who work in rural hospitals had more autonomy to make decisions about women's oral intake during labour, as they shared women's care with GPs, and their views of care were similar. Due to this, these participants did not recall receiving direction about women's oral intake during labour from these doctors and their peers. These

findings are consistent with the literature on rural healthcare practice. The roles of midwives in metropolitan versus rural areas are different, as midwives in rural areas work more independently (Hegney 2007, p. 74). In rural settings, there are a limited number of specialists and resources; therefore, midwives who work in rural hospitals have more autonomy and independence, and are more multi-skilled (out of necessity) in managing women's conditions (Hegney 2007, p. 76). Midwives in rural areas also feel that their autonomy is recognised, and their decisions are supported by their organisation (Toohill et al. 2017, p. 6). They have more confidence in their knowledge compared with midwives who work in urban areas (Toohill et al. 2017, p. 6). For these reasons, health systems influence midwives' roles in providing midwifery care. Midwives who work in rural hospitals may tend to freely allow women's food and fluid consumption during labour, as they usually look after low-risk uncomplicated women, and their decision-making is self-reliant.

Furthermore, this study has shown that varying models of care, including in the public and private systems, are factors that affect midwives' decision-making about oral nutrition during labour. In addition, midwives' level of autonomous decision-making is different in each model of care (Parsons 2004, p. 76). Even though midwives and obstetricians work together, the final decision is made by the obstetricians or obstetric registrars in many settings, including in tertiary public hospitals (except in the MGP), and in private hospitals (Kruske et al. 2013, p. 86). The MGP in the public system focuses on continuity of care and woman-centred care where a primary midwife supports each woman's journey of pregnancy, birth, and the postnatal period (Government of South Australia 2016). Women in MGP are usually low-risk uncomplicated pregnancies, and they give birth either at home, or in a birth centre or labour ward in a public hospital (Government of South Australia 2016). These women are consulted by an obstetric registrar or senior obstetric consultant who is employed by the hospital only if a woman needs to be seen and the midwife makes a referral (Government of

South Australia 2016). The study found that MGP midwives sometimes experience being guided about women's oral intake during labour, when the women have a potential risk of an emergency caesarean-section. However, midwives in MGP, a midwife-led model, have autonomous responsibilities to make decisions to look after women. Due to this, they are more likely to make decisions about women's oral intake during labour independently, being less directed by obstetric registrars.

Private obstetricians are a significant factor mentioned by all the participants who worked in the private hospital setting. According to Dahlen et al. (2017, pp. 5-7), low-risk uncomplicated primipara women who give birth in private hospitals have the highest chance of having an instrumental birth or caesarean-section, with a potential reason for this being practitioners' behaviours and preferences. Midwives, especially in a private hospital, may be concerned about the risk of oral intake during labour because of the high rate of instrumental births and caesarean-sections. However, this reasoning was not evident in the study findings. It has also been shown that midwives in such contexts feel an obligation and stress to follow obstetricians' advice (Blix-Lindstrom, Johansson & Christensson 2008, p. 194). This latter reason was definitely evident in this study.

Furthermore, peers were also identified as a factor from the study which influenced midwives' practice in relation to women's oral intake during labour. Senior midwives are likely to dominate and drive midwifery care because of the staff hierarchy in hospital settings (Martin & Bull 2005, p. 126). Additionally, midwives tend to justify their care, including their attitudes and performance, based on their years of experience and perceived expertise (Hunter 2005, p. 257). For these reasons, senior midwives may reduce junior midwives' opinions of care; thus causing less experienced midwives to experience conflict between what they are allowed to do and the current evidence-based practice (Hunter 2005, p. 257). Recent graduates have less confidence and experiences; therefore, their options for care are also

limited (Parsons 2004, p. 77). Conflicts and disagreements with obstetricians or midwifery peers occurs because of their differing roles and the power differences between them, which influence a midwives' decision-making processes (Blix-Lindstrom, Johansson & Christensson 2008, p. 191). Complicated tensions and hierarchical relationships between senior and junior midwives, as well as obstetricians, still linger in institutional cultures within healthcare facilities (Reiger & Lane 2009, p. 323). Accordingly, as shown in this study, midwives' decision-making about women's food and fluid consumption during labour is affected by hierarchical relations in hospital settings, and this is also supported in the existing literature.

5.3.2 Midwives' knowledge and beliefs

This study suggests that midwifery practice in relation to women's oral nutrition during labour is influenced by midwives' knowledge and beliefs. Knowledge is a considerable factor affecting midwives' decision-making in clinical situations (Considine, Botti & Thomas 2007, p. 723). According to the Nursing and Midwifery Board of Australia (2008, p. 1), midwives have a responsibility to cultivate their knowledge to manage issues effectively in their clinical practice. Pre-registration education courses should support the development of midwives' essential intellectual skills in order to make autonomous decisions for complex situations and safe evidence-based practice (Banning 2008, p. 188). Therefore, midwives who commence assessing, screening, and classifying women to make clinical decisions are influenced by their education (Jefford, Fahy & Sundin 2010b, p. 248). Additionally, midwives see themselves as professionals who advocate for, and promote, normal pregnancy and birth (Blix-Lindstrom, Johansson & Christensson 2008, p. 195). When midwives make a midwifery care judgement, they do so based on their past experiences of practice. Positive experiences engender trust and belief which are matched to current situations, and this pattern influences midwives' practice (Jefford, Fahy & Sundin 2010a, p. 129). This study has also

found that participants' past professional and personal experiences, both positive and negative, had an impact on their decision-making. Considine, Botti and Thomas (2007, p. 723) stated that health professionals' past clinical and personal experiences affected them in terms of their memory recall, which is connected to their decision-making process.

