

Literature Analysis Comparing Mother-Newborn Skin-to-Skin Contact Following Cesarean  
Section and Vaginal Births

Submitted by

Kelsey Fischer

Nursing

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School of Nursing

Oakland University

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### **Abstract**

The goal of this thesis project is to gather information regarding immediate mother-newborn skin-to-skin contact following vaginal and cesarean births in hopes of reinforcing the importance of skin-to-skin contact and promote a nursing practice change. It has been shown that immediate skin-to-skin contact can help improve newborn health and growth and induce a stronger mother to child bond. The analysis will delve into the importance of skin-to-skin contact, the reasons behind non-compliance, current practice of skin-to-skin contact via different birthing methods and the future of skin-to-skin contact practice. This thesis will provide more supportive evidence to encourage a change in nursing practice to promote a mother's contact with the newborn as quickly and often as possible. The results and benefits of this project will be to improve transitional care for mothers and newborns after a cesarean or vaginal birth.

### **Introduction**

Skin to skin contact (SSC) or kangaroo care occurs when a naked newborn or an newborn dressed only in a diaper and hat is positioned on the mother's chest. Ideally this will occur immediately following the birth of the newborn (Schneider, Crenshaw & Gilder 2016). SSC is recommended by the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) for babies born at 37 and 0/7 weeks with stable mothers, regardless if born by vaginal or cesarean section (AWHONN, 2016). The most recent Cochrane review recommends immediate SSC at 35 and 0/7 weeks (Cadwell, Brimdyr, & Phillips, 2018). SSC practice has been studied for nearly fifty years and is endorsed by the American Academy of Pediatrics, American Heart Association (AHA), American College of Obstetricians and Gynecologists, AWHONN and the Center for Disease Control (CDC) beginning in 2011 (Baker-Rush, 2016). SSC does not typically interfere with the routine care provided for the mother and newborn. It is suggested that SSC is continued without disruption for at least 1 full hour or until the baby has its first breastfeed, if applicable (Baby-Friendly USA, 2016). Despite the recommendations for SSC about one third of births did not finish with immediate skin-to-skin contact between the newborn and mother (Lavigne, Washburn, Gosiewski & Kuester, 2015) and practice has not changed very much over the last three decades (Magee, Battle, Morton & Nothnagle, 2014).

SSC can be performed following both vaginal and cesarean section births. However, it is more frequently achieved using the recommended guidelines following a vaginal birth due to different barriers (Koopman et. al, 2016). While SSC following a vaginal birth is fairly commonplace, in 2013 over half of newborns born through uncomplicated cesarean section in US hospitals had SSC within two hours of birth (Schneider, Crenshaw & Gilder, 2016). There are many studies dating back decades studying SSC following vaginal birth and fewer studying

SSC following cesarean section births. This thesis aims to combine information of SSC following both vaginal and cesarean section births into one paper. In addition, it investigates the reasons some hospitals are not following the recommended guidelines and examines healthcare practices that should be updated to promote a future of SSC in all hospitals.

### **Literature Review Methodology**

This literary analysis was conducted using the search engines CINAHL Plus with Full-Text, ClinicalKey, Conchrane Review and Google Scholar. The studies referenced were published between the years 2014 and 2018. The studies included mothers eighteen years of age and upward from various regions including the US, Japan, Iran and Australia. The newborns were studied immediately after birthing up to the first six months of age. Each study focused on different methods of birth: cesarean section, gentle cesarean birth, vaginal birth, assisted vaginal birth and less orthodox birthing methods. Key search terms included “skin to skin contact”, “vaginal birth”, “cesarean section birth” and “kangaroo care”. The total amount of articles across all search engines was over 100,000. From these medical documents, 20 relevant articles were chosen.

