Parents' experience of having premature baby: A literature review

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Abstract:

**Aims and objectives:** To describe the review of patents’ experience that have a premature baby and analyze the data collection methods that authors has chosen to use in their articles.

**Background:** The premature rate is increasing. The experience of having a premature baby may affect parents’ psychology and physiology. Based on Family-centered care (FCC), it is necessary for every nurse to help parents to copy with this experience in clinical practice.

**Design:** Descriptive review of qualitative studies

**Methods:** One electronic databases (PubMed) was explored and studies published between August 14th 2007 – August 14th 2017 were included. Preferred Reporting Item for Systematic Reviews and Meta-analysis (PRISMA) and guide with “Guidelines for degree projects at the bachelor’s level in the main field of nursing”. Main themes were extracted and synthesized.

**Results:** Three main themes resumed parents’ experience of having a preterm baby from 11 studies. Themes were: psychological changes of being parents with premature baby (anxiety and uncertainty, painful emotions, positive experience and growth); parents need for support (interact with infants, private space, need for being cared and noticed, and religion); alteration in parents’ role (difficultly grasping the parents’ role, imbalanced between parents’ role and other roles, realizing the parents role).

**Conclusions:** Parents of preterm infant may experience negative emotions and need various supports. Professionals would be able to discuss with parents to know their experiences and provide help sympathetically. Continually, parents build he/her role with the help of nurses.

**Key words:** Experience, Neonatal, Nursing, Parents, Preterm Infants,
摘要：
目的：描述早产儿父母的经历并分析所选论文作者数据分析方法
背景：早产儿的数量在不断增加，早产儿父母的经历影响着父母的身心健康。基于“家庭为中心”理论，护士有必要对早产儿父母进行心理护理和关怀。
设计：描述性、质性研究
结果：从 11 篇文献中分析得出结论，概括为三个主题：心理改变（焦虑、不确定、痛苦、积极的体验与成长）、需要被支持（想和孩子相处、有独处的空间、被关注和宗教上的慰藉）、父母角色变化（不能很快适应角色，不能与其他角色平衡，意识到父母这个角色）。
结论：早产儿父母会面临非常多负面的情绪并且需要很多支持。专业的护理人员应该帮助父母亲分析状况，试着去了解他们的心理并及时给予他们关爱和帮助。
关键词：父母、护理、经历、早产、早产儿
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1. Introduction

1.1 Premature baby

1.1.1 The definition of premature baby

The baby delivered within 40-42 weeks is being considered full term infant. Preterm birth is the delivery of a baby before 37 completed weeks' gestation. Infants who born before 32 weeks' gestation are called “very preterm” infants, and especially “extremely preterm” infants are those born before 28 weeks gestation. (Tucker & McGuire 2004)

1.1.2 The incidence of premarital

According to the report of WHO, globally, premature is the leading cause of death in children under the age of 5 years old.

Preterm birth rates are increasing. Across 184 countries, the rate of preterm birth ranges from 5% to 18% of babies born. What's more, Africa and South Asia account for 60% of the percent of whole world premature births. Several years ago WHO sets the November 17th as "World Premature Baby Day". In 2012, WHO has developed new guidelines with recommendations for improving outcomes of preterm birth. This set of key interventions can improve the chances of survival and health outcomes for preterm infants. (WHO 2016) From the statistic of WHO this year, Malawi has the highest premature birth rate in the world, with 18% of all babies being born too early and 13% with low birth weight(WHO 2017). Hence, more concerns about promoting family-centered care and keeping parental involvement when infant births (Montirosso et al., 2012).

1.1.3 Factors influencing premature birth

The happening of preterm infants resulted from multiple factors, like maternal factors (Mohsin et al., 2003).

First-born infants, and infants born to mothers aged less than 20 years, or who were single, separated/divorced or who smoked during the pregnancy, were at increased risk of being premature. Gestational age was confirmed to be the single most important risk factor for low birth weight (Fink et al., 2012). Another study also revealed that infants born to mothers who smoked during pregnancy and who had hypertension were more likely to be premature (Mohsin et al., 2003). The factors such as the infection, cervical problem of mothers, the bad habit of smoking of parents and other fatal diseases would cause the premature babies (Goldenberg et al., 2008). What is more, a history of preterm birth or poor socioeconomic condition of the mother was the most important predictor of

On the other hand, exposing in some environment and occupational, lifestyle, physical factors were relevant to preterm (Kumar et al., 2017). There was a research found that woman’s exposing in environment with tobacco smoke and pollutants raise the risk of preterm delivery (Wilhelm et al., 2011). Though, most of the preterm births follow spontaneously, with unexplained preterm labor, or spontaneous preterm labor rupture of the amniotic membranes. However, doing too much psychological work also increased the risk of preterm (van Beukering et al., 2014). Especially, standing and walking might be related to high risk of preterm, when women work through the second trimester (Petraglia et al., 2013).

1.1.4 The environment in NICU

Many external elements in NICU had the risk that affecting human, like admitted infants, parents and professionals. In NICU, the external environment like noise and light has been proved to be affective to infant. Light and noise influenced breast-feeding, weight or sleep and infants’ development (Venkataraman et al., 2018, Raboshchuk et al., 2018). And the space also has been seen as an affective factor to parents and their infants (Dellenmarkblom et al., 2014). However, there was more single-family care rooms used to improve the physical condition like weight more and less medical procedures. (Lester et al., 2014)

On the other hand, the environment in NICU have impacted on parent whose infant been sent in. Family and mother were impacted, after their babies have admitted in NICU, even some mental health problem which may relate to disconnect (Fabbro & Cain, 2016). Because of hygiene and sterility recommendation, parents or family members are cut off. (Holditch-Davis & Miles, 2000) Many parents had responded the isolated role and space which really have an effect on them. The physical environment like location of bedroom may give negative experience to parent, if showering baby is inconvenient. (Williams et al., 2018) Some huge equipment and machine given parent a shock and unknown feeling (D’Agata et al., 2017).

1.1.5 The nurse in NICU

Nurses believed the parents were an integral part in their baby’s life and it was crucial that parents were informed of their baby’s condition, given the prognosis and options for treatment (Claassen, 2000).
Part of the role of the neonatal nurse was to emphasize the “baby” to the parents, so they could begin to bond with their baby. Nurses expressed that they wanted parents to know what their lives has changed and wondered if parents were able to be realistic about how their lives could be affected (Rossatoabéde & Angelo 2002). But it also could be problematic as parents were difficult to establish a relationship with a baby that distorts reality and they were not easy to bond with their baby (Baker & Mcgrath 2011).

Nurses held that they recognized the need for caring for the parents. Hence, they perceived the importance of guidance regarding the treatment procedures and the health status of their premature baby, valuing their presence and seeing them as participants and not as spectators (Pinheiro et al., 2008). They expected to perform actions that favor the maximum of the value of parents, making them felt responsible for this maximum (Baker & Mcgrath 2011). For example, allowing parents to stay together with their premature baby, handling and following the child closely, which were the actions that can help these parents to strengthen the emotional bond with their premature baby (Rossatoabéde & Angelo 2002).

