Confidence in Midwifery- Midwifery students and midwives’ perspectives

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Abstract

A confident midwife has an impact on a pregnant woman’s clinical outcome and birth experience. Knowledge acquisition, competence, and confidence develops over a lifetime and is of great importance in developing and forming personal skills and allowing the personal traits to grow and mature. Previous international studies have shown that midwifery students do not feel confident in many areas in which they are supposed to practice independently. The aim of this thesis was to investigate confidence levels in basic midwifery skills in Swedish midwifery students in their final semester just before entering the midwifery profession. An additional aim was to describe clinical midwives’ reflections about learning and what factors that developes professional competence, and confidence.

Study I was a cross-sectional survey with Swedish midwifery students (n=238). They assessed their own confidence in all competencies that a midwife should have and could practice independently. The results of study I confirmed that Swedish midwifery students feel confident in dealing with the most common procedures during normal pregnancy, childbirth, and postpartum and newborn care. However, they do not feel fully confident in cases in which there are deviations from the normal procedures and obstetric emergencies. When comparing groups of midwifery students, the younger group of midwifery students felt more confident in general compared to the older group. Students at a university with a medical faculty were also more confident than the students at a university without a medical faculty.

In study II, focus group discussions were held with 14 midwives emphasizing the way in which midwives reflect on learning and the development of competence and confidence. Content analysis was used to analyze the focus group discussions. Four categories were identified as a result of study II: 1.) feelings of professional safety evolve over time; 2.) personal qualities affect professional development; 3.) methods for knowledge and competence expansion; and 4.) competence as developing and demanding. The conclusion of this thesis is that more practical and clinical training during education is desirable. Midwifery students need to have access and the opportunity to practice obstetrical emergencies within a team of obstetricians and pediatricians. Learning takes time, and one improvement is to extend midwifery education to include and increase in clinical training. This would strengthen the students theoretical, scientific, and clinical confidence. Clinical midwives claim that it takes time to feel confident and that there is a need to develop professionalism.

Keywords: Clinical Practice, Competence, Confidence, Knowledge, Learning, Midwifery, Midwifery education, Midwifery students

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Summary in Swedish

En trygg barnmorska har en positiv inverkan för förlossningsutfall samt förlossningsuppelevelse. Kunskap, kompetens och trygghet är ett livslångt lärande och har stor betydelse för att utveckla och forma personliga färdigheter, att låta de personliga egenskaperna växa och mögna. Tidigare internationella studier har påvisat att barnmorskkestudenter känner sig otrygga inom områden där förväntas vara självständiga. Syftet med denna avhandling var att undersöka graden av trygghet hos svenska barnmorskstudenter strax innan de var färdigutbildade. Ett annat syfte var att utforska hur kliniskt verksamma barnmorskor reflekterar över lärande och vilka faktorer som bidrar till att utveckla yrkesmässig kompetens och trygghet.

Studie I var en tvärnittsundersökning med svenska barnmorskestudenter (n = 238). De bedömde egen trygghet inom alla kompetenser som en barnmorska förväntas kunna samt utföra självstänligt. Resultaten av studie I bekräftade att svenska barnmorskestudenter känner sig trygga att hantera de vanligaste rutinerna vid normal graviditet, förlossning, eftervård samt nyföddhets vård. De känner sig emellertid inte fullt så trygga när något avviker från det normala samt vid obstetriska nödsituationer. Vid jämförelse mellan yngre och äldre barnmorskestudenter samt grad av trygghet, var det den yngre gruppen av barnmorskestudenter som kände sig tryggare i allmänhet jämfört med den äldre gruppen. Studenter vid ett universitet med en medicinsk fakultet var också mer trygga än studenterna vid ett universitet utan en medicinsk fakultet.

I studie II hölls fokusgrupper med 14 barnmorskor, de diskuterade och reflekterade över hur barnmorskor utvecklar kompetens. Metod för att analysera var innehållsanalys, i resultatet framkom fyra kategorier 1.) känslor av professionell trygghet utvecklas över tid; 2.) Personliga kvaliteter påverkar yrkesutveckling. 3.) metoder för kunskap och kompetensutveckling; och 4.) Kompetens som utveckling och krävande.

Slutsatsen av denna avhandling är att mer klinisk träning under utbildning är önskvärt. Barnmorskkestuderar behöver tillgång och möjlighet att öva obstetriska nödsituationer tillsammans i team bestående av förlossningspersonal och barnläkare. Det tar tid att lära samt att känna trygghet, en möjlighet att underlätta för studenter vore att utöka samt förlänga barnmorskeutbildningen, att inkludera mer klinisk träning. Detta skulle innebära att stärka studenters möjligheter till en utökad klinisk trygghet. Kliniska barnmorskor hävdar att det tar tid att känna sig trygg och att det ett finns behov av att utveckla professionalism.

Nyckelord: Barnmorskestuderar, Barnmorskeutbildning, Klinisk träning, Kompetens, Trygghet, Kunskap, Lärande

List of papers

The thesis is based on the following parts, which are referred to in the text with the following roman numerals


The articles are published with permission from the respective journals.

Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>APGAR SCORE</td>
<td>Immediate assessment of vital parameters/ Omedelbar bedömning av vitala funktioner hos barnet</td>
</tr>
<tr>
<td>ANTENATAL</td>
<td>Care before birth/ Vård innan förlossning, mödravård</td>
</tr>
<tr>
<td>CCE</td>
<td>Continuity of care experience, kontinuitet i vården</td>
</tr>
<tr>
<td>ICM</td>
<td>International Confederations of Midwives/ Internationella Barnmorskeförbundet</td>
</tr>
<tr>
<td>INTRAPARTAL</td>
<td>Care during birth/Vård under förlossning</td>
</tr>
<tr>
<td>MMR</td>
<td>Maternal mortality rate/ mödradödlighet</td>
</tr>
<tr>
<td>NEONATAL</td>
<td>Newborn care/ Nyföddhetsvård</td>
</tr>
<tr>
<td>POSTPARTUM</td>
<td>Care after the birth/Vård efter förlossning</td>
</tr>
<tr>
<td>VFU</td>
<td>Practice during education/ Verksamhetsförlagd utbildning</td>
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<td>WHO</td>
<td>World health organization/Världshälsoorganisationen</td>
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Preface

This study was designed based on a personal interest in education, particularly the education of midwifery students. The interest in learning derives from my experience as the main supervisor for students at the Women’s Clinic in Östersund. It has given me an insight on how midwifery students perceive clinical competence and the way in which to understand their future profession. The midwifery students describe the midwife’s profession as fantastic and interesting but also difficult and demanding. Therefore, to study Swedish midwifery students’ degree of confidence in basic competence areas is of importance when there is a national emphasis in the midwifery education to develop and improve the midwifery programs. There are reports about burnout among midwives and midwives leaving the profession. Knowledge of how clinical midwives perceive the on-going process of maintaining a positive approach throughout their professional life is essential to promote.
Introduction

Confidence and Competence
Confidence could mean to feel safe and secure, but also to be pleased. In this thesis the interpretation of confidence is related to feelings of safety and security. Security can be related to self-efficacy. Bandura (1995) described self-efficacy such as "an inner belief in the own capacity to organize and to take the steps necessary to cope with future situations". Bandura described inner beliefs as determinants of how people feel, behave, and think (1). The concept of confidence is related to competence. While they can be linked, they are not synonymous (2). Fullerton et al. (2013) described competence as necessary basic knowledge with capacity for critical thinking and ethical and moral values. Fullerton also described confidence as an achievement or "an ability to do something successful or effective", a complementary feeling in a performance (3).

When it comes to learning situations, confidence is of importance and has attributing factors: 1.) it is situational, which means that it is dependent on time and recourses; 2.) it has an institutional structure, which depends on what pedagogical level the education has, and 3.) it is related to personal characteristics such as perception, attitudes, and motivation (4–7). Therefore, a high level of confidence does not need to be directly proportional to high competence, but a low degree of confidence may be linked to a reduction in skilled performance (8).

Confidence is one of the most important factors for being able to apply knowledge and competence. According to Crooks et al. (2003), experiencing confidence means experiencing a form of self-esteem. They described four processes for enhancing confidence, which include feeling, knowing, doing, and reflecting. When supported through these phases, students felt prepared (confident) to assume broader roles in health care (9).