According to Straus, Tetroe and Graham (2011, p. 17), health professionals gain knowledge and skills through their initial education, continuing professional development, training, reading of the current literature, and their own clinical and personal experiences. Therefore, Considine, Botti and Thomas (2007, p. 725) have argued that knowledge and experience are significant factors influencing nurses' and midwives' decision-making. Nevertheless, experience as an independent factor is not associated with making clinical decisions, because it has been shown that years of experience are not associated with an improvement in decision-making and care (Considine, Botti & Thomas 2007, p. 725). The participants in the present study included a lecturer and a clinical facilitator, who both stated that they accessed up-to-date evidence-based information to teach students about the importance of women's oral intake during labour. However, their actual practice was different, as they were influenced more by the institutional expectations, and focused on maintaining their work relationships with colleagues and peers. According to Gerrish et al (2011, p. 1079), obtaining knowledge in the workplace through the observation of other colleagues and peers, and from the clinical guidelines, are more effective influences on midwives' decision-making rather than keeping up with the current published research. Furthermore, those participants who were also Registered Nurses indicated that their nursing background somewhat influenced their decision-making in relation to women's oral intake during labour. Nurses in hospital settings tend to focus on risk management in the treatment of disease, rather than promoting normality (Kennedy & Lyndon 2008, p. 426). As a result, a number of participants tended to assess women during labour quite prudently.

Midwives' knowledge from their education, beliefs, and clinical and personal experiences influenced their decision-making in relation to women's oral intake during labour, which was evidenced by the participants in the study. Nevertheless, the study suggested that other factors involved in the work environment, such as the model of care, and colleagues and peers had a more direct effect on the participants, as they respected individual obstetric registrars, private obstetricians, and other midwives in working together.

5.3.3 Clinical guidelines/policies

The clinical guidelines/policies on maternity care have been developed to serve institutional agendas, concentrating on risk management and safety (Freeman & Griew 2007, p. 11). The WHO guidelines on pregnancy and childbirth, as well as the Australian government guidelines, state that a low-risk uncomplicated women's oral food and fluid consumption during labour should not be restricted. However, each Australian state has different policies/guidelines. Furthermore, not all states in Australia include women's oral intake during labour in their policies/guidelines. However, the SAGGPs (2015) do state that women's intake should not be restricted when having a normal, uncomplicated labour. These guidelines are revised approximately every three years to ensure that they are based on the latest evidence-based research. Clinical guidelines are established through scientific evidence to support health professionals' decision-making in relation to relevant care for specific conditions, and these are crucial to ensure evidence-based practice (Francke et al. 2008, p. 2). Midwives should utilise clinical guidelines for all women to provide midwifery care which can also promote high quality practice (Francke et al. 2008, p. 2). However, the guidelines/policies may be limited in regard to a variety of women's clinical conditions (Edmondson & Walker 2013, p. 34), and they tend to narrow the options available to midwives to choose and provide care (Cheyne 2006, p. 631).

This study found that the participants recognised the importance of government and hospital clinical guidelines/policies to promote safe and high quality evidence-based practice; nonetheless, they were not aware of, or not confident with, their content. The barriers to the use of guidelines and policies were shown to include heavy workloads, insufficient time, the lack of awareness of women's needs, the confidence of midwives to practice, a supportive work environment, and the complexity of the research (Gerrish et al. 2011, p. 1080; Toohill et al. 2017, p. 4). In addition, the guidelines and policies are not always implemented favourably as they may undergo frequent change, and not all health professionals agree with the recommendations in the guidelines (Francke et al. 2008, p. 2).

The research has shown that midwifery practice in large maternity units does not always follow formal guidelines and policies (Parsons & Griffiths 2007, p. 31). The study found that participants rarely referred to clinical guidelines and policies. Perhaps they did not have much opportunity or time to review them, or deemed the evidence about women's oral intake during labour unnecessary to be concerned with. Most of the participants adhered to institutional cultural norms, which means that they also tended to obey authority in the hospital setting. This had a significant impact upon their decisions in relation to women's oral intake during labour.

Individual midwives work in complicated environments which are influenced by institutional, organisational, social, political, and authoritative factors (Rycroft-Malone 2008, p. 405). This study has identified that midwives' decision-making in relation to women's oral nutrition during labour is influenced by this complicated environment, the models of care, and the power relations between clinicians and midwives, rather than universal, government, or hospital clinical guidelines.

5.3.4 Women's expectations of care

The participants' decision-making in relation to labouring women's food and fluid consumption during labour was also influenced by the women's expectations of care, including their choices, desires, comfort, and sense of control. Women's birth experiences are complex and subjective, and affected by extensive cultural and moral influences, and the varying contexts of the birth (Larkin, Begley & Devane 2009, p. e53).

Midwives should promote choice for women by supporting and informing them about the options for care in order to feel in control during their labour and the birthing experience (Maureen & England 2010, p. 43). Furthermore, hunger may lead to women's discomfort, stress, and concern during labour (Pairman et al. 2015, p. 514). Also, a lack of energy and hydration leads to ketosis which causes exhaustion and prolonged labour (Pairman et al. 2015, p. 514). This study has found that the participants considered that women had a right to choose their care. Furthermore, they supported women in having positive birth experiences to promote birth satisfaction and psychological well-being. If women's expectations are met, their birth experiences are more positive (Maureen & England 2010, p. 43). Their positive birth experiences lead to lifelong benefits, such as bonding and attachment with their newborns, confidence in motherhood, and high self-esteem (Larkin, Begley & Devane 2009, p. e50). On the other hand, negative birth experiences can lead to psychological issues, including anxiety, depression, and stress, which can cause difficulties with attachment of the new-born, relationships with their families, and can also change their reproductive decisions in the future (Larkin, Begley & Devane 2009, p. e50). The study participants stated the importance of understanding the women's cultures, because they may have traditional customs related to specific foods and fluids during labour. Women's specific cultures need to be considered in midwives' decision-making because of the capacity to increase women's satisfaction and autonomy (Noseworthy, Phibbs & Iblce 2013, p. e47).