### **Benefits of SSC**

The benefits of SSC are numerous and remarkable. To begin, immediate SSC allows the newborn to create a bond with the mother and ease the transition into extrauterine life. Immediate SSC has also been shown help the newborn calm him or herself faster, which leads to a trend of improved maternal confidence in caring for the newborn (Koopman et. al, 2016). Furthermore, for the mother as well as the newborn, SSC allows greater release of oxytocin

which helps the patient to relax which decreases pain sensations (Baker-Rush, 2016). SSC with the baby in a prone position on the mother's chest helps to release oxytocin, a hormone that increases bonding and decreases stress (Baker-Rush, 2016). This action has also been shown to decrease the stress hormone cortisol (Baker-Rush, 2016). Overall, SSC provides pain-relieving effects for newborns that aides in soothing them through painful procedures such as blood draws or elective circumcisions because of the lasting calming effect and the decrease of cortisol (Baker-Rush, 2016).

Another benefit of immediate SSC following birth, it increases the ease in the initiation of breastfeeding. For breastfeeding mothers, SSC can increase sustained exclusive breastfeeding weeks after birth (Conroy and Cottrell, 2015). SSC has been shown to improve breastfeeding duration and ease of initiation following birth, as well as improved rates of exclusive breastfeeding (Conroy and Cottrell, 2015). Breastfeeding is the best nutrition for the baby and it is recommended to exclusively breastfeed the baby for the first six months by the American Academy of Pediatrics (American Academy of Pediatrics, 2012). Studies correlating SSC and breastfeeding rates have been documented to increase this nurturing care by 30 to 63 percent (Schneider, Crenshaw, and Gilder, 2016).

SSC also has many physiological benefits for both the newborn and the mother. For the newborn, SSC stimulates the vagus nerve which has control over temperature regulation, heart rate, oxygenation, and sleep/wake cycles (Baker-Rush, 2016). SSC can also increase blood flow to extremities, encourage brain development and even reduced crying duration (Baker-Rush, 2016). SSC improves the newborn's heart rate variability meaning that it helps with the heart's ability to adapt to stress (Baker-Rush, 2016). The newborn faces many stressors when transitioning to extrauterine life. SSC effect on regulation of blood sugar is also a huge

advantage for the newborn receiving it immediately following birth (Takahashi, and Tamakoshi, 2018). It is especially important for those newborns that are born small for gestational age, large for gestational age or born from gestational diabetic mothers because those newborns are more at risk of having low blood sugars after birth.

SSC has even been discovered to decrease postpartum hemorrhage risk following cesarean section births (Kenyon-Berry & Seymour, 2015). Women who did not receive SSC and were not breastfeeding were twice as likely to have a postpartum hemorrhage opposed to women who did have immediate SSC and were breastfeeding (Saxton, Fahy, & Hastie, 2014). The risk of postpartum hemorrhage is thought to be decreased because it causes the placenta to more completely separate. This encourages immediate contraction of the uterus and even promotes a shorter third stage of labor which is delivery of the placenta (Cadwell, Brimdyr, & Phillips, 2018).

Overall, something that seems as simple as holding the newborn chest to chest immediately following birth can have a huge overall effect on the newborn's wellbeing. The numerous benefits of SSC following birth are vital to newborns. SSC not only allows the mother and newborn to create a physical connection but also helps the baby maintain body temperature, improve blood flow to their extremities, improves heart rate variability and reduces heart rate and crying duration for baby (Baker-Rush, 2016).

### **Reasons for Noncompliance of SSC Guidelines**

Despite to many benefits of SSC for mother and baby, there are certain situations that inhibit immediate SSC following birth. SSC is not typically initiated in emergency situations. When the mother is extremely sick or the baby is having trouble adjusting to extrauterine life, it

is not reasonable to have immediate SSC contact. While immediate SSC benefits are important, they are not as relevant when the newborn or mother's life is at risk. SSC could be introduced once both the mother and newborn are stable (Bidlow et al, 2017). The benefits of SSC are dose related meaning that the mother and baby are still able to have some of the effects of SSC even if the SSC is not immediately following birth (Moore et al, 2016). Furthermore, newborns who are stable after birth are able to benefit from SSC with the father or other support person of the family.