Sarvimäki (2006) described competence as knowledge that requires an active cognitive act such as a motorical or affective act. She also describes the need for an open mind in order to receive new experiences and actions. There is also a need for curiosity to develop knowledge, and if curiosity is maintained year after year, then work is experienced positively and a person’s skills are well-utilized (10). Pilhammar (2004) argued that competence is constantly changing, and it can change in line with different cultural contexts and needs. Competence is not static; it varies over time and context. People are constantly in changing circumstances and different phases of life. If the demands from outside world or the organization are met and consistent, the image is completed, and the competence requirement is complete. Nevertheless, after a while it has once again changed (10). Competence development is a life-long learning process, and there are some contributing factors, which need to be noticed, that influence the learning process in the new profession. These facts could be used to develop a professional identity,
adjust to expectations, gain confidence and freedom, separate or integrate into the culture, experience guidance, continue to learn, and the ability to work with clients (11).

**Importance of confidence and efficacy for a midwife**

Being a midwife involves responsibility for normal pregnancy and birth, which requires independent thinking and self-efficacy in order to be able to make the required decisions (12).

The day of giving birth is not an ordinary day, and that needs to be taken in consideration for midwifery students and midwives. In a study by Simpkin, (1992), it was concluded that women remember the birthing experience. Even 20 years later, women's memories are generally accurate, especially with respect to the encounter and the actions with the staff and first contact with the baby (13).

The midwife has an important and significant impact on the birth; he or she has a specific influence on the outcome and the birth experience. The care of a midwife is woman centered and it is essential that the midwife’s knowledge is embedded, which indicates that he/she is grounded in him/herself and has the resources and skills to use his/her knowledge differently in response to a birthing woman’s desires. There is also a need for empathy, kindness, and spiritual presence from midwives passed onto the birthing women; birth can become a peak life experience that fosters confident mothering. Meeting a confident and kind midwife allows a pregnant woman to relax and feel safe and experience a trustful and respectful relationship with the midwife (14–16).

A midwife needs to be aware of a variety of psychological factors that may affect the encounter between her or him and the pregnant woman in addition to being aware of how she or he themself can be viewed by the birthing woman. The midwife needs to be confident with respect to rapid establishment of relations with those she meets in order to make the birthing woman feel safe and secure in a painful situation. It requires an empathetic and compassionate midwife, which includes good communication skills, motivation, and kindness. A midwife must also have a degree of self-sufficiency, use up-to-date knowledge, and have self and professional awareness (17–20).

**Maternity organization in Sweden**

In Sweden, midwives have a broad field of practice; they play an important role throughout women’s entire life. Midwives work in youth and maternity clinics and in antenatal, intrapartum postpartum, newborn, and gynecological care settings. In large hospitals, the midwives often work in one ward, whereas in mid-size and small hospitals, the midwives rotate between different wards. For example, a midwife may rotate between intrapartum, gynecological and
postpartum care wards. According to the Swedish competence description for midwives, midwives are educated to work in all of these different areas (21).

In Sweden today, small birthing units are closing down, and maternity care is in a crisis as there is shortage of midwives. In recent years many midwives have left the profession (22). Small hospitals and modified birth centers have been closed even though evidence supports small scale and continuity, which also has impact on the midwifery profession (23). In some Swedish universities, places in the midwifery programs are not filled even though there is a need for more midwives in the country. This implies stress for clinically active midwives since time is difficult to find in already strained environments. That makes it difficult for midwives to find time for reflection, which is extremely valuable, especially for midwifery students. Time for reflection involves a critical evaluation of what is being done and to understand and feel conscious; reflection supports knowledge acquisition and increases the ability to learn a new profession (24). In order to learn, develop, and to grow professionally in competence and confidence, there should be room for humility and an atmosphere of warmth, support and joy (25).

International Confederation of Midwives (ICM)

The International Confederation of Midwives (ICM), in collaboration with the World Health Organization (WHO) sets standards and recommends midwifery education program content. The ICM defines the scope of practice for midwives and has developed a list of basic skills that a midwife should be able to learn and to perform and which could be applied globally. This list of competencies is revised in collaboration with midwives from around the world (26). The current competence description was drawn up in 2013, and a review is currently under way. The ICM recommends a minimum of three years of education within a direct entry education, or an 18-month continuing education program after nursing education, in cases that there is no direct education for midwives (27).

International perspective of Midwifery Education

Maternal mortality is still high, mainly in low resource countries, due to lack of resources and maternal-associated healthcare professionals. Another reason could be due to inadequately educated midwives who assist in maternal and childbirth care (28). In 2011, a report from the United Nations Population Fund (UNFPA) was published, announcing that there is a positive development in midwifery education internationally, but there is still a need for educated midwives. UNFPA's report called for strengthening and improving curricula, increasing resources, training more teachers, and expanding clinical practice for midwifery students. (29).

Internationally, the average length of a direct education to become a midwife is three years with two years for additional, supplementary education. The average
number of births in which a student needs to assist is about 30. A common trend in India, South East Asia, and Africa, areas in which midwifery is not an independent profession, is one in which midwives work as both nurses and midwives. In Europe, there are both direct entry midwifery programs and post-nursing midwifery programs. Denmark has a 3-year direct entry education and the United Kingdom (UK) has both types of programs (30). Norway has a 2-year education supplementary program after nursing education, and many of the Norwegian midwifery educations are at a master’s level (31). Canada has a 4-year direct entry education program that leads to a bachelor's degree.

The Canadian model of midwifery education is effective and has low attrition rates (32). In Australia, many universities offer a direct entry education program because the supplementary nursing education has been criticized for fragmented training. The care is called fragmented based on the fact that the ordinary maternity care does not value continuity, and pregnant women often meet many different midwives during the course of their pregnancies (33). The direct entry midwifery education often uses a women-centered care philosophy, especially with an emphasis on continuity, which is seen as an advantageous model in which to learn midwifery (26).

The history of midwifery education in Sweden

Historically in Sweden, before educated midwives were assisting at births, the maternal mortality rate (MMR) was as high as 500/100,000 births. Sweden was a low-income country with high fertility rates, and most of the births took place in the homes. In 1685, Queen Ulrica Eleonora started the first professional midwifery school in Sweden. In 1711, the code of practice and ethics were established. The Collegium Medicum regulated midwifery education by 1712. Two years of training with an experienced midwife (an apprenticeship) was required before examination.

National training programs for midwives were developed in 1757, but there was no clear medical education at the hospitals. A national, uniform midwifery education program was not available until the Karolinska Institute in Stockholm was founded in 1810. In 1819, a national regulation was established in which every municipal area in Sweden should employ a midwife, who also was responsible for newborn care and vaccinations. The midwifery education at the time was six months long, and the government financed education for 12 students per year.

In 1930s there was a focus on hygiene, breastfeeding, and public health, and giving birth in hospitals became more common. In the 1950s, most Swedish children were born in hospitals. Because of better nutrition and health care in general, antenatal care, medical technology, and midwifery education the
mortality rates in Sweden are now some of the lowest in the world 4/100,000. The midwifery education in Sweden has now existed for more than 300 years (34).

**Midwifery education in Sweden today**

In conjunction with other medium-term healthcare programs, midwifery education has gone through various reforms in healthcare education, general reforms of higher education, and the integration of midwifery education into the higher education system. The Swedish higher education reform (1977) meant a shift for midwifery education and the specialist-nursing programs from a diploma to a degree program and from vocational training to a more academic education (35).

The European higher education reform in 2007 (the Bologna reform) aimed at a convergence in higher education in Europe and generated a new editorial structure at the bachelor’s, master’s (postgraduate), and doctoral levels. A common system for credits was also introduced where 60 ECTS (European Credit Transfer System) corresponded to one-year of full-time studies (36). Swedish midwifery education is an 18-month program following the nursing education program. Most of the 13 programs in Sweden require 12 months of experience as a nurse before applying to the midwifery program.