It is significant for women to feel comfortable, supported, and cared for by midwives who allow women to make their own decisions; hence, in this way, their expectations of care can be met (Larkin, Begley & Devane 2009, p. e50). However, the study found that it is sometimes difficult to satisfy women's preferences and desires as private obstetricians or obstetric registrars often decided whether women were allowed to eat or drink during labour, often without any explanation. In such situations, the participants spoke of needing to guide women to meet the obstetricians' or obstetric registrars' desires, or negotiating with them to achieve the women's expectations. Nevertheless, the women generally accepted their obstetricians' instructions. The relationship between women and midwives who are supportive, aware of women's needs, and who communicate well in providing appropriate information during labour, can boost women's satisfaction of their birth experience and their sense of feeling in control (Larkin, Begley & Devane 2009, p. e55).

Midwives recognise the significance of ensuring that women's choices are considered, as well as their own knowledge and skills in the process of decision-making; however, they meet challenges in meeting women's expectations of care in the hospital setting, as medical authority often dominates (Everly 2012, p. 50; Noseworthy, Phibbs & Benn 2013, p. e43). It is recognised as a conflict to have to consider both women's rights and the authority of medical professionals (Noseworthy, Phibbs & Benn 2013, p. e43). For these reasons, midwives are sometimes caught between the women's needs and preferences for care, and the work environment, professional dominance, and their professional role as midwives in making decisions about women's oral intake during labour (Blix-Lindstrom, Johansson & Christensson 2008, p. 195).

Midwives' knowledge and beliefs, work environment including the clinical guidelines/policies, and women's expectations of care are the factors that influenced the participant midwives' practice in relation to women's oral intake during labour. It was

evident that these four factors created tension and were interrelated for midwives in making such decisions. However, the most significant factors affecting these decisions were the work environment including the varying health systems, models of care, and medical dominance. Effective communication and the development of good relationships between midwives and doctors, and the labouring women, are significant for providing high quality woman-centred care which results in women's successful outcomes (O'Toole 2016, p. 3).

This study suggests that midwives prioritise obstetricians' and obstetric registrars' preferences to make decisions in relation to women's food and fluid consumption during labour. When midwives make decisions about midwifery care, they need to consider the perspectives of different professionals, the hierarchy, labouring women's needs, and the lack of support for change (Lyndon, Zlatnik & Wachter 2011, p. 91). It is evident from this study that midwives' autonomy and empowerment to make decisions in relation to women's oral intake during labour was related to the degree of medical authority. To promote ongoing interpersonal relationships, the participants described how they most often complied with this dominance.

5.4 Chapter conclusion

This chapter has presented a summary, and discussed the findings, of the factors which influence midwives' practice in relation to women's oral intake during labour. The findings were grouped into four themes: midwives' knowledge and beliefs, the work environment, clinical guidelines/policies, and women's expectations of care. These factors interact and cause tension in midwives' decision-making about women's oral nutrition during labour. The next chapter summarises the study, presents the limitations of this research, discusses the implications and recommendations for further research, and concludes the study.

CHAPTER 6: CONCLUSION

6.1 Introduction

This study has explored the factors which influence midwives' practice in relation to women's oral intake during labour. The first chapter presented an introduction to the study. The second chapter provided a literature review of the factors which influence midwives' decision-making and practice in the management of labour. The methodology and methods used to conduct the study were outlined and discussed in Chapter Three. Chapter Four presented the findings of the study which were discussed in Chapter Five. This concluding chapter summarises the key findings, and presents the limitations of the study. The implications for midwifery practice, education, and further research, and recommendations for improving midwifery care and women's birthing satisfaction will be presented. The chapter concludes with the overall finding.

6.2 Summary of key findings

The aim of the study is to investigate the influences that affect midwives' clinical practice in relation to women's food and fluid intake during labour. The study has found that the work environment, especially the difference between the public and private systems, models of care, and obstetricians and/or obstetric registrars influenced midwives' decision-making on this issue. This may be because hospital systems and models of care determine the role or position of midwives.

Additionally, midwives seek to achieve and maintain good interpersonal relationships with colleagues and peers in order to provide high quality woman-centred care. The study has found that obstetric registrars and obstetricians in tertiary public hospitals (except in the MGP) and metropolitan private hospitals make the final decisions for women's oral intake during labour. Midwives brought their knowledge, government and hospital clinical guidelines/policies, and labouring women's expectations of care in relation to their oral

intake during labour into their decision-making, to provide safe woman-centred care. However, the midwives also felt a sense of obligation to follow obstetricians' and obstetric registrars' preferences to allow or limit women's food and fluid consumption during labour. This hierarchical relationship between obstetricians and midwives significantly influenced midwives' decision-making. These factors, as identified in this study, are inter-related and also generate significant tension. Therefore, midwives should be aware that these influences are associated with their practice in relation to women's oral intake during labour.

6.3 Limitations of the study

There are a number of limitations that need to be considered when applying the findings of this study. Firstly, even though the participants worked in a variety of contexts and models of care, they worked in only two states of Australia, South Australia and New South Wales. Each state government or hospital establishes midwifery or obstetric guidelines and policies for standard practice. For this reason, the participants' practice in relation to women's oral nutrition during labour may be different from midwives in other states or health services. Furthermore, no independent midwives showed a willingness to participate during the process of recruitment, and therefore, are not represented in this study.