Attitudes of healthcare workers have a huge impact on the care of the dyad following birth. Without the healthcare workers especially nurses educating on the importance of immediate SSC the families may not realize all the benefits (Koopman et al (2016). Healthcare worker attitudes have the ability to not only shape the patient's care but greatly impact the patient's education. Koopman et al (2016) looked at a health professionals' opinions of immediate SSC in a hospital in the United States. The healthcare professionals include OB nurses, NICU nurses and doctors from both NICU and Labor/Delivery units all of which were female between the ages 21 and 54. The data was collected in 2014 from two different interviews with the healthcare professionals about SSC. One interview was about vaginal birth and the other about cesarean births. The healthcare professionals were knowledgeable about the benefits of immediate SSC but generally suggested that actual practice was not consistent. Some mothers would receive immediate SSC and some would not. Other mothers would also have SSC for longer durations. It was found that it was rare to have SSC with a cesarean section birth. These interviews revealed safety concerns for the mother and newborns as reasons why SSC would not occur. Furthermore, patient education was another factor that these healthcare providers saw as a barrier to immediate SSC. Some parents think that the newborn seems unclean and do not want

to hold the naked newborn or the mother does not want to breastfeed therefore she feels that SSC is not very beneficial for her (Koopman et. al, 2016).

Another reason that SSC may not occur immediately after birth is that the patient may refuse SSC with her newborn. This can happen because of cultural differences, misinformation or even a lack of education. Birth is an extremely exhausting experience and some mothers may feel that they would not be safe holding their newborn so soon after birth, especially if they feel weak. Vittner et al. (2017) looked at the impact of nurses' influence on SSC perception of the new mother. This study looked at 79 nurses' responses to a survey regarding education and opinions on SSC. 62% of nurses responded that SSC was managed on their units well but those nurses with higher levels of education (BSN or higher) responded that their units did not manage SSC very well (Vittner et. al, 2017). The nurses were well educated on the benefits of SSC and knew that SSC can decrease the stress response for both the mother and newborn but they do not necessarily implement SSC or give education depending the patient's situation and stability (Vittner et al, 2017). Furthermore, Bidlow et. al (2017) developed a study that determined that SSC did not occur immediately after birth because of cesarean section birth and the mother's choice. This study was hospital in Pennsylvania that had an immediate SSC rate of 53% following all deliveries (Bidlow et. al, 2017). This study aimed to increase the education of mothers on SSC to decrease the refusal rate. With education for the mother at arrival onto the labor and delivery unit, the SSC rate increased to 83% and with education of staff the reason of cesarean section birth for not initiating SSC was eliminated (Bidlow et. al, 2017). The new reasons for those not having SSC included the mother's preference, unstable situation and healthcare worker interventions (Bidlow et. al, 2017).

## Review Results

### Studies on SSC Following Vaginal Birth.

SSC has been researched by multiple groups in the context of vaginal births. Vaginal births are often seen as the common healthy birth in which SSC seems more innate and immediate because the woman is seen as healthy and able to care for the baby. While vaginal births do tend to have more immediate SSC rates, SSC does not always occur for this type of birth process. Much of the research solely focusing on SSC following vaginal births was completed over a decade ago but is still consistent with studies that were completely recently, further encouraging immediate SSC. Most studies found for this literature review looked that the effects of SSC on glucose stability of the newborn and the short and long term effects of SSC on breastfeeding exclusivity.

Yuki Takahashi and Koji Tamakoshi (2018) studied the effects of SSC on blood glucose in healthy newborns born vaginally. This group looked at 60 newborns born in baby friendly hospitals in Japan. All newborns in this study were given SSC with the mother within five minutes of birth. This study showed that the newborns who received SSC immediately following birth had higher blood glucose at 2 hours of birth. This happened regardless of gestational age, length of labor, weight, and gender of the newborn (Takahasi and Tamakoshi, 2018). Low blood glucose or hypoglycemia can cause an newborn to have a lack of energy, develop a blue tint to the skin, become shaky and even develop brain damage (Takahasi and Tamakoshi, 2018). Hypoglycemia has these consequences if the low blood glucose is severe and prolonged because blood glucose is a main source of energy for the newborn. Blood glucose levels often change and decrease as a response to stress therefore a higher blood glucose helps to make the stressful

transition to the extrauterine world easier for the newborn (Takahasi and Tamakoshi, 2018). This makes the study looking into more stable and higher blood sugars for babies who had immediate SSC following birth very impactful and important.