The implementation of the Bologna reform has led to expanded education content with higher emphasis on academization. It also places increased demands on the teachers’ skills and competence, but it also gives the students opportunity for further academic studies (37). Midwives’ fields of practice have gradually broadened and cover woman’s sexual and reproductive health from a life-cycle perspective. The National Board of Health and Welfare regulates the midwifery profession with a competence description (21).

Currently, the Swedish midwifery association is responsible for the development and regulation of a new competence description. The Swedish midwifery education leads to a professional diploma and an academic level in the form of a 1-year master's degree. Most programs have their own major subject for midwifery as formulated in the Swedish Higher Education Ordinance, including sexual, reproductive, and perinatal health. In Sweden, there are approximately 300 students who take their midwifery exam annually.

**Learning methods and clinical practice**

The Swedish midwifery programs comprises 90 ECTS credits and consists of two equal parts with 45 ECTS theoretical and 45 ECTS clinical-based education. Teaching methods vary, and lectures and practical method exercises complement each other. All midwifery programs have access to a clinical training center (KTC) or similar situation in which students can practice skills using simulator training. The use of an advanced simulation makes scenarios realistic and provides
opportunities to train for complex actions and situations. Further, for the students to be able to repeat the same skill/competence and feel more familiar with different manipulations. Students can practice in a calm and safe environment, and they can practice teamwork with different professions (38–40). Other teaching methods used are lectures by other students, group work, online learning, and self-study.

In clinical practice, midwifery students learn clinical skills from a supervising midwife. Sometimes students have the same supervisor, especially in the antenatal care, but in intrapartum care, it is common to have many different supervisors. In Sweden, a midwife student will assist at 50 births and care for at least 100 pregnant women during labor (Clinical practice). The midwifery student spends a lot of time in the hospitals to reach the required number of childbirths, depending on the size of the hospital and how many annual births occur. In small hospitals, it is common to be “on call”, which can be very tiring and demanding.

Being a midwifery student is to "be with the woman" and to be present during major emotional events. Within clinical training, there are strong emotional demands on the students, and they must be able to tolerate not having control in a control-oriented environment, which can often lead to anxiety. Therefore, supervisors and the staff need to be aware of their exposure to strong feelings and vulnerability in new demanding situations (41, 42).

During the students' clinical training, a clinical supervisor works with them. A prerequisite for clinical supervisors is at least one year of clinical experience and preferably that they also have a course in supervising and an academic level degree of a 1-year master’s degree. Midwifery is very practical work and most of the learning takes place in a clinical environment. Throughout the world, the midwife is taught in clinical practice, which is an important learning environment in which knowledge, skills, and attitudes are taught and formed. The midwifery students themselves take responsibility for active learning in a real environment, setting up individual goals in addition to the national goals that should be achieved in order become a midwife (43).

The students emphasize that the supervisor’s personal qualities are significant for developing confidence and knowledge in their students. In a study by Brunstad, (2014), midwifery students acknowledged the importance of the supervisor’s skills and interest. The study results showed that midwifery students learned the new profession best in cases in which they were in a trusting relationship with the supervisor, and it was desirable if the supervisor had some form of supervisory education (44). It is necessary for the students to reflect on and to what they were exposed and what happens and why. Students need time to learn and the clinical environment needs to be adapted to the student's needs (45). According to Bass et al. (2017) students become aware of internal strengths and weaknesses through reflection. Bass et al. (2017) has developed a model that describes development
from a student to graduated midwife. In this model, reflection is emphasized as a reflexive process in which students' thoughts should be controlled and described with words such as: “to think about what it is, what it is now but also what it could be ...” (24).

**Complementary learning methods and alternative methods**

In most of the Swedish hospitals, systems with main supervisors are used, which are valuable for students, especially when there is a low amount or lack of time for reflections. Sheen et al. (2016) described that the use of main supervisors is to promote and facilitate important time for reflection. They suggested that main supervisors could effectively provide support for both the student at the personal level and the clinical supervisors within the organization thereby gaining insight into the environment around learning. Midwifery students are exposed to many psychologically stressful situations and therefore need time to process and to prepare for this and mature into the new profession (46).

Using experienced midwives (such as main supervisors) at advanced levels is to utilize resources within their own organization to meet changing demands from today's soon-to-be parents and also be aware of and spread evidence-based care to provide a high quality of care. There are studies that have compared systems with or without a main supervisor, and it was found that systems with main supervisors help students offer person-centered qualitative care demanded by women today (47). The main supervisors also have a function in supporting the clinical supervisors, and the main supervisors may also assist in student assessments.

A method, especially for new midwives, to develop and increase confidence in the profession could be a mentorship. Mentorship was defined by Eby (1997), as a relationship between an experienced employee and a new employee, whose focus is on professional development as well as getting acquainted with the workplace within a hierarchical organization (48). From a midwifery perspective, the experienced midwife helps and guides the new midwife. The mentors may be chosen by the organization or the individual student midwives, and the length of the relationship in the mentorship will be decided individually after the goals are met. It does not seem to matter if the mentor is assigned or self-chosen or what form of care it takes, but everyone seems to agree that mentoring supports confidence and safety and facilitates the transition from student to midwife (49).

In other countries, such as Australia, there are new alternative forms of clinical practice expressed in model of Continuity of Care Experience (CCE) or working with a caseload, which is the same continuity model that offers students a more unique way to understand the process from pregnancy to birth. These forms of practice emphasize the importance of following a woman from maternity care to childbirth and the postpartum period. Continuity emphasizes care in which the
relationship between midwife and the pregnant woman is in focus. The model promotes a genuine relationship that enables the student to get a deeper understanding of the woman and her specific needs that are highly beneficial to learning, and the model aims to promote students’ confidence and competence (50, 51).

Theoretical framework
As described above, the midwifery student in Sweden is a registered nurse who has undertaken additional training in order to become a midwife, which means that transitioning into a new area is necessary. Meleis (2000) transition theory can provide a base into understanding this process. That transition theory emphasizes that changes in daily life could imply new demands and people could be vulnerable to these changes, the environment could mediate the transition by proving support and increase stress. (52). It is therefore important that we consciously facilitate the transition to something new. In students’ transition to a new profession, the environment must be adjusted in order to facilitate the transition.

Some essential characteristics that can be identified during the transition process are awareness, commitment, changes and differences, time period, critical point, and events. This means that a person must be aware of any surrounding changes and that consciousness affects the degree of involvement. It is important to discover the dimensions of change because it could lead to critical events such as disruption in relationships and routines.

Students should have a precise understanding of familiar and societal norms and expectations from supervisors’, teachers’, and soon-to-be parents’ expectations (52). For students, there is a period of time (education), with an identifiable end (exam). There are critical points and events in the transition process that are characterized by a sense of stabilization in new routines, skills, and lifestyles. Before stabilization is achieved there is usually a period of uncertainty, and being prepared, motivated, and anticipating changes facilitates the transition for the midwifery student, whereas lack of knowledge inhibits the transition.

When it comes to preparation, knowledge of what can be expected during a transition and useful strategies can be helpful. Strategies for the midwifery student could means support from supervisors, reflections, and classes. A healthy transition is both a process and outcome, and patterns of response for a healthy transition include feeling connected, interacting, being situated, and developing confidence and coping. Midwifery students need all of these factors; they want to feel comfortable and connected to the midwives with whom they work, which requires continuity in their relationships. They also want to feel connected to the
women they meet and that requires continuity of care and a clearly articulated midwifery philosophy strategy (53, 54).

According to Meleis’s theory, the environment can facilitate and support development in addition to reducing stress on the midwifery student. The student should have a sense of emotional and physical well-being and be psychologically stable. This is also confirmed by Bandura (1995) who described that motivation and emotional wellbeing could increase self-efficacy and confidence (1). Bandura (1993) also described the opposite in people who doubt self-efficacy as they often visualize failure scenarios. Self-doubt then becomes the ruling action and not much else would be achieved. According to Bandura (1989), people are striving for control over life circumstances; to have control makes people feel secure and gives them social benefits (55).

A strong sense of self-efficacy in socially valued pursuits is conducive to humans and contributes to a person’s well-being (1). In social environments, people are using their knowledge and cognitive and behavioral skills to produce desired results. When acting as agents over themselves, other people monitor their actions and judge what needs to change even if the individual person enlists cognitive guides and self-incentives to produce desired personal changes. They are influencing themselves as they are influencing their environment.