Secondly, this qualitative study has only a small sample size and is quite subjective in nature. Also, midwives' experiences and feelings in relation to women's oral nutrition during labour are diverse and highly individual; therefore, the findings might not be reflective of all midwives in Australia.

In addition, the findings might not be as in-depth as is possible, as English is the second language of the principal researcher. Most of the interviews were conducted by phone or Skype, so there was potential for misunderstanding. However, the researcher had an interview practice session with the supervisors to improve her abilities to conduct the

interviews; thus, the aim of the study was accomplished. Despite these limitations, the study proposes a number of significant recommendations for midwifery clinical practice, education, and further research.

It needs to be recognised that all of these limitations may affect the rigour of the study, and therefore, the findings may not apply to the entire Australian context of midwifery practice in relation to women's food and fluid consumption during labour.

6.4 Implications of the study

The findings of this study have implications for midwifery practice in Australia. Midwifery education provides midwives with the required skills and knowledge required to ensure high quality midwifery practice (Way 2016, p. 1). The study provides midwives with an understanding of the factors that influence their decision-making in relation to women's oral intake during labour, and how these factors create tension and are inter-related, all of which have a negative impact on midwives' practice.

It is evident from this study that midwives' work environment, especially the health systems, models of care, and obstetricians and obstetric registrars had a significant impact on midwives' decision-making and behaviours. Hence, midwives need to negotiate with, or guide, women to meet doctors' preferences in order to maintain their relationships in working as a team in order to provide woman-centred care. The participants indicated that labouring women usually accept the midwife's or obstetrician's advice; however, women's expectations of whether they should eat and/or drink may sometimes be overlooked. The study suggests that midwives should provide appropriate and sufficient information about women's oral intake during labour prior to, or during, labour in order to facilitate women's autonomous decision-making.

The study participants demonstrated that they had learned about women's oral nutrition during labour as part of their pre-registration education and other training courses. However, their knowledge from their education is different to their actual midwifery care, because institutional and medical control and pressure alter their behaviour during their practice. As a result, midwives' decision-making processes, including the inter-related factors - midwives' knowledge and beliefs, the work environment, clinical guidelines/policies, and women's expectations of care - should be included as part of pre-service and in-service education in the universities and hospitals. Furthermore, the majority of the participants were not aware of government or hospital clinical guidelines which provide information about women's oral intake during labour. Therefore, current clinical guidelines should be made more accessible, to encourage midwives to constantly review evidence-based practice, and to facilitate their autonomous decision-making in relation to women's oral intake during labour.

The study focused on midwives' decision-making in relation to women's oral intake during labour, and found that midwives prioritise obstetricians' and obstetric registrars' instructions rather than the labouring women's desires. Furthermore, there is no identified research about women's decision-making and experiences in relation to their oral intake during labour. Investigating women's experiences would provide further understanding of the provision of woman-centred care, and supporting women's positive birth experiences.

6.5 Recommendations

The recommendations presented here are related to midwives' practice, education, and further research. Improving midwives' awareness of the interconnected factors which create strain when making decisions about women's oral nutrition during labour, can potentially empower midwives in making autonomous decisions. For example, the awareness of these factors may help midwives to revise clinical guidelines to ensure the use of evidence-based practice and to provide midwifery care with confidence. Pre-registration education in the

nation's universities, and in-service education in the workplace, are needed, and should include the topic of midwives' decision-making, including these four factors, in order to strengthen midwives' professional development. Midwifery education and continuous learning has the potential to improve midwives' empowerment and self-esteem so that they can better discuss labouring women's oral intake with obstetricians in institutional settings.

Based on the findings, the following recommendations are suggested:

-Pre-registration education and in-service training in midwives' process of decision-making should be implemented in order to enable them to recognise the factors which influence their decision-making in relation to women's oral intake during labour.

-Midwives should be encouraged to provide information to women about eating and drinking during labour, during the antenatal period, or in labour situations to promote women's empowerment to make their own decisions, which can support positive birth experiences.

The recommendations for further research are:

-Women's experiences of labour and birth in relation to their oral nutrition during labour should be further researched, as this study has found that labouring women's desires are sometimes disregarded. Exploring women's experiences of their oral nutrition during labour may be beneficial for both labouring women and midwives to make their decisions positively.

6.6 Chapter conclusion

This qualitative study, utilising an interpretive descriptive approach, has explored the factors that influence midwives' practice in relation to women's oral intake during labour. Midwives' knowledge and beliefs developed through their formal education, their professional and personal experiences, the work environment including various health

systems, models of care, clinical guidelines/policies, and obstetric authority, and women's expectations of care and comfort determined midwives' decision-making and behaviours in providing care in relation to labouring women's oral nutrition in Australia.

The most significant factors to arise from this study were the health systems, models of care, and obstetric control that influenced midwives' decision-making in relation to women's oral intake during labour, because midwives tried to maintain effective interpersonal relationships with obstetricians or obstetric registrars to provide woman-centred care. The findings of this study provide an understanding of midwives' experiences of women's oral intake during labour, and the factors which are linked and create tension in relation to midwives' decision-making. It is important for midwives to be aware of these compound factors which negatively influence their decision-making processes in order to facilitate midwives' autonomy and empowerment.

This study has presented the findings, implications, and recommendations for midwives' practice, education, and further study. The implementation of the recommendations can provide improvements to midwifery care in relation to women's oral intake during labour, and midwives' empowerment to make effective decisions for labouring women.