Moreover, Cadwell, Brimdyr and Phillips (2018) looked at a Baby Friendly Hospital in California, USA in 2013 with an average of 2,500 births a year and one of the highest breastfeeding rates in the United States. This study looked at 84 babies born vaginally from mothers over the age of 18 and had a low-risk pregnancy. These newborns were intended to be given SSC immediately after birth for at least one hour and the mothers all intended to breastfeed. The newborns were all delivered at full term with no known abnormalities. Each of these dyads were filmed following birth through the first SSC session and were analyzed by the researchers using Healthy Children's Project SSC Implementation algorithm. The researchers were looking to see if the baby successfully moved through the Widström's nine stages and if the SSC was interrupted. Widström's nine stages are what an newborn should go through during the first SSC session. The stages begin with the first cry, relaxation, awakening, activity, resting, crawling, familiarizing self with the mother's nipple, suckling, and sleeping (Cadwell, Brimdyr and Phillips, 2018). The focus of this study was the eighth of the nine steps which is suckling or the first breastfeeding. 31 of the original 84 had to have emergent cesarean sections and were not able to have immediate SSC but a total of 48 of the 84 were given uninterrupted SSC which is over 50% of the original 84 (Cadwell, Brimdyr and Phillips, 2018). There was 47.9% or 23 of the 48 newborns moved through the 9 stages within the first hour following birth which included actual breastfeeding (Cadwell, Brimdyr and Phillips, 2018). This study looks at how important the impact of immediate SSC was on breastfeeding as well as neonatal mortality because newborns that do not breastfeed within the first hour have a one third increase in neonatal

mortality (Cadwell, Brimdyr and Phillips, 2018). If the mother chooses to breastfeed her baby it is especially important to encouraged immediate SSC because of the obvious benefits of earlier breastfeeding it elicits as well as a decrease in newborn deaths (Cadwell, Brimdyr and Phillips, 2018).

Aghdas, Talat and Sepideh (2014) were also able to further demonstrate the impact of SSC on breastfeeding, but this study looked at the longer-term effect on breastfeeding rates. The study was developed and completed in a large hospital in Iran between April and July in 2012. This study looked at 92 new mothers and newborns, 47 of which received immediate skin to skin care and 45 which received standard care. All newborns were born through vaginal birth and all mothers chose to breastfeed their newborns. The researchers used the Newborn Breast-Feeding Assessment tool to assess breastfeeding after birth which is a tool that was proved reliable by previous studies. At 28 days a tool called the breastfeeding self-efficacy scale was used which was a 33-question survey with higher scores correlating with higher breastfeeding skill confidence. The rate of breastfeeding following birth was over 55% in the SSC group and just over 35% in the standard care set of dyads (Aghdas, Talat and Sepideh, 2014). The time between birth and the first feed was also much lower in the SSC group which had a mean of over 20 minutes than the standard group which had a mean of over an hour (Aghdas, Talat and Sepideh, 2014). Immediate SSC group also had a long-term effect of successful breastfeeding 28 days after birth (Aghdas, Talat and Sepideh, 2014). The immediate SSC showed greater confidence in their breastfeeding than the standard card group when given a survey asking if they needed help breastfeeding and if they felt they had the skills needed to breastfeed (Aghdas, Talat and Sepideh, 2014). This study's focus on only vaginal deliveries allowed the researchers to look at SSC direct impact on breastfeeding without the method of delivery having an unnecessary

influence on the results. This study further demonstrated the notion that SSC is incredibly important for the success of breastfeeding, both immediately following birth and also for long-term breastfeeding. A practice change improving SSC could also improve breastfeeding for the newborn beyond hospital stay which would only further encourage the American Academy of Pediatrics' recommendation of exclusive breastfeeding for the first six months of life.

