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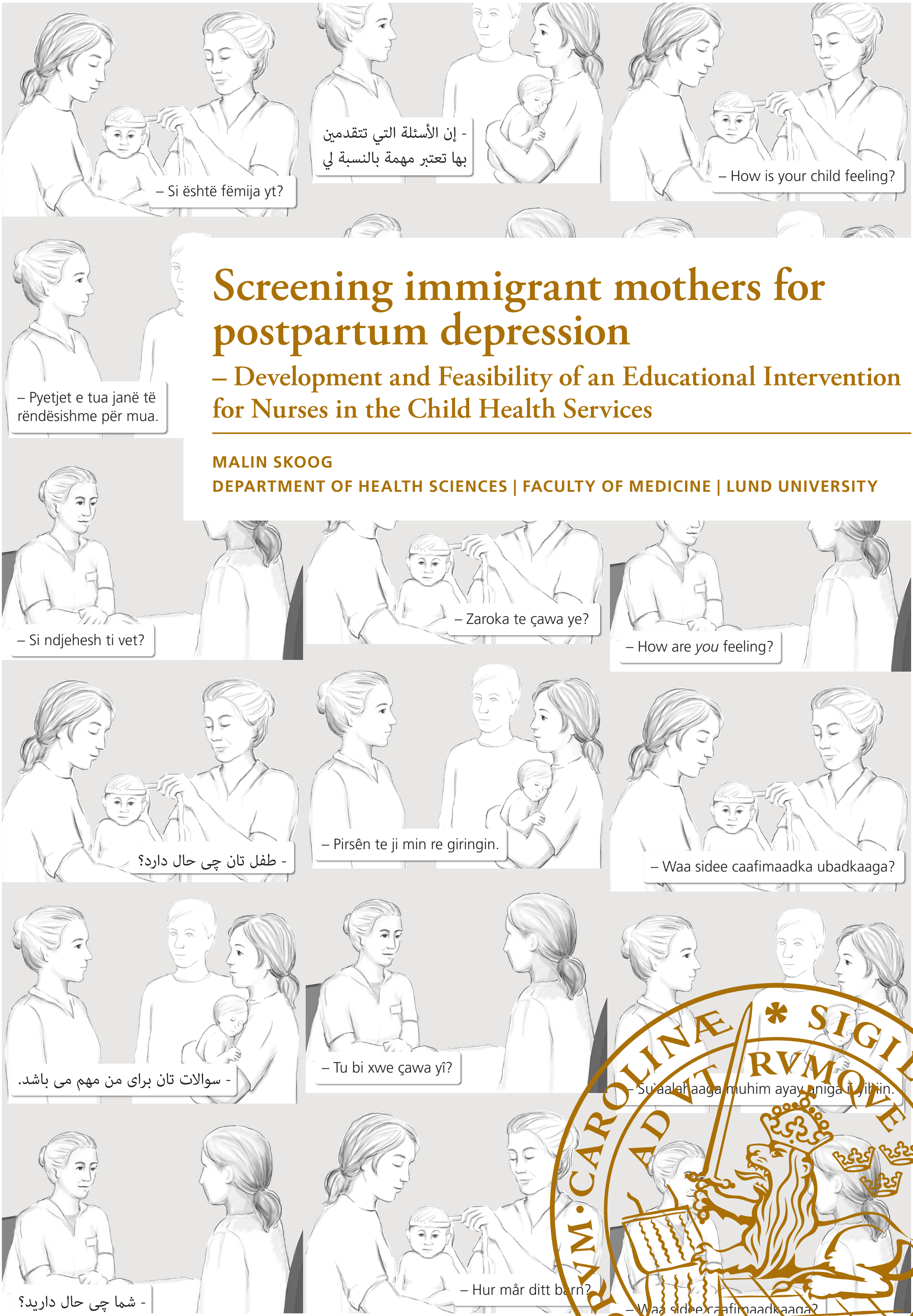

Screening immigrant mothers for postpartum depression

– Development and Feasibility of an Educational Intervention for Nurses in the Child Health Services

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MALIN SKOOG

DEPARTMENT OF HEALTH SCIENCES | FACULTY OF MEDICINE | LUND UNIVERSITY

Screening immigrant mothers for postpartum depression

Development and Feasibility of an Educational Intervention for Nurses in the Child Health Services

Malin Skoog

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Abstract

Postpartum depression (PPD) is a major public health problem, which immigrant mothers are at particular risk of being affected by. Routine screening is implemented by many countries to increase identification, but research suggests that health care professionals (HCPs) experience screening of immigrant mothers as challenging.

The overall aim of this thesis was therefore to develop an evidence-based educational intervention for Child Health Services (CHS) nurses in screening immigrant mothers for postpartum depression, and to test its feasibility. Study A and Study B were qualitative interview studies with 13 participants each, Study C was a systematic review including eight papers and Study D had a one-group pretest-posttest experimental design with 30 participants.

In Study A the CHS nurses' experiences of identifying signs of PPD in non-Swedish-speaking immigrant mothers showed that a transcultural caring relationship needed to be established to enable assessment of the mother's mood. The nurses relied on their tacit knowledge when identifying signs of PPD and cultural knowledge was used to filter their impressions. Perceived lack of cultural competence, when trying to get the mother to disclose her feelings and accept external support, caused frustration.

The findings in Study B showed that non-native-speaking immigrant mothers felt confirmed as a person when participating in screening for PPD, although the condition itself was unclear to most mothers. Cultural beliefs about mental ill health, negative expectations connected to their perceived value as a woman, shame at not being grateful enough for their new life, fear of the Child Protective Services and negative experiences of the interaction during the screening challenged them in speaking about their mood.

In Study C the HCPs' synthesized experiences of identifying signs of and screening immigrant mothers for PPD showed fear of missing mothers with signs of PPD, feeling uncomfortable in the cross-cultural setting and frustrated in handling difficulties associated with communication, translated versions of the screening scale and cultural implications of PPD.

Based on the findings in Study A, Study B and Study C, previous research and theoretical frameworks, an educational intervention for CHS nurses in screening immigrant mother for PPD was developed and tested for feasibility (Study D). The CHS nurses were 100% satisfied with the different training sessions in the intervention and 93% of them stated that the intervention to a high degree improved their ability to meet the requirements linked to the work task. The intervention was found to be feasible but required minor adjustments to the sessions on the use of interpreters and on tacit knowledge, as well as the practical training sessions. The material requires adjustment and further evaluation. In conclusion, this thesis contributes to the development of evidence-based clinical guidelines involving interpreters and translated versions of the EPDS which may facilitate the screening of immigrant mothers for PPD.

Key words; Child Health Services, complex intervention, Edinburgh Postnatal Depression Scale, immigrant/migrant, maternal mental health, nursing, postpartum/postnatal depression, screening

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Abbreviations and Symbols

ANC	Antenatal clinic/ Mödrahälsovård
ARL	Action Reflection Learning
BCG	Bacillus Calmette-Guèrin
CASP	Critical Appraisal Skills Programme, qualitative research checklist
CCCTQ-pre	Clinical Cultural Competency Training Questionnaire – pre
CCCTQ-post	Clinical Cultural Competency Training Questionnaire – post
CHCC	Child Health Care Centre (CHCC) / Barnavårdscentral (BVC)
CHS	Child Health Services / Barnhälsovård (BHV)
CHS nurse	Child Health Services (CHS) nurse / Barnhälsovårds-sjuksköterska (BHV)
CI	Confidence Interval
CNI	Care Need Index. A socioeconomic need index value used to allocate resources to CHCCs
EPDS	Edinburgh Postnatal Depression Scale
FC	Family Centre / Familjecentral. Co-location and cooperation with antenatal clinic, child health services, open preschool and social services
HCP	Health care professionals / Hälso- och sjukvårdspersonal
HIC	High-income countries / Höginkomstländer
PPD	Postpartum depression
RN	Registered nurse / Legitimerad sjuksköterska
S-GSE	Swedish General Self-efficacy Scale
WHO	World Health Organization / Världshälsoorganisationen

Original papers

This thesis is based on the following papers referred to in the text by their Roman numerals:

I Skoog M, Hallström I, Berggren V. 'There's something in their eyes' – Child Health Services nurses' experiences of identifying signs of postpartum depression in non-Swedish-speaking immigrant mothers. Scandinavian Journal of Caring Science. 2017 Jan 25, volume 31, issue 4, pp. 739–747. doi: 10.1111/scs.12392

II Skoog M, Berggren V, Hallström I. "Happy that someone cared" – non-native-speaking immigrant mothers' experiences of participating in screening for postpartum depression in the Swedish Child Health Services. Journal of Child Health Care. Journal of Child Health Care. 2019, Vol. 23(1) 118–130. doi.org/10.1177%2F1367493518778387

III Skoog M, Hallström I, Vilhelmsson A. Health care professionals' experiences of screening immigrant mothers for postpartum depression – a systematic review. Submitted.

IV Skoog M, Rubertsson C, Hallström I. Feasibility of an evidence-based educational intervention in screening immigrant mothers for postpartum depression -a pretest-posttest experimental design. Submitted.

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Introduction

The postpartum period is a challenging transition period for new mothers involving a wide range of emotions and leaving them at high-risk of being susceptible to mental ill health (Finlayson et al., 2020). Postpartum depression (PPD), refers to a non-psychotic depressive condition (Cox, Murrey & Chapman, 1993) that usually begins within four to six weeks after the birth (Swain et al., 1997). It is recognized as a global public health problem (World Health Organization, 2008), which immigrant mothers are at higher risk of being exposed to (Falah-Hassani et al., 2015) especially asylum seekers and refugees. Those who migrated within five years are at particular risk (Dennis, Merry & Gagnon, 2017) and do not speak the language of their new homeland (Bandyopadhyuy et al., 2010). PPD is identified as a major childhood adversity and interventions to reduce long-term negative developmental outcomes are an important public health strategy (Dennis & Dowswell, 2013). Several countries have implemented routine screening of all new mothers to increase identification of mothers suffering from PPD (Armstrong & Small 2010; Hansotte et al., 2017).

The Edinburgh Postnatal Depression Scale (EPDS) is one of the most frequently used screening instruments for PPD and has been translated and validated in many languages (Cox, Holden & Henshaw, 2014). The 10-item Likert scale is especially developed for symptoms of PPD (Cox, Holden & Sagovsky, 1987) and is used in conjunction with a clinical interview (Wickberg, 2020). The screening is usually conducted by health care professionals (HCPs) in primary health care settings (Phoosuwan & Lundberg, 2020; Wickberg, 2020).

In Sweden, routine screening for PPD has been recommended by the Swedish National Board of Health and Welfare (2010) since 2010, and is included in the National Child Health Services (CHS) programme to be conducted by the nurses in the services (Swedish National Board of Health and Welfare, 2014). The screening procedure for PPD is well implemented throughout the country (Wickberg et al., 2020), but despite high general participation it is difficult to reach immigrant mothers (Centre of Excellence for Child Health Services, 2017). Earlier research suggests that HCPs' experience screening immigrant mothers for PPD as a challenging task (Teng et al., 2007, Massoudi et al., 2007). The overall aim of this thesis was therefore to develop an evidence-based educational intervention for Child Health Services nurses in screening immigrant mothers for postpartum depression, and to test the feasibility of the intervention.

Background

Postpartum depression

PPD has been globally recognized as a major public health problem (World Health Organization, 2008) and is the most common complication after a pregnancy and delivery in high-income countries (HICs) (Howard et al., 2014). Postpartum depression refers to a non-psychotic depressive condition that begins or extends into the postpartum period (Cox, Murrey & Chapman, 1993). The depression most commonly starts after the birth (40.1%) (Wisner et al., 2013), usually within four to six weeks (Swain et al., 1997). Symptoms such as feeling inadequate as a mother, a sense of emptiness, tearfulness, anxiety and panic, despair, guilt, irritation and of not being oneself, are characteristic of PPD and make it difficult to manage everyday life (Wickberg & Hwang, 1997).

The overall prevalence of PPD in mothers without a prior history of psychiatric disorder is estimated at 17%, but significant differences between geographical regions are seen, with Europe having the lowest prevalence of 8–13% (Shorey et al., 2018). The prevalence of PPD in Sweden is estimated at 11.1% (Rubertsson et al., 2005). Moderate risk factors associated with PPD are earlier stressful life events, low partner support or marital difficulties, low social support, pregnancy complications and/or obstetric complications around birth, premature birth or low birth weight and medical illness, while the highest risk factors are previous history of depression or anxiety disorder, domestic violence or previous abuse, and migration status (Howard et al., 2014).

Postpartum depression and immigrant mothers

The prevalence of PPD among immigrant mothers as a group (asylum seekers, refugees, relation and labor immigrants) is estimated at 20% (Falah-Hassani et al., 2015) and as high as 42% among refugees and asylum seekers (Collins et al., 2011), which means that immigrant mothers have a higher risk of being affected compared to indigenous mothers in HICs (Falah-Hassani et al., 2015; Collins et al., 2011). Besides refugees and asylum seekers, mothers less proficient in the native language of their new country are at particular risk (Bandyopadhyuy et al., 2010). The increased risk of postpartum depressive symptoms among immigrant mothers is complex but may be related to disproportionately many stressors in the transition to parenthood. Coping with pre- and post-migration stressors (violence, war, natural disaster, shifting gender roles in the family and uncertain immigration status), cultural factors (disparity between the original and the new culture), poor information about the health care system and not being able to carry out cultural rituals associated with childbirth are specific risk factors for PPD connected to immigration. Other known risk factors are food insecurity and worries about family members left behind (Dennis, Merry & Gagnon, 2017).

Immigrant mothers who experience lower levels of social support, poorer marital adjustment and perceived insufficient household income are also more likely to develop depressive symptoms. Symptoms of PPD are conceptualized differently in diverse cultures (Falah-Hassani et al., 2015) and somatization of depressive symptoms, such as headache or back pain, is more common the more non-west a culture is (Evagorou, Arvaniti & Samakouri, 2016).

Postpartum depression and its impact on the child

The symptoms of PPD (feeling downhearted, anhedonia, weight or appetite changes, feelings of worthlessness or guilt, sleep disorder, loss of energy, decreased ability to think or concentrate, recurrent thoughts of death or suicide) are not distinguished from depression that occurs at other times in life (American Psychiatric Association, 2013). The difference is that the depression not only affects the mother's own health but also can have adverse effects on the child's health and development (Stein et al., 2014; Soe et al., 2016). Most of the mothers with mild to moderate depression recover after a few months, but just below one third are still depressed after one year (Goodman, 2004).

It is the long-lasting and severe depressions that risk affecting the child's wellbeing most negatively. Children of mothers suffering from PPD are shown to have an increased risk of difficulties in early emotional regulation and social behaviour. This is related to the mother being less sensitive and responsive to the infant's needs (Stein, 2014). A review addressing the impact of PPD on the mother's and child's relationship highlights that mothers suffering from PPD more often question their parental competence and their ability to positively influence their children's development compared to non-depressed mothers (Letourneau et al., 2012). There is also a higher risk of more punitive parenting and lower tolerance for their children's behaviours, reduced child safety practices at home and non-attendance at the health visits to CHCC (Zajicek-Farber, 2010). Consequently, disturbance in the mother's and infant's relationship may impact the child's cognitive, behavioural and socio-emotional development as well as physical health (Stein et al., 2014). For example, preschool children of postpartum depressed mothers showed lower verbal intelligence as well as lower social intelligence compared to children of non-depressed mothers (Kersten-Alvarez et al., 2012) and they achieved lower scores on intellectual measures and motor development (England, 2009). At age 16 they were found to have a substantially increased risk of depression themselves (Murray et al., 2011).