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APPENDIX A: SUMMARY OF ARTICLES INCLUDED IN THE REVIEW

No.	Author/s surname, year & country	Title	Study Purpose	I. Study paradigm II. Methodology III. Methods IV. Data analysis	Setting and sample	Main findings	Strengths /weaknesses of the study
1	Blix-Lindström, Johansson & Christensson 2008 Sweden	'Midwives' navigation and perceived power during decision-making related to augmentation of labour'	To investigate how midwives understand their decision-making regarding augmentation of labour	I. Qualitative II. Descriptive III. Focus-group discussions IV. Thematic content analysis technique	20 midwives working on labour units in Stockholm, Sweden	Five categories were identified which were factors that affected midwives' decision-making: 'midwives' professional selves', 'women in labour', 'regulations and guidelines', 'influence of obstetricians', and 'shortage of delivery rooms'	**Strengths**: Justified the appropriate data collection and analysis. Rigour was stated. Clear findings. Identified the limitations of study. Clearly stated ethics approval. **Weakness**: It does not discuss the theoretical foundation of the study. Sampling strategy was not detailed. Did not identify the relationship between the researchers and the participants
2	Cheyne, Dowding & Hundley 2006, UK	'Making the diagnosis of labour: midwives' diagnostic judgement and management decisions'	To investigate midwives' perception to make decisions regarding the diagnosis of labour.	I. Qualitative II. Descriptive III. A convenience sample and focus groups IV. Latent context analysis	13 midwives who worked in a maternity department in the North of England in 2002 They were interviewed about their experiences regarding women's admission of labour	Women's stress, stress coping, physical indications, social factors, women's expectations, and institutions, including midwifery care, justifying actions, and organisational factors influenced midwives' decision-making in relation to the diagnosis of labour	**Strengths**: Addressed appropriate recruitment, data collection and analysis. Identified limitations and gaps. Stated suggestions for further research. Clearly stated ethics approval **Weakness**: The sample size is small. Did not identify the relationship between the researchers and the participants. Might be outdated

3	Everly 2012 The USA	'Facilitators and barriers to independent decisions by midwives during labor and birth'	To examine the factors that affect midwives' decision-making in relation to the management of labour in free-standing birth centres and hospitals	I. Qualitative II. Grounded theory III. Semi-structured interviews with open-ended questions IV. Identified codes, categories and themes through QRS NVivo (QSR International, Cambridge MA)	10 midwives were interviewed through open-ended questions	Midwives' decision-making was influenced by the facilities, their confidence, women, the birth environment, and healthcare teams	**Strengths**: Addressed appropriate recruitment, data collection and analysis. Demonstrated considerations for future research. Clearly stated ethics approval. Identified trustworthiness and limitations of the study **Weakness**: Not adequate data for grounded theory. Did not identify the relationship between the researchers and the participants.
4	Freeman, Adair, Timperley & West 2006 New Zealand	'The influence of the birthplace and models of care on midwifery practice for the management of women in labour'	To explore how the midwifery model of care and varying birthplaces affect midwives' decision-making processes in relation to labour management	I. Quantitative II. Surveys III. Questionnaires IV. The Statistical Package for the Social Sciences (SPSS, Version 10)	104 midwives and 100 uncomplicated healthy primiparas were surveyed using open-ended questions	Models of care did not influence midwives' decision-making. However, the birthplace, especially the obstetric model of hospitals and guidelines significantly influenced midwives' decision- making	**Strengths**: Clinical and statistical significance: wider population of study. Demonstrated each outcome based on statistical analysis. Clearly stated ethics approval. **Weakness**: Did not mention confounding factors
5	Martin & Bull 2005 UK	'Measuring Social Influence of a Senior Midwife on Decision-making in Maternity Care: An Experimental Study'	To examine whether midwives' decision-making was affected by their senior colleagues in midwives' general practice	I. Mixed methods (Quantitative and qualitative design) II. Surveys (the Social Influences Scale for Midwifery (SIS-M)) and interviews III. Questionnaires IV. Analysis of Variance ANOVA	209 midwives (a 65% response rate) were surveyed and 60 midwives were interviewed. The project took 5 years. E grade: juniors G grade: seniors F grade: between E and G	The presence of senior midwives was a factor that influenced junior midwives' decision-making for women-centred care	**Strengths**: Wider population and longitudinal nature of the study. Indicated the relationship between the interviewer and the interviewees. **Weakness**: Did not mention ethics approval. The interviewer was a more experienced midwife than the interviewees, which might have affected their responses.

6	Noseworthy, Phibbs & Benn 2013 New Zealand	'Towards a relational model of decision-making in midwifery care'	To explore issues of midwives' decision-making of labour care and to introduce a relational-decision-making model	I. Qualitative II. Descriptive III. Interviews IV. Thematic analysis	Eight midwives were interviewed in a large region of New Zealand	Midwives' decision-making was influenced by complicated human, political, and contextual factors	**Strengths**: Clear rationale of data collection and analysis. Findings are related to clinical practice. Clearly stated ethics approval. **Weakness**: The sample size is small. Did not explain the relationship between the researchers and the participants. Limitations and rigour of the study are not stated
7	Parsons 2004 Australia	'A midwifery practice dichotomy on oral intake in labour'	To explore the views which influence midwives' decision-making and practice in relation to oral intake during labour for women with low-risk status	I. Quantitative II. An exploratory survey design III. Questionnaires IV. Using simple content analysis	89 midwives at four different hospitals were surveyed	Midwives' practices regarding oral intake during labour were affected by their experiences, hospital policies, and midwives' individual decisions	**Strengths**: Clinical and statistical significance: wider population of the study. Clearly stated ethics approval. **Weakness**: Poor response rate (46%). Might be outdated
8	Toohill, Sidebotham, Gamble, Fenwick & Creedy 2017 Australia	'Factors influencing midwives' use of an evidenced based normal birth guideline'	To examine midwives' experiences and understanding of the Queensland Normal Birth Guideline	I. Quantitative II. Descriptive cross-sectional study III. Survey IV. The data were analysed by SPSS 21	297 midwives in Queensland, Australia were surveyed. The survey structured four sections including geographic information, Best Uptake of Maternity Practice Survey (BUMPS), Adapted Evidenced Based Practice Beliefs Scale (A-EBP-B), and a free comments section	Institutions including public and private systems, and models of care, affected midwives in their use of the guideline to facilitate evidence-based practice	**Strengths**: Clinical and statistical significance: wider population of study. Used relevant indicators to analyse data for reliability. **Weakness**: 80.7% of participants worked in a public sector and 12.9% of them worked in a private sector, which might influence the rigour of the study. Did not mention ethics approval