Additionally, Redshaw, Hennegan and Kruske (2014) looked at maternal satisfaction as related to how quickly SSC occurred after birth following unassisted vaginal deliveries assisted vaginal deliveries. This study occurred in Queensland, Australia and surveyed a sample of over 4,500 women who gave birth between late 2011 and early 2012. It was revealed that women who had vaginal deliveries without assistance were often able to hold their newborns earlier and longer than cesarean section births or even assisted vaginal births (Redshaw, Hennegan and Kruske, 2014). Following unassisted vaginal birth, 94% were able to have immediate SSC within five minutes after delivery (Redshaw, Hennegan and Kruske, 2014). These women were able to hold their newborns for a mean of over 52 minute and a median of half an hour (Redshaw, Hennegan and Kruske, 2014). This was much more common than the 49% of cesarean section mothers who had SSC contact immediately following birth of their newborn (Redshaw, Hennegan and Kruske, 2014). Also, maternal satisfaction increased for the mothers who held their newborns within five minutes and those that held their newborns for more than twenty minutes after delivery as compared to those that were not able to hold their newborn as soon (Redshaw, Hennegan and Kruske, 2014). Furthermore, these mothers also reported greater rates of breastfeeding than women who did not have early or immediate SSC (Redshaw, Hennegan and Kruske, 2014). This study demonstrates that there is a difference in care in regard to SSC depending on mode of delivery which results in changes in the mother's satisfaction and even the

rate of successful breastfeeding. This study also found that breastfeeding was benefited by not only from immediate SSC but also from frequency and duration of SSC. This study promoted that care needs to encourage SSC early and often to improve not only breastfeeding but also maternal-newborn bond and maternal satisfaction.

### **Studies on SSC Following Cesarean Section Birth.**

SSC and cesarean section births seem to be a topic of interest in the recent years due to the obvious benefits of SSC and the lack of occurrence of SSC following the cesarean section birth.

According to Levine and Lowe (2014), the rate of cesarean births is increasing worldwide and has been for the past few decades. This rate has been increasing due to healthcare professionals' opinions of childbirth or the ability of healthcare professionals that treat childbirth and pregnancy as an illness (Levine & Lowe, 2014). The idea that childbirth is an illness comes from seeing the need for intervention of healthcare professionals as an indicator that the event is dangerous rather than a healthy woman requiring support for the birthing process. Nurses, those that tend to have the most patient contact, have the ability to either promote or hinder vaginal births which can be increasing the rate of cesarean section births. This study is important because it explains that healthcare professionals' opinions and treatment of mothers makes SSC occur less frequently following a cesarean section birth than it does following a vaginal birth. This study also points out that nursing attitudes need to be better defined in order to look at this subject more closely as it relates to birth methods.

Moreover, cesarean section newborns typically have a harder time adjusting to life outside of the uterus and the bond that comes from SSC with their mother helps make the

adjustment less stressful (Copple, 2016). Copple (2016) created a study which compared the adjustment of cesarean section babies after birth if the baby was placed on the chest of the mother to situations where the baby was placed under a warmer. The argument was made and supported that the newborns that were placed SSC adjusted better to life outside the uterus rather than the newborns placed under the warmer (Copple, 2016). This article demonstrated that SSC eased the transition to extrauterine life and helped facilitate the bond between newborn and mother especially for those newborns that are born via cesarean section.

Conroy and Cottrell (2015) were another group that looked into the effects of SSC on newborns born through cesarean section. This study took place at a non-profit hospital. These researchers looked at the effect of SSC on breastfeeding by comparing an experimental group of mothers who were given immediate SSC with their newborns to a group that was given the standard care without immediate SSC. The experimental group had 25 participants while the control group had 16. This group found that the mothers given immediate SSC had an easier and shorter time before starting breastfeeding and the newborns tended to breastfeed for longer (Conroy & Cottrell, 2015). Exclusive breastfeeding rates were also higher for more weeks after birth in the immediate SSC group (Conroy & Cottrell, 2015). This group suggested that SSC would be beneficial for all birth situations as the effects on breastfeeding and bonding were so abundant, but this study was limited due to the small group sizes and only taking place at one hospital.