Furthermore, the nurses believed the presence of the parents in the NICU is a mainly positive way, permanently involving them in the care of the newborn could be a great suggestion (Pinheiro et al., 2008). This implies the need to think the apprehension of parents’ experience of having a premature baby; it also indicates new directions to consider regarding the care in the NICU (Claassen, 2000).

### 1.1.6 Nursing intervention

Premature infants faced a lot of risks: undeveloped organ, low immunity, external stimuli, inflammation and death (Goldenberg et al., 2008), so delivering into NICU is usual, and parents disconnected with the premature delivered infants. Nursing intervention seemed to be an appropriate way of bridging the gap experienced by the mother of a premature infant due to the resulting separation period (Jotzo & Poets 2005). There were many studies introduce varied nursing interventions, identifying accurate interventions such as kangaroo care, massage, breastfeeding , and parents reported positive feelings after (Ferber et al., 2005). All of parent needed in-time intervention, which helped them in daily life after delivery (Roller, 2005).

One of the nursing interventions was mother-infant attachment, which has been emphasized in many studies. Mother reported benefit from this attachment, like more “approaching” and “easier”, and fewer problems, like colic, sleep, excessive crying. Parent also said that their communication skill has developed (Newnham et al., 2009).
Another common method was Kangaroo care. Parents were allowed putting the infant on their chest only by wearing a hat and a diaper, like kangaroos. This method has been done for the first time in Bogota in Columbia in 1970 in order to decrease infants’ death due to shortage of incubator (Valizadeh et al., 2013). Parents expressed that they could be closer to their infants, and facilitate attainment of their paternal role. They felt that everything was controlled and that they did good things for their infant (Blomqvist, et al., 2012). In parents cause parent-infant attachment, they reflected feeling lower depressive after childbirth, decreased anxiety, facilitating of breast milk production and improvement of breastfeeding (Grant, 2014).

1.2 Family-centered care theory

Family-centred care (FCC) has been identified as a complex concept, and is still a concept which during its development. Family-centred care can be viewed in a number of ways including as a paradigm (Griffin, 2006), a philosophy, a model of care, or as a practice theory (Kay, 1999). Although family-centred care is based in western culture, there are still some studies have identified as key elements of the concept in less developed country context (Shields&Nixon 2004). The key principles of family-centred care include parents and families being treated with dignity and respect; parents have rights to know about their infant’s care and condition and updated information should be available to them (Kay, 1999). Nurses should make open communication and share information with parents and families in ways which are affirming and useful. Information-giving should be edited according to parents’ individual preferences and their changing needs (Davidson et al., 2017). Parents and family members should be encouraged to participate in their infant’s care with the purposes of developing a sense of confidence, control, and growing independence; and continuously provide practical and emotional supports, throughout the caring pathway (Johnson, 2000). Family-centered care in NICU is the active partnership of the parents in the infant’s plan and delivery of care (Lester et al., 2011). When individual suffer critical illness, family and patient are facing sever difficulties and FCC emphasizes the role of the family to a patient’s recovery and the liability of the healthcare team to provide supports for families with seriously ill patients (Davidson et al., 2017). In newborn intensive care unit (NICU), FCC is an approach to the planning, delivery, and evaluation of healthcare that is based upon a partnership between healthcare professionals and families of patients, and “dignity and respect”, “information sharing”, “family participation in care”, “family collaboration.” are highlighted. It has been proved that FCC influences the family well-being (Griffin,
Family-centered care views that parents and professionals are equal in a partnership when referring to the premature baby health care (Lester et al., 2011).

Nurses play a vital role in the process of FCC. Nurses, as a psychologist’s intervention givers, provide patients with spiritual support, to meet their expressed desire for spiritual care. Facing strange status and environment, parents need information and knowledge from nurses. When infants discharged, nurses should take the duty of helping parents to adapt new role in society. (Davidson et al., 2017)

1.3 Problem statement

As the preterm delivery problem word wild, the incident increased year by year. The environment in NICU affected both for mother or family and infants. (Fabbro & Cain, 2016). Having a premature baby may be hard to describe (Hagen et al., 2016, Provenzi & Santoro 2015). What should be emphasized is that the nurses in NICU should not take care of preterm infants and give recover, and take parent in mind and help them to go through this experience.(Claassen, 2000)

However, there are some literature review studies only focused on father (Provenzi & Santoro 2015, Davis et al., 2003), but in this review, the influence over parents, fathers, mothers, single parents, or surrogate mothers are included. On the other hand, in Provenzi & Santoro’s 2015 paper, studies published between 2000-2014 were included. (Provenzi & Santoro 2015) And Davis’s in 2003 paper concluded studies which published from 1960 to 2002. (Davis et al., 2003)

All in all, it is necessary for nurses to know the experience, feeling, view and attitudes of having premature infants, for the nurses can provide effective healthcare to parents and promote family-centered care and holistic nursing. It is necessary for nurses working in practice to help parents to copy with this experience. Hence, it is vital to understand parents’ experience of having prematurely born infants in a wider context.

1.4 Aims and specific questions

The aim of this study was to describe the experience of parents with a premature baby and to describe the data collection methods used in these studies.

Question 1:
What experience of having a premature baby do parents have?

Question 2:
What data collection methods do authors have chosen to use in their articles that the author used in this thesis?
2. Methods

2.1 design

A descriptive literature review was used (Polit & Beck, 2012).

2.2 Search terms, search strategies and selection criteria

The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines (Moher et al. 2011) was adopted. Articles were be found by searching in the databases PubMed, with certain limits, as table 1 shows. This database was selected because they were considered to include the most relevant articles. The research was limited which published from August 14th 2007 to August 14th 2017. The studies published from 2007 onwards were excluded. Search terms were developed, and four groups of terms were combined: Infant, Premature; parents; Infant, Premature AND experience OR attitude OR perception OR view; Infant, Premature AND parents AND experience OR attitude OR perception OR view. Those four groups of terms might include all premature items.

Table 1: Outcome of database searches

<table>
<thead>
<tr>
<th>Database</th>
<th>Limits and search date</th>
<th>Search terms</th>
<th>Number of hits</th>
<th>Possible articles (excluding doubles)</th>
</tr>
</thead>
</table>
2.3 Inclusion criteria and exclusion criteria

The inclusion criteria for articles which were included in the degree project should be relevant with the aim of the review study-parents’ experience with premature baby, and empirical scientific articles should use a qualitative approach.

The exclusion criteria which would be applied by the authors are articles that were only concerned with physicians’, nursing staffs’ or the general public’s experience which caring a premature baby. The authors focus on the 19+ age mothers, so those articles which choose the age below 19 years are also not considered to be used.
2.4 Outcome of database searches

A computer-based literature search was conducted on studies published between August 14th 2007 – August 14th 2017 on the following databases: PubMed. To be more comprehensive in the first step of the PRISMA procedure, we opted to include in the search string Infant, Premature, the number of hits is 8133, given that several studies focusing on premature babies in title. Then we used the key words: parents, the number of hits is 10993. Next we chose the key words: Infant, Premature"[Mesh] AND experience OR attitude OR perception OR view, the number of hits is 573. Last we decided to put the key words: ("Infant, Premature"[Mesh]) AND "parents"[Mesh]) AND
(experience OR attitude OR perception OR view, the number of hits is 78, we chose 25 articles to use. The outcome of the performed database searches as well as databases with the chosen limits, search terms, number of hits and chosen sources are shown in table 1.