APPENDIX B: EVALUATION OF QUALITATIVE STUDIES

1. Blix-Lindstrom, Johansson & Christensson (2008)
2. Cheyne, Dowding & Hundley (2006)
3. Everly (2012)
6. Noseworthy, Phibbs & Benn (2013)

Study Number	**1**	**2**	**3**	**6**
Review Criteria				
1. Was there a clear statement of the aims of the research?	Y	Y	Y	Y
2. Is a qualitative methodology appropriate?	Y	Y	Y	Y
3. Was the research design appropriate to address the aims of the research?	Y	Y	N	Y
4. Was the recruitment strategy appropriate to the aims of the research?	Y	Y	N	Y
5. Was the data collected in a way that addressed the research issue?	Y	Y	Y	Y
6. Has the relationship between researcher and participants been adequately considered?	N	N	N	N
7. Have ethical issues been taken into consideration?	Y	Y	Y	Y
8. Was the data analysis sufficiently rigorous?	Y	Y	Y	Y
9. Is there a clear statement of findings?	Y	Y	Y	Y
10. How valuable is the research? (Do they consider the findings in relation to current practice or policy?)	Y	Y	Y	Y

APPENDIX C: EVALUATION OF QUANTITATIVE STUDIES

4. Freeman, Adair, Timperley and West (2006)

5. Martin & Bull (2005)

7. Parsons (2004)

8. Toohill, Sidebotham, Gamble, Fenwick and Creedy (2017)

Study Number	**4**	**5**	**7**	**8**
Review Criteria				
1. Did the study address a clearly focused issue?	Y	Y	Y	Y
2. Were the participants recruited in an acceptable way?	Y	Y	Y	Y
3. Was the exposure accurately measured to minimise bias?	N/A	N/A	N/A	N/A
4. Was the outcome accurately measured to minimise bias?	Y	Y	Y	Y
5. (a) Have the authors identified all important confounding factors?	N/A	Y	N/A	N/A
(b) Have they taken account of the confounding factors in the design and/or analysis?	N/A	Y	N/A	N/A
6. (a) Was the follow up of subjects complete enough?	N/A	Y	N/A	N/A
(b) Was the follow up of subjects long enough?	N/A	Y	N/A	N/A
7. What are the result of this study (justified or not?)	Y	Y	Y	Y
8. How precise are the results? (demonstrated or not?)	Y	Y	Y	Y
9. Do you believe the results?	Y	Y	Y	Y
10. Can the result be applied to the local population?	Y	Y	Y	Y
11. Do the results of this study fit with other available evidence?	Y	Y	Y	Y
12. What are the implications of this study for practice (mentioned or not?)	Y	Y	Y	Y

APPENDIX D: LITERATURE REVIEW THEMES

Theme	Subtheme	Study
Work environment	Institutional environment	Blix-Lindström, Johansson & Christensson (2008), Cheyne, Dowding & Hundley (2006), Everly (2012), Toohill et al. (2017)
	Human environment	Freeman et al. (2006), Martin & Bull (2005), Parson (2004)
Midwives' autonomy to practice	Midwives' professional autonomy	Blix-Lindström, Johansson & Christensson (2008),
	Midwives' knowledge of practice	Cheyne, Dowding & Hundley (2006), Everly (2012),
	Midwives' values and beliefs	Noseworthy, Phibbs & Benn (2013)
Women's expectation of care	Women's desires and behaviour during labour	Blix-Lindström, Johansson & Christensson (2008), Everly (2012)
	Women's culture	Noseworthy, Phibbs & Iblce (2013), Parson (2004)

APPENDIX E: ETHICS APPROVAL

7400 SBREC Final approval notice (22 September 2016)

HE Human Research Ethics

Thu 22/09/2016, 12:03 PM

Mika Tadaumi; Linda Sweet; Kristen Graham

Reply all

Inbox

This message was sent with high importance.

Dear Mika,

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. This means that you now have approval to commence your research. Your ethics final approval notice can be found below.

FINAL APPROVAL NOTICE

Project No.:	7400
Project Title:	What factors influence midwives' practice in relation to women's oral intake during labour?
Principal Researcher:	Ms Mika Tadaumi
Email:	tada0009@flinders.edu.au
Approval Date:	22 September 2016
Ethics Approval Expiry Date:	31 December 2018

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

RESPONSIBILITIES OF RESEARCHERS AND SUPERVISORS

1. **Participant Documentation**

Please note that it is the responsibility of researchers and supervisors, in the case of student projects, to ensure that:

- all participant documents are checked for spelling, grammatical, numbering and formatting errors. The Committee does not accept any responsibility for the above mentioned errors.
- the Flinders University logo is included on all participant documentation (e.g., letters of Introduction, Information Sheets, consent forms, debriefing information and questionnaires – with the exception of purchased research tools) and the current Flinders University letterhead is included in the header of all letters of introduction. The Flinders University international logo/letterhead should be used and documentation should contain international dialling codes for all telephone and fax numbers listed for all research to be conducted overseas.
- the SBREC contact details, listed below, are included in the footer of all letters of introduction and information sheets.