Screening with the Edinburgh Postnatal Depression Scale

To increase the identification of mothers suffering from PPD, many countries have implemented routine screening of all new mothers (Armstrong & Small 2010, Hansotte et al., 2017). The screening for PPD is usually conducted by HCPs in primary health care settings, such as antenatal clinics (ANCs) or Child Health Care Centres (CHCCs) (Phoosuwan & Lundberg, 2020; Wickberg, 2020). Several screening instruments have been developed to detect PPD but there has been no consensus regarding which one provides the optimal screening (Ukatu, Clare & Brulja, 2018). One of the most commonly used screening instrument for PPD is the Edinburgh Postnatal Depression Scale, which has been translated into eight languages and validated into 46 different languages (Cox, Holden & Henshaw, 2014). It is a 10-item self-report Likert scale especially developed to screen for symptoms of PPD which covers the following symptoms: feeling downhearted, anhedonia, anxiety, loss of energy, sleep disorder, guilt and thoughts of suicide (Appendix I) (Cox, Holden & Sagovsky, 1987). It is used in conjunction with a clinical interview to deepen and evaluate the mother's responses to the scale (Wickberg, 2020). If necessary an interpreter assists in the screening and the clinical interview to enable communication (Cox, 2019). The screening tool is not designed to diagnose depression, but to identify mothers who during the last seven days showed symptoms of depression and need further clinical evaluation (Cox, 2017). The method requires that adequate measures are offered to those who are screened out. Appropriate training for HCPs in psychosocial assessment of risk factors and clear referral guidelines with care pathways are necessary to be able to conduct the screening (Howard et al., 2014).

The EPDS is perceived as acceptable by most HCPs and mothers, but questions have been raised about the appropriateness for its use in diverse ethnic groups (Howard et al., 2014). It has been shown that immigrant mothers are offered participation in screening to a lesser extent than native-born mothers (Massoudi, Wickberg & Hwang, 2007; Centre of Excellence for Child Health Services, 2017) and are not screened out as frequently as could be expected in relation to the high prevalence in the group (Centre of Excellence for Child Health Services, 2017). Conducting screening on immigrant mothers is challenging for HCPs (Teng et al., 2007; Massoudi et al., 2007) as the mother's literacy level and the quality of the interpreter's work must be taken into consideration. Likewise, different cultural interpretations of the questions can result in scores which do not reflect the mother's mood (Department of Health Government of Western Australia, 2006). Immigrant mothers have been shown to refrain from participating in screening to a greater extent than native-born mothers (De la Fe Rodríguez-Muñoza, 2017; Centre of Excellence for Child Health Services, 2017). This might be related to both practical barriers such as language difficulties and cultural barriers such as fear of stigma (Teng, Robertson Blackmore & Stewart, 2007).

The Swedish Child Health Services

Over a century-long history of CHS, Swedish society has aimed to promote children's health and development, preventing ill health in children, early identification and intervention concerning problems in children's health, development and environment (Stenhammar et al., 2001). The CHS is provided free of charge by governments grants and are privately or publicly organized within the primary care setting. Even though participation is voluntary, almost 100% of all children 0–5 years old and their parents attend (Swedish National Board of Health and Welfare, 2014).

The national Child Health Services programme

Based on a national CHS programme, consisting of 18 scheduled health visits, universal efforts are offered to all children 0–5 years old and their parents regardless of income or risk exposure. Further, targeted efforts are given to all according to needs. Besides health visits to the CHCC, the programme includes home visits and parental groups. The programme has a variety of actions related to health surveillance, health promotion and prevention. In recent decades, a shift has been made in the CHS direction from a somatic to an increasingly psychosocial perspective, not only focusing on the child's but also on the parents' psychological and social needs (Swedish National Board of Health and Welfare, 2014).

All parents are offered support individually and in groups. An individual parental interview is included for each parent in the universal CHS programme. The non-birthing parent is offered an interview approximately three months after the birth, which primarily focuses on promoting them in their parental role (Bergström, 2019). Systematic screening for PPD according to the EPDS method of all new mothers 6–8 weeks after giving birth has been recommended since 2010 by the Swedish National Board of Health and Welfare (2010). The screening procedure is well implemented, and national figures show that four out of five women take part (Wickberg et al., 2020).

Child Health Services nurses and screening for PPD

The screening for PPD is conducted by the nurses in the CHS. They are all registered nurses (RN), with a one-year master's degree in either paediatric or public health care nursing. The nurse is the leader of the team consisting of different professions in the CHS – nurse, physician, and psychologist – and bears the main responsibility for the ongoing work (Swedish National Network for Nurses in the Child Health Services, 2017). The nurses independently perform 14 of the 18 scheduled universal health visits in the national CHS programme, including the screening for PPD (Swedish National Board of Health and Welfare, 2014).

Standard mandatory training is given to the CHS nurses by maternal and child psychologists in recognizing risk factors and symptoms of mental ill health postpartum, particularly depression, how to conduct a psychosocial assessment and practical training in screening according to the EPDS method. The psychologists also provide training in conducting person-centred counselling and give regular tuition to the CHS nurses (Wickberg, 2019). Person-centred counselling is offered by the CHS nurse if mild symptoms of PPD are identified. If severe symptoms have been identified, the parent is offered referral to a maternal and child psychologist and/or physician at the primary health care centre or a psychiatric clinic. The Child Protective Services and Child and Adolescent Psychiatry may also need to be involved (Wickberg, 2020). Despite high general inclusion in screening for PPD, it has proved difficult to reach immigrant mothers (Centre of Excellence for Child Health Services, 2017).

Immigrant families

In this thesis an immigrant is defined as a person who, for whatever reason, moves to a new country with the intention to settle there permanently, while a migrant only intends to live there temporarily (Anderson & Blinder, 2019). Immigrants are usually divided into four groups: asylum seekers, refugees, relation immigrants and labor immigrants (Statistics Sweden, 2020).

Immigrant families in Sweden

Immigration to Sweden has increased in recent decades and approximately 20% of Sweden's 10 million population are of foreign origin, which means having been born abroad. In the metropolitan regions the corresponding figure is 25 per cent (Statistics Sweden, 2021). This has led to more children either being born abroad themselves or being born in Sweden with two foreign-born parents. In 2018 there were 196,000 foreign-born children and 318,000 domestic-born children with foreign background in Sweden. In total, thus, there were 514,000 children of foreign background in the country. The foreign-born children consititute 9% of children in Sweden and domestically born children with a foreign background 15%. Children with a foreign background, as well as domestic-born children with foreign background live to a lesser extent with both their parents compared to children with Swedish background. They often have a worse socioeconomic situation and it is more common to have parents with a low level of education and a low income level. The families more frequently live overcrowded in areas with socioeconomic challenges (Statistics Sweden, 2020). Among immigrant families with children, an increased proportion is reported as being in need of public support due to psychosocial vulnerability such as previous trauma (war and persecution), language difficulties, unemployment, overcrowded housing and economic stress (Lagerberg, Magnusson & Sundelin, 2008; Fridh et al., 2014). Foreign born parents are more likely to report lower access to emotional support in their daily life compared to indigenous population and refrain from seeking health care for their child. Mental ill health is more common among foreign born parents, especially among parents born outside Europe (Fridh et al., 2014).

Immigrant families and the Child Health Services

Contact with children and parents with other cultures and nationalities is consequently an important part of the work in CHS (Berlin, Nilsson & Törnkvist, 2010). Research shows that CHS is a new encounter for many of the immigrant parents since there is usually no similar organization in their country of origin. It is perceived as well-organized and all families are welcomed equally regardless of background (Mangrio & Persson, 2017). The nurses are described by some immigrant parents as nice, thoughtful and interested, which makes them feel secure and accepted (Mangrio & Persson, 2017; Berlin, Törnkvist & Hylander, 2010). Others perceive them as not encouraging and doing their job routinely, making the parents feel vulnerable and questioned (Berlin, Törnkvist & Hylander, 2010).

The importance of being friendly, trustworthy, humorous and curious about people from other cultures is emphasized by the nurses themselves as a description of being able to work in the CHS (Samarasinghe, Fridlund & Arvidsson, 2010). However, difficulties are reported in contacts with immigrant families (Berlin, Hylander & Törnkvist, 2008). The difficulties derive both from communication problems and from lacking cultural competence among the CHS nurses (Berlin, 2010). Problems in communicating can, for example, lead to the CHS nurses not knowing whether the parents understand the health information they are given (Berlin, Hylander & Törnkvist, 2008). Processing the information is also dependent on the parents' level of health literacy. This means a person's ability to understand health messages, cognitive skills in evaluating health information and deriving meaning, and the ability to apply and critically analyse health information (Nutbeam, 2000). Health literacy has been shown to be limited or poor among refugees from low-income countries compared to indigenous western population, and this needs to be considered by HCPs (Wångdahl, 2014). The situation may further be complicated if the nurse is not used to working with the assistance of an interpreter and if too much information is given at the same time, causing information overload (Pergert et al., 2007).

Cultural competence is defined as "the ongoing process in which the health care provider continuously strives to achieve the ability to effectively work within the cultural context of the client" (Campinha-Bacote, 2002, p. 181). Limited cultural competence makes it difficult for the CHS nurses to understand immigrant families' living conditions and assess the children's health risks. In the long term insufficient cultural competence may lead to time-consuming assessments of health risks, which may delay interventions to ensure optimal development of the child's physical, mental and psychosocial health (Berlin, Hylander & Törnkvist, 2008; Reijneveld et al., 2005).

Frameworks

The Medical Research Council's (MRC) (Craig et al., 2008) framework for complex interventions was used as the methodological framework, while two grand nursing theories, the Theory of Culture Care Diversity and Universality (Leininger, 1991) and the Theory of Human Caring (Watson, 1985), related to transcultural and transpersonal nurse-patient relationships respectively, were identified as theoretical frameworks.

The Medical Research Council's framework

The framework refers to the systematic development, feasibility testing, evaluation and implementation of complex interventions using the best available evidence and appropriate theory. An intervention can be described as complex if it either contains multiple components or mechanisms of change and/or generates outcomes which are dependent on external factors such as complex behaviours of those delivering or receiving it or in the context or system in which it is being implemented. The four phases of the framework are: development or identification of an intervention, feasibility, evaluation, and implementation (Figure 1) (Craig et al., 2008; Craig et al., 2013).

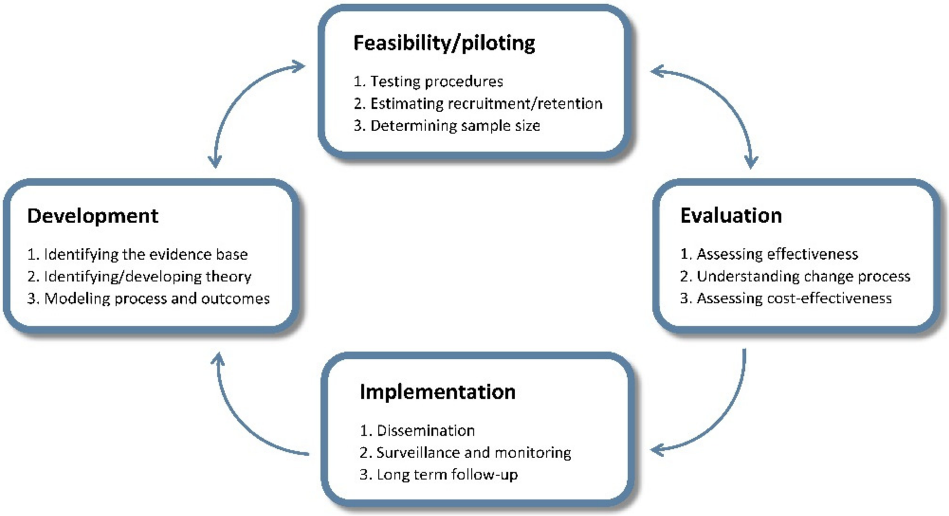


Figure 1. A framework for developing and evaluating complex interventions (Craig et al., 2008).

The development phase refers to the process of designing and planning an intervention and starts by identifying research evidence and the theory of the problem. If an intervention already exists it means adapting it to the new context. The feasibility phase explores the feasibility of the intervention and/or the evaluation design to underpin decisions about whether and how to progress to evaluation. In the evaluation phase the intervention is assessed using the most appropriate method. The primary focus should be on providing useful evidence rather than minimizing bias. The implementation phase refers to the dissemination of the intervention and evaluation, surveillance, monitoring and long-term follow-up. The four phases are not to be seen as sequential as they interact with each other aiming to strengthen the intervention and the design (Craig et al., 2008; Craig et al., 2013).

Theory of Culture Care Diversity and Universality

The theory was developed with the goal of using culturally based research knowledge to provide culturally congruent holistic, safe and meaningful care for patients of different or similar cultures. By understanding and valuing the practice of culturally competent care nurses can effect positive changes in healthcare practices for clients of designated cultures. Culture is defined as "the learned, shared, and transmitted values, beliefs, norms and lifeways of a particular culture that guides thinking, decisions, and actions in patterned ways and often intergenerationally" (Leininger, 1991, p. 13). There is an emphasis on the need for nurses to have knowledge that is specific to the culture in which nursing is being practised. The theory includes three phases for the nurse to achieve cultural skills and knowledge. In phase one, the nurse creates a cultural awareness and understanding of cultural differences as well as similarities. In phase two, the nurse forms a deeper understanding of cultural aspects through research-based knowledge. In the third phase, the nurse uses evidence-based research and her own experience in care, which is then evaluated to see if the care provided has been culture-based (Leininger & McFarland, 2006).

The transcultural caring relationship develops when the nurse and patients start to interact and refers to a professional relationship between cultures in order to care over cultural boundaries. Health is a key concept in transcultural nursing and seen as universal across cultures but distinct within each culture in a way that represents the beliefs, values and practices of the culture (Leininger & McFarland, 2006).

Theory of Human Caring

The theory elucidates the special human socializing between a nurse and a patient. The art of caring and nursing is influenced by the nurse's ability to accept the patient's emotional expressions and to experience these within herself. The nurse seeks to work from the patient's frame of reference, grasping the meaning and significance of the information for the patient, as well as the patient's readiness and timeliness to receive information. In addition, the nurse must be able to think in an overall perspective regarding body, spirit and soul. Nurses who are sensitive to patients are better able to learn about patients' views of the world, which subsequently increases concern about the patients' comfort, recovery and wellness. The nurse must be aware of herself to be able to use herself in a relationship. Listening to a patient's story is described as the greatest healing act nurses can offer (Watson, 1985).

Rationale

Postpartum depression (PPD) is identified as a major childhood adversity and interventions to reduce long-term negative developmental outcomes are an important public health strategy (Dennis & Dowswell, 2013). Children of immigrant mothers are at higher risk of being exposed to PPD since the prevalence among immigrant mothers is almost twice as high as among indigenous mothers in high-income countries (HICs) (Falah-Hassani et al., 2015). Many countries have implemented routine screening of all new mothers to increase identification of PPD (Armstrong & Small 2010; Hansotte et al., 2017). The Edinburgh Postnatal Depression Scale (EPDS) is a self-report screening scale for PPD (Cox, Holden & Sagovsky, 1987) used in conjunction with a clinical interview (Wickberg, 2020). Although the scale is perceived as acceptable by most health care professionals (HCPs) and mothers, its appropriateness for use on diverse ethnic groups has been questioned (Howard et al., 2014) and research suggests that HCPs find it challenging to screen immigrant mothers for PPD (Teng et al., 2007; Massoudi et al., 2007). Therefore, more knowledge about how screening for PPD is conducted and experienced could be valuable, potentially contributing to increased participation and better outcome of screening for this vulnerable group of mothers.

Aims

The overall aim of this thesis was to develop an evidence-based educational intervention for Child Health Services nurses in screening immigrant mothers for postpartum depression, and to test the feasibility of the intervention.

- Paper I: To elucidate Child Health Services nurses' experiences of identifying signs of postpartum depression in non-Swedish-speaking immigrant mothers in the Swedish Child Health Services.
- Paper II: To elucidate non-native-speaking immigrant mothers' experiences of participating in screening for postpartum depression in the Swedish Child Health Services.
- Paper III: To synthesize health care professionals' experiences of identifying signs of and screening immigrant mothers for PPD.
- Paper IV: To develop and test the feasibility of an evidence-based educational intervention in screening non-native-speaking immigrant mothers for postpartum depression.