In their everyday transactions, people act on their thoughts and later analyze how well their thoughts have served them in managing events (55). According to Bandura, this concept is called social interaction in which according to Bandura (1989), people want to produce desired changes, and they are involved and conscious of their own personal changes or transitions similar to the Meleis transition theory (2000) in which students need to be clear and familiar with social norms and expectations.

**Rationale**

Strengthening midwifery is an important issue as midwifery has an impact on women’s and children’s health and well-being worldwide. Midwifery competence is closely related to being confident in the basic midwifery skills. However, previous research has demonstrated lack of confidence in midwifery students in many areas in which they are supposed to practice independently. Research has also shown that competence and confidence develop gradually. The knowledge about clinical midwives’ and midwifery students’ confidence and competence is lacking in Sweden. This knowledge is important in order to educate and keep a healthy and skilled workforce of midwives.
**Aim**

The overarching aim of this thesis was to investigate levels of confidence in basic midwifery skills in Swedish midwifery students, in their final semester prior to enter the midwifery profession. An additional aim was to explore clinical midwives’ discussions on how to become confident in the professional role.

**Specific aims**

*Study I*

The purpose of the present study was to investigate final years’ midwifery students’ professional confidence just before they are graduated, in basic midwifery skills according to ICM competencies and associated factors.

*Study II*

This study intends to describe how midwives reflect on learning and the development of professional competence and confidence.

<table>
<thead>
<tr>
<th>Table1. Overview of the dissertations part studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study I</td>
</tr>
<tr>
<td><strong>Aim</strong></td>
</tr>
<tr>
<td>To investigate midwifery students’ professional confidence just before they are graduated in basic midwifery skills according to ICM competencies and associated factors</td>
</tr>
<tr>
<td><strong>Design</strong></td>
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<tr>
<td>Cross-sectional survey</td>
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<td>Survey</td>
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<tr>
<td><strong>Participants Sample</strong></td>
</tr>
<tr>
<td>Swedish midwifery students 2016/2017(n=238)</td>
</tr>
<tr>
<td><strong>Analysis</strong></td>
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<td>Descriptive and comparative statistics</td>
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</tbody>
</table>
Material and method

Study I

*Design & setting*

A cross-sectional study in which all 13 midwifery programs in Sweden were offered the chance to participate. Cross-sectional studies are appropriate for describing phenomena relationships or status of a phenomena at a fixed time point as it gives an overview on how it is at that time point (56).

*Procedure*

At the Swedish Midwives Association’s Education Board in spring 2015, the first information about the study was announced at a meeting of program managers. A formal request was sent in spring 2016 to all of the midwifery programs in which permission for participation in the study was requested. When permission was obtained from all program managers, information about the study was distributed to the students via the program administrator. All 13 midwifery programs accepted participation.

One of the researchers traveled to the midwifery programs to inform students about the study and be present when the students completed the survey. Most of the students were given the opportunity to respond to the questionnaire during the scheduled time (in the period just before graduation). The data collection took place in 2016/2017 depending on spring or autumn graduation from the midwifery programs.

*Data collection*

Data was collected through a questionnaire that was previously developed and used in India. In the Indian study, confidence in midwifery students was explored by type of program, (diploma or bachelor), and ownership (private or government) (2). The Indian questionnaire was developed by Sharma et al. and (2015) involved four areas of competence: 1.) antepartum; 2.) intrapartum; 3.) postpartum; and 4.) newborn care. The questionnaire consisted of background questions such as age, sex, children on their own, marital status, nursing experience, interest in which area to work, and number of births attended during the education.

There were five questions on each of the 84 competencies that a midwife should be able to perform independently: 1.) What teaching method was used for the classroom session; 2.) Did you have enough time to practice clinical skills prior to contact with women; 3.) Were you confident when you practiced for the first time on women; 4.) How satisfied are you with the supervision during clinical
practice; and 5.) How confident are you in performing this skill independently? In the questionnaire, 17 competencies were related to antepartum care, 37 skills to intrapartum care, 13 post-partum care skills, and 17 skills in newborn care. This study only focuses on question number five: “How confident are you to perform this skill independently?” The midwifery students evaluated each of the 84 skills in relation to that question. They self-assessed their confidence by selecting one of the following answers on a scale: 1.) Not confident; 2.) Somewhat confident; 3.) Confident; and 4.) Very confident.

The competencies about which they were asked are basic competencies established according to ICM (26), which means that a midwife should be able to perform these independently. Examples of skills in antenatal care include assessment of fetal growth by manual measurements or listening to the fetal heart rate. For intrapartum care, items could include providing physical and psychological support or administering local anesthetics. Postpartum care could include initiation and support of breastfeeding or education and information about hygiene and baby care. Newborn care could include providing routine newborn care as per local guidelines and protocols (such as identification, eye care, screening tests, administration of vitamin K, birth registration).

The competency questionnaire developed by ICM were originally validated in India by a group of six senior midwifery teachers. They assessed the tools and removed some skills that were out of scope from the Indian midwives’ practice context (such as using some instruments that did not exist in India) (2). Before this Swedish data collection took place, a workshop were held in Stockholm with midwives from countries around the world, and the questionnaire was presented at that workshop. Eight countries were interested in using it, and all together in that group, the competencies were discussed for accuracy and importance.

Permission to use the questionnaire in Sweden was granted, and then the translation process started. It was translated from English to Swedish. During the translation procedure, clinically active midwives, researchers, and obstetricians participated in addition to an English native speaking midwife. After translation, the questionnaire was pilot tested in one midwifery program in order to assess the time needed to complete the survey and to test if the questions were understood. The decision to pilot test the questionnaire is a form of validation in order to determine if the instrument has reliability and that it really measures what it is intended to measure (56). The pilot test resulted in some minor changes in wording, and some competencies were removed. Examples include identification of medical complications such as anemia, malaria, and HIV in addition to performing a physical examination. Those competencies were removed or changed due to the relevance to the Swedish context.
Sample
Midwifery students in Sweden who were present at their universities or university colleges on the day when the data collection took place were offered the chance to participate. There were 303 students present, and 238 completed the questionnaire, which gave a 79% response rate.

Data analysis
To analyze data the Statistical Package of Social Science (SPSS) Version 24 (SPSS, Inc., Chicago, USA) was used.

In the first phase, all competencies were sorted into four domains: 1.) antepartum care; 2.) intrapartum care; 3.) postpartum care; and 4.) newborn care. For each of the four domains (antepartum, intrapartum, postpartum, and newborn care) the skills were rank ordered from 1 (not confident) to 4 (very confident). Reliability for each domain was tested with Cronbach alpha values. The Cronbach alpha is a test that measures the reliability of a scale (that the items in a scale measures the same thing) and the internal reliability should be >0.7 in order to be credible (57). In this study, Cronbach alpha values ranged from 0.882–0.915.

Descriptive statistics (mean and median) were used to describe the background characteristics and also the results from the midwifery students confidence scores. The midwifery students confidence scores were dichotomized into confident (scoring 3+4) and less confident (scoring 1+2). All competencies were tested against background characteristics such as age, having/not having children, and years of experience as a nurse. Independent sample t-test or analysis of variance (ANOVA) were used to compare each confidence skill in relation to the background characteristics (57). A p-value of 0.05 was chosen as the level of statistical significance.

In the second phase, background data were compared based on type of school the midwifery students attended such as a university with or without a medical faculty. The two groups were compared according to background factors. Crude and adjusted odds ratios (OR) with a 95% confidence interval (CI) were calculated between students’ background characteristics and type of faculty for all basic competencies in each of the four domains. Odds ratios show the probability of an exposure variable’s association with an outcome variable. In this case, faculty type was the outcome variable and confidence in each skill the exposure variables. A binary logistic regression analysis was used to calculate the odds ratios (57).

The result is presented with confidence intervals with a gauge for the precision of any point estimate, and usually a 95% confidence interval is used, which corresponds to a p-value of 0.05. Greenberg et al. (2005) explained that, taken together, a positive odds ratio with a CI not including the value of 1.0, is
Ethical aspects

An ethical approval was granted from the University Local Committee (University Ref. 2015/1850). Participation was voluntary, and the students could withdraw at any time.