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project Number 'INSERT PROJECT No. here following approval'). 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.

2. **Annual Progress / Final Reports**

In order to comply with the monitoring requirements of the *National Statement on Ethical Conduct in Human Research (March 2007)* an annual progress report must be submitted each year on the **22 September** (approval anniversary date) for the duration of the ethics approval using the report template available from the Managing Your Ethics Approval SBREC web page. *Please retain this notice for reference when completing annual progress or final reports.*

If the project is completed **before** ethics approval has expired please ensure a final report is submitted immediately. If ethics approval for your project expires please submit either (1) a final report; or (2) an extension of time request and an annual report.

Student Projects

The SBREC recommends that current ethics approval is maintained until a student's thesis has been submitted, reviewed and approved. This is to protect the student in the event that reviewers recommend some changes that may include the collection of additional participant data.

Your first report is due on **22 September 2017** or on completion of the project, whichever is the earliest.

3. **Modifications to Project**

Modifications to the project must not proceed until approval has been obtained from the Ethics Committee. Such proposed changes / modifications include:

- change of project title;
- change to research team (e.g., additions, removals, principal researcher or supervisor change);
- changes to research objectives;
- changes to research protocol;

- changes to participant recruitment methods;
- changes / additions to source(s) of participants;
- changes of procedures used to seek informed consent;
- changes to reimbursements provided to participants;
- changes / additions to information and/or documentation to be provided to potential participants;
- changes to research tools (e.g., questionnaire, interview questions, focus group questions);
- extensions of time.

To notify the Committee of any proposed modifications to the project please complete and submit the *Modification Request Form* which is available from the Managing Your Ethics Approval SBREC web page. Download the form from the website every time a new modification request is submitted to ensure that the most recent form is used. Please note that extension of time requests should be submitted prior to the Ethics Approval Expiry Date listed on this notice.

Change of Contact Details

Please ensure that you notify the Committee if either your mailing or email address changes to ensure that correspondence relating to this project can be sent to you. A modification request is not required to change your contact details.

4. Adverse Events and/or Complaints

Researchers should advise the Executive Officer of the Ethics Committee on 08 8201-3116 or human.researchethics@flinders.edu.au immediately if:

- any complaints regarding the research are received;
- a serious or unexpected adverse event occurs that effects participants;
- an unforeseen event occurs that may affect the ethical acceptability of the project.

Kind regards
Rae

Mrs Andrea Fiegert and Ms Rae Tyler
Ethics Officers and Executive Officer, Social and Behavioural Research Ethics Committee
Andrea – Telephone: +61 8 8201-3116 | Monday, Tuesday and Wednesday
Rae – Telephone: +61 8 8201-7538 | Monday, Wednesday, Thursday and Friday

Email: human.researchethics@flinders.edu.au
Web: Social and Behavioural Research Ethics Committee (SBREC)

Manager, Research Ethics and Integrity – Dr Peter Wigley
Telephone: +61 8 8201-5466 | email: peter.wigley@flinders.edu.au
Research Services Office | Union Building Basement
Flinders University
Sturt Road, Bedford Park | South Australia | 5042
GPO Box 2100 | Adelaide SA 5001

APPENDIX F: LETTER OF INTRODUCTION

Dr L Sweet
School of Nursing and Midwifery
Flinders University

GPO Box 2100
Adelaide SA 5001

Tel: 08 8201 3270
Fax: 08 8201
linda.sweet@flinders.edu.au

CRICOS Provider No. 00114A

LETTER OF INTRODUCTION

Dear Madam

This letter is to introduce Mika Tadaumi who is a master's student in the School of Nursing and Midwifery at Flinders University. She is undertaking research leading to the production of a report and journal publication on the subject of what factors influence midwives' practice in relation to women's oral intake during labour. She would like to invite you to assist with this project by agreeing to be involved in a single interview. No more than 30 to 45 minutes would be required.

Be assured that any information provided will be treated in the strictest confidence and none of the participants will be individually identifiable in the resulting thesis, report or other publications. However, anonymity will not be able to guaranteed if you have shared your stories with other people which may be recognised as your stories. You are, of course, entirely free to discontinue your participation at any time or to decline to answer particular questions.

Since Mika intends to make an audio recording of the interview, she will seek your consent to record the interview, to use the recording or a transcription in preparing the report and publication, on condition that your name or identity is not revealed.

Any enquiries you may have concerning this project should be directed to me at the address given above or by telephone on 82013270, or e-mail linda.sweet@flinders.edu.au

Thank you for your attention and assistance.

Yours sincerely

Associate Professor Linda Sweet

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project number 7400). 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

APPENDIX G: INFORMATION SHEET

Dr L Sweet
School of Nursing and Midwifery
Flinders University

GPO Box 2100
Adelaide SA 5001

Tel: 08 8201 3270
Fax: 08 8201
linda.sweet@flinders.edu.au

CRICOS Provider No. 00114A

INFORMATION SHEET

Title: 'What factors influence midwives' practice in relation to women's oral intake during labour?'

Investigator:
Ms Mika Tadaumi
Master of Midwifery student
School of Nursing and Midwifery
Flinders University
Phone: 04 5047 8099

Supervisors:
Associate Professor Linda Sweet
Phone: 8201 3270
Ms Kristen Graham
Phone: 8201 3918
School of Nursing and Midwifery
Flinders University

Description of the study:
The aim of the project is to explore what factors influence midwifery practice with relation to women's food and fluid consumption during labour. Investing the influences which affect midwives' practice related to the issue may inform evidence-based practice and improve women-centred care.