Among those 25 articles, firstly after reading the abstract of articles, authors deleted 4 articles that are irrelevant to present the study’s aim and deleted 2 articles are literature review. Then authors screened the whole text, and deleted 8 papers that explore the experience from nurses’ perspective. Finally, they got 11 articles that would be used in the result.

2.5 Data analysis

The authors abstract key descriptive details of the included papers, including authors, publication year, countries, article design, possible approaches, participants, data collection methods, data analysis method, an main results.

The analyses of the study consisted in aggregation and synthesis from previous primary research papers. Data from the articles were extracted using the data extraction tool of the Joanna Briggs Institute-Qualitative Assessment (Joanna Briggs Institute, 2014). Initially, the following data were extracted for each study: methodology, data collection, participants, data analysis, and the author’s and reviewers’ conclusions. Later, two reviewers independently extracted the findings, which were defined as the conclusions reached by the primary authors and presented in the form of themes or metaphors (Table 2). For each finding the reviewers reported the related illustrations, such as direct quotations of participants’ words, field, or other supporting data reported in the original paper. Two reviewers assembled and categorized the findings on the basis of similarity in meaning and determine themes. Later two reviewers made sub-category to analyze the findings further. Last two reviewers use a code to describe the sub-category they had made. Any discrepancies between reviewers were, solved by discussion. The produced categories were then subjected to a meta-synthesis to produce a comprehensive set of synthesized findings (Joanna Briggs Institute, 2014).

According to Polit & Beck (2012), this is a good strategy for finding themes and patterns, and a good opportunity for categorizing collected material in a qualitative study. After analysis, each study finding was identified with a number composed of the alphanumeric code assigned to each article (1-11) and the alphanumeric code assigned depending on the position of each finding within the article. (Table 2)
2.6 Ethical considerations

The articles read and reviewed objectively, without being subject to the authors’ own opinions and attitudes. The results presented in their entirety without being altered according to the authors’ wishes. This project is free from plagiarism.

3. Results

The results of parents’ feelings indicated how parents experience when they were informed of having a premature baby, which included the psychological changes, need for support and alteration in parents’ role. They expressed their unexpected, anxiety, sad about their premature baby, and felt guilt and depressed about themselves. They showed their eager to connect with baby, and the actions around them also played an important role, mothers needed support from fathers or others, some even sought the religions for help. Other noticed that this helpless and unbalance feeling would eventually make them grow up and became stronger. Regarding the data collection methods of the selected articles, this was clearly shown in all articles and relevant and scientific methods were used, which contributed to the result.
<table>
<thead>
<tr>
<th>Themes</th>
<th>Categories</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological changes of being parents with premature baby</td>
<td>Anxiety and Uncertainty</td>
<td>1b. Focus on physical appearance; Potential medical conditions; 1c. Physical description; Comparing to mature baby; Questioned 4a. Focus on the infant’s precarious health; 4b. Uncertainty was high and the parents felt horrified; 4d. Prolonged uncertainty: cycles of crisis and adaptation 5a. Not being able to understand the present situation 7a. Created an image tiny (physical); 7b. Anxiety 8c. Living with worry 9h. They feel confused about the future and difficult to think about the future life. 11a. Worried</td>
</tr>
<tr>
<td>Painful Emotions</td>
<td>1a. Psychological absence and memory loss; sudden or surreal experience; 1b. Nervous and tentative when touching for avoiding harming; Potential medical conditions; Dreaded (scared); 1c. Confusion (elated and devastated); Confusion; Guilt; 1d. Awkwardness and exclusion; Confusion 2a. A Traumatic Experience; 2d. Lack of psychological readiness; 2e. Unexpected, surprised; 2c. Guilty; 2b. Self-blame 4a. Distress; 4a. Stress; 4c. Compounded by feelings of guilt; Birth was a sudden and unexpected; 4b. Helpless 5a. Suddenly being in a situation question; New and unexpected; 5b. Stressful 7a. To realize that the infant’ weak and underdeveloped and to have the bad impression; unwanted stressful situation; Disappointment and sadness; 7b. Feared; Emotionally stressful 8a. Living beside reality 9b. Unexpected; 9d. Fear to hurt the baby 10a. Mothers are shock by the unexpected baby; 10b. Sad; 10e. Fear; 10g. Feel guilty as if she is abandoning the baby; 10c. Grief (blame); 10f. Blame herself; 10d. Depressed 11c. Overwhelming and distressing; 11f. I was faced with the reality of my baby’s situation I became more distressed</td>
<td></td>
</tr>
</tbody>
</table>
| Positive experience and growth | 1b. Excited 7e. Positive experience  
2a. Fathers experienced wonder and joy/optimistic  
4d. Rebuild their meaning systems  
5b. Overwhelming and happiness; 5a. Confronted  
6b. Exciting; Valued the experiences and strain Strengthen relationship  
7e. Personal growth  
8f. Be hopeful |
|---|---|
| Parents need for support | 1c. Connected; 1b. Eager and desperate to see  
2i: They want to stay with their baby and look at them 3b. Be with preterm baby  
5b. Being together and care  
10k. Bond with baby |
| Connected with baby | 3c. Private space and time; 3a. The quiet caring room; Well-being.(support)  
11e. There is no privacy to do the praying practices. |
| Private space | 5c. Needing to be noticed every now and then. They wanted someone to talk  
7e. Talk  
10h: Indifferent of fathers; 10i: Loss and ignorance (nurse, staff) |
| Need for being cared and noticed | 2h: Protection by spiritual and magical means. Do not want others seeing their baby  
10j: God’s providence |
<p>| Religion |</p>
<table>
<thead>
<tr>
<th>Alteration in parents role</th>
<th>Difficulty grasping the parents role</th>
</tr>
</thead>
</table>
|                                          | 1b. Confident, but not yet ready  
2g: Initial difficulties bonding; 2f: Not feeling like a mother  
4c. Strangers; 4a. Inadequacy  
5b. Putting mother and infant first, providing mother and infant they need, and mother prior  
9a: The disconnection from child  
6a: But not yet ready  
7a: Without being prepared  
8d: Their senses of being a father return when they touch their baby; a wonderful moment to hold the baby;  
8b: Become an outsider  
9e: Lack of confidence; They feel self-perception and inadequate, having no confidence; 9c: The perception of maternal inadequacy; 9f: They feel they don’t like a mother, they can’t handle the baby and take care of them; 9g: They should ask nurses before they hold or look their baby, they feel they lose their mother’s power |
| parents role imbalance with other roles | 4c. Hard to balance; 4d. Imbalance in work, family, and money  
6b. Imbalance each one valued the experiences and strain they felt in different ways and recounted being busy taking care of the child  
7d. Families could not spend time together  
11d: Experiencing challenges in family relationships and feeling isolated |
| Realize the parents role                  | 6a. Becoming more confident as a father  
8e: They felt confirmed as a father when they were able to care for their infant |
3.1 Psychological changes of being parents with premature baby

3.1.1 Anxiety and uncertainty

When the premature appears, the experience (anxiety and uncertainty) of parents follows. These anxieties come from various aspects, such as physical appearance (Arnold et al., 2013, Lindberg & Öhrling 2008), medical condition (Arnold et al., 2013, Lasiuk et al., 2013), unknowing (Arnold et al. 2013, Lasiuk et al., 2013, Lindberg et al., 2007, Spinelli et al., 2015) and worry and anxiety (Lindberg & Öhrling 2008, Lundqvist et al., 2007, Obeidat & Callister 2011). Parents feel worry which about the appearance of their premature baby, and they become anxious when they compare their own with mature babies (Arnold et al. 2013). They focus on the tiny images of their baby (Lindberg & Öhrling 2008). They become worry because of the precarious health and physical condition of their baby (Lasiuk et al., 2013), thinking the relevant potential medical condition (Arnold et al., 2013). As premature is alien to the parents, they are not able to understand the present situation (Lindberg et al., 2007). They are questioned about the situation (Arnold et al., 2013). They feel horrified and their uncertainty is high, they also express that this kind of uncertainty can prolong, which seems like cycles of crisis and adaptation (Lasiuk et al., 2013). Anxiety is a very common emotion according to the description of parents. Parents convey their worried (Obeidat & Callister 2011) and anxiety (Lindberg & Öhrling 2008) a lot, they also sigh that they live with worry when they don’t see their baby (Lundqvist et al., 2007).

3.1.2 Painful emotions

Large number of mothers tell the moment of having a premature baby is kind of unexpected experience: ‘I was not ready to have him; it was a shock to me’ (Lasiuk et al., 2013). Several mothers added that it was a new and surprised moment (Lindberg et al., 2007), but really a sudden and surreal experience, few mothers even mentioned that they felt lack of psychological readiness (Baum et al. 2012), psychological absence and memory loss (Arnold et al., 2013). Since how sudden having a premature can be, parents thought this was really a traumatic experience and living beside reality (Lundqvist et al., 2007, Baum et al., 2012). Parents also expressed that they were confused, distressed, awkward and excluded, they didn’t have idea what was going happen and what should they do (Arnold et al., 2013). They were overwhelming and distressing by the
situation (Obeidat & Callister 2011, Lasiuk et al., 2013). Parents became fear, dreaded and stressful, they were afraid of losing their baby (Arnold et al. 2013, Lasiuk et al., 2013, Lindberg et al., 2007, Lindberg & Öhrling 2008, Ntswane-Lebang et al., 2010). When they had chance to touch their baby, they became fearful again. They feared to hurt the baby: ‘I am scared to hold her, she is very small. My love for him gives me hope. When the nurse inserted the tube in his tiny nose, I felt the pain with him’ (Ntswane-Lebang et al., 2010). They were nervous and tentative when touching with avoiding harming (Arnold et al., 2013). Parents explained that they became more distressed when they faced their babies, as they face the reality again (Obeidat & Callister 2011), but when they were separated from their baby they became angry and confused (Arnold et al., 2013), disappointed and sad (Lindberg & Öhrling 2008), ‘I feel sad like I am abandoning him’ (Ntswane-Lebang et al., 2010). When parents realized that their infant was weak and underdeveloped, they were trapped into a stressful situation deeply (Lindberg & Öhrling 2008). Even more, they were compounded by feelings of guilty: ‘when I am at home, I feel very guilty as if I am abandoning my baby’ (Arnold et al., 2013, Lasiuk et al., 2013, Baum et al., 2012) and blamed themselves: ‘I blame myself for this situation; I should not have stressed about my boyfriend’s behavior’ (Ntswane-Lebang et al., 2010, Baum et al., 2012). They were surrounded with feelings of helpless and depressed: ‘in the beginning I cried a lot and I could not sleep at night, thinking if he would survive or not’ (Lasiuk et al., 2013, Ntswane-Lebang et al., 2010).

3.1.3 Positive experience and growth

Besides negative experience, there were still some positive sharing in parents’ description. When parents were allowed to hold their premature baby, they felt it was a positive experience, especially when they were informed that their baby would survive which give them strength to cope the difficulty and with a feeling of personal growth (Lindberg & Öhrling 2008). And they felt excited when touching and talking with their baby (Arnold et al., 2013, Lindberg & Öhrling 2008). A few fathers told that he was overwhelming when knew he had a premature baby but still with happiness because he was becoming a father (Lindberg et al., 2007). In particular, some parents noted that this experience rebuilt their meaning systems, during the confrontation they valued the experience and strain strengthen relationship between their baby and husband/wife and
assure that they were hopeful of their future (Lasiuk et al., 2013, Lindberg et al., 2007, Lundqvist et al., 2007, Lindberg et al., 2008).

3.2 Patients need for support

In a distress, stressful and anxiety situation that preterm baby come into real life suddenly,( Lasiuk et al., 2013, Lindberg et al., 2007, Lindberg & Öhrling 2008, Obeidat & Callister 2011) parents were in needed and should be helped. Parents, who were in a complex and psychological environment, need for support from nursing stuff, information about their infants and environment (Ntswane-Lebang et al. 2010, Baum et al., 2012).

3.2.1 Interact with infants

After preterm infants born, parents wanted interaction with their infant (Arnold et al. 2013, Hall & Brinchmann 2009, Lindberg et al., 2007, Ntswane-Lebang et al., 2010), if they were separated from infants. Parents all eager to see baby or be with infants again, at the time they were leaved, (Arnold et al., 2013, Hall & Brinchmann, 2009) although some parents were fear to confront (Arnold et al., 2013). ‘It would be better to be around my baby all the time.’ (Ntswane-Lebang et al., 2010) Even, some parents got anger and anxiety, if cannot be satisfied seeing their baby (Arnold et al., 2013, Lindberg et al., 2007). Parents also wanted to take care and bond with baby (Lindberg et al., 2007, Ntswane-Lebang et al., 2010). Mothers in the current study expressed their wish to breastfeed the babies in statements like: ‘I wish I could feed him on the breast and not by express milk.’ ‘If I can put him on my breast, it will soothe me.’ (Ntswane-Lebang et al., 2010) parents got relief and support from baby and helpful in connecting with baby.

3.2.2 Private space

Parents need private space or room, in that a family can keep interaction (Hall & Brinchmann 2009, Obeidat & Callister 2011). Parents in private space felt the sense of place. A parents described that NICU was crow liking an incubator but seeing and closing to baby makes him feeling a parents (Hall & Brinchmann 2009). ‘it is just so nice, because this is what you have been waiting for during the whole pregnancy. Feel her little body, feel that she lies there by me and quietens. We sit there in cosiness. I use some time to sing for her.’ A private space given parent opportunity to deal thing by themselves, like pray, a quiet
room help parents to do some religious practice. ‘I’m not sure that the place of prayer was clean. There is no privacy to do the praying practices.’ (Obeidat & Callister 2011)

3.2.3 Needs for being cared and noticed

After infants delivering, mother was in a complex psychological status and father was waiting and gathering information he needs (Arnold et al., 2013, Lindberg et al., 2007). Not only mother expressed that the talking experience and being listened was what they really wanted, but father (Lindberg et al., 2007, Lindberg & Öhrling 2008). Family was a branch of way supporting parents, staff do as the same way. Receiving kindness from staff gives mother a feeling that their baby was taking well and resulting in less worry. ‘I wanted to hear this is a normal reaction and you are going on and they could notice if something was not OK.’ When nobody paid attention to parents, they felt disappointed in that nobody know their thoughts and desire (Lindberg & Öhrling 2008). Some parents also experienced indifferent and ignore or loss (Obeidat & Callister 2011). When parents came into infant, mother was feared and shocked by the appearance and the tube, and hoping father can give some relies (near and care the baby), but mothers were not supported by fathers’ action. ‘My husband becomes irritable when I ask for transport money to come to see the baby.’(Obeidat & Callister 2011). On the other hand, father or mother needed notice from staff and nurse. Parents needed information from doctors or nurses about their infants, however they could not always receive enough and useful information. Parents needed well-treated and felt that they were being understood as if their baby. ‘My baby was on oxygen but they said nothing and for the whole week I was sick worried.’(Obeidat & Callister 2011)

3.2.4 Religion

Parents also needed religious support (Ntswane-Lebang et al., 2010). God and other spiritual or magical power mean a lot to parents (Hall & Brinchmann 2009). Mother discussed with physicians and nurse, about treatment, nursing, and caring for baby, and mother gained faith in nurses’ work. And they saw the work of physician and nurse as Gods’ help. The courage from God made mother sure that baby can overcome every hard situation and the ability of nurse. Mothers expressed: ‘I ask myself what happened, but I put everything to God’s hands.’ ‘God is there and I have faith that the nurses are trained and know what to do.’(Obeidat & Callister 2011)
3.3 Alteration in parents role

3.3.1 Difficulty in grasping parents’ role

Parents described their hardship in parents’ role as different in bonding, inadequacy, no confidence, not feeling like a mother or father. (Lasiuk et al., 2013, Lindberg et al., 2007, Spinelli et al., 2015, Lindberg & Öhrling 2008, Lundqvist et al., 2007) Some mothers repelled touching baby or interacting with baby, because mothers refused the truth and were immersing in shocking when they first seeing their baby(Lasiuk et al., 2013). What’s more, sometimes the disconnecting after delivery was result from the medical condition of infants and mothers, also having a sensation of being deprive, and this prolong. (Spinelli et al., 2015) However, the sense of being a father or mother came back when they hold or touch infants. (Lundqvist et al., 2007)

Being a parents, they expressed inadequate and not yet ready, and this leaving them far of being parents.(Arnold et al., 2013, Lasiuk et al., 2013, Lindberg et al., 2008, Lindberg & Öhrling 2008, Spinelli et al., 2015) Parents read book or images the live after baby delivery, but they truly were shocked and felt disorder of being parents.(Arnold et al., 2013) Before discharging, fathers were forced to do many things, because the medical condition of infant and mother, alone, though they are not ready.(Lindberg et al., 2008) The separation of mother and baby did not add the ability of caring baby, and mother felt inadequacy because doubting she could take care of their baby or not (Spinelli et al., 2015). Some mothers felt self-perception and inadequate, having no confidence, and these feelings of inability may have some effect on, to a great extent, construction of to identify maternal role (Lasiuk et al., 2013).

Parents also described that they loss parents’ role and mother felt not like a mother or loss mothers’ power. Constantly, father expressed that they become a stranger, though they saw mother as their largest choice and focus on family, mother and infant. (Lasiuk et al., 2013, Lindberg et al., 2007, Spinelli et al., 2015) As the process of delivery was quick, and infants left mom suddenly, mother is hard to feel that the baby was exist and belong to him.(Arnold et al., 2013) ‘It took me time to absorb it. I still don’t believe that I gave birth to this tiny baby. It’s hard for me to grasp that this is my son, and I’m his mother.’(Lasiuk et al., 2013) ‘It is the situation itself that does not allow you to be the mother already.’(Spinelli et al., 2015) Father in this situation expressed liking a stranger and lost the role as a father, in that the even happened too fast and difficult to grasp what occurred. Father had no idea about the language the staffs’ words, and can do nothing for infant as a father (Lasiuk et al., 2013). Though, father preferred to provide whatever
mother and infant need, cause it is helpful to hide feeling that he had (Lindberg et al., 2007).

### 3.3.2 Role imbalance (parenthood, family, social role)

Excepting in parents’ role, parents described that it was hard for them to balance different role between parents in family and a staff in working place. (Lasiuk et al., 2013, Lindberg et al., 2008, Lindberg & Öhrling 2008, Obeidat & Callister 2011) Parents were busy in daily work, when baby was living in intensive care unit, resulting in they have to arrange very well work, with the help of co-workers or friends, some even burden in this arrangement. (Lasiuk et al., 2013) It was usual that parents worked all day, having no time to take well care of family. If there were two children, parents felt harder to balance in order to take good care of child. The mothers described they would constantly think about their youngest ones than other children. They felt that they were unable to normalize their life (Obeidat & Callister 2011). ‘My four year old son is so distressed because I’m not with him in the home. My husband was demanding me sometimes to leave the hospital for a period of time and to have his sister stay with my baby, but I refused.’ (Obeidat & Callister 2011) Parents had less time to spend on family and infants, regardless they were eager to. Some fathers felt strain in occupation. (Lindberg et al., 2008) The relationship in family is challenged. (Obeidat & Callister 2011)

### 3.3.3 Realize the parents’ role

Men confirmed or had confidence to be father, on the condition that they had interaction with their baby (Lindberg et al., 2008, Lundqvist et al., 2007). Father was being encouraged when he was admitted to NICU and care baby with professional build which help him prepare to care baby in home (Lindberg et al., 2008). Father felt confirmed as a father when they were able to care for their infant and increasing the feeling of being a family (Lundqvist et al., 2007). ‘there’s been a good compromise between the professionalism of the staff, we know that they know what they have to do, but still they listen to the knowledge and prior experience that I bring along about her development, her experiences.’ (Lundqvist et al., 2007)

### 3.4 Results regarding the chosen articles’ data collection methods

After scrutinized the 11 articles included in the present literature review, it was found that the data collection method was described in all of them.
In one of the articles, it was made clear that the authors used an interview guide with opening questions for semi-structured and in-depth interviews (Hall & Brinchmann 2009). However, it was only in the study by Hall & Brinchmann (2009) that the authors used an interview guide. In two of the chosen articles, semi-structured, in-depth interviews in the form of focus groups were employed (Baum et al., 2012; Spinelli et al., 2015). In one article, individual, in-depth interviews are used (Ntswane-Lebang et al., 2010), one used in-depth interview only (Arnold et al., 2013), one used semi-structured interview (Lasiuk et al., 2013) and another use individual interview only (Lundqvist et al., 2007). In the study by Obeidat & Callister (2011), the researchers applied the descriptive phenomenological inquiry in the article. In three remaining articles, narrative interviews were chosen to use (Lindberg et al., 2007; Lindberg et al., 2008; Lindberg & Öhrling 2008).

Among the following six chosen articles, the researcher/authors themselves carried out the data collection during a personal and quiet meeting (Hall & Brinchmann 2009; Lasiuk et al. 2013; Lindberg et al., 2007; Lindberg et al., 2008; Lindberg & Öhrling 2008; Spinelli et al., 2015). In four of the selected articles, the data collection was carried out during a quiet meeting, but it was not made clear by whom (Arnold et al., 2013; Lundqvist et al., 2007; Ntswane-Lebang et al., 2010; Baum et al., 2012). In the studies by Obeidat & Callister (2011), the researchers did not carry out the data collection themselves, but a person called principally investigator and it was also carried out during a personal meeting.

Among these studies, it was made clear that all interviews were carried out by the same researcher (Lasiuk et al., 2013; Lindberg et al., 2007; Lindberg et al., 2008; Lindberg & Öhrling 2008; Obeidat & Callister 2011; Spinelli et al., 2015). In the remaining five articles, there was no information on whether the same researcher carried out all the interviews (Arnold et al., 2013; Hall & Brinchmann 2009; Lundqvist et al., 2007; Ntswane-Lebang et al., 2010; Baum et al., 2012).

In two studies, the data collection took place more than one occasion (Hall & Brinchmann 2009; Lasiuk et al., 2013). In the remaining nine studies, the data collection was performed on just one occasion (Arnold et al., 2013; Lindberg et al., 2007; Lindberg et al., 2008; Lindberg & Öhrling 2008; Lundqvist et al., 2007; Ntswane-Lebang et al., 2010; Obeidat & Callister 2011; Baum et al., 2012; Spinelli et al., 2015).

In 11 studies, there is no mention of material being used like photographs or diariesthis (Arnold et al., 2013; Hall & Brinchmann 2009; Lasiuk et al., 2013;
Among the six selected studies, the participants themselves chose the location for the interview, it could be in the hospital or in their house as long as it was convenient for the participants (Arnold et al., 2013; Hall & Brinchmann 2009; Lasiuk et al., 2013; Lindberg et al., 2007; Lindberg et al., 2008; Lindberg & Öhrling 2008). In five of the studies, the location for the data collection is not specified (Lundqvist et al., 2007; Ntswane-Lebang et al., 2010; Obeidat & Callister 2011; Baum et al., 2012; Spinelli et al., 2015).

4. Discussion

4.1 Main results

Three main themes resumed parents’ experiences of a preterm baby from 11 studies. Themes were: psychological changes of being parents with premature a baby (anxiety and uncertainty, painful emotions, positive experience and growth); needs for support (interact with infants, private space, need for being cared and noticed, and religion); alteration in parents’ role (difficultly grasping the parents’ role, imbalanced between parents’ role and other roles, realizing the parents’ role).

4.2 Results discussion

4.2.1 Psychological changes of being parents with premature baby

Parents who had a premature would suffer a lot psychological disorder; they felt unexpected, fear, worried, sad and other negative feelings. This was in line with the result in Provenzi & Santoro (2015), as it mentioned that fathers described the premature birth as an unexpected and shocking event, and didn’t have time to get ready. They felt out-of-the-blue loss of control over the situation. It is noticeable that, in their results, there were some fathers stopping coming to the hospital for a while because they are so frustrated. And some even felt excited for being a father. What’s more, there were some fathers mentioning that even when their baby discharge from the hospital, the recollection of this period was still horrible. Similar result can be found in Maghaireh et al (2016), parents reported that having a baby hospitalized in NICU is a stressful experience. They defined stress as a sense of pressure, tension and nervousness from new or unexpected situations or their sense of pressure and responsibility. Some differences were parents felt of loss of their baby when they admitted to the NICU, and they also faced various challenge.
Another result shown in Ireland et al (2016) was consistent with results what we found. Parents suggested that having an infant in NICU appears to be associated with a similar level of stress and anxiety to becoming a parent to term-born babies. One interesting finding was that some fathers came back to work as their therapeutic and they thought useful distraction help them return to the reality, which release their stress.

Hence, it was important that physical, emotional and economic support from nurses should be readily available so that the parents’ availability to her premature or ill infant is insured. The parents’ coping was positively influenced when nurses and heath personnel considered the parents’ opinions and needs regarding caring for their baby as important (Whittingham et al., 2015). According FCC, Nurses should recognize the importance influence from parents (Davidson et al., 2017).

The psychological care given to the parents of premature infants should include those actions that were aiming at reinforcing the sense of control over the situation and reducing the sense of helplessness, insecurity, and anxiety (Kmita, 2003).

This aim can be achieved by increasing the sense of competence in parents, concentrated much more on recognizing and reinforcing mechanisms stimulating adaptation to the difficult situation which poses a threat to infant’s health (Diane et al., 2015). The important aspects of such care were the actions described above reinforce the sense of the parents’ competence in childcare, acquiescence to parents’ participation in taking decisions. And by making them feel that they are good at taking their child’s care and those they were needed, by involving parents in the child’s care. Informing them full and communicative information about the infant’s health, and the medical procedures performed reinforce the sense of control and understanding of the situation, reduce helplessness and anxiety (Kmita, 2004).

### 4.2.2 Parents need for support

The senses of needing support of parents derive from the isolation of their premature baby and they can’t get the regular information, which make the communication between nurses and parents became more necessary and significant. And parents always expressed their eager to touch their baby. They can look at their infant, but they were not allowed to get physical contact. If they were not supported by adequate and consistent information, the fear of doing harm to the baby might lead to prolonged states of anxiety and fear. In addition; they show their willing to stay with their baby in a private environment. The result is corresponding with the result in Provenzi and Santoro (2015), but one more
different is in Provenzi and Santoro (2015), fathers who manage to engage in the care of their infants report more positive emotions: for example fathers involved in skin-to-skin practice report to feel ‘proud’, feeling that this child also needs him. And this was a really nice thing for him, to be needed right from the beginning. Early interaction with baby, fathers even describe a more joyful and positive experience and they soon develop a more conscious will to share their experience with friends, relatives and significant others outside of the hospital. In addition, result from Maghaireh et al(2016) collected that parents expressed that their routine life was disrupted, fearing for their infant’s condition, insufficient information about that medical condition, the NICU environment and poor staff communication. Same findings can be seen in Ireland et al (2016). Parents reported increased knowledge and information about their baby reduced “role-stress” alteration. However one thing should be paid attention to is that information sharing can be a ‘double edged sword’ with potential both to empower the father and to exacerbate his fears.

Patients always insist that no news is not good news; absence of news just gives them reason to be fearful. The same thing could apply to the parents of extremely premature babies, but in this situation it may create hope of an outcome that is just not possible (Currie et al., 2018).

It was difficult to know whether parents perceive staff withholding information from them. Perhaps the nurses in the current study were correct that parents could read things off their face. (Lindberg & Öhrling 2008) Hence, it was really a challenge for nurses to learn how to communicate with parents and how to inform them the bad news and good news (Obeidat et al., 2010). And to achieve compliance the parents also need to trust nurses, nurses can’t help parents until they gain parent’s trust, which also require nurses to obtain high level of knowledge, for high level of knowledge provide a sense of safety and trust in health personnel. This needs effort from both parents and nurses sides (Currie et al., 2018).

As for the treatment of isolation there was popular way called “Kangaroo Care”. It was a specific parenting intervention that is widely utilized in NICU's promotes skin-to-skin contact between the mother and infant. KC resulted in positive effects on maternal depression, perception of the infant as being less abnormal, increased maternal sensitivity, and improved ratings of the quality of the home environment (Feldman et al., 2002).

Family-based intervention can also be used. Browne and Talmi (2005) have found that a family-based intervention enhanced mother-infant interaction, increased parental knowledge of infant behavior and decreased parenting stress by providing either
education or demonstration of infant behavior (Browne & Talmi 2005). According to the 
FCC theory, encouraging the family members to participate the process during the 
hospital is needed.

**4.2.3 Alteration in parents role**

The alteration in parents’ role happen such hurry, they didn’t have time to prepare 
and they regarded themselves as a failure, for they can’t have a complete baby. And they 
couldn’t hug their baby or feed them; they felt themselves like an outsider and not a real 
mother/father. They had difficulty in grasping the parent’s role, and kept balance between 
parents’ role and other roles. The similar result can be found in the result of Provenzi and 
Santoro (2015), fathers wanted to be recognized as the father, and not only as the partner 
or a supportive source for the mother: ‘Sometimes the staff gave me the feeling that the 
infant was not ours, we just have her on loan.’ One special is that in the result of Provenzi 
and Santoro (2015), after NICU discharge, fathers still appreciated to be supported at 
follow-up visits, specifically for what regards the better way to interact with their infant. 
When a parent was in a situation that lacks a sense of reality, it was difficult to understand 
and get what is communicated, resulting in an inability to cope. The fathers in Ireland et 
al (2016) although ‘shocked’ by early birth were ready to become involved immediately as it marked the beginning of the relationship with their child, and expressed a need for 
help to take on the duties by merit of their larger hands and inexperience in handling 
babies. In addition, they described being treated as a ‘second parent’ by staff. One 
different feeling found in the article was that fathers regarded the work as an important 
contact to the outside world. Parents in Maghaireh et al (2016) experienced a change in 
parenting roles, such as a change in life routine, altered parental roles, a decreased ability 
to hold their infants and many infant feeding problems for the mothers. They also felt fear, 
powerlessness and stress that affected their ability to fulfill their physical and 
psychological responsibilities towards their infants. Something new was that in the result 
of Maghaireh et al (2016) fathers faced double duties in the absence of mothers, job loss 
because of shifting responsibilities and duties, and the separation of parents, especially in 
the case of an absent mother. And parents developed bad parenting habits such as 
becoming more obsessive about their baby’s development after discharge from the 
hospital, as well as frequently looking for symptoms and signs of medical or 
developmental disorders that may affect childcare.
Family-oriented approach can be used to minimize the separation of mother and baby; it is helped by less restricted visiting policies in neonatal units. Most units will allow parents and siblings open access to their baby after they were equipped with infection control measures (Affleck & Tennen 1991).

And it was good practice for nurses to discuss medical and nursing issues in detail with parents and to involve them in decision making from an early stage. Parents would often have immediate access to recordings, results, and clinical notes. They could also help take care of their preterm baby. Nurses could help parents make “skin to skin” contact, providing skilled care such as tube feeding, oral toileting, and intensive “developmental care” programme (Harrison, 1993).

Basing on FCC, when nurses provide parents of help they should take the former experiences of the parents into consideration. Coping also seemed easier where parents’ opinions were heard regarding care of their baby and when both parents were present in the process of dealing with problems (Davidson et al., 2017). Health personnel should be advised to listen to the parents and collect data on each of the parent when they feel comfortable by taking part in care and using the kangaroo method (Jotzo & Poets 2005).

Many coping strategies tried to gain a deeper understanding of the problems, establishing a degree of control over the situation, seeking social support from other people, and escaping from or minimizing the apparent severity of the situation. These mechanisms were used to varying degrees in individual parents, and there was a systematic difference seen between mothers and fathers. Mothers tended to look for support from others and to search for an explanation for what has happened, whereas fathers were more likely to try to minimize the situation, often by concentrating on supporting their partner (Singer et al., 1999).

### 4.2.4 Discussion of the selected articles’ data collection methods

In the selected 11 studies, one made clear that the authors used an interview guide with opening questions for semi-structured and in-depth interviews (Hall & Brinchmann, 2009). However, it was only in the study by Hall & Brinchmann (2009) that the authors used an interview guide. In two of the chosen articles, semi-structured, in-depth interviews in the form of focus groups were employed (Baum et al., 2012; Spinelli et al., 2015). Two articles used in-depth interview only (Ntswane-Lebang et al., 2010; Arnold et al., 2013), one used semi-structured interview (Lasiuk et al., 2013) and another used individual interview only (Lundqvist et al., 2007). In the study by Obeidat and Callister (2011), the researchers used applied the descriptive phenomenological inquiry in the
In six of the selected studies, the participants themselves chose the location for the interview, it could be in the hospital or in their house as long as it was convenient for the participants (Arnold et al., 2013; Hall & Brinchmann, 2009; Lasiuk et al., 2013; Lindberg et al., 2007; Lindberg et al., 2008; Lindberg & Öhrling 2008).

Unstructured interview is conversational and interactional by asking a broad questions (Lindberg et al., 2007, Lundqvist et al., 2007, Lindberg et al., 2008, Lindberg & Öhrling 2008, Obeidat & Callister 2011, Arnold et al., 2013), help gaining more wide range date and information that make it possible to obtain as much detail as possible about the participant’s daily life and is probe for more detail until the experience is described totally (Polit & Beck 2012). On the other hand, the use of an interview guide with open-ended questions was described in six articles, which the researchers covered the desired areas of interest during data collection (Polit & Beck 2012).

Obviously, the semi-structure interview, in which research has a prepared guide( Hall & Brinchmann 2009, Lasiuk et al., 2013, Spinelli et al., 2015, Baum et al., 2012), is good at give a space to talk freely about the entire topic on the guild and story in their own words. This ensures the information giving by participants is what researchers want and people can provide more illustrations and explanations freely. (Polit & Beck, 2012)

In-depth interview, it mentions some depth information (Ntswane-Lebang et al., 2010, Baum et al., 2012), and gives an opportunity to search for knowing participants’ own world and this interview make sense to respondents. And, in-depth interview also meaningful because the participants have different culture background. (Polit & Beck 2012)

Lasiuk et al 2013 chose both face-to-face interviews and telephone interviews for their data collection. For telephone interviews, it may absence of visual signs such as non-verbal communication. As a result of this, which is automatically given during a personal meeting, an important source of positive development of the interview is lost. Comparing with telephone interviews, face-to-face interviews have more possibilities to gaining information that uneasy to realize. (Polit & Beck 2012)

Basing on Polit & Beck 2012, for one-to-one interviews, in-home interviews are benefit for observing the participants and taking observational notes. Obviously, in-home interview can offer more privacy and except interruptions. (Polit & Beck 2012)
In all of the 11 selected, interviews were recorded and transcribed following data collection (Arnold et al., 2013, Baum et al., 2012, Hall & Brinchmann 2009, Lasiuk et al., 2013, Lindberg et al., 2007, Lindberg et al., 2008, Lindberg & Öhrling 2008, Lundqvist et al., 2007, Ntswane-Lebang et al., 2010, Obeidat & Callister 2011, Spinelli et al., 2015) which, according to Polit & Beck (2012), strengthens the objectivity of the data collection method.

4.4 Method discussion

The literature review was present in accordance with the protocol, and worked with a systematic and documental each step of the research process (Polit & Beck 2012). According Polit & Beck, literature view do well in looking at critically or searchingly or in minute detail for former researches and summarize the result of each study. Continually, the author chosen a descriptive design, as the aim of the study was to explore parents’ experiences of having a preterm infant. The results are based on qualitative articles that correspond with the present study’s aim, which according to Polit & Beck (2012) is a good choice when the aim is to describe individuals’ experiences of something.

Databases PubMed, which is for searching the bibliographic database MEDLINE, offers a special tool for those seeking evidence for clinical decisions is used when select article (Polit & Beck, 2012). The authors used MeSH terms and free text searches were used in order to obtain a more relevant outcome of articles. Only one database can be a limitation leading paper insufficiency.

In this review, the author had precious and explicit including or excluding criteria. This help selecting articles efficiently and accurately. By contrast, only 11 studies (published between August 14th 2007 – August 14th 2017), were included, this can approach new result and gain more up-graded result. However, only ten years’ paper limits the result from previous research. The literature review also token that English language as a including criteria may leading exclude other country’s meaning results, so, results in this review may be unconvincing. To be noticed, that it should be careful when the result is used in those countries that don’t speak English. Another chosen exclusion criteria was that the articles must be freely available to the University of Gävle, which might be seen as a limitation as relevant articles might have been missed by the authors due to lack of resources.

In this literature review, the selected articles were read separately by both authors as an initial step, in order to ensure that the authors were not influenced in each other
explanation process of the text and thus having risk losing important information. And both authors were engaged when selecting papers and this helped gain aim articles in case losing we need and exclude the paper do not tally with aim.

Based on the studies, key themes were extracted and synthesized, guiding with Preferred Reporting Item for Systematic Reviews and Meta-analysis (PRISMA) and “Guidelines for degree projects at the bachelor’s level in the main field of nursing”(Guidelines for degree projects at the bachelor’s level in the main field of nursing, revise 2017). With the themes describing, we answer to our aim.

In this literature review, authors completed the different part but without quality evaluation of selected article. It could be limitation without did this leading misinterpret or bias. Like there were several races including in selected studies, like Muslim. The risks were critical as preterm infants’ characteristics at birth and socio-demographics have been found to impact preterm birth and NICU stay (Fink et al., 2012). Another limitation of the studies is that they do not think too much on heterogeneous and systematic ethnic diversity among fathers enrolled in the selected papers. As shown by Heidari et al. (2012), cultural differences might set subtle yet informative differences about the lived experiences of fathers in the NICU and future research should better investigate this issue.

4.5 Suggestions for further research

The authors find, in the selected article, a few interviews more than one time. Thinking on that, that authors suggest that do more multiple interviews, which are necessary and can find the dynamic change of the experience. After working through the material for the present literature review, the authors were established that less published Chinese research that describe the experience of fathers. From this perspective, it can be interesting to study the fathers’ experience of having a preterm infant. In order to improve the nurse’s opportunities to perform good, person-centred care for individuals, it is desirable to conduct Chinese research from the fathers’ perspective. In the culture background of filial piety, it is also interesting to research the experience of grandparents.

4.6. Clinical implication for nursing

In this review, 3 themes were induced. With knowing the experience that parents may have, professionals have opportunities to work better and provide advanced nursing care. Parents may experience psychological changes, needing support, and alteration in parents’ role. When the changes happen, it is approximate, for professional, to taking the parents-supporting caring attitude(Arnold et al., 2013, Lundqvist et al., 2007), and being
a good listener (Lasiuk et al, 2013, Hall & Brinchmann 2009). Continuously, with parents need various supports, professionals should provide information which in parent really need (Lundqvist et al., 2007), and help of parent bonding with the preterm baby (Benzies et al., 2015), like let them engaging in daily care of infant and giving professional knowledge in operation education, and psychological caring. Also, when parent facing dilemma in parents role, it is helpful in talking with them about their thinking the role of being parent and giving some suggestion, basing on professional knowledge and respect culture variety (Benzies et al., 2015, Lindberg & Öhrling 2008). As family-centred philosophy are tent to highlight acknowledging for preterm care in NICU (Lester et al., 2011), and recognize parents’ role should be helped timely, especially for father. Hopefully, we believe that if professionals would be able to give opportunity to engage parents both in daily care for their preterm infant during NICU stay and transition to parenthood, family well-being would be preserved and enhanced.

5.Conclusions
Parents of preterm infant may experience negative emotions and need various supports. Professionals would be able to discuss with parents to know their experiences and provide help sympathetically. Continually, parents build he/her role in the help of nurses.

6.Reference


www.who.int/mediacentre/factsheets/fs363/en/(WHO)


### 7. Appendix

Table 3. Synthetic characteristics of the studies included in the

<table>
<thead>
<tr>
<th>Author(s) + year/country of publication</th>
<th>Aim</th>
<th>Title</th>
<th>Design (possibly approach)</th>
<th>Participants</th>
<th>Data collection method(s)</th>
<th>Data analysis method(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lindberg et al. 2007+Sweden</td>
<td>The aim of this study was to describe the experiences from the birth of premature infants in the fathers’ perspective</td>
<td>The birth of premature infants: Experiences from the fathers’ perspective</td>
<td>Description Qualitative study</td>
<td>Number: 8 father Age: 22 to 37 years. Gender: male Baby weight: The children were born with a gestational age between 25 and 34 weeks Condition of participants: 6 fathers were first-time fathers, all fathers live together with baby’s mom.</td>
<td>Narrative interviews The average length of each interview was 50 min. Interviewers use the opening questions. The interviews were recorded and transcribed verbatim</td>
<td>Qualitative content analysis (Baxter, 1991; Cantanzaro, 1988)</td>
</tr>
<tr>
<td>Lundqvist et al. 2007+Sweden</td>
<td>To illuminate their lived experience of caring for their preterm born infant</td>
<td>From distance towards proximity-- Fathers’ lived experience of caring for their preterm infants</td>
<td>Explorative Qualitative study</td>
<td>Number: 14 fathers Age: 27 and 45 years Gender: male Baby weight: The gestational ages ranged between 25 and 32 weeks Condition of participants: 8 of the 13 fathers this was the first child, for 3 the second child and for 2 fathers it was the third child. One of the fathers had an earlier experience of a stillborn infant. All fathers lived together with the infants’ mother.</td>
<td>Individual interviews last45 and 90 minutes Interviews use the opening questions The interviews were tape-recorded and later transcribed verbatim.</td>
<td>A detailed line-by-line approach (van Manen, 1997) hermeneutical circle (Kvale, 1997) Organized in subthemes and themes, which according