Study II

Design

A qualitative study with clinical midwives participated in focus group discussions. The use of focus groups has advantages according to Kitzinger (1995). She describes focus group discussions as not discriminatory against people who cannot read or write, to encourage participation from those who are reluctant to be interviewed on their own, and to encourage contributions from people who feel they have nothing to say (60).

Setting

The hospitals in which the discussions took place varied in number of births from 300 to 2000 per year. The largest maternity unit had about 2000 births annually, and the second largest maternity unit had about 1650 births. In the third hospital there were about 1000 births annually, and at the smallest hospital there were about 300 births per year. All midwives rotated between intrapartum and postpartum care.

Process

First, a formal request for permission to conduct focus group discussions was sent to the four directors of the maternity wards at the different hospitals. When permission was obtained, the directors further sent an informative letter about the study to the unit managers in the maternity units. They were told to ask clinical midwives of interest to participate in the focus group discussions with the purpose of revealing midwives’ views about their concepts of knowledge and skills. All unit managers agreed and forwarded oral information to the midwives, who attended a workplace meeting. The midwives who were interested expressed their interest in participating in the study during the workplace meeting. The managers of the units then forwarded postal addresses and telephone numbers to the
researchers in addition to written information to the participating midwives. Date, time, and place were decided jointly.

**Sample**
Midwives in maternity units at four different hospitals in the middle and northern areas of Sweden were chosen to participate in the study.

**Data collection**
Focus group interviewing is a method in which several participants with similar backgrounds are engaged. It consists of organized discussions with a group of individuals for the purpose of gaining information about their experiences and views about a topic presented to them in advance (61, 62). A focus group is not a decision-making or problem-solving meeting. Patton (2002) described it first and foremost as an interview. The method is often used to explore the experience and needs among health care professionals’ attitudes (62). The major benefit of focus group discussions includes listening to each other’s responses, which creates a dialogue around the subject. The participants do not have to agree or disagree with each other. The objective is to get high quality data in a social context, and the people can express their views and listen to others so that it is an interactive method (63).

Polit & Beck (2012) stated that the setting of the focus group should be selected carefully and ideally, and it should be a neutral one. The location should be comfortable, accessible, easy to find, and acoustically amenable to audiotape recording. Furthermore, a focus group’s major advantage is efficiency because of the group format (56).

It is recommended by Polit & Beck (2012) that there are two people conducting the focus group discussions, one moderator and one observer. The moderator plays a critical role by soliciting input from all group members, and not letting a few vocal people dominate the discussion, while the observer can take detailed notes on sorting out who said what (56).

In the present study one researcher acted as a moderator and asked questions about knowledge and competence and how these were achieved. The moderator tried to keep the discussion focused on the questions by using clarifying questions such as: “what do you think about”, “can you explain”, or “tell me more about that”. Another researcher acted an observer and handled the technical equipment. The interviews lasted between 42 and 54 minutes; the median time was 50 minutes. The interviews were tape recorded and transcribed verbatim.
Data analysis

In this study, content analysis was used as an analytical method. According to Downe-Wamboldt, (1992) the analytical method is important, and it is also important to decide what combination of methods are best suited for achieving the aim. Furthermore, it has been described that content analysis is particularly well suited for healthcare professionals (64). The analysis was conducted stepwise as described by Graneheim & Lundman (2004).

Graneheim & Lundman (2004) described the analytical process as a shortening of a text, which includes the concepts of reduction, distillation, and condensation (65). A decision to focus on the manifest content was taken, which refers to the visible and obvious content such as what the text “talks about” (65).

In the first step, the interviews were read repeatedly with the aim of developing a deeper understanding and familiarization of the text and to get a sense of the whole (65). The purpose of the study governed the reading, which meant that the units that focused on knowledge and competence were identified.

In the second step, the text was condensed into meaning units. Using condensation is a way to make the text shorter and still preserve the core. When the text was condensed, it was labeled with codes to exemplify the sentence meanings. Thereafter, the codes were sorted into subcategories based on how they were related in terms of similarities and differences. In the next step, the subcategories were sorted into categories. Categories and subcategories were drafted through discussions in the research group. In the results section, categories and subcategories were exemplified by quotes.

Ethical aspects

In this study, practice was followed and no approval from an ethics board or committee was necessary as only healthcare employees were involved and questions about knowledge, competence, and confidence are not viewed as sensitive. Participation was voluntary, the study was conducted in accordance with the Helsinki Declaration, and in accordance with the Swedish Central Ethics Testing Board, Regulation No. (2003: 460).

The Helsinki declaration is based less on key philosophical principles and more on prescriptive statements, and it promotes good clinical practice in research design and publication. The goal of the declaration is to protect the subjects of biomedical research from abuse and exploitation (66). The presence of the participants was a confirmation of their consent and interest in participating. They were informed that the interviews were recorded, and that transcribed data was coded without any personal identification. Furthermore, the participants were informed that only the researchers had access to the data, and the results were to be published without identifiable information about the participants.
Results

Study I

Background Characteristics

There were 349 students enrolled in the 13 different midwifery programs in Sweden during 2016/2017. At the time of data collection, 303 students were present, and 238 students completed the questionnaire, which gave a total response rate of 79%. It took approximately one hour to respond on the questionnaire.

Table 2 shows that the midwifery students were all female, and the median age was 31 years. Most of them had children of their own (63%), and a long working experience as a nurse (53% >5 years).

Table 2. Background Characteristics

<table>
<thead>
<tr>
<th></th>
<th>n=238</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;31 years</td>
<td>103</td>
<td>(44.0)</td>
</tr>
<tr>
<td>&gt;31 years</td>
<td>134</td>
<td>(56.0)</td>
</tr>
<tr>
<td><strong>Children</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>151</td>
<td>(63.0)</td>
</tr>
<tr>
<td>No</td>
<td>87</td>
<td>(37.0)</td>
</tr>
<tr>
<td><strong>Experience as nurse</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1–4 years</td>
<td>112</td>
<td>(47.0)</td>
</tr>
<tr>
<td>&gt;4 years</td>
<td>126</td>
<td>(53.0)</td>
</tr>
<tr>
<td><strong>Medical faculty</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>139</td>
<td>(58.0)</td>
</tr>
<tr>
<td><strong>Other faculty</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>99</td>
<td>(42.0)</td>
</tr>
</tbody>
</table>

More of the midwifery students (58%) were enrolled at a university with a medical faculty, and 42% were enrolled at university collages without a medical faculty.

Low scores in some basic skills

The lowest values of confidence (the midwifery students assessed confidence ranging from 1–4), found in antenatal care were skills that are not performed on a
daily basis such as assessments of fetal growth by manual measurements (2.09) and first-line management of medical and pregnancy complications based on evidence-based national/local guidelines before referral for high level intervention (2.52).

In intrapartum care, the lowest confidence rating was found in performing appropriate hand maneuvers for face and breech deliveries (1.57), management of prolapsed cord while requesting medical attention or transfer (1.59), identifying cervical lacerations and providing first level care (1.56), and performing an episiotomy (1.60). In postpartum care, low confidence scores were found in providing information and support for women and their families who are bereaved (maternal death, stillbirth, pregnancy loss, neonatal death, congenital abnormalities) (2.01) and providing emergency treatment for late post-partum hemorrhage and referral if necessary (2.44). In newborn care, scores were lowest for transferring the at-risk newborn to an emergency care facility (2.31), initiating emergency measures for respiratory distress and newborn resuscitation (2.34), and supporting and educating parents who have given birth to multiple babies (2.35).

**High scores in some basic skills**

In antenatal care, the midwifery students scored high in taking initial and ongoing medical history (3.49), calculating the expected day of delivery (3.63), and listening to fetal heart rates (3.57).

For intrapartum care, they scored high in providing physical and psychological support for women (3.52), clamping and cutting the cord (3.78), and providing opportunity for women to express their needs and choices during birth (3.67). In postpartum care, they felt confident in taking a selective history, including details on pregnancy, labor, and birth (3.48) and educating birthing women in the importance of hygiene and recognizing signs of an infection (3.46). In newborn care, the skills that were rated high in confidence included promotion and maintenance of normal newborn body temperature (3.63) and performing a screening/physical examination of newborn for congenital defects (3.55).