Purpose of the study:
The purpose of the study is to identify factors which influence midwives' practice with relation to women's oral intake during labour. Hunger during labour impacts on women's birth experiences because it can lead to stress, discomfort and concern.

The research objectives are:

1. To identify factors affecting midwifery practice regarding women's oral intake during labour.
2. To explore the relationship between influencing factors and midwives' attitudes and practices relating to women's oral intake during labour.

Who can participate in the study?
Any registered midwife who currently cares for women during labour and birth, and speaks English may volunteer to participate in this study.
We aim to recruit 12 midwives who work in a variety of contexts, including public and private hospitals, midwifery group practices, and independent practice. Recruitment will cease once we reach these targets.

What will I be asked to do?
You are invited to participate a one-on-one interview with Mika Tadaumi who is a Masters of Midwifery student at Flinders University. She will ask you questions about your experiences of women's food and fluid consumption during labour. The interview will take approximately 30-45 minutes. The interviews will be audio-recorded to capture the information which you provide. You are able to ask the researcher to be pause or turn off the recording at any time. Transcriptions of the recorded interviews will be made by the researcher for the purpose of data analysis.

What benefit will I gain from being involved in this study?
This project may have little benefit to you individually, however, you may be able to contribute to improve or development of midwifery care in Australia. Additionally, midwives' satisfaction of midwifery care may increase by the study. Feedback of the study results will be provided upon request. If you wish to receive feedback you will need to provide the researcher an email address, and at the conclusion of the study, a brief report will be sent to you.

Will I be identifiable by being involved in this study?
All of the participants' information will be maintained privacy and de-identified for anonymity. No one except the research and supervisors will access the information. The information will be stored on a computer by using a password. Fake names will be used on the notes in the thesis and any published information. Your comments will not be linked to you by using the actual name. However, anonymity cannot be guaranteed, as if you have shared your stories with other people, these may be recognisable. The supervisors of the project can access the information and transcriptions of the interviews for educational purposes. All information will be maintained safely at the University for 5 years after completion of the thesis work.

Are there any risks or discomforts if I am involved?
Discussing your clinical practice and the influences on your practice may cause mild discomfort, if your practice is not in alignment with your preferences.
If you disclose a practice that varies from current clinical guidelines, your confidentiality is assured. Should you experience any discomforts due to the interview, we suggest you seek free confidential counselling through your employers' staff support service, a community service such as Life Line, or through your GP. Additionally, should you wish to discuss further with a midwifery professional you may contact the research supervisors.

How do I agree to participate?
Participation in the study is voluntary and you can withdraw at any time. Your decision to participate or not to participate will not affect you in any ways. If you agree with participation in the research project, please contact the researcher on the following email address:

Mika Tadaumi: tada0009@flinders.edu.au

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 7400). 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.

APPENDIX H: CONSENT FORM

CONSENT FORM FOR PARTICIPATION IN

RESEARCH BY INTERVIEW

What factors influence midwives' practice in relation to women's oral intake during labour?

I .....

consent to participate as requested in the interview for the research project on **What factors influence midwives' practice in relation to women's oral intake during labour?**

1. I have read the information provided.
2. Details of procedures and any risks have been explained to my satisfaction.
3. I agree to audio recording of my information and participation.
4. I am aware that I should retain a copy of the Information Sheet and Consent Form for future reference.
5. I understand that:
    - I may not directly benefit from taking part in this research.
    - I am free to withdraw from the project at any time and am free to decline to answer particular questions.
    - While the information gained in this study will be published as explained, I will not be identified, and individual information will remain confidential. All of my information will be de-identified and pseudonyms will be used in the thesis and published information.
    - Anonymity is not be able to be guaranteed, as if I have shared my stories with other people, these may be recognisable
    - I may ask that the recording be stopped at any time, and that I may withdraw at any time from the session or the research without disadvantage.
6. I agree/do not agree* to the tape/transcript* being made available to other researchers who are not members of this research team, but who are judged by the research team to be doing related research, on condition that my identity is not revealed. ** delete as appropriate*

Participant's signature……Date……...

I certify that I have explained the study to the volunteer and consider that she understands what is involved and freely consents to participation.

Researcher's name……..

Researcher's signature…… Date……

NB: Two signed copies should be obtained. The copy retained by the researcher may then be used for authorisation of Items 8 and 9, as appropriate.

APPENDIX I: INTERVIEW GUIDE

"What factors influence midwives' practice in relation to women's oral intake during labour?"

Demographic questions

- How long have you been a registered midwife?
- Are you also a registered nurse? If yes how long?
- Where did you gain your qualification as a midwife?
- What is your age
- What is the context/model of care in which you currently work – public/private/Midwifery Group Practice/Independent/other?

List of interview questions

- Can you please describe to me your current practice regarding managing women's eating and drinking during labour?
- How do you feel about this?
- What is the culture in your workplace regarding women eating and drinking in labour?
- What do you know of your peers' practices of women eating and drinking in labour? What do they do?
- Is your practice different from what you would prefer to be doing for women? If so why?
- If Registered Nurse – do you think your nursing background influences your practice on managing women eating and drinking in labour?
- What do you think about women having choice regarding eating and drinking in labour?
- What do you think the benefits are of eating or drinking during labour?
- What do you think the disadvantages/risk are of eating or drinking during labour?
- How have you gained your knowledge of managing women's oral intake during labour? How does this compare to your current practice?
- What policies or guidelines are you aware of regarding women's oral intake during labour?
    - Prompts – hospital guidelines, South Australian Perinatal Practice Guidelines, individual clinicians
- How do these policies or guidelines influence your practice?
- What do you think are the main factors that influence your current practice regarding women eating and drinking during labour?
- How do you feel about your ability to practice in the manner you would like too?