Moreover, Schneider, Crenshaw and Gilder (2016) focused on newborns born via cesarean section and were transferred to the neonatal intensive care unit (NICU). This group looked at a designated baby-friendly hospital in Southwest United States. Baby-friendly hospitals must follow ten steps in order to increase exclusive breastfeeding, breastfeeding long term and

reduce formula feeding within the first two days (Baby-Friendly USA, 2016). This hospital has been implementing SSC following cesarean section births whenever possible since 2013 and has been implementing SSC following vaginal births for many years prior to that. This study looked at NICU transfers following cesarean sections from 2011 to 2015 as in before and after 2013 when immediate SSC was implemented for cesarean section births. The analysis resulted in 5.6% of newborns transferred to the NICU before 2013 and only 1.75% following 2013 (Schneider, Crenshaw and Gilder, 2016). There were no other major policy changes to this unit that would have affected the outcome of this study. This study showed that immediate SSC allows the newborn to have a better adjustment period which could potentially keep the newborn out of the NICU for observation decreasing staffing needs and unnecessary handoffs between staff members (which can impact patient safety) (Schneider, Crenshaw and Gilder (2016). This study had limitations as in it only looked at one hospital and in the studies' population it excluded premature newborns and only completed research on newborns born after 37 weeks of gestation.

Gentle cesarean section was researched by Magee, Battle, Morton and Nothngale (2014). This group of researchers were able to produce a study looking at the process of gentle cesarean when vaginal birth is not a feasible option. Gentle cesarean aims to make the operating room environment more conducive to the family and allow for immediate SSC contact if the baby is stable (Magee, Battle, Morton and Nothngale, 2014). The study took place at a community hospital that runs in partnership with Brown University between 2009 and 2012. The study did see some newborns that had lower temperatures following birth therefore a policy change was implemented which included adding a warming blanket. Newborns temperature was more stable when held SSC and with a warm blanket problem, therefore the issues were solved with the policy change during this study (Magee, Battle, Morton and Nothngale, 2014). This study

demonstrated that gentle cesarean or a family-centered cesarean section with a focus on SSC immediately following birth can promote maternal-newborn bonding as well as breastfeeding (Magee, Battle, Morton and Nothngale, 2014). Although this study demonstrated great positive feedback, the study focused on one small hospital overlooking 144 cesarean sections over three years (Magee, Battle, Morton and Nothngale, 2014). In order to create an evidenced-based practice change the study would need to be repeated at several hospitals with similar policies, but this is a promising start.

In 2016, almost one third of births were via cesarean section (Mercier, & Durante, 2018). With this rise in cesarean section births, Mercier and Durante developed an analysis regarding the use of gentle cesarean section with emphasis on immediate SSC following birth (2018). Typically, after most cesarean section births, the baby is given to a healthcare provider who does an assessment and the baby is dried and swaddled before being given to the mother, with gentle cesarean section births the newborn is dried off right before being placed prone on the mother's chest where all medical interventions and assessments can be completed (Mercier & Durante, 2018). If the mother is not stable and the newborn is, the newborn can be placed skin to skin with the mother's labor support person (Mercier & Durante, 2018). Immediate SSC following a cesarean birth was found to help with temperature regulation and had no increasing effect on respiratory distress (Mecier & Durante, 2018). This study by Mercier and Durante (2018) looked at survey responses of 86 healthcare professionals in 2015 that worked at a facility that saw about 2,000 births a year with about 600 or about 30% of those being via cesarean section (Mercier & Durante, 2018). This survey allowed the providers to input their concerns regarding immediate SSC contact which focused mainly on concerns of not being able to have an accurate assessment of the newborn or not being able to step in and assist a baby that is struggling with its

transition to extrauterine life (Mercier & Durante, 2018). The positive input reinforced that idea of bonding being improved and helping the mother come to terms with a non-ideal birth. Mercier and Durante (2018) acknowledge that the concerns of the healthcare providers are legitimate while reinforcing that the benefits for the newborn and mother dyad can outweigh those concerns with healthy births. The study (Mercier & Durante, 2018) states the main problem is the healthcare provider's attitudes and ways of practice are the hardest to change. However, it fails to mention the difficulties of actually changing policy to implement new evidence-based practice which also pose a barrier to immediate SSC following cesarean section.