**Descriptive statistics of the four domains**

As shown in table 3, students felt least confident in intrapartum care and most confident in antepartum care. The Cronbach Alpha value for the four domains ranged from 0.882–0.915, suggesting that the construct into the four different domains were valid.
Table 3. Mean confidence of the four domains

<table>
<thead>
<tr>
<th>Domain</th>
<th>MIN</th>
<th>MAX</th>
<th>MEAN</th>
<th>Cronbach alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antepartum care</td>
<td>2.09</td>
<td>3.49</td>
<td>3.13</td>
<td>0.887</td>
</tr>
<tr>
<td>Intrapartum care</td>
<td>1.57</td>
<td>3.78</td>
<td>2.74</td>
<td>0.909</td>
</tr>
<tr>
<td>Postpartum care</td>
<td>2.01</td>
<td>3.48</td>
<td>3.03</td>
<td>0.882</td>
</tr>
<tr>
<td>Newborn care</td>
<td>2.31</td>
<td>3.63</td>
<td>2.97</td>
<td>0.915</td>
</tr>
</tbody>
</table>

Thereafter, the students were divided by type of faculty and checked for differences in background characteristics (Table 4). The only statistically significant difference between the faculties was enrollment of students in a medical faculty consisted of younger students. Age was thereafter explored for differences in the basic skills. When analyzing the mean in age and confidence there were significant differences between the groups. Statistical tests presented with p-values are the probability of the t-test according to Dawson & Trapp (2004) (59).

Table 4. Background characteristics divided in types of Universities

<table>
<thead>
<tr>
<th></th>
<th>Medical faculty</th>
<th>Other Faculty</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=139</td>
<td>n=99</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n (%)</td>
<td>n (%)</td>
<td></td>
</tr>
<tr>
<td>Mean age</td>
<td>31.9 (5.35)</td>
<td>33.5 (6.36)</td>
<td>0.036</td>
</tr>
<tr>
<td>&lt;31 years</td>
<td>66 (47.8)</td>
<td>37 (37.4)</td>
<td>0.110</td>
</tr>
<tr>
<td>≥31 years</td>
<td>72 (51.2)</td>
<td>62 (62.6)</td>
<td></td>
</tr>
<tr>
<td>Children</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>81 (58.3)</td>
<td>70 (70.7)</td>
<td>0.050</td>
</tr>
<tr>
<td>No</td>
<td>58 (41.7)</td>
<td>29 (29.3)</td>
<td></td>
</tr>
<tr>
<td>Experience as nurse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-4 years</td>
<td>66 (47.5)</td>
<td>46 (46.5)</td>
<td>0.877</td>
</tr>
<tr>
<td>&gt; 4 years</td>
<td>73 (52.5)</td>
<td>53 (53.5)</td>
<td></td>
</tr>
</tbody>
</table>

Some basic skills in relation to age

The following figure shows statistically significant differences according to students’ age and confidence, which ranged from 1 to 4. There were not so many differences in antenatal care, but younger midwifery students were more confident that older students in the following competences illustrated in figures 1 to 4.
In intrapartum with several competencies, there were more differences between older and younger midwifery students. Younger students were more confident overall.

Figure 1. Student’s age related to antenatal care

Figure 2. Student’s age related to intrapartum care
In postpartum care there were two competencies that differed between the younger and older students; the group of older midwifery students were more confident in supporting bereaved parents than the younger midwifery students.

![Figure 3. Student’s age related to postpartum care](image)

In newborn care, three competencies are described with differences in confidence, and the group of younger students were more confident in all of them.

![Figure 4. Student’s age related to newborn care](image)
Confidence and type of faculty

Confidence in basic midwifery skills was then compared according to type of faculty. Each of the basic skills were compared and adjusted for age, parity and working experience. The skills with statistically significant differences are described in Table 5. The result showed that students enrolled at a university with a medical faculty were more confident in managing some obstetric emergency situations such as shoulder dystocia, postpartum hemorrhage, and performing aortic compression. In addition, in postpartum care, students in a medical faculty reported higher confidence in educated parents about when to resume sexual activity following childbirth. When adjusted for background characteristics the odds of being confident in these areas did not change.

Table 5. Comparisons between students allocated to a university with or without a medical faculty

<table>
<thead>
<tr>
<th>University with medical faculty</th>
<th>Crude Odds ratio</th>
<th>P-value</th>
<th>Adjusted OR</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manage shoulder dystocia</td>
<td>2.97 (1.29–6.85)</td>
<td>0.010</td>
<td>2.99 (1.28–6.98)</td>
<td>0.00</td>
</tr>
<tr>
<td>Manage postpartum haemorrhage</td>
<td>1.92 (1.13–3.24)</td>
<td>0.014</td>
<td>1.94 (1.14–3.29)</td>
<td>0.015</td>
</tr>
<tr>
<td>Perform aortic compression</td>
<td>2.81 (1.41–5.61)</td>
<td>0.003</td>
<td>2.76 (1.37–5.54)</td>
<td>0.004</td>
</tr>
<tr>
<td>First line treatment and referral</td>
<td>2.28 (1.15–4.54)</td>
<td>0.018</td>
<td>2.26 (1.12–4.55)</td>
<td>0.021</td>
</tr>
<tr>
<td>Educate on resuming sexual activity following childbirth</td>
<td>1.89 (1.10–3.24)</td>
<td>0.010</td>
<td>1.92 (1.11–3.30)</td>
<td>0.019</td>
</tr>
</tbody>
</table>

There were no statistically significant differences between students allocated to a university with or without a medical faculty in antenatal care after investigating all of domain variables. Likewise, in the last domain of newborn care, there were no statistically significant differences between the two types of universities.
Study II
Twenty midwives from different hospitals expressed interest in participating in the discussions. However, due to high workloads and illnesses, fewer midwives could participate, which was not confirmed until just before the discussions were to take place.

There were 14 participating midwives from four county hospitals in central Sweden. Four focus group discussions were conducted. The number of midwives in each group varied between two and six. The midwives’ professional experience ranged from 7 months to 27 years, and the median experience was 15 years. The discussions took place when the shifts overlapped with intention to make it easy and accessible to the participants. Four categories were identified in the analysis: 1.) feelings of professional safety evolve over time; 2.) personal qualities affect professional development; 3.) methods for expanding knowledge and competence; and 4.) competence as developing and demanding.

The first category, *feelings of professional safety evolve over time*, could be understood as one in which confidence develops through experience, and skills grow with working experience and a lot of practice. The midwives considered the profession as a handcraft. In the focus group discussion, it was mentioned that intuition develops through experience, and intuition was an essential and important feeling. The participants in the focus groups agreed upon the idea that knowledge and competence start with education.

In the second category, *personal qualities affect professional development*, an inner sense of self-esteem and comfort was acknowledged. There was a consensus in the group discussions that internal factors such as self-efficacy, competence, and personality were of importance for confidence. Self-esteem and confidence were linked in such a way that confidence was a feeling of safety in which also self-esteem was experienced, and confidence and self-esteem could be radiated to the other individuals that they met in some situations. The process of knowledge acquisition was facilitated if the midwife was interested in the profession and had good communication skills. This was exemplified as an ability to quickly establish contact with a woman in childbirth, make her feel safe and secure, and communicating with her in a supportive and pedagogical way so that the women and the midwife could connect in a sometimes fearful and painful situation such as birth.

Methods for expanding knowledge and competence, was a category in which the midwives gave rich examples. Being a supervisor and meeting midwifery students were considered enriching for competence, because the students brought new scientific knowledge into the wards. Collegial learning encompassed midwives’ opportunities to attend courses, learn new skills, update other competencies, and bring new knowledge to the wards. A permissive environment was also brought up in the discussions and was exemplified as an environment in which colleagues...
allowed new midwives to "be new", and no questions were too challenging. In addition, a permissive attitude could be felt when the experienced midwives had the opportunity and were allowed to ask for help. There was a humility inside the ward in which most of the midwives helped each other and assisted in birthing situations in which they learned from each other.

In the last category, *competence as developing and demanding*, the rotation between the wards was a focus in the discussions. Some of the midwives experienced rotating among different wards in different areas enriching for competence, but most of the midwives experienced rotating among different wards as demanding. It could be difficult to be new, and the time for reflection was extremely important. To enable and encourage individuals to create an atmosphere in which there were opportunities for midwives to reflect on what happens was a developing factor.

The organization with rotation meant that there were a lot of competencies to question and understand at the expense of time for reflection. Developing broad competence was a time-consuming process, and in order to feel safe and secure and become an expert in some areas was impossible due to the rotations. The organization with rotation hindered the midwives, and they felt that they were not able to take responsibility for their own development in the situations where they felt split between different assignments. Rotation was something they had not chosen to do within themselves, and it was difficult to be updated in all areas.
Discussion

The main finding of this thesis was the idea that developing professional confidence and competence is a time-consuming process. Personal qualities were of importance, and competence could be considered as both developing and demanding. Near-graduation midwifery students were well prepared for managing uncomplicated midwifery skills, but they appeared to need additional training in order to feel confident in managing complicated cases. Some background variables such as age and type of university were associated with higher levels of confidence.

The main result in Sweden showed that the midwifery students were confident in handling normal pregnancy and birth. They were not confident in an unexpected, rare complicated situation that could occur during pregnancy and birth. In contrast, in the Indian study by Sharma et al. (2015), nearly half of the midwifery students scored low confidence in all four domains despite education type or level (2).

During intrapartum care, the students did not feel confident with acute complications that could occur such as assisting in facial presentations, breech presentations, and umbilical cord progression. There are few Swedish hospitals currently advocating or offering vaginal breech births, and Catling et al. (2016) reported that both midwives and doctors lack competence in this area, thus presenting the need for education or updating in those areas (67).

The present study results showed that the students were not confident in managing shoulder dystocia and postpartum hemorrhage and performing aortic compression. These emergency obstetric situations seldom occur; for example, the risk of shoulder dystocia is in 0.5%–1% of vaginal births, and the risk of postpartum hemorrhage 2.5% of vaginal births. There are studies that could confirm the impossibility of feeling confident in rare situations. Nyfløt et al. (2017) suggested that in order to feel better prepared and confident in those rare situations, additional training and risk identification is required (68, 69). This is obvious since more practice is needed as is a permissive environment for students with good collaboration between professionals and respect for the experienced feelings. If that respect exists, it can offer an opportunity to practice and train according to his/her own needs (25, 40, 70).

However, results indicate that the group of younger midwifery students (<31 years) felt more confident overall. According to age as it relates to midwifery in Sweden, no research has been done, but a new Australian study interviewed young midwifery students in direct entry education and focused on midwifery students’ ages (<21 years). The researchers found more advantages in being young despite the emotionally demanding education and profession. The result of that study showed that young midwifery students developed resilience and coping strategies over time, and they also demonstrated commitment to a career in midwifery (71).
In the Australian study, young midwifery students were strongly motivated and had developed a strong sense of themselves as midwives. This finding could be understood in the light of Bandura’s self-efficacy theory. Bandura (1995) described four major processes that regulate efficacy: 1.) cognitive; 2.) motivational; 3.) affective; and 4.) selective processes. All of these processes usually operate concurrently. From a midwifery perspective, it is likely that the stronger the perceived self-efficacy, higher goals could be set and the midwives who have a high sense of efficacy could visualize success. Bandura (1995) also described the opposite in people who doubt self-efficacy as they often visualize failure scenarios, which, in a midwifery perspective, means that she/he would be preoccupied with only seeing what could go wrong. Self-doubt then becomes the ruling action and not much else can be achieved.

Confidence could be related to positive or negative thinking. In the study by Fenwick et al (2016), it appears that young midwifery students don’t have much “negative thinking” as negative thinking with negative targeting can affect the outcome. The midwives’ beliefs in their own personal coping capabilities can affect how much stress they could experience in difficult and sometimes threatening situations during labor and birth (71). Within Banduras (1993) perspectives, sometimes, midwifery students personal level of motivation may hinder or facilitate the process of becoming a midwife (72). Combined self-efficacy and goals could increase the students’ strategies to regulate learning and play an important role in motivation to learn (72). Bandura’s theory is valuable and complements the view of students' learning in which self-efficacy matters for learning (1).

Another result from study I was that midwifery students at a university with a medical faculty were more confident than midwifery students at a university without a medical faculty. This may be understood due to the fact that there are more possibilities at a medical faculty to train in teamwork in complicated situations. In a study by Watters et al., (2015) it was confirmed that confidence ratings improved within inter-professional training (IPT), and post-course ratings showed that the training was significantly associated with better final outcomes for a communication/teamwork dimension (73).

The result can also depend on the different working conditions for Swedish midwives. Midwifery is a very independent profession in some areas outside university clinics. In rural areas especially, the responsible medical doctor may be at home, on call. Midwifery students who practiced in that kind of care may find it difficult to feel confident and not feel ready to practice there. It may seem invincible to work in those conditions. In Meleis’s transition theory, it is important to discover the dimensions of change, which can lead to critical events such as disturbances in relationships and routines. In the perspectives from midwifery students, they felt that they may not be prepared for the new profession and feel expectations for which they are not ready to assume.
To have experience as a nurse was not an advantage in study I as this factor was not associated with confidence. Midwifery students in Sweden are registered nurses and describe midwifery as a different profession with a different perspective than that found in nursing. That different perspective could be difficult for a midwifery student to comprehend (unpublished data).

In some other countries, there could be other perspectives from a midwifery view; in the Netherlands, teachers in the midwifery schools in Netherlands report that they are striving toward more “client-centered care” (53). Client-centered care occurs in cases in which a midwife takes advantage of the woman’s own power and creates time to mutually reflect on what is happening. To understand the changes that a pregnant woman is undergoing, it is important to consider the prospective parents’ personal situation, to involve them, and offer them informed choices so they can to act upon their desires and become empowered (19, 74, 75). The ones who supports client-centered care believe that it is not the hours spent at the obstetric clinics that are most important for learning midwifery, but rather, it is the relationship with the pregnant women during which time the student can increase knowledge (53).

The organization was the largest focus in study II, and it was beneficial for confidence with a permissive environment with good collaboration between professionals and respect for the experienced feelings that occurred sometimes. If respect was shown to exist, opportunities to practice and train according to own needs were enhanced (25, 40, 70). In a midwifery context confidence can influence the whole process from meeting the pregnant women until the birth occurs since that process is time consuming (14, 15, 19). In the discussions, there was a consensus that there should be time for reflection and critical review of the care offered, and midwives need to support each other while they are developing in the profession.

A permissive environment with collaboration was also a concept that Meleis suggested as important in order to facilitate the transition from student to professional and to be aware of students’ vulnerability (52). This new and different transition from nurse to midwife could be difficult for a new midwife to understand and it could lead to a feeling of insecurity. One method to decrease insecurity could be to use mentorship. Lennox and Skinner (2008) described mentorship as a personal relationship in which the goal is to strengthen the new midwife, so she grows into the new role and feels confident in the profession. How long the mentorship should last should be decided individually after the goals are met. One conclusion was that mentoring supports confidence, safety, and facilitates the transition from student to professional midwife (76).

Bandura acknowledged motivation and an emotional wellbeing as important factors that could increase self-efficacy and confidence; midwives mentioned that personal qualities affect professional development. The midwives acknowledged
an inner sense of self-esteem and comfort as a way to reach competence and confidence, which was in line with Bandura’s concept of wellbeing.

The midwives in study II described that feelings of not being safe and becoming confident in some areas was impossible due to the rotations; they felt that their emotional wellbeing was threatened. The organization with rotations between labor, postnatal, and sometimes gynecological wards diminished the midwives’ confidence, and they expressed doubt in self-efficacy. This is an organizational issue in which midwives are moved around between different wards to cover employment needs, which does not contribute to confidence or competence. Those external organizational factors in childbirth and maternity care could affect midwives’ satisfaction with their work. It was not positive for professional confidence development, which may have caused midwives to feel divided or split.

The workplace is a social environment and interacting with both coworkers and patients has an impact on the individual midwife. It should be a safe environment in which she is part of the team and to fits in (25).

In Bandura’s theory of social integration, which states that in social environments, people use their knowledge and behavioral skills to produce desired results. Midwives are self-conscious since other people monitor their actions and judge them. They are influencing themselves while they are influencing their environment. In their everyday transactions, people act on their thoughts and later analyze how well their thoughts have served them in managing events (55). Midwives and midwifery students are “with women”, they meet expectations and wants to manage and fulfill parents desires. To sometimes feel expectations from parents and not being able to provide the kind of care they deserve is an ethical stress which need to be considered (41).

These two studies were about confidence in midwifery and were studied from two different perspectives: 1.) from clinical midwives’ perspectives and 2.) how confident soon-to-be midwives feel in the field of practice. For both the experienced and student midwives, time was significant for learning and developing in the midwifery profession.

From a pragmatic view, there are consequences when a midwife does not become confident. It is important that the midwifery education prepares midwifery students for their future profession, and that the midwives are able to be independent and preserve normality during childbirth. Despite the preparation from education, midwives experience stress at the maternity units due to high workload, poor management, and a lack of promotional opportunities. These aspects could contribute to a risk of burn out, causing midwives to leave the profession (77). The stress in the maternity units also may have consequences for the individual women who has a need for “confidence in the meeting”.
Even if midwifery education changes, there are still different opinions among the professionals in academic institutions and in clinical practices about theoretical and practical knowledge and the areas on which students are supposed to focus. These facts call for a national consensus regarding the major subject of all midwifery programs in Sweden, but there are still different opinions about the content and length of the midwifery education. Studies have shown that midwifery students, clinical midwives, and obstetricians want a better balance between theoretical and practical knowledge. The midwifery students indicated that time for writing a minor thesis was made at the expense of time for clinical training, and clinical training was what they needed. Even the teachers of the midwifery courses had problems with the time pressure and felt that it was too much to be taught in a limited time period. One conclusion of those findings could be to extend the midwifery education to at least two years after three years of nursing education or to start a direct midwifery entry program of five years culminating with a master’s degree in the science of midwifery (37, 78).

Methodological considerations

Study I
This study was compromised by its observational design, which limits the conclusion to be drawn. Nevertheless, it was a national study in which all midwifery programs participated with a good response rate (79%).

The different conditions of the students with respect to time and place to respond to the questionnaire could have impacted the results. To respond to the questionnaire took time, and it would have been beneficial if every student could have responded during the scheduled time, which was not the case. The method of using only a questionnaire without additional interviews could also have impacted the responses as it is possible that some students might have wanted to explain more about the subject. This was understood by Stewart et al. (2000) who stated that we need to be careful with what we measure, and self-assessment instruments could be used to evaluate practice and promote reflections on performance but could not be used to judge the ‘accuracy’ of the individual’s evaluation. This indicates that it may not be reliable to use a self-assessment instrument when measuring competence or confidence (79).

In the translation process, when validating the questionnaire, only a translation from English to Swedish was done, and no reverse translation was done in order to confirm that the right words were used. This may have been a source of error.

A response analysis was performed, the total number of students present during the data collection was 300 (at 13 midwifery schools), and the response rate was 238 students, which gave a response rate of 79%. The students who participated
in data collection were the ones that could participate, but it happened that some students brought a survey (with a pre-paid envelope) to another course companion who was not present. Overall, there were not many who responded to sending the distributed questionnaire.

The total number of enrolled midwifery students in Sweden's program was 310 in 2016/2017. There could have been more students as all midwifery programs together offered 374 places, but there were only 310 assigned places. Unused places were 64, which may consist of students who have a student brake for personal reasons. In one of the schools there were only half of the class present and there was no opportunity for the rest of the students to attend. In most cases a researcher was present during data collection. At one school just before the Christmas break the researcher was not present, and during that time, it was voluntary for the students to choose to leave or fill in the form at scheduled time. Most of the students chose to go on Christmas leave which gave a very low response rate (15%).

At another university, there was a very low response rate (9%), possibly due to the fact that there was no opportunity for the students to answer the questionnaire during the scheduled time. At the university with the lowest response rate, the researcher was present and informed about the study and did stay the whole day in a connecting room in case there were some questions.

The conclusion was that the only possibility of having a good response rate was to be physically present in the same room with the students in order to explain possible questions. Of course there was a risk that a researcher’s presence could have affected the response, and it is important to be aware of one’s power in the presence of the students. Still, the most important issue was that the students were given the opportunity to answer during scheduled time because the questionnaire was very extensive and took about 60 minutes to answer. In India, where they first conducted the study, there were also researchers present during data collection. A reliability test was done, which indicated reliability because the Cronbach Alpha value range from 0.882–0.915, all above the minimum recommendation of 0.7 (57).

**Study II**

In study II, it was only 14 midwives took part in the discussions. There should have been 20, but many could not participate due to heavy workloads. In one of the groups, only two midwives participated and that could not be called a group, but they had interesting information to share. Their contribution to the study was interesting, especially because it concerned the hospital with the smallest birth rate and how they developed confidence in that setting. However, small groups are not only considered to be negative since there may be a lot of benefits to a small group according to Morgan, (2010) who states that it gives the participants
more opportunities to express themselves, there is no group pressure, and it gives
the participants in the groups more time to think and talk (80).

The discussions were interesting and stimulated the participants to express their
opinions and feelings of how they were thinking of the concept of knowledge,
competence, and how to achieve feelings of confidence. It is a known fact that
participants could be shy in large groups and did not want to speak in front of
others (56), but that was not the fact in this case. The groups were dynamic during
the discussions. Midwives who had long experiences with a lot of stories and
eamples to share sparked interest in the new midwives, who were interested in
listening. It appeared to be a good mix of different levels of experience. One
limitation of the study was that it required an interviewer who has good skills with
in-group processes (as described by Patton 2002), and the researchers were not so
familiar with the group-process or were not experienced interviewers. However,
one study strength was the use of two interviewers as one had conducted the
interviews and the other was able to handle the techniques and takes notes.

The researchers’ experiences as clinical midwives were not considered
problematic as they had a lot of experience in intrapartum care. This experience
permitted the researchers to understand what the midwives were discussing
without further explanations. This “pre-understanding” influenced the results
despite striving to be neutral, but in these focus group discussions it was a positive
influence and the midwives could take their time in the discussions and did not
have to explain the context to the researchers. Concerning the problem with pre-
knowledge, Creswell (2017) described that a researcher filters data through a
personal lens and cannot escape the personal interpretation brought to qualitative
data analysis. It is not possible to analyze this without imposing one’s own
interpretations (81). To ensure credibility and trustworthiness in data, the authors
followed the steps in the analysis process jointly and individually, focusing on
selecting the most useful meaning units for the purpose of the study (65).

**Conclusion**

The main findings of this thesis suggest that developing professional confidence
and competence is a time-consuming and demanding process that involves
personal qualities. Soon-to-be graduated midwives are well-prepared for
managing uncomplicated midwifery skills but need additional training to feel
confident in managing complicated cases. Competence, knowledge, and
confidence is a continual evolving process. Midwives’ confidence depends on
both external and internal factors and develops over time. Results from studies I
and II showed that more practical training is desirable in addition to having access
and opportunities for exposure to complex situations and possibilities to reflect
on what happens in a permissive environment.
Clinical implications

Becoming a midwife is a sensitive and life changing process. To be exposed to such emotional experiences requires time to reflect and understand in order to enhance the new profession. It is expected that midwives and midwifery students should perform basic skills independently and feel confident about doing so, but it may be a utopic situation in the kind of midwifery programs and the clinical context that exist today. One way to increase midwifery students’ confidence is an extended education program or a completely different type of education such as a long direct-entry education.

Offering possibilities for equal opportunities in practice at university hospitals and in other forms of care needs to be considered, especially after considering the results in which midwifery students educated at university with a medical faculty were more confident in obstetrical emergency situations than the non-medical faculty counterparts. That type of training could be arranged through a national distribution of clinical practice. Even newly graduated midwives need a good start in the new profession, encompassing an individualized start where the needs should guide. Improvements for newly graduated midwives could be a system with mentorships to help with development in the student’s professional role and mature in addition to becoming acquainted with the workplace, which increases confidence, as a part of a lifelong learning in midwifery.

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