Method

The thesis included four studies, described in four papers. Both qualitative and quantitative research methods were used and an overview of the different designs and studies is shown in Table 1.

Design

The studies followed the first two phases in the MRC framework for the development and evaluation of complex interventions (Craig et al., 2008; Craig et al., 2013): development (Study A, Study B and Study C) and feasibility/piloting (Study D).

- Study A and Study B had a qualitative inductive approach, which is recommended if knowledge of a phenomenon is sparse or fragmented (Elo & Kyngäs, 2008). Individual interviews were followed by a latent content analysis as described by Elo and Kyngäs (2008).
- Study C was a systematic literature review and meta-synthesis guided by Noblit and Hare's (1988) meta-ethnography, following the eMERGe (France et al., 2019) and PRISMA reporting guidelines (Moher et al., 2009).
- Study D had a one-group pretest-posttest experimental design where data was collected before and after the intervention (Kazdin, 2003). The study followed the CONSORT 2010 statement: extension to randomised pilot and feasibility trials (Eldridge et al., 2016) and was registered in ClinicalTrials.gov (NCT04167709).

Table 1. Overview of designs and methods

Study	Paper	Design	Sample	Data collection	Analyses
A	I	Inductive, descriptive	CHS nurses (N=13)	Individual interviews	Qualitative content analysis
B	II	Inductive, descriptive	Non-Swedish-speaking immigrant mothers (N=13)	Individual interviews	Qualitative content analysis
C	III	Meta-synthesis	Qualitative papers (N=8)	Systematic literature search	Meta-ethnography
D	IV	Pretest/posttest experimental design	CHS nurses (N=34)	Questionnaires	Descriptive and comparative statistics, Paired t-test, Wilcoxon signed rank test

Study context

The studies were conducted in the CHS in Skåne, a region in the south of Sweden, between May 2013 and March 2021. The region has an area of 11,035 square kilometres, consisting of both rural and urban areas with approximately 1.4 million inhabitants (Region facts Skåne, 2021). The CHCCs are organized in connection with a primary health care centre, as independent units or as part of a family centre (FC). Besides CHS and ANC, a FC consists of social services and an open pre-school (Pettersson, 2020). About 100,000 children, aged 0–5 years, are enrolled in one of the 148 CHCCs in the region (Centre of Excellence for Child Health Services, 2019). Approximately 24 per cent of the children were either born abroad or both of their caregivers were born abroad (Statistics Sweden, 2021).

A socioeconomic need index value (CNI) is calculated for each CHCC based on sociodemographic background information on enrolled children's caregivers (unemployment, low educational status, single status, children under age 5, high mobility and born outside Europe). The index value is 1 and CHCCs with higher values receive more funding as the higher the value, the higher the risk of ill health and illness. A high CNI value also indicates that the CHS nurses frequently meet families with an increased need of support (Sundquist et al., 2003).

According to statistics on children born in 2018 in the current region 90.6% of their mothers were invited to participate in screening, 86.8% participated and 5.6% of the screenings are conducted with the assistance of an interpreter. In total 11.7% of the mothers are offered further support after participating, most commonly person-centred-counselling by a CHS nurse. Screening of mothers for PPD with the assistance of an interpreter was conducted at 106 of the 148 CHCCs in Skåne during 2018 (Centre of Excellence for Child Health Services, 2019).

Study participants and recruitment

Purposive sampling, as described by Patton (2002), was utilized to recruit participants for Study A and Study B, which meant that participants with specific knowledge of the phenomena were chosen. In Study D stratified sampling was applied, ensuring the inclusion of participants who met certain criteria (Creswell & Creswell, 2018).

In Study A, 13 CHS nurses were interviewed among those who were in frequent contact with immigrant mothers who, due to their limited proficiency in Swedish, required an interpreter's assistance when visiting the CHS. The recruitment started by contacting the operations managers of the 25 CHCCs with the highest rates of BCG-vaccinated children (Centre of Excellence for Child Health Services, 2014) asking them to suggest a suitable CHS nurse to participate in the study. This approach was chosen since in Sweden vaccination against tuberculosis only is given to children of foreign origin, and a high rate of BCG-vaccinated children at a CHCC indicates that many children of foreign origin are enrolled (Swedish National Board of Health and Welfare, 2014). Consent was given by 15 operations managers and the suggested CHS nurses were contacted. One of these nurses declined participation. Of the 14 participants, it was not possible to set up an interview with one. The reason she mentioned for postponing the interview was high workload. Profiles of the participating CHS nurses, who all were female, are presented in Table 2.

Table 2. Background characteristics of the participating CHS nurses in Study A and D

Characteristics	**A (N=13)**	**D (N=30)**
Age (x̄, min-max)	54 (33–65)	50 (32–65)
Education (n, %)		
RN and Public health care	9 (69)	19 (63)
RN and Paediatric	2 (15)	10 (33)
RN and Public health care + Paediatric	2 (15)	1 (3)
Years working in CHS (x̄, min-max)	18 (3–31)	12 (1–32)
Organization (n, %)		
Working only with CHS	11 (85)	26 (87)
Working with both CHS and adults	2 (15)	4 (13)
Newborns per year (x̄, min-max)	59 (26–77)	45 (16–57)

In Study B 13 immigrant mothers, speaking Albanian, Arabic, Badinani or Turkish, who had been screened with assistance of an interpreter without showing any signs of PPD according to the CHS nurses' clinical assessment, were interviewed approximately one to two months after the screening.

The recruitment of participants for Study B started by identifying Albanian, Arabic, Badinani and Turkish as the four languages for which an interpreter was most used in the CHS, and engaging one authorized female health care interpreter in each language. Twenty-five nurses in seven different CHCCs, who according to statistics (Centre of Excellence for Child Health Services, 2014) were among the 15 centres that performed most screening for PPD with the assistance of an interpreter, agreed to act as intermediaries. They informed suitable mothers about the study in connection with their babies' scheduled three-month check-up.

The intermediaries used translated information in the mothers' native language in addition to verbal information with the help of interpreters. If a mother expressed interest in participating, the author of the thesis was notified and one of the authorized female health care interpreters tied to the study made arrangements for an interview. Eighteen mothers expressed interest in the study but three of them declined participation after being given further information. One mother was previously acquainted with the first author and was excluded. One mother withdrew her participation after she had been interviewed. Profiles of the participating mothers are presented in Table 3.

Table 3. Profile of the participating non-native-speaking immigrant mothers (N=13)

Characteristics	
Born in (n, %)	
Syria	4 (31)
Kurdistan	3 (23)
Iraq	3 (23)
Kosovo	2 (15)
Libya	1 (8)
Age (range)	19–34
Time in Sweden, (range)	9 months - 4.5 years
Reason for migration (n,%)	
Refugee due to war	7 (53)
Political refugee	1 (8)
Family immigrant	5 (38)
Residence permit (n,%)	
Yes	12 (92)
No	1 (8)
Education (n,%)	
Tertiary	2 (15)
Sixth-form college	3 (23)
Basic schooling	6 (46)
Two years of basic schooling	1 (8)
No schooling	1 (8)
Living with (n,%)	
Husband	11 (85)
Husband and extended family	2 (15)
Interviews in (n,%)	
Arabic	6 (46)
Badinani	5 (38)
Albanian	2 (15)

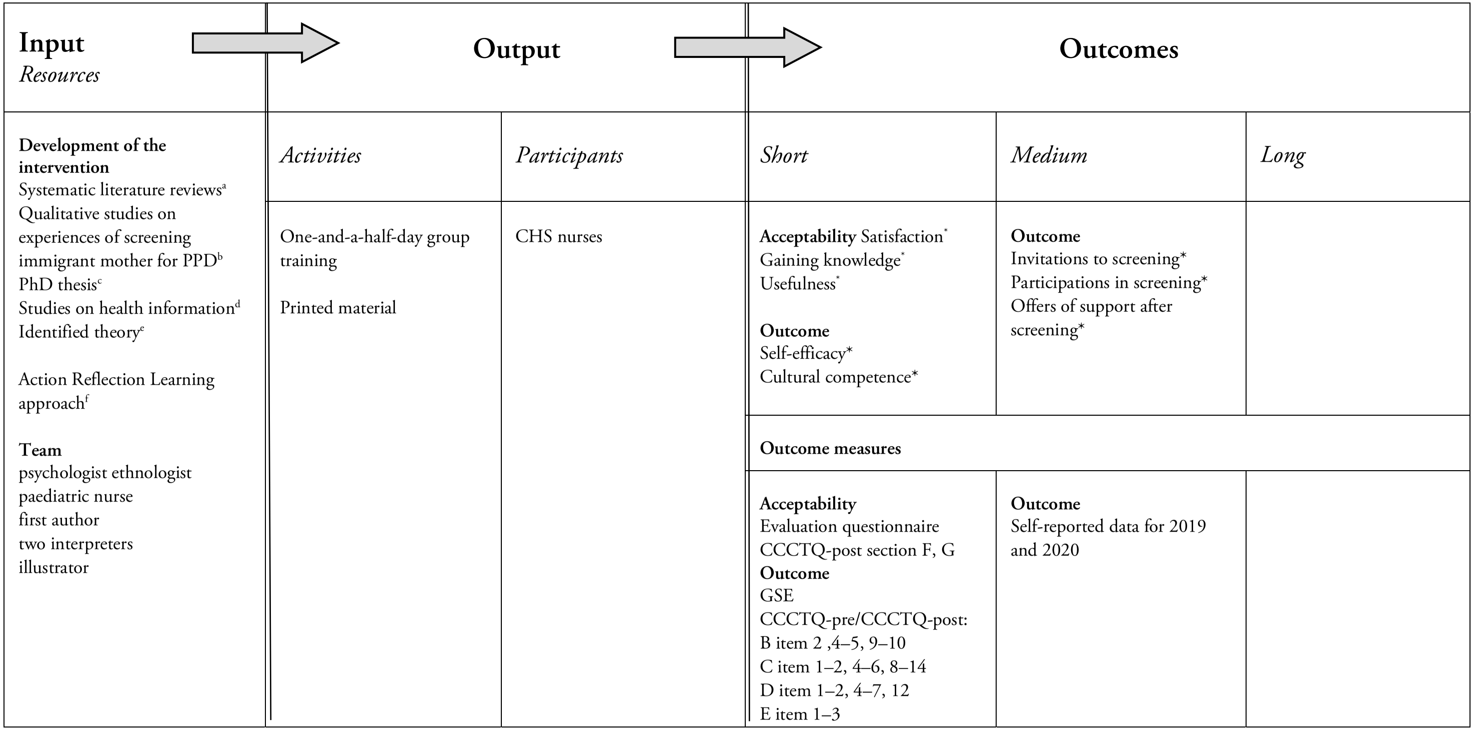
Participants in Study D were 34 CHS nurses, employed at a CHCC in Skåne, who had undertaken mandatory standard training in screening for PPD and conducted screening with the assistance of an interpreter three times or more per year. The recruitment started by forming four groups out of the 41 CHCCs in which the employed CHS nurses, according to statistics, conducted screening with the assistance of an interpreter to a high (>5 times per nurse per year) or medium (3–5 times per nurse per year) degree (Centre of Excellence for Child Health Services, 2018). The four groups were based on the frequency of screening with the assistance of an interpreter (high, medium) and the proportion of mothers offered support after participating (<11.7% and ≥11.7% respectively). An overview of the stratification is shown in Paper IV, Table 2.

Thirty of the CHCCs' operation managers (equally distributed between the four groups) were contacted for consent for the CHS nurses to participate in the study. Since 6 operation managers declined their nurses' participation, due to heavy workload, and another 3 did not respond despite two reminders, the remaining 11 operation managers (out of the 41 CHCCs in total) were also contacted. Of these operation managers 6 gave their consent.

In total 76 CHS nurses were invited to the study after 27 operation managers gave their consent. Of these 36 declined participation for different reasons (heavy workload, upcoming parental leave or retirement, already participating in another research project or upcoming change of clinic). Another 6 did not respond to the invitation despite two reminders, leaving 34 CHS nurses (representing 17 clinics), who agreed to participate. The nurses could choose among suggested dates for participation in the training and four groups of equal size developed. However, 2 participants dropped out due to illness shortly before the first day of the training and another 2 did not complete the training, one because of severe illness and the other because of change of career. Background characteristics of the 30 participating CHS nurses are shown in Table 2.

Development of the intervention

The development of the intervention followed the MRC framework (MRC 2008; Craig et al., 2013); 1) identifying the evidence base, 2) identifying/developing theory, and 3) modelling process and outcome. It is illustrated in a logic model (Figure 2), which is a diagram used to communicate how an intervention is proposed to work (O'Cathain et al., 2019). Besides in Study A, Study B and Study C, the evidence base for the intervention and material was identified in one thesis (Berlin, 2010) and five systematic reviews (Brealey et al., 2010; Schmied et al., 2017; Wittkowski et al., 2017; Hadziabdic & Hjelm 2013; Houts et al., 2006) and a book (Eastmond, 2007). The model of cultural competence in delivery of health care services (Campinha-Bacote, 2002) and person-centred counselling (Rogers, 1951) were identified as a theoretical framework approach for the intervention and Action Reflection Learning (ARL) as a pedagogical framework (Rimanoczy, 2008).



Input *Resources*	**Output**		**Outcomes**		
Development of the intervention Systematic literature reviews[a] Qualitative studies on experiences of screening immigrant mother for PPD[b] PhD thesis[c] Studies on health information[d] Identified theory[e] Action Reflection Learning approach[f] **Team** psychologist ethnologist paediatric nurse first author two interpreters illustrator	*Activities*	*Participants*	*Short*	*Medium*	*Long*
	One-and-a-half-day group training Printed material	CHS nurses	**Acceptability** Satisfaction* Gaining knowledge* Usefulness* **Outcome** Self-efficacy* Cultural competence*	**Outcome** Invitations to screening* Participations in screening* Offers of support after screening*	
			Outcome measures		
			Acceptability Evaluation questionnaire CCCTQ-post section F, G **Outcome** GSE CCCTQ-pre/CCCTQ-post: B item 2 ,4–5, 9–10 C item 1–2, 4–6, 8–14 D item 1–2, 4–7, 12 E item 1–3	**Outcome** Self-reported data for 2019 and 2020	

[a]Brealey et al., 2010: Schmied et al., 2017: Wittkowski, Patel & Fox, 2017, Hadziabdic & Hjelm, 2013. [b]Skoog, Kristensson Hallström & Berggren, 2017: Skoog, Berggren & Kristensson Hallström, 2018: Teng, Robertson Blackmore & Stewart, 2007: Griffith, 2009: Nithianadan et al., 2016: Stapleton, Murphy & Kildea, 2013: Tobin, Di Napoli & Wood-Gauthier, 2015: O'Mahony & Clark, 2018: Ganann, 2019. [c]Berlin, 2010. [d]Houts, 2006. [e]Campinha-Bacote, 2002: Rogers 1951, [f]Rimanoczy, 2008.*Outcomes evaluated in the intervention

Figure 2. Logic model for the intervention

Model of cultural competence in delivery of health care services

Cultural competence is described in the model of cultural competence in delivery of health care services as an ongoing process in which the HCPs continuously strive to develop their ability to effectively work within the cultural context. There are five major constructs in the model: *Cultural awareness, referring to self-examination of one's own cultural and professional background*; *Cultural knowledge, meaning the process of seeking and obtaining knowledge about diverse cultures*; *Cultural skills, the ability to collect relevant cultural data and perform a culturally based physical examination*; *Cultural encounter, referring to the process that encourages HCPs to engage in cross-cultural interactions and also includes assessment of patients linguistic needs*; and finally, *Cultural desire, which is the motivation of the HCP to engage in the process of becoming culturally aware*. The constructs depend on each other, and all five constructs must be addressed and/or experienced, and it is the intersection of the construct that depicts the process of cultural competence (Campinha-Bacote, 2002).

Person-centred counselling

This is an approach originating from client-centred therapy, which is a humanistic therapy with the aim of increasing a person's feeling of self-worth and reducing the level of incongruence between the ideal and the actual self. Person-centred counselling rests on three basic principles which are fundamental to building trust and confidence in the relationship between a therapist and a patient: being authentic to the client, allowing them to experience the therapist as he/she really is; providing an unconditionally positive view of the patient by conveying warmth, kindness, and respect; and never being judgemental. The last principle refers to the therapist's deep and genuine care for the patient by showing an empathetic understanding. The success of the therapy rests on the quality of the connection between the patient and therapist. If it is not permeated by trust, authenticity and positive feelings, it is unlikely to be successful (Rogers, 1951).

Action Reflection Learning

The holistic learning methodology approach, Action Reflection Learning (ARL), is rooted in the common sense of practitioners and based on reflection, alone and with others, on real actions and on personal experience. This methodology involves three phases in a cohesive process. Action means acting, taking initiatives and experimenting with your own ability. Reflection means exploring what is really going on and changing perspectives. Learning means formulating newly acquired knowledge in generalizable concepts or models, connecting to research and theoretical knowledge and transferring this understanding to new situations and daily work. It is also about the tacit knowledge of experience being transformed into conscious rules of action (Rimanoczy & Turner, 2012). The approach consists of 17 elements which constitute the core characteristics and key features. These are underpinned in principles that justify and/or give meaning to the elements. The principles are rooted in theoretical frameworks and in established bodies of knowledge. A tool is an activity used to apply an element, for example learning coach, writing and journaling (Rimanoczy 2007, 2008).

Modelling the intervention

The intervention was designed as training at advanced level, building on the mandatory standard training. It comprised one day followed by a half-day follow-up three months later and was led by a psychologist and a paediatric nurse who also participated in the modelling team. The team also included an ethnologist and the author of the thesis. The modelling of the intervention started out with the team separately preparing by reading material and making notes of important key issues to address. Then they met for three days and the modelling continued by comparing notes and discussing the key issues. The team jointly created a grid of topics which were considered important for the training and linked them to the studied evidence base and theoretical and pedagogical framework. In the next step the different topics were discussed in more detail and those who were interpreted as related formed a theme.

Learning objectives for each theme were articulated and suitable tools in the ARL were connected to form a session. The team then decided how the sessions were connected and in which order they should be presented to create a common thread. The ARL (Rimanoczy, 2007) approach permeated the educational intervention while the Model of Cultural Competence in Delivery of Health Care Services (Campinha-Bacote, 2002) was used to provide structure to the intervention. The model was also specifically used in the sessions: a) Reflecting on using translated EPDS and cultural impact on the interpretation of the items; b) Exploring the transcultural caring relationship taking the nurses' and immigrant mothers' perspective; c) Discussing challenges in the screening situation; d) Comparison of child-rearing and domestic life in different cultures; and e) Exploring strategies for offering support to mothers with signs of PPD for understanding of the different constructs within the concept of cultural competence. The person-centred counselling approach (Rogers, 1951) was used in the practical sessions Method review and practical training in screening with translated EPDS and interpreter and Practising conversational technique when using an interpreter to support the clinical interview technique.

A professional illustrator designed illustrations for the sessions, focusing on working with an interpreter and an example called *the interpreter triangle* is shown on the back of the thesis. Standardised instructions about the use of interpreter and material about the screening method and a specific glossary for the topic to the interpreter were developed. Two experienced authorized female health care interpreters in Arabic and Badinani were interviewed, contributing to the development of the session on working with an interpreter and the written instructions. An informative brochure designed as a comic strip (translated into nine different languages) about parental support in the CHS was designed by the team – see illustration on the front of the thesis. On the fourth modelling day the PowerPoint-pictures, which the author of the thesis had developed as support in conveying the content of each session, were discussed and altered accordingly. Finally the modelling team met for rehearsal for two half-days in connection with the training.

Content of the intervention

The overall learning objectives for the first day of training were; a) gaining in-depth knowledge of the EPDS and challenges when using translated versions; b) awareness of specific risk factors for immigrant mothers for contracting PPD; c) increased cultural competence related to PPD; d) elucidating challenges for conducting screening with assistance of interpreter and introducing standardised instructions. The second day the learning objectives were; e) increased awareness of differences in child-rearing and domestic life in diverse cultures; f) in-depth knowledge of tacit knowledge; g) different strategies for offering support to mothers with signs of PPD; and h) practicing conversational technique according to person-centred counselling when using an interpreter. A detailed overview of the content of the intervention is presented in Table 4.

Table 4. A detailed overview of the content of the intervention

Sessions – Day 1	**Pedagogical tool – Day 1**
Reflecting on challenges in using translated EPDS and cultural implications on the interpretation of the items.	Individual reflection Short lecture. Peer learning by group reflections
Reviewing prevalence and specific risk factors for PPD among immigrant mothers.	Short lecture. Peer learning by group reflections
Exploring the transcultural caring relationship, with specific focus on the PPD. Taking the nurses' and immigrant mothers' perspectives.	Peer learning from group reflections with clinical examples of the five constructs in the model; cultural awareness, cultural knowledge, cultural skills, cultural encounter and cultural desire. Individual reflection
Elucidating challenges in the screening situation with specific focus on the mother for speaking about her mood and the use of interpreter in the screening situation: - Shame of not being grateful for her new life - Cultural beliefs about mental ill-health - Negative expectations connected to her perceived value as a woman - The relationship with the nurse - The impact of mental health literacy - Views and expressions of symptoms of mental ill health in different cultures - The mothers perception of the CHS operation - The mothers fear of Child Protective Services - The interpreters' perspecive of the screening procedure - The interpreter's impact on the three-way interaction	Short lecture with clinical examples and group reflection Individual exercise in exploring being reliant on an interpreter Introducing printed material to the mother about parental support in the CHS. Introducing printed material to the interpreter about the screening and a glossary

Method review standardised instructions for the use of interpreter in the screening. Practical training in using interpreter and translated EPDS in the screening.	Short lecture Written group assignment in rephrasing the different EPDS items Group exercise – counselling
Sessions – Day 2	**Pedagogical tool – Day 2**
Connecting to day 1	Vernissage
Comparison of child-rearing and domestic life in different cultures	Short lecture with clinical examples and group reflections –peer learning
Focusing on tacit knowledge in assessing the mother's mood	Individual reflection Short lecture Group reflection
Exploring eight strategies for offering support to mothers with signs of PPD; tacit knowledge, normalising, start from the presented symptoms, refer to routines, refer to evidence, rephrase professional title, take advantage of the relationship	Short lecture with clinical examples and group reflections
Practicing conversational technique according to person-centred counselling when assisted by interpreter	Individual reflection, short lecture Group exercises –coaching interview technique
Individual evaluation	Line exercise

Data collection

Procedures

In Study A interviews lasting an average of 29 minutes (range 20–39 minutes) were conducted by the author of the thesis from May to September 2013. All interviews were performed at a place chosen by the CHS nurses, who all chose their workplace.

In Study B the interviews lasted an average of 54 minutes (range 37–94 minutes) and were conducted from November 2015 until November 2016. The interviews were performed by the author of the thesis in the mother's home or at her local CHCC with the assistance of female authorized health care interpreters, translating Albanian, Arabic, Badinani and Turkish. The interpreters were all employed at another interpreter agency than the one used by the CHS in Region Skåne and were all given information about the nature of the study, PPD, the EPDS method and the qualitative research interview. During the interviews the interpreters performed consecutive translation and were seated next to the researcher and mother who were sitting opposite each other.

Semi-structured interview guides, one for each study, were developed and used (Table 5). Two pilot interviews were conducted to test each guide. Since they did not result in any changes these interviews were also included in the research material. Probing questions such as "Can you explain more about that?" and "What are your thoughts about that?" were asked to elaborate on the participants' thoughts in more detail. The interviews were transcribed as close to verbatim as possible on a personal computer without internet access. In Study B other interpreters than the ones used in the research interviews verified the material by listening to the recording and comparing it to the transcription.

Table 5. Question areas in the semi-structured interview guides.

Study A	Study B
How do you to assess the mood of a non-Swedish-speaking immigrant mother?	What influenced your choice to participate in the screening for PPD?
What are your experience of screening non-Swedish-speaking immigrant mothers for PPD using the EPDS?	What is your experience of the EPDS and circumstances for filling it out?
	What is your experience of the clinical interview?
	What are your thoughts about suitable follow-up if needed?

In Study C a systematic literature search was conducted in April 2019 in collaboration with two research librarians in the following six databases: CINAHL, PubMed, PsycINFO, SocINDEX, Embase and Cochrane. A search strategy was developed by using a PEO (Populations, Exposure, Outcome) (Bettany-Saltikov, 2016). Subject headings were adjusted as necessary to fit the database terms and searches were run through each database separately. Terms and subject headings were used to both expand and focus the searches for each of the keywords using the Boolean operator 'OR'. Paired combinations of searches were made using the Boolean operator 'AND'. A hand search was carried out using the references obtained from the eligible papers. Inclusion criteria were studies using a qualitative approach, published in English, in peer-reviewed journals between January 2000 and January 2019 and focusing on the HCPs' perspective. Studies focusing on mothers' experiences and using quantitative data or mixed-method studies without substantive qualitative data or findings were excluded. To ensure that the data reflected the HCPs' most recent experiences of the subject, studies published before 2000 were excluded. Conference abstracts and unpublished PhD or Master's theses were not included. The literature search was updated in February 2021 to include articles published in 2019 and 2020.

An overview of the combined search strategy, which yielded in total 632 records, is shown in Paper III; Supplement 3, Figure 1. Another record was found by hand searching, but was later excluded due to a publication date earlier than 2000. The titles and abstracts of the 346 records, which remained after removing 287 duplicates, were screened. This resulted in the exclusion of another 336 records because they did not fulfil the inclusion criteria as they were either quantitative studies, systematic reviews, letter to the editors, featured immigrant mothers' experiences or did not meet the aim of the study. The remaining nine articles, six qualitative and three mixed-methods, underwent quality appraisal according to the Critical Appraisal Skills Programme (CASP, 2019) including those which scored 6 or more in the review. Eight of the articles received CASP scores varying from 7/10 to 10/10 and were included. The most common limitation was reflection on the roles of the researchers. One article received CASP scores below six and was excluded with reasons.

In total eight studies were included in the review, with the sample size of the individual studies ranging between three and 28 participants in each study and 126 in total. The studies were conducted in four different countries. Key descriptive data, including authors, year, country, study aim, participants, study methodology, methods and contribution to emerging themes from the included studies are summarized in Table 6.

Table 6. An overview of included papers and their contributions to the emerging

Authors, year & country	Aim	Participants	Methodology & Methods	CASP score	"I was about to say become friends"	"My job is to put another perspective to them"	"You don't want to make things worse"	"A document that non-English speaking woman don't necessarily understand"	" […] trying to communicate […] through a translator […] feels like … an exercise in futility"	"They go underground with their symptoms"
Griffith 2009, UK	To address the patterned and nuanced positioning of the help given to immigrant mothers in the postnatal period.	3 participants; one clinical counsellor, one support worker and one interpreter.	Ethnographic narrative approach. Individual interviews.	7/10		x	x		x	x
Teng, Robertson Blackmore & Stewart, 2007, Canada	To explore healthcare workers' experiences of providing care to recently immigrated women suffering from postpartum depression.	16 participants working as nurses, home visitors, psychologists, psychiatrists, family doctors and social workers.	Grounded theory approach. Individual interviews using a semi-structured interview guide	9/10	x	x	x	x	x	x

Stapleton, Murphy & Kildea, 2013, Australia	To identify significant emerging issues and develop recommendations for future development of care, specifically for women with a refugee background.	18 participants: midwife, social worker, obstetrician, hospital managers, hospital interpreting coordinators, community stakeholders and research assistants.	Mixed-method approach. A thematic analysis was applied for the qualitative analysis. Four focus groups and three individual interviews.	10/10		x		x	x	x
Nithianandan, Gibson-Helm, McBride, Binny, Gray, East & Boyle, 2016, Australia	To investigate barriers and enablers to implementing evidence-based, nationally recommended perinatal mental health screening, and inform sustainable implementation of a screening and referral program in women of refugee background.	28 participants; midwives, obstetricians, maternal and child health nurses, perinatal and infant psychiatrist, perinatal mental health expert, maternity general practice liaison officer, community mental health team leader, refugee health nurse, refugee health experts, bicultural worker, interpreters.	Qualitative deductive approach. A thematic analysis applied in analyzing the material from individual interviews. A semi-structured interview guide was used.	9/10	x	x	x	x	x	x

Skoog, Hallström & Berggren, 2017, Sweden	To elucidate child health services nurses' experiences of identifying signs of PPD in non-Swedish –speaking immigrant mothers.	13 participants: child health services nurses.	Qualitative inductive approach. Latent content analysis was applied in analyzing the material from individual interviews. A semi-structured interview guide was used.	10/10	x	x	x	x	x	x
O'Mahony & Clark, 2018, Canada	To increase understanding of immigrant women's reproductive mental health care services within rural settings and to inform the implementation of a cross regional research program.	10 participants: mental health community/ public health practitioners, policy makers and managers.	Mixed-method approach. A thematic analysis was applied for the qualitative analysis. An open-ended interview guide was used.	9/10		x	x	x	x	x
Ganann, Sword, Newbold, Thabane, Armour & Kint, 2019 Canada	To explore service provider perspectives on facilitators and barriers they face in terms of providing accessible services for immigrant women with PPD.	14 community service providers: nurses, social workers, perinatal psychiatrists, community health workers and administrators.	Content analysis was used to analyze the material from individual interviews. A semi-structured interview guide was used.	9/10	x	x	x		x	x

Willey, Gibson-Helm, Finch, East, Khan, Boyd & Boyle, 2020 Australia	To evaluate the acceptability and feasibility of a perinatal mental health screening program for women of refugee background from the perspective of health professionals	24 participants: midwifes, midwifery managers, bi-cultural workers, administrators, counsellors and a refugee health nurse liaison.	Mixed-method approach. A thematic analysis was applied for the qualitative analysis of two focus group and eight semi-structured interviews.	10/10	x	x		x	x	x

In Study D data collection was conducted between November 2019 and March 2021. The pre-intervention data were collected at the start of the first day of the training and the post-intervention data at the end of the second day. On each occasion the author of the thesis handed out a closed envelope, marked with each participant's code number, containing the questionnaires. The participants completed them and returned them in the same envelope. Data on the general performance of the task (number of newborns, number of mothers invited to participate in screening, number of mothers participating in screening, number of mothers offered support after participating in screening and number of screenings conducted with the assistance of an interpreter) were brought on a separate sheet by each participant and placed in the envelope (together with the questionnaires) at the start of the first day were sent in a closed envelope at the turn of the year 2020.

Questionnaires

Evaluation questionnaire

A questionnaire, to measure the level of acceptability of the intervention by content, relevance and training (Appendix II), was used in Study D. Seven questions answered on a five-point Likert scale ranging from 1 "poor" to 5 "excellent" and six open-ended questions giving the possibility to answer in free text. The questionnaire was previously used in another similar study in the same context (Lefèvre, 2017), but was slightly adapted with specific questions to fit the aim of the study.

Clinical Cultural Competency Training Questionnaire Pre and Post

The questionnaire Clinical Cultural Competency Training Questionnaire PRE/POST (CCCTQ PRE/POST) adapted to the CHS by Berlin, Nilsson & Törnkvist (2010), was used to measure the participants' acceptability of the training and self-assessed level of cultural competence for the area, before and after the intervention. The questionnaire covers the elements in Model Cultural Competence in the Delivery of Health Services and are divided into six sections: *A. Demographic characteristics*; *B. Knowledge*; *C. Skills*; *D. Encounters/situations*; *E. Awareness*; *F. Education and training*; and *G. Impact*. The items are based on a five-point Likert scale ranging from not at all to very. The reliability and internal consistency of the instrument have been tested, showing Cronbach's alpha scores >0.83 (Berlin, Nilsson & Törnkvist (2010).

General Self-Efficacy Scale

The Swedish version of the General Self-Efficacy Scale (S-GSE) consists of 10 items based on a four-point Likert scale ranging from not at all true to exactly true. Its reliability and internal consistency have been tested showing Cronbach's alpha scores 0.91(Löwe, Moore & Hensing, 2006). The scale was applied to measure the participants' self-assessed self-efficacy in performing the task before and after participating in the intervention. The scale was previously used in a similar context (Phoosuwan & Lundberg, 2020).

Data of the general performance of the task

Self-reported data on the general performance of the task for the years 2019 and 2020 included all mothers, not only immigrant mothers. The following data was summarized and reported by each participant; a) number of newborns; b) number of mothers invited to participate in screening; c) number of mothers participating in screening; d) number of mothers offered support after participating in screening; and e) number of screenings conducted with the assistance of an interpreter.

Data analysis

Qualitative content analysis

In Study A and Study B latent content analysis according to the approach of Elo and Kyngäs (2008) was used to analyse the transcribed interviews about CHS nurses' and non-Swedish-speaking immigrant mothers' experiences. The goal of content analysis is to provide knowledge and understanding of the phenomenon under study. Latent analysis deals with what the text talks about, the relationship aspect, and involves an interpretation of the underlying meaning of the text (Downe-Wamboldt, 1992).

The analyses started with the first and second author reading the material several times in order to immerse themselves in the data (Elo & Kyngäs, 2008). Text that appeared to elucidate the participants' experiences, being the unit of analysis, was highlighted. Keywords or phrases from the highlighted text were written in the margin, what is called open coding. The codes were discussed and sorted into different sub-categories named after a content-characteristic word. The sub-categories with similar content were organized under higher-order headings into generic categories through interpretation of how the different sub-categories were associated and connected with each other. The different sub-categories and generic categories were then verified by the last author after reading and analysing three interviews (Study A) and all interviews (Study B). The generic categories were organised under main categories which were abstracted as far as it was sensible to interpret the latent meaning of the text (Elo and Kyngäs, 2008).

For the comments expressed in the open-ended questions in the evaluation questionnaire in Study D manifest content analysis was used. The comments were read through to get a first impression of the text. They were then coded by the first author and the codes were discussed with the other authors. All jointly clustered the codes with the same meaning under main categories (Kondracki, 2002).

Meta-etnography

For the meta-synthesis of the papers included in Study C, Noblit and Hare's (1988) seven-phase method based on meta-ethnography was applied. Three techniques for translating the studies are described: reciprocal, refutational and "line of argument". Reciprocal involves looking for similarities across studies, while refutational refers to exploring and explaining contradictions between individual studies. "Line of argument" refers to interpreting different aspects of the same phenomenon under study, and producing a greater whole. Since there was a significant overlap of key concepts a reciprocal translation was chosen. The core metaphors or concepts of the original studies are preserved, which is achieved by determining how the studies are related to each other and then translating them into each other, allowing a new interpretation to emerge and creating a whole (Noblit & Hare, 1988).

After the research aim had been articulated (Phase I) the first (the author of the thesis) and last researcher defined the material through a search strategy and independently screened all records by title and abstract against the inclusion criteria. Articles assessed as eligible for inclusion were further screened in full text by all three authors to check for consistency, and any disagreements were resolved by discussion (Phase II). Quality appraisals were then undertaken. Scores for each study were first compared separately by the first and last researcher, and then consensus was reach between all three authors by the second researcher confirming the scores. Any differences in the researchers' appraisals resulted in a re-read of the text and a decision was reached in unison by all three researchers.

The researchers then separately read the papers carefully and repeatedly (Phase III). Notes of findings related to the aim (themes, metaphors, concepts with data examples and key ideas presented in results or discussion) were made in the margin during the reading and then collected into a document, one for each study. The first and last researcher then compared their notes and jointly developed a grid of concepts for each study, which were confirmed by the second researcher. In order to make an assumption of how studies were related to one another, the researchers compared the grid from each study to identify common and recurrent key concepts (Phase IV). The translation was done by the researchers comparing and contrasting key concepts in relation to others in the original study and across studies, and those which had similar initial concepts were translated into themes (Phase V). The translated themes were further collapsed and synthesized into emerging themes, which were named from direct quotations of the studies' participants to further communicate the findings (Phase VI).

In the last phase (VII) the final themes within the synthesized findings were identified by interpreting and discussing the emerging themes to reach consensus (Noblit & Hare, 1988).

Statistical analysis

In Study D the data covering the participants level of acceptability of the intervention's content, relevance and training (sections F, G in the CCCTQ POST and the evaluation questionnaire) was presented by descriptive statistics (numbers, percentage and mean).

The participants' self-assessed level of cultural competence for the area, before and after the training, was measured by comparing the scores of 31 selected items (reflecting the content of the training sessions) in sections B, C, D and E of the CCCTQ PRE/POST using the Wilcoxon signed-ranked test. In order to avoid mass significance, a p-value $p \leq 0.01$ was considered as a statistically significant training difference.

The S-GSE scale was applied to measure the participants' self-assessed self-efficacy in performing the task before and after the training. The change in total scores on the S-GSE measured pre and post were compared using a paired t-test with the significance level set to $p \leq 0.05$.

The self-reported data of the general performance of the task for the years 2019 and 2020 (proportion of mothers offered screening, participating in screening, screenings with the assistance of an interpreter and mothers receiving follow-up) was presented by descriptive statistics (numbers, mean, median, min-max, percentage).

The analyses of descriptive and comparative statistics were performed using IBM Statistical Package for Social Sciences (SPSS version 26; IBM, Armok, NY, USA).

Preunderstanding

Previous knowledge about a specific phenomenon can be referred to as our preunderstanding. It may facilitate, as well as limit, our interpretation and understanding of data in qualitative research and is therefore important to describe (Dahlberg, Dahlberg & Nyström, 2008). The author of this thesis had several years' experience of working as a CHS nurse and as a health care developer for the CHS in the region Skåne. In an attempt not to let this preunderstanding influence the studies in a subjective way, the studies were done in collaboration with other researchers with experiences from other areas of health care. The author's preunderstanding was reflected upon and discussed at regular supervision throughout the study process. The study results were also discussed in multi-professional research-group seminars.

Ethical considerations

The studies were planned and carried out in accordance with the WMA Declaration of Helsinki of 2013 (World Medical Association, 2013) considering the ethical principles of autonomy, non-maleficence and beneficence, and justice (Beauchamp and Childress, 2019). The included studies were ethically approved by the Swedish Ethical Review Authority (case no. 2013/132 (Study A), 2015/96 (Study B) and 2018/1063 (Study D). All data were handled according to the General Data Protection Regulation (2016/679/EU).

Autonomy

The principle of autonomy refers to the individual's right to make an informed and voluntary decision whether to participate or not without interference from researchers and/or caregivers (Beauchamp and Childress, 2019). The participants in Study A, Study B and Study D were all informed, both verbally and in writing, about the study and were encouraged to get in contact if they had any questions.

The CHS nurses (Study A, Study D) were informed about the nature of the study, measures to preserve their confidentiality, freedom of participation and the possibility to withdraw their participation at any time. Their written informed consent to participate in the study was obtained. The author of the thesis had a professional relationship with the nurses during Study D, being employed as a health care developer for the CHS at the time of the study. Measures were taken, such as e-mailing regarding the study from another address, not speaking about the study except when necessary and assuring the nurses orally and in writing that choosing to participate or not in the study would not affect the relationship.

The non-native-speaking mothers (Study B) received written and verbal information in their native language with the use of an authorized female health care interpreter about the nature of the study, measures to preserve their confidentiality, freedom of participation and the possibility to withdraw their participation at any time. They all gave their written informed consent. As the child's CHS nurse acted as an intermediary and informed the mother about the study in connection with the child's regular check-up, it was emphasized that whether or not the mother agreed to be contacted about the study would not affect future access to care.

Non-maleficence and beneficence

The principles of non-maleficence and beneficence mean that the scientific benefits of the study are supposed to outweigh the risks and inconvenience for the participants (Beauchamp and Childress, 2019). The participants in Study A and in Study B were given the opportunity to choose the time and place for the interview to create a secure environment. They were informed about the possibility to receive counselling from a psychologist if they experienced distress or anxiety in any way after giving the interview. As for the four mothers in Study B who expressed symptoms of mental ill health during the interview, the author of the thesis made sure that the mothers received care.

To ensure the participants' confidentiality in Study A and Study B, the interviews were given a code number after the transcription and a code list was established. The code list was kept separately from the data material in a locked cabinet and accessed only by the author of this thesis. Profiles of the participants were presented on a group level to prevent any individual participant from being recognized, and unique quotations were presented with a code number. In Study D the code numbers and personal data were kept separate from the data material and accessible only to the author of this thesis. The presented findings were not linked to any individual participant. The data material will be stored according to Lund University guidelines.

The time spent participating might be seen as a possible inconvenience by individual nurses (Study A, Study D) and mothers (Study B) but was balanced by the benefits of contributing to improved clinical guidelines.

Justice

The principle of justice concerns the issue of recruitment of the participants being performed in a non-discriminating way (Beauchamp and Childress, 2019). This thesis gives voice to a vulnerable group of individuals that are seldom included in research because of communication difficulties (Study B). As for the nurses, the ones with the most experience of screening non-native-speaking mothers were invited to participate and to share their experience (Study A, Study D). This might be interpreted as being in conflict with the principle of justice. But by selecting this group, and not every nurse, a deeper and more nuanced picture of the challenges was captured, which created better circumstances for modelling the intervention and improving clinical guidelines.

Results

The findings are presented in relation to the phases in the MRC framework (Craig et al., 2008; Craig, 2013). In section “the development phase” findings from Study A, Study B and Study C are integrated, while findings from Study D are reported in the section “Feasibility/piloting phase”.

Development phase

The quotations from Study A and Study B are from original interviews, while the quotes from Study C are from papers included in the review.

Developing a trusting relationship

The importance of developing a trusting relationship was emphasized by both professionals (CHS nurses and HCPs) and the immigrant mothers (Study A, Study B and Study C). The professionals described establishing a transcultural supportive relationship with the mother as the first step in continuously being able to interpret the mother’s mood (Study A, Study C) and as the core for getting the mother to be a partner in care and to act on advice given (Study C). The mothers expressed how the perceived quality of the contact with the professionals was important for accepting the invitation to participate in screening and finding it meaningful (Study B).

Continuity of caregivers and longer appointments were seen as facilitating for establishing an open and trusting relationship (Study C). So too were being available, receptive, and responsive whenever the immigrant mothers sought help and receiving them with compassion, dedication, and a genuine desire to learn more about their culture and understand their situation (Study A, Study C).

> “-That they feel that I welcome them as I welcome any fellow human being and that I don’t look down on them or think that they are different, but that we… I was about to say become friends, but it’s the wrong word … but that we have a good relationship. That they feel they are liked and that I listen to them. I think that’s the main thing […] then they trust me […] that’s how I think it works”. (Study A)

Standing or sitting close to the mother was considered a subtle way of showing how dedicated the professional was in supporting her (Study A). It was suggested that building trust could take longer with immigrant mothers due to lacking understanding of provider confidentiality (Study C) and expectations of care (Study A, Study C). The professionals experienced that immigrant mothers had other anticipations of care compared to indigenous women, who saw coming to CHS more as a matter of course (Study A, Study C). In the beginning the immigrant mothers had the impression that the CHS was only for the child’s health and it was surprising to them that the nurse also was interested in them and how they were feeling (Study B).

Conditions for building trust were also affected by challenges in communicating (Study A, Study C). The use of interpreters did to some extent bridge cultural differences. The professionals did however experience an uneven quality in the interpreters’ work and they were attentive to signs from the mother that she was uncomfortable like giving short answers, poor eye contact and starting to focus on the baby (Study A).

Interpreting the mother’s mood

The established relationship was used as a springboard for continuously interpreting the mother’s mood based on observations and interactions. The professionals had the experience that signs of PPD in non-native-speaking mothers did not differ from signs observed in indigenous mothers. But since PPD, in their opinion, was not recognized in some cultures, or at least not recognized as a “medical” problem (Study A, Study C), they used cultural knowledge as a filter to understand and find explanations for some of their impressions (Study A). The professionals reported that expressions that caused concern were bodily visions of distress such as static movements, looking tired, slouching, and having a stiff facial expression and having poor eye contact, with an empty, sad, blank look in their eyes (Study A, Study C).

> “-It feels as if they distance themselves from both me and the baby. They don’t hold the baby as I would if it was my baby. There’s something in their eyes or rather there’s something missing. Because it doesn’t matter how tired you are or how hard the nights are or how much the baby cries or how unsure you feel as a mother […] there is still a spark in most [of the mothers’ eyes], and if I don’t see it I feel worried”. (Study A)

Lack of interest in the baby and slow or indifferent response to the baby's signals also caught the professionals' attention. So too did mothers being in a constant hurry, worried and anxious with a lot of questions, and the opposite, being a little absent and quiet, not giving information and asking few questions (Study A). Presentation of somatic "symptoms", such as headache and back pain, also aroused suspicion among the professionals considering that PPD was not recognized as a condition in some cultures (Study C). This picture was partly confirmed by the mothers, since the concept of PPD in general was unknown among them and none of them had experienced a general discussion in society. They felt reassured knowing that the nurse would identify signs of PPD in her clinical assessment if they did not recognize suffering from it by themselves. Even if the participating mothers were assessed by a professional as not showing signs of PPD, a couple of the mothers spoke about having sleeping disorders, feeling sad, and crying for no reason, loss of interest in their daily life, suffering from fatigue, anxiety, anger or irritability, self-loathing and unexplained aches and pain. One of them mentioned having delusions and thoughts of harming herself (Study B).

The professionals also relied on their intuition when interpreting the mothers' mood and felt that it was rarely wrong despite the cultural differences. The intuition gradually grew from observing and interacting with the mother. They felt that it was a delicate issue to bring up with these mothers compared to indigenous mothers and the relationship needed to be deepened before the subject could be addressed. The nurses sometimes waited until the scheduled screening took place to be able to compare their intuition with what disclosed at screening (Study A).

Challenges for conducting the screening

Despite challenges in conducting the screening with the EPDS, the professionals' attitudes to it were in general positive since it allowed for more focused discussion about mental health. They saw it as an important part of their work to support immigrant mothers in becoming aware of the condition, knowing about different available services, helping them to connect and to refer them if needed. They tried to normalize the screening by talking about it at earlier appointments and describing it as routine and useful (Study C). The reason for the invitation to screening was still somewhat unclear to the mothers, but they were happy about being asked since it made them feel confirmed and treated just like everyone else (Study B).

The professionals adapted the screening procedure to the best of their ability given the circumstances, trying to avoid deviating too much from the original approach. Access to a translated validated EPDS in the mother's native language, her literacy level and the interpreter's skills were taken under consideration when adjusting the screening to fit the individual mother's needs (Study A, Study C). It was also emphasized how the mother's educational level affected her ability to understand and fill out the EPDS (Study C). The professionals had the experience that the items in the EPDS could be interpreted differently in diverse cultures, and many of them noticed that immigrant mothers tended to interpret the statements literally.

> "-The [EPDS] is a document that non-English-speaking women don't necessarily understand … plus when you literally translate something like: "do things get on top of you?" the literal translation is: "Is there something on top of your head?" and it's like, what's that got to do with anything? Yes, I carry water on top of my head. I carry things on my head because that's what I do in Africa. Yes, everyday things get on top of my head". (Study C)

Concerns were raised about the scale's cultural sensitivity and terminology (Study C). The mothers found item ten in the EPDS, about harming oneself, somewhat peculiar but still accepted it since they saw it as being posed from a western point of view (Study B). The validated translations of some languages, especially Arabic and Turkish, were perceived by the professionals as deficient (Study A, Study C).

Besides the challenge with the EPDS, lacking a common language and having to rely on an interpreter was perceived as a major barrier for conducting effective screening (Study A, Study C). The interpreters' work was found to be uneven in quality and standardised instructions to the interpreter regarding PPD screening were suggested. The professionals were dependent not only on the interpreters' ability to translate and convey the EPDS, but also their capacity to translate the clinical interview in a nuanced and exact way (Study C). Applying their regular conversational technique during the clinical interview was difficult (Study A). Discussing something as subtle and complicated as emotions through an interpreter caused frustration (Study C).

Challenges for the mother to speak about her mood

Several aspects emerged that challenged the mother when speaking about her mood and the professional when getting her to open up and accept help. It involved guilt and shame at not being grateful for the life in the new county, of which the professional was seen as a representative. If the professional was perceived as stressed, or in some other way absent in the situation, then the mothers did not want to burden her further despite feeling that they had a good relationship. Not being used to getting attention as a person because of their gender was also a challenge for disclosing their mood, as were stories of how women had been mistreated by professionals in their country of origin (Study B). Another concern which the professionals had to be aware of was mothers' fear of speaking about mental ill health with a person in authority since there was a general belief among immigrant families that the baby then would be taken away by the Child Protective Services. One of the most prominent aspects was the stigma attached to mental ill health in many cultures, where speaking about mental ill health was not common and not accepted (Study A, Study B, Study C).

> “-Well, I can say that in a country that’s more developed it often works better than in our home countries. If you wanted to say that you’re not feeling mentally well it’s nothing that you can talk openly about then they’ll think you’re crazy. You can’t say that, but here in Sweden you can say that you’re not feeling well or it’s too much then there is the possibility that you can speak about it or calm down in some way to feel better again”. (Study B)

The professionals reflected on how the mother felt compelled to hide her feelings for fear of bringing shame on the family, even if she was able to identify and accept her distress and wanted help. The mothers tended to choose “good” answers in the screening, conveying a positive message since “bad” answers attracted unwanted attention. The professionals attempted to handle the situation by normalising mental ill health and conducting the screening without the presence of the extended family, which occurred even if the professionals tried to avoid it. Lacking spousal support was identified as a key barrier to accessing care (Study C). Accepting professional assistance as a first-line health intervention was not common since mental ill health is kept in the family (Study B, Study C). The mothers explained that if they still had been living in their country of origin the close family would have taken care of them if they had not been feeling mentally well (Study B).

The mother was also challenged in speaking about her mood, by circumstances related to the interpreter’s understanding and acceptance of the sociocultural norms within the mother’s country of origin and the host country (Study C). The mother could become apprehensive about disclosing symptoms if she did not trust the interpreter’s confidentiality (Study B, Study C) or if the interpreter became too friendly (Study A, Study C). Using an interpreter of the opposite sex was perceived as problematic since the mothers might then experience further stigmatization (Study A, Study B, Study C) and for this reason both the professionals and the mothers preferred using on-site female interpreters (Study B, Study C).

The challenges altogether caused frustration among the professionals about not being able to perform the screening of immigrant mothers as well as they expected themselves to do because of difficulties in communicating, in applying the EPDS, because of cultural implications of PPD, and in motivating the mothers who did disclose their feelings to seek help and support (Study A, Study C). This made them made doubt their overall ability to care for this population (Study C).

> “-It can be tough if you’re not really sure that you truly understand the situation … you might not feel competent in a cross-cultural setting … you don’t want to make things worse”. (Study C)

Some of them felt that they would benefit from training in cultural competence, while others did not. They meant that the only way forward was by keep on exposing themselves and getting more clinical experience and having an open mind. Then they would gradually develop self-efficacy in their own ability (Study C).

Feasibility/piloting phase

The evaluation questionaire used in Study D showed that all nurses (100%) found that it was worth their time and effort to participate in the intervention, 97% found that the training added to their knowledge and 93% stated that it greatly improved their ability to meet the requirements linked to the task of screening immigrant mothers for PPD. Increased cultural competence was reported to facilitate the screening procedure since the nurses had become more aware of immigrant mothers' obstacles to being able to speak about their own mood, specifically attitudes towards and expression of mental ill health. The nurses also reported that they had become more aware of other cultures in general, including their own.

As regards the CHS nurses' perceptions of the different training sessions, 100% reported that they were satisfied overall. The sessions that provided the most useful knowledge and increased their awareness the most were *Method review screening with translated EPDS and interpreter* and *Comparison of child-rearing in different cultures* (Table 7). The nurses described how they had become more selective about which interpreters to book since they gained knowledge about the interpreters' degree of competence and also how to place higher demands on the interpreters' professionalism. They hoped to achieve better cooperation and have more in-depth conversations with the mother by applying the new strategies they learned for using an interpreter. Some participants stated that they needed more clinical supervision in working with an interpreter.

The participants were more content with the theoretical part (100%) than with the practical part (80%). Still 76% stated that the group exercise contributed to increased knowledge and the sessions *Practical training in screening with the assistance of an interpreter* and *Conversational technique and coaching interviewing* were found by 73% and 76% repectively of the participants to provide useful knowledge and increase their awareness. The participants appreciated the opportunity for peer learning since it made them feel more secure in their professional role. Some participants were more comfortable with reflections and discussions and found the role-play difficult. A couple of the nurses reported that they felt more confident in giving person-centred counselling after participating in the training.

As for the material, the comic strip had been used both at the first appointment with the family and in connection with the screening. The information to the interpreters had been handed out in the waiting area to prepare for them for assisting in the screening procedure. Seventy-seven per cent of the CHS nurses reported that the printed material had provided new knowledge and it had been used by 53%. The reasons mentioned for not using the material were not having the opportunity since there was no screening with the assistance of an interpreter, and some had forgotten about it.

Regarding the participants' self-estimated general self-efficacy pre and post intervention, no significant changes were shown (95% CI: -2.45939 to 0.39272; *p*=0.149), although 15 participants reported a deterioration, six no change and nine improvements.

Statistically significant changes were found in the participants' self-estimated cultural competence pre and post intervention (Table 7) concerning knowledge of the CHS health policy regarding cultural diversity (*p*=0.002), skills in dealing with culturally sensitive health care plans (*p*=0.010), encountering cultural expressions of distress and suffering (*p*=0.010) and awareness of the importance of sociocultural interaction with other visitors (*p*=0.004).

Data from 22 participants on the general performance of the task, the proportion of mothers invited to participate in screening, the proportion of mothers participating in screening, the proportion of mothers offered support after participating and screenings conducted with the assistance of an interpreter showed no significant changes between 2019 and 2020 (Paper IV, Table 7). Fifteen CHS nurses had to the same or greater extent offered mothers the opportunity to participate in screening, 14 reported that a higher proportion of mothers had participated and 15 had offered counselling to the same or higher extent. Data from eight participants was excluded since one nurse changed clinic before participating in the training, one nurse was partly transferred to another clinic in 2020 and six nurses changed clinic in 2020.

Table 7. Section B, C, D and E of the CCCTQ PRE/POST training and section F and G of the post training

Item	**Pre training** Median (quartiles)	**Post training** Median (quartiles)	**p-value**
B. Knowledge How knowledgeable are you about:			
2. social characteristics of diverse ethnic groups	4.00 (3.00, 4.00)	4.00 (4.00, 4.00)	0.068
4. health disparities experienced by diverse ethnic groups	3.00 (2.75, 4.00)	3.00 (3.00, 4.00)	0.394
5. socio-cultural factors in treatment/care	4.00 (3.00, 4.00)	4.00 (3.75, 4.00)	0.033
9. national policies of cultural diversity in health	3.00 (3.00, 4.00)	4.00 (3.00, 4.00)	0.088
10. CHS health policy regarding cultural diversity	3.00 (3.00, 4.00)	4.00 (4.00, 5.00)	**0.002**
C. Skills How skilled are you in dealing with:			
1. greeting in a culturally sensitive manner	4.00 (3.00, 4.25)	4.00 (4.00, 4.00)	0.048
2. parents' perspective on health and illness	3.00 (3.00, 4.00)	4.00 (3.75, 4.00)	0.025
4. eliciting use of folk healers	2.00 (1.00, 3.00)	3.00 (2.00, 3.00)	0.032
5. culturally sensitive physical examination	3.00 (2.00, 3.25)	3.00 (2.00, 4.00)	0.031
6. culturally sensitive health care plan	3.00 (2.00, 4.00)	4.00 (3.00, 4.00)	**0.010**
8. culturally sensitive preventive health care advice	3.00 (3.00, 4.00)	4.00 (3.00, 4.00)	0.014
9. parents' health literacy	3.00 (2.75, 4.00)	4.00 (3.00, 4.00)	0.031
10. medical interpreters	4.00 (3.00, 5.00)	4.00 (4.00, 5.00)	0.157
11. cross-cultural conflicts	3.00 (2.00, 4.00)	3.00 (3.00, 4.00)	0.148
12. cross-cultural compliance problems	3.00 (2.00, 4.00)	3,50 (3.00, 4.00)	0.042
13. multicultural ethnic conflicts	2.50 (2.00, 3.00)	3.00 (2.00, 3.00)	0.032
14. apologizing for multicultural misunderstandings	3.00 (2.25, 4.00)	4.00 (3.00, 4.00)	0.025
D. Encounters/situations. How comfortable do you feel in dealing with:			
1. parents of culturally diverse backgrounds	4.00 (4.00, 5.00)	4.00 (4.00, 5.00)	0.782
2. parents with limited Swedish proficiency	4.00 (4.00, 5.00)	4.00 (4.00, 5.00)	0.305
4. identifying beliefs interfering with child health care	3.00 (2.00, 3.00)	3.00 (3.00, 4.00)	0.025
5. non-verbal cues in different cultures	3.00 (2.00, 3.00)	3.00 (3.00, 4.00)	0.023
6. cultural expressions of, e.g., distress, suffering	3.00 (2.00, 4.00)	3.50 (3.00, 4.00)	**0.010**
7. advising parents to change practices	3.00 (3.00, 4.00)	4.00 (3.00, 4.00)	0.072
12. large groups of family members accompanying	3.00 (2.75, 4.00)	3.50 (3.00, 4.00)	0.211
E. Awareness. Importance of socio-cultural factors in interaction with:			
1. parents	5.00 (4.00, 5.00)	5.00 (4.00, 5.00)	0.527
2. relatives	4,50 (3.75, 5.00)	4.00 (3.00, 4.00)	0.193
3. other visitors	4.00 (3.00, 5.00)	4.00 (3.00, 4.00)	**0.004**
Self-awareness			
1. cultural identity	4.00 (4.00, 5.00)	4.00 (4.00, 5.00)	0.808
2. cultural stereotypes	4.00 (3.00, 4.00)	4.00 (4.00, 4.00)	0.106
3. biases and prejudices	4.00 (3.00, 4.00)	4.00 (4.00, 5.00)	0.033

Item	Post training, n (%)					
	Don't know	Not at all	Only a little	To some extent	Rather much	Very much
F. Education and training						
Risk factors for PPD among immigrant mothers	–	–	–	6 (20)	17 (57)	7 (23)
Challenges in the screening situation	–	–	–	5 (17)	13 (43)	12 (40)
Method review screening with translated EPDS and interpreter	–	–	–	3 (10)	17 (57)	10 (33)
Practical training in screening with assistance of interpreter	–	–	2 (7)	6 (20)	13 (43)	9 (30)
Parenting and childrearing in different cultures	–	–	1 (3)	2 (7)	13 (43)	14 (47)
Tacit knowledge	–	–	–	7 (23)	14 (47)	9 (30)
Strategies for offering support	–	1 (3)	–	4 (13)	15 (50)	10 (33)
Conversational technique and coaching interviewing	–	–	1 (3)	6 (20)	13 (43)	10 (33)
Overall content	–	–	–	–	8 (27)	22 (73)
G. Impact						
The education affected your ability to screen immigrant mothers for PPD	1 (3)	–	–	1 (3)	15 (50)	13 (43)
E. Training						
Importance of training for staff in the CHS about cultural diversity	–	–	–	3 (10)	4 (13)	23 (77)

Discussion

Methodological considerations

The research followed the MRC (Craig et al., 2008) framework for complex interventions involving the phases of development and feasibility/testing. Based on the results from the interview studies (Study A, Study B) and the meta-synthesis (Study C), an invention was modelled and tested for feasibility (Study D). Qualitative and quantitative research both have their strenghts and limitations (Kazadin, 2003; Lincoln & Guba, 1985). These strenghts and limitations are discussed in relation to trustworthiness for the qualitative studies (Study A, Study B, Study C) and in relation to validity and reliability for the quantitative study (Study D).

Trustworthiness

Trustworthiness refers to whether the data reflects the truth and is used to evaluate the quality of qualitative studies. The concepts credibility, dependability, transferability and confirmability are used to describe various aspects of trustworthiness. Although the terms represent different perspectives on trustworthiness, they should be seen as intertwined (Lincoln & Guba, 1985).

Credibility

Credibility refers to the confidence in the truth of the data and how well the data addresses the intended focus (Lincoln & Guba, 1985). It involves the selection of appropriate methods and participants and as well as transparency in reporting the study procedure (Elo et al., 2014). The participants in the Study A and in Study B were chosen by purposive sampling, which is suitable when the researcher is interested in participants who have the best knowledge concerning the research topic (Creswell, 2013). It is also the most frequently used sampling method when content analysis is performed (Kyngäs et al., 2011). By choosing the sample differently and interviewing nurses with sparse experience of the subject it cannot be ruled out that additional variations might have been revealed. Likewise, in Study B, the mothers represent only a small group with three different languages, originating from five different countries, and it can be claimed that in a larger sample additional variations could have been revealed. However, it was difficult to recruit participants and the data collection stretched over one year. Even if the recruitment of participants had been more successful it is hard to know how it might have affected the results since it, in earlier research, has been found that no new information is obtained after twelve interviews, provided that the participants are a relatively homogeneous group, the objective is narrow and an interview guide is used (Guest et al., 2006).

Individual interviews were chosen for both Study A and Study B for ethical reasons, since the research area might be considered a sensitive topic to speak about (Kvale & Brinkmann, 2014). To establish trust, which is important for obtaining rich data in interviews, the interviews were conducted at a time and place chosen by the participants. Furthermore, the author of the thesis, who conducted all the interviews, personally recruited all the participants in Study A. By using this approach, the eligible participants had the possibility to directly ask questions about the study. This may increase the likelihood for the participants to open up and share their experience (Morse, 2015). In Study B the author of the thesis had not met the participants prior to the interview since the recruitment was done with help of the interpreters tied to the study. Even so, this seems not to have affected the trust since four of the mothers' revealed symptoms of PPD. The authorized female health care interpreters tied to Study B came from another agency than the one that the CHS used, to avoid previous acquaintance with the mothers, which otherwise might have affected the interviews.

The semi-structured interview guides were tested in two pilot interviews for each study. Pre-interviews may help to determine whether the interview questions are suitable for obtaining rich data that answers the research aim (Koch, 1994). They are also useful for the researcher's self-awareness, enabling critical reflection on her own actions (Elo et al., 2014). The choice of qualitative content analysis as research approach in Study A and in Study B was made since existing research in the area was limited. The chosen approach and sample offered a broad description of the participants' varied experiences (Elo & Kyngäs, 2008). For Study C a meta-ethnographic approach was chosen, which means determining how the studies are related, translating them into each other and allowing for a new interpretation (Nobilt & Hare, 1988). The reason for choosing this approach was mainly the fact that the meta-ethnographic approach aims at preserving the core metaphors or concepts of the original studies, which gives a deeper understanding of the subject of interest (France et al., 2019).

Dependability

Dependability refers to the stability of data over time and under different conditions (Lincoln & Guba, 1985; Elo et al., 2014). The use of semi-structured interview guides in Study A and Study B ensured that the same main questions were posed to all participants. To increase the dependability of the data in Study B, seven of the research interviews were verified by another interpreter than the one used in the interview.

These interpreters were court interpreters and the confirmation of each interview took several hours but only minor changes to the transcribed interviews were undertaken.

In Study C a predetermined search strategy was used and the search was conducted by two university research librarians. Despite conducting an extensive literature search in electronic databases, it is possible that not all relevant articles were located since the search was limited to articles published in English after the year 2000. In order to further strengthen the study's dependability and to make sure that all recent articles were included, the literature review was updated in February 2021. The CASP (2019) tool was used for quality-appraisal of articles which met the inclusion criteria. The quality-appraisal of Study A, which was included in the systematic review (Study C), was first done seperately and then discussed by all three authors ensuring as neutral assessement as possible. The meta-synthesis followed the eMERGe reporting guidelines (France et al., 2019) and the PRISMA checklist (Page et al., 2020). The results from Study A, Study B and Study C have also been discussed in research seminars with junior and senior researchers.

Transferability

The term transferability refers to whether or not the findings can be transferred to other groups or settings than those studied (Lincoln & Guba, 1985; Elo et al., 2014). The researcher can suggest transferability, but it is for the readers to decide about the transferability of results to another context (Graneheim, Lindman & Lundman, 2017). In order to facilitate the transferability of the results in Study A and in Study B the context, the participants' characteristics, the sampling, the data collection and data analysis were described in as much detail as possible (Elo & Kyngäs, 2008). This also applies to Study C, where the predetermined search strategy, the quality assessment, facts of the included articles and the data analysis were described in detail. As for the results from Study A, the structure of the Swedish health care system might differ from that in other countries, but the results were very similar to the results in Study C, which (excluding Study A) represented three countries.

Confirmability

The term confirmbility refers to the objectivity of data and interpretations (Lincoln & Guba, 1985; Elo et al., 2014). The researchers' preunderstanding differed but was regularly discussed during the data collection and the analysis. To reduce potential bias that might come from a single researcher analysing the material, researcher triangulation was used. The authors independently read the material and then conducted a parallel analysis which enabled a consistency check of the results (Patton, 1999). In the result each generic category was supported with quotations from the individual interview in order to enrich the descriptions and make the interpretations as transparent as possible for the reader (Creswell, 2013), and detailed examples of the different steps in the analysis were presented in all three studies.

Validity

This is often discussed in terms of external and internal, and refers to the ability of the study to scientifically answer the questions it is intended to answer (Kazdin, 2003).

External validity

The term external validity refers to the possibility to generalize the results to other populations and settings. It is important to consider how representative the study population is of the intended population since sample charateristics are considered as a threat to external validity (Kazdin, 2003). The transferability of the training tested in Study D was already considered in the development phase since the professions responsible for the training, a psychologist and a paediatric nurse, are available in 20 of 21 central CHS teams in Sweden. The training could therefore be transferred to other central CHS teams which are responsible for quality development and evaluation of the care offered at the CHCC. Training of CHS nurses lies within their assignment (Swedish National Board of Health and Welfare, 2020). The selected study population might be percieved as a threat to external validity as they cannot be seen as representative of "general" CHS nurses. They are rather to be seen as representatives of CHS nurses working in areas with socioeconomic challenges, for which the intervention is also intended. Since the evidence base, on which the intervention was carefully modelled, consisted of a systematic review building on the experience of 126 HCPs representing four countries (Study C), the possibility to generalize the results of Study D to international settings is suggested. In order to increase external validity and make the results more useful for decision makers, an economic evaluation is needed, preferably an assessment of cost-effectiveness, which is also recommended in the MRC framework for complex interventions (Craig et al., 2013; Skivington et al., 2021a). This could possibly be included in a future randomized controlled trial.

Internal validity

The term internal validity refers to the validity of the conclusions drawn (Kazdin, 2003). In 2021 the MRC framework was updated and the new version emphasizes that each phase should consider six core elements; the intervention's interaction with its context; the underpinning programme theory, including stakeholder perspectives; key uncertainties; how the intervention can be refined; and the comparative resource and outcome consequences of the intervention (Skivington et al., 2021a). In this thesis, the different studies are successively built on each other and the six core elements have been considered for both phases. As for the interventions interaction with its context, special consideration was given to the transferability of the intervention (see external validity). All eligible CHS nurses in the county were invited to participate in Study D, which might have decreased the risk of selection bias, which is a common threat to internal validity (Kazdin, 2003). On the other hand, this increases the risk of attracting only the most motivated participants. Thirty of the 34 included nurses completed their participation, which can be considered as a strength but also as an indication that the study attracted those who took most interest in the subject. Consequently, this may have influenced the study results and it cannot be excluded that the results would be less positive if the training were provided to all nurses in the region. As for underpinning the programme theory, it was carefully considered and is reported in a logic model (Fig 1). Furthermore, stakeholders' involvement is emphasized and by conducting Study A, Study B and Study C the experiences of the HCP´s (in particular CHS nurses) and immigrant mothers was elucidated. Likewise, interpreters contributed in modelling the intervention. Key uncertainties were addressed in Study D involving the relevance of the content and clinical use of the training.

The pretest-posttest design is suggested as suitable for small-scale feasibility studies (Bowen, 2009) and when researchers are primarily interested in individual changes (Knapp, 2016). Approximately 30 participants were considered adequate, based on a previous study with a similar design and conducted within the same context (Lefèvre et al., 2017). History is known to be a threat to internal validity, referring to the effects of events outside or inside the experiment that may account for the results (Kazdin, 2003; Knapp 2016). The Covid-19 pandemic forced the group leaders to cancel the last half-day group session and instead the participants were divided into two smaller groups and given an abbreviated version. This might have influenced the results for these seven participants in a negative way. Immigration declined by 29% in Sweden during 2020, which also affected the participants' possibilities to practise their new knowledge (Statistics Sweden, 2020). Process evaluation is an important part of the MRC framework (Craig et al., 2013; Skivington et al., 2021b) to avoid making conclusions about the impact, or lack of impact, of a complex intervention. Since Study D was a feasibility study aiming primarily to evaluate the acceptability of the intervention, the results should be interpreted with caution. However, positive preliminary results suggest that an intervention is ready to be tested in a full-scale trial (Bowen et al., 2009).

Reliability and validity of the instruments used

Reliability refers to consistancy of the measure that is, the ability of an instrument to measure consistently. Validity refers to the content, whether the instrument measures what it is intended to measure, and also if it fits its purpose (Kazdin, 2003).

The General Self-efficacy scale is a widely used instrument in research on HCPs self-efficacy (Gillespie et al., 2007; Falk-Brynhildsen et al., 2019; Phoosuwan & Lundberg, 2020). As earlier described it is validated in a Swedish general-population sample with factor analyses and reliability analyses demonstrating a high internal consistency (Cronbach's alpha scores 0.91) (Löve, Moore & Hensing, 2011).

The original version of the CCCTQ PRE/POST originates from Krajic et al (2005) and a version adapted to fit the CHS by Berlin, Nilsson & Törnkvist (2010), was used to measure the participants' self-assessed level of cultural competence for the area before and after the intervention. In Berlin's (2010) version of the CCCTQ PRE/POST the wording was changed to fit the CHS and 14 questions which were considered as not applicable were omitted. The instrument was tested for face validity and internal consistency with the Cronbach's alpha scores >0.83 (Berlin, Nilsson & Törnkvist, 2010). In this thesis Berlin´s version of the CCCTQ PRE/POST were applied and 31 items, tied to the content of the different training sessions, were selected prior to analyses. This as the purpose was to test the acceptability of the content of the training and response to outcomes for the specific area and not the participants general level of cultural comptetence.

General discussion

Promoting mental health within the transcultural relationship

Both the CHS nurses and the immigrant mothers conveyed a positive picture of their relationship. The nurses spoke of the importance of being dedicated and compassionate about meeting these mothers (Study A, Study C) while the mothers emphasized their appreciation of being supported and confirmed as a person (Study B). The nurses had the requisites to develop the transcultural relationship with the immigrant mother so that they could continuously be to be able to interpret her mood (Study A), while the mothers perceived the quality of the relationship with the nurse as important for them when deciding to participate in the screening and finding it meaningful. This was confirmed by previous research, who found the relationship between the nurse and mother crucial for conducting effective screening, particularly for immigrant mothers who need to feel comfortable with the process of screening to answer the questions honestly (Tobin, Di Napoli & Wood-Gauthier, 2015). In the Theory of Human Caring it is highlighted that being skilled in conversational techniques and having a therapeutic approach are not enough for the relationship with the patient to develop and to be genuinely caring. The process is about the importance of the nurse meeting the patient in a way that makes her feel seen and respected as a person. The nurse needs consciously to direct her attention to the patient as a person to create possibilities for a deep transpersonal contact (Watson, 1985).

The results of the systematic review reported that the HCPs saw it as an important part of their work to support immigrant mothers in becoming aware of PPD and of different available services (Study C). Earlier research shows that when immigrant mothers were made aware of services and had more knowledge about PPD, their access to help was facilitated (O'Mahony et al., 2012). The concept of mental health literacy was therefore introduced in the intervention, defined by Jorm et al. (1997, p 182) as "knowledge and beliefs about mental disorders which aid their recognition, management or prevention. Mental health literacy includes the ability to recognise specific disorders; knowing how to seek mental help information; knowledge of risk factors and causes, of self-treatments, and of professional help available; and attitudes that promote recognition and appropriate help-seeking" (Jorm et al., 1997). Reduced mental health literacy has been shown in a case study report to be a noteworthy element influencing help-seeking behaviour among immigrant with mental health problems (Ekblad, 2020). This is somewhat confirmed by the results in Study B, where mothers expressed that they felt reassured that the nurse would identify signs of PPD in her clinical assessment in case they themselves did not recognize that they were suffering from it.

According to the Theory of Human Caring the nurse also needs to be aware of her own attitude and its importance for the patient, not only for receiving the information but also for processing it (Watson, 1985). Health literacy and cultural competence are seen as related concepts. Joined together they allow the development of effective and appropriate interventions which incorporates cultural elements and holistic assessment in the design, planning and implementation and evaluation of a person's health care issues (Ingram, 2012). The HCPs saw handing out multilingual information sheets on PPD as a valuable part of their strategies for supporting mental health literacy together with normalising, giving information repeatedly and arranging social networking through parental programme activities (Study C). A wish for written resources in their own languages was also articulated by immigrant mothers in earlier research (Riggs et al., 2012). The need for written information was brought into the intervention and a comic strip was designed on the basis that pictures, specifically cartoons, are a helpful aid for persons with limited literacy skills to be able to understand and use health information (Krasnoryadtseva, Dalbeth & Petrie, 2020). The printed material was however only used by just over 50% of the participants and further evaluation is needed.

Interventions aiming at raising HCPs' awareness of the concept of mental health literacy and strategies for promoting it among immigrants urgently need to be implemented and are already on the agenda in some HIC, as for example in Australia, where mental health workers of different ethnic origin are trained to provide bilingual mental health education and counselling (Transcultural Mental Health Centre, 2016). Model of Cultural Competence in Delivery of Health Care Services may contribute to reducing health disparities as it can assist nurses in incorporating culturally appropriate assessments while simultaneously providing health care information at suitable literacy level (Ingram, 2012).

Combining cultural knowledge with intuition for identifying signs of PPD

The CHS nurses spoke of how they used a filter of cultural knowledge to understand and find explanations for some of their impressions when suspected signs of PPD were identified (Study A). Despite giving examples of this filter of cultural knowledge, the professionals expressed frustration over lacking cultural knowledge to a degree that they found themselves doubting their competence in caring for this population (Study C). Much of the frustration lay in not getting the mothers to disclose their feelings (Study A, Study C). The HCPs were aware of several of the mothers' difficulties in speaking about their mood, such as the stigma attached to mental ill health, feeling uncomfortable with the interpreter, fear of the Child Protective Services and that the PPD condition was unknown to many mothers (Study C). But other perspectives were added by the mothers, such as not being used to the attention, stories of how other women had been mistreated by professionals, guilt about not being grateful for their new life and not want to burden the nurse if she appeared stressed (Study B). Some of the HCPs felt that they would benefit from training in cultural competence, while others thought that by getting more clinical experience, they would gradually develop self-efficacy in their own ability (Study C). This is a common belief among HCPs, but several systematic reviews show that training in cultural competence is beneficial for both professionals and patients (Beach et al., 2005; Chipps, Simpson & Brysiewicz, 2008; Renzaho et al., 2013). It is also stressed in the Theory of Culture Care Diversity and Universality that in order to enable culturally competent nursing, the nurse needs to acquire theoretical knowledge of other cultures and ethnic groups. The need to have a critical attitude towards your own culture is also essential in order to become aware of how it affects your view of health, quality of life and nursing (Leininger, 1991). Emphasis in the intervention was therefore put on the development of the participants' cultural knowledge for the area and the training was structured around Model of Cultural Competence in Delivery of Health Care Services. The results indicate that some aspects of the CHS nurses' self-estimated cultural competence for the area were positively affected, for example cultural expressions of distress and suffering (Table 7).

The CHS nurses thought that signs of PPD in immigrant mothers did not differ from signs in indigenous mothers. Besides using their filter of cultural knowledge to sort out their impressions, intuition was used as an aid to recognizing signs of PPD (Study A). Both Leininger and Watson argue that scientific knowledge is just one type of knowledge, and for a nurse it is a creative approach to use all forms of available knowledge as a basis for one's decision (Leininger, 1991; Watson, 1985). Intuition is known in literature as tacit knowledge and is described as knowledge taught through practice and experience rather than lectures (Polanyi, 1966). Tacit knowledge is embedded within an individual and is gradually gained over time. It is generally not initially recognized by an individual but can be converted to a recognizable form only under the appropriate conditions for reflection (Yoo, Zhang & Yun, 2019; McAdam, Mason & McCrory, 2007). It was considered an invaluable asset for the nurses in the Swedish context (Study A), but the finding did not emerge in the international setting (Study C). Despite this, a session on tacit knowledge was included in the intervention as an attempt to raise the participants' awareness of this knowledge. In ARL it is an important concept since it is assumed that individuals have a wealth of tacit knowledge which can be triggered and made conscious in the element questions or guided reflection by using the tools learning coach, writing and journaling (Rimanoczy 2007, 2008). From the participants' point of view, however, the session on tacit knowledge (Table 7) was one of the weaker parts in the intervention and needs to be revised.

The complexity of using a translated EPDS and an interpreter

Conducting screening with a translated EPDS and the assistance of an interpeter also caused frustration among the HCPs, even though they ambitiously applied best-practice strategies: establishing a trusting relationship, practising continuity of care, normalising the screening, considering the mother's literacy level and seeking a skilled interpreter (Study C). These strategies are in line with recommendations which emphasize that using the EPDS via an experienced interpreter after establishing a collaborative relationship with the immigrant mother may increase the accuracy and honesty in the screening procedure (Cox, 2019). The HCPs experienced difficulties related to the EPDS lacking cultural sensitivity and terminology (Study C). This was confirmed by the mothers finding that item ten was posed from a western point of view (Study B). Questions have been raised in earlier research about the appropriateness of developing a screening instrument for PPD in western societies and based on western perceptions and experiences of PPD and applying this to culturally diverse immigrant mothers (Brealey, 2010). Recommendations for using a translated version of the EPDS highlight the importance of assuring oneself that the back-translation is satisfactory and that there is evidence of satisfactory face, semantic, conceptual, and technical validity (Cox, 2019). The HCPs still hesitated about using a couple of the translated EPDS versions, which despite being validated seemed to be deficient in the back-translation (Study A, Study C). The HCPs also reflected on how the mothers' educational level affected their possibilities to answer the EPDS (Study A, Study C). Likert-type scales are known to be problematic for migrants with poor educational attainment (Flaskerud, 2012). Using a translated validated EPDS may also be a matter of the rights to equal care (Swedish National Board of Health and Welfare, 2019). In Sweden for example only 21 translated validated versions and one translated version, out of a total of 46 validated and 8 translated versions, are available for the CHS (Wickberg, 2019).

Even if the HCPs were content with the assisting interpreter's skills in general, they were still concerned about being reliant on the interpreter's ability not only to translate but also to convey the different items in the EPDS which could be interpreted differently in different cultures and need further explanation and clarification (Study C). Their reasons for concern are confimed since the EPDS, despite being translated and psychometrically tested in many languages, has not been validated for use on immigrant mothers and not via an interpreter (Tobin et al., 2015). Delivering the EPDS in a more guided approach is also known to affect the scores (Jain & Levy, 2013) since interpreters may struggle to find an adequate description in their own language (Miller et al., 2005).

The HCP was also dependent on the interpreter's capacity to translate mothers' answers in a nuanced and exact way and they found that it was hard to apply their regular conversational technique during the clinical interview. Other circumstances related to the interpreter, which also could influence the screening and clinical interview, were the interpreter's understanding and acceptance of the sociocultural norms connected to the mother's culture of origin (Study C), interpreters' confidentiality and interpreters of the opposite sex (Study A, Study B, Study C), the negative interaction connected to the screening or if the interpreter became too friendly (Study A) making the mother apprehensive about disclosing symtoms (Study B, Study C). For some of these reasons mothers and HCPs preferred using authorized female interpreters on-site (Study A, Study B, Study C). This preference is confirmed in earlier research findings within the same context (Barnes et al., 2011).

Standardized instructions regarding the use of an interpreter in screening were suggested by the participants in Study C. This was developed for the edcational intervention together with instructions to the interpreter regarding the PPD screening procedure where 77% of the praticipants reported that it had provided new knowledge but only 53% had used the instructions to prepare interpreters for assisting in the screening procedure. The challenges connected to handling screening with a translated EPDS and an interpreter were given a significant space in the training and the session *Method review screening with a translated EPDS and an interpreter* was one of the most highly appreciated sessions. The participants reported that they aimed for better teamwork with the interpreter by using the information material for the interpreter and applying their newly learned strategies. The outcome evaluation, however, did not show any change in the participants' self-estimated skills in dealing with interpreters, and the practical training in screening with the help of an interpreter had the lowest scores (Table 7). Likewise did 97 per cent of the participants state that the training affected their ability to screen immigrant mothers for PPD in a positive way, but at the same time 21 participants reported no change or deterioration in their self-efficacy in executing the task. These somewhat contradictive results may indicate that the training started a learning process which the participants needed further support in handling. According to the element of sequenced learning in the ARL, participants must have time and be allowed to try out and experiment with what they learned and then exchange experiences and reflect on obstacles they faced (Rimanoczy, 2007). Offering interactive training opportunities in combination with clinical experiences has been shown to strengthen HCPs' self-efficacy in communicating with the assistance of an interpreter (Thompson et al., 2013). Earlier research has also shown that it is essential for adult learners to integrating course content with their professional work activities (Mahan & Stein, 2014). Integrating group supervision therefore need to be considered for a possible future full-scale trial.

Conclusions and clinical implications

The economic and human costs of PPD are a particular burden for society because of the detrimental effects on child health. Integrating screening for PPD and providing follow-up and treatment is therefore a growing worldwide concern. Despite adapting the PPD screening procedure to the best of their ability given the circumstances, the professionals described that they were not able to effectively perform the screening and get the immigrant mothers to disclose their feelings, which led to a sense of fear and frustration. The evidence-based educational intervention, which aimed to support professionals in handling difficulties related to cultural implications of PPD, communicating through an interpreter and the use of translated versions of EPDS, was shown to be feasible, have high acceptability and positive impact on self-rated cultural competence for the area. The sessions on the use of interpreters and on tacit knowledge, as well as the practical training sessions and material, requires adjustment and further evaluation before possibly proceeding to a randomized controlled trial. Likewise the need to supplement the training with group supervision must be taken under consideration. Standardised evidence-based guidelines for screening with translated EPDS and interpreter urgently need to be developed in order to make professionals more satisfied and successful in their health care work of promoting mental health in this vulnerable group of mothers and ultimately also their babies' health and development.

The findings from this thesis contribute to the following clinical recommendations:

- Awareness of the importance of a successful development of a transcultural relationship and facilitating circumstances for establishing it; receiving the mothers with compassion, dedication and interest, being available and offering longer appointments, continuity of care and assistance of skilled communication interpreters.
- As the concept of PPD and the reason for offering screening may be unclear it is essential to normalize the condition and to give repeated information about PPD in combination with handing out multilingual information sheets.
- Authorized female health care interpreters on-site are preferred by both professionals and immigrant mothers. It is facilitating if the interpreter successfully has assisted the mothers at earlier visits to the CHCC prior to the screening. Handing out standardised instructions to the interpreter regarding the PPD screening procedure are recommended.
- Attentiveness to specific challenges for these mothers to speak about their mood must be kept in mind by professionals; cultural beliefs about mental ill health, negative expectations connected to their perceived value as a woman, shame at not being grateful enough for their new life, fear of the Child Protective Services and negative experience of the interaction during the screening procedure.

Future research

For future research, firstly, a qualitative interview study aiming to elucidate the experience of interpreters assisting in the screening for PPD is suggested. This knowledge is important to further strengthen the session in the educational intervention focusing on the interpreter.

Secondly, the printed material, the instructions to interpreters about the screening method and a specific glossary for the topic and the information brochure designed as a comic strip about parental support in the CHS needs further evaluation.

Thirdly, and most importantly, a full-scale evaluation of the evidence-based educational intervention is needed after adjusting the practical training sessions, strengthening the sessions focusing on the use of an interpreter and on tacit knowledge and supplement with group supervision. The full-scale evaluation should also include the cost-effectiveness of the intervention.

Svensk sammanfattning

Post partum depression (PPD) är ett globalt folkhälsoproblem som kan ha långvariga traumatiska effekter inte bara på moderns egen hälsa, utan även på hennes partners, och framförallt på barnets hälsa och utveckling. Förekomsten beräknas till 8-13 % hos inhemsk västerländsk befolkning, medan mödrar som migrerat till ett annat land har en ökad risk med en förekomst av cirka 20 %. Screening av alla nyblivna mödrar för PPD, sex till åtta veckor efter förlossningen, rekommenderas därför av Socialstyrelsen. Sjuksköterskan i Barnhälsovården (BHV) genomför screeningen med hjälp av skattningsskalan Edinburgh Postnatal Depression Scale (EPDS) i kombination med ett samtal för att bedöma moderns psykiska mående. Skalan är översatt och validerad till många olika språk. Vid behov används tolk i samtalet. Screening av utlandsfödda mödrar för PPD har i tidigare forskning visat sig vara en utmanande arbetsuppgift för hälso- och sjukvårdspersonal. Det övergripande syftet var utveckla en evidensbaserad utbildningsintervention om screening av utlandsfödda mödrar för PPD riktad till BHV-sjuksköterskor och testa interventionens genomförbarhet. Avhandlingen bygger på fyra studier, vilka resulterat i fyra artiklar.

I den första studien, med syftet att belysa BHV-sjuksköterskors erfarenheter av att identifiera tecken på PPD hos icke-svenskspråkiga mödrar, genomfördes 13 individuella intervjuer. Materialet analyserades med latent innehållsanalys och resultaten visade att en förutsättning för att kunna tolka moderns sinnesstämning var etablerandet av en transkulturell vårdrelation som successivt fördjupades. Intuition användes för att uppfatta tecken på PPD hos mamman och intrycken filtrerades med hjälp av kulturell kunskap. Sjuksköterskorna anpassade screeningen och det efterföljande samtalet efter bästa förmåga utifrån förutsättningarna för att få mamman att öppna sig och ta emot hjälp, men upplevd bristande kulturell kompetens orsakade frustration.

Den andra studien syftade till att belysa icke-svenskspråkiga mödrars upplevelser av att delta i screening för PPD i BHV. Individuella intervjuer genomfördes med hjälp av tolk med 13 mödrar med albanska, arabiska eller badinani som modersmål och materialet analyserades med latent innehållsanalys. Resultaten visade att innebörden av PPD var i allmänhet oklar, men möjligheten att delta i screening och därigenom bli behandlad som alla andra mödrar uppskattades. Kvalitén på relationen med sjuksköterskan var av betydelse för om modern valde att delta i screening och erfara den som meningsfull. Kulturella föreställningar om psykisk ohälsa, negativa förväntningar kopplade till sitt upplevda värde som kvinna, skam över att inte vara tillräckligt tacksam för sitt nya liv, rädsla för Socialtjänsten och negativa upplevelser av interaktionen i samband med screeningen gjorde det svårt för mödrarna att tala om sitt mående.

I den tredje studien, en systematisk litteraturöversikt, var syftet att sammanfoga hälso- och sjukvårdspersonals upplevelser av att identifiera tecken på PPD och genomföra screening med EPDS av utlandsfödda mödrar. Materialet från åtta inkluderade artiklar analyserades med meta-etnografi. Resultaten visade att personalen upplevde rädsla och frustration. Rädslan var relaterad till att inte upptäcka mödrar med tecken på PPD, då de kände sig obekväma i det transkulturella sammanhanget, medan frustrationen låg i att hantera svårigheter associerade till kommunikation, översatta versioner av EPDS och kulturella implikationer av PPD.

Den fjärde studien syftade till att utveckla en evidensbaserad utbildningsintervention i screening av icke-svenskspråkiga mödrar för PPD och testa dess genomförbarhet. I studien, vilken hade en experimentell design, deltog 30 BHV-sjuksköterskor. Utbildningen sträckte sig över en dag med en halv dags uppföljning tre månader senare och baserades bland annat på resultaten av de tre första studierna. Resultaten visade att samtliga deltagare var nöjda med utbildningens innehåll. Den gav dem ny kunskap och förbättrade deras förmåga att möta utmaningar kopplade till arbetsuppgiften. Utbildningen påverkade i vissa avseenden deras självskattade kulturella kompetens for området på ett positivt sätt, men inte tilltron till egen förmåga och det allmänna genomförande av arbetsuppgiften. Slutsatsen är att interventionen är genomförbar men delar av de praktiska träningsmomenten behöver omarbetas och även de som berör att arbeta med tolk.

Sammantaget visar avhandlingen på betydelsen av att BHV-sjuksköterskan bygger en tillitsfull relation med den icke-svenskspråkiga modern, inte bara för moderns vilja att delta i screeningen utan även för möjligheten att bedöma hennes mående. Även om mödrarna i allmänhet uppskattar möjligheten att delta så framkommer samtidigt ett flertal hinder för dem för att tala om sitt mående. Den evidensbaserade utbildningen, som syftade till att ge BHV-sjuksköterskor stöd i att hantera utmaningar relaterade till kulturell kompetens, kommunikation och användandet av översatta versioner av EPDS, visade på hög acceptans och viss positiv påverkan på självskattad kulturell kompetens inom det aktuella området. Det är därför angeläget att genomföra en större studie för att kunna utvärdera utbildningens effekt. Utifrån resultaten av de genomförda studierna ges följande kliniska rekommendationer; sträva efter att skapa en förtroendefull vårdande relation med modern, erbjud individuellt avpassad information om PPD och tillgängligt stöd vid flera tillfällen med hjälp av tolk och bildmaterial, ta assistans av en kvinnlig auktoriserad hälso- och sjukvårdstolk i samband med screeningen och samtalet, förbered tolken på arbetsuppgiften genom att ge muntlig och skriftligt information samt var uppmärksam på utmaningar för modern för att tala om sitt mående.

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Appendix I: Cox, J. L., Holden, J. M., Sagovsky, R. (1987). Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale. *The British Journal of Psychiatry,* 150:782-786.

Edinburgh Postnatal Depression Scale[1] (EPDS)

Name: ______________________________ Address: ___________________________
Your Date of Birth: ____________________ ___________________________
Baby's Date of Birth: ___________________ Phone: ___________________________

As you are pregnant or have recently had a baby, we would like to know how you are feeling. Please check the answer that comes closest to how you have felt **IN THE PAST 7 DAYS**, not just how you feel today.

Here is an example, already completed.

I have felt happy:
☐ Yes, all the time
☒ Yes, most of the time
☐ No, not very often
☐ No, not at all

This would mean: "I have felt happy most of the time" during the past week. Please complete the other questions in the same way.

In the past 7 days:

1. I have been able to laugh and see the funny side of things
   ☐ As much as I always could
   ☐ Not quite so much now
   ☐ Definitely not so much now
   ☐ Not at all

2. I have looked forward with enjoyment to things
   ☐ As much as I ever did
   ☐ Rather less than I used to
   ☐ Definitely less than I used to
   ☐ Hardly at all

*3. I have blamed myself unnecessarily when things went wrong
   ☐ Yes, most of the time
   ☐ Yes, some of the time
   ☐ Not very often
   ☐ No, never

4. I have been anxious or worried for no good reason
   ☐ No, not at all
   ☐ Hardly ever
   ☐ Yes, sometimes
   ☐ Yes, very often

*5 I have felt scared or panicky for no very good reason
   ☐ Yes, quite a lot
   ☐ Yes, sometimes
   ☐ No, not much
   ☐ No, not at all

*6. Things have been getting on top of me
   ☐ Yes, most of the time I haven't been able to cope at all
   ☐ Yes, sometimes I haven't been coping as well as usual
   ☐ No, most of the time I have coped quite well
   ☐ No, I have been coping as well as ever

*7 I have been so unhappy that I have had difficulty sleeping
   ☐ Yes, most of the time
   ☐ Yes, sometimes
   ☐ Not very often
   ☐ No, not at all

*8 I have felt sad or miserable
   ☐ Yes, most of the time
   ☐ Yes, quite often
   ☐ Not very often
   ☐ No, not at all

*9 I have been so unhappy that I have been crying
   ☐ Yes, most of the time
   ☐ Yes, quite often
   ☐ Only occasionally
   ☐ No, never

*10 The thought of harming myself has occurred to me
   ☐ Yes, quite often
   ☐ Sometimes
   ☐ Hardly ever
   ☐ Never

Administered/Reviewed by ______________________________ Date ___________________________

[1] Source: Cox, J.L., Holden, J.M., and Sagovsky, R. 1987. Detection of postnatal depression: Development of the 10-item Edinburgh Postnatal Depression Scale. *British Journal of Psychiatry* 150:782-786 .

[2] Source: K. L. Wisner, B. L. Parry, C. M. Piontek, Postpartum Depression N Engl J Med vol. 347, No 3, July 18, 2002, 194-199

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Appendix II

UTVÄRDERING

Utbildning i screening för post partum depression av utrikesfödda mödrar

Sätt kryss i lämplig ruta!

Dåligt 1 2 3 4 5 Utmärkt

Vad tyckte Du om…

1. … utbildningens innehåll – teoretiska avsnitt ☐ ☐ ☐ ☐ ☐

2. …utbildningen innehåll – praktiska avsnitt? ☐ ☐ ☐ ☐ ☐

3a. I vilken mån tillförde utbildningen någon ny kunskap som du har nytta av i din roll som professionell ? Liten ☐ ☐ ☐ ☐ ☐ Stor

3b. Om du fått någon ny kunskap vad kommer du i så fall att använda dig av?

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

4. I vilken grad bidrog grupparbetet till ökad kunskap om ämnet? Liten ☐ ☐ ☐ ☐ ☐ Stor

Beskriv med egna ord på vilket sätt det bidrog.

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

5. I vilken grad kände du dig engagerad i utbildningen och att du bidrog till egen och andras utveckling? Liten ☐ ☐ ☐ ☐ ☐ Stor

6a. I vilken grad bidrog det skriftliga materialet till ökad kunskap om ämnet? Liten ☐ ☐ ☐ ☐ ☐ Stor

b. Har du använt det skriftliga materialet? Ja ☐ Nej ☐

c. Om ja, beskriv hur du har använt materialet.

……………………………………………………………………………………………………

……………………………………………………………………………………………………

Tack för din medverkan!

………

………

6. På vilket sätt tror du att utrikesfödda mödrar kan få nytta av ditt deltagande i utbildningen?

………

………

………

………

7. Allt sammantaget – var det värt din tid och insats
att delta i kursen? Lite ☐ ☐ ☐ ☐ ☐ Mycket

8. Har du förslag på förändringar inför en ny utbildning för nya deltagare?

………

………

………

………

9. Övriga synpunkter:

………

………

………

………

Tack för din medverkan!

Avhandlingar i ämnet vårdvetenskap vid forskargruppen ”Barns och familjers hälsa”, vid Institutionen för Hälsovetenskaper, Medicinska fakulteten, Lunds universitet.

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