### **Studies Comparing SSC Following Vaginal and Cesarean Section Births.**

SSC has benefits for babies born either through vaginal and cesarean section and should be provided whenever not medically contraindicated in order to ensure these benefits for the dyad. Vaginal birth is typically seen as more natural and less dangerous than cesarean section births and therefore is given the SSC more frequently and is more readily encourage by healthcare professionals such as nurses. Cesarean section newborns are typically at higher risk for birth complications and therefore could more likely need the benefits of SSC.

Vaginal SSC has been researched for decades and it seems that the market for this literature has been saturated, which cesarean section SSC is currently being researched along with SSC following births of premature newborns. There is still a lack of studies comparing the differences in treatment of vaginal and cesarean section births in regard to SSC immediately following the delivery.

Moore et. al (2016) were one of the few groups to create a large-scale comparison of immediate SSC following all birth methods. This study looked at 21 different countries and included 38 trials with over 3,000 dyads. The study found that more women who were given immediate SSC with their newborns were breastfeeding from one to four months longer than women who were given standard care without immediate SSC (Moore et. al, 2016). The newborns given immediate SSC also fared better regardless of birth method. Newborns given immediate SSC had higher blood glucose levels and have higher stability of the cardio-respiratory system (Moore et. al, 2016).

### **Future of SSC**

In an ideal world, all newborns would receive immediate SSC following their birth in order to create a more intimate bond faster with their mother as well as benefit from many effects SSC can have on their wellbeing. The future of SSC for all newborns is one of the many criteria of “Baby Friendly Hospitals” which receive national recognition from Baby-Friendly USA. Baby friendly hospitals are more likely to be chosen by parents because of their “10 Steps for Successful Breastfeeding” which include more emphasis on immediate and continuous SSC, breastfeeding education and rooming in. All which greatly benefit the baby during the hospital stay and have a lasting effect for the upcoming first months of the newborns' lives. The idea and push for family-centered cesarean section births will also have a large impact on the increase of SSC following cesarean sections.

Medical technology advancements are also going to shape the future of evidence-based practice for immediate SSC. Different surgical drapes allow for the newborn to be placed immediately after the cesarean section onto the mother's chest without compromising the surgical field. There is a need to incorporate the fast-paced improvements for the medical world into evidence-based practice for immediate SSC following all births.

### **Limitations**

This thesis project posed certain limitations. Because the medical field is constantly advancing, the study focused solely on articles published between 2012 and 2018. There was also a limit on the number of articles used in this project. 20 articles were able to create a big picture idea of the benefits and importance of immediate SSC but more articles could have revealed a bigger scope surrounding this issue. To ensure article authenticity only CINAHL Plus with Full-Text, ClinicalKey, Conchrane Review and Google Scholar could be used as research databases. This factor limited the number of articles found, using more databases could have yielded more relevant articles to this thesis project.

### **Conclusion**

SSC has numerous benefits for both mother and newborns regardless of birth method. These benefits help to ease the transition to extrauterine life for the newborn and helps to decrease stress, lower risk of postpartum hemorrhage and increase the bond between the mother and newborn. There is a gap in practice for those newborns born via cesarean section rather than vaginal in that immediate SSC is not as commonplace for these dyads. The gap was created due to different healthcare professionals' opinions, a lack of education and a standard of practice that

has been in place for decades. While vaginal births consistently have more immediate SSC than cesarean section, it is still not occurring consistently for all newborns. There have been many studies looking into this, but practice change has taken years to take place, and for cesarean section newborns, the practice change is taking even longer because the research is newer compared to the studies looking at vaginal births. Comparing these studies has allowed all the information to come into one place to make it more understandable that all newborns that are stable and are born to stable mothers would benefit greatly from SSC and healthcare practices and policies should reflect this. Baby-Friendly hospitals are the first big push to create an ease of transition into extrauterine life with an emphasis on immediate SSC. This thesis compiled a large amount of information to better explain the need for practice change and reemphasize the importance of immediate SSC regardless of birth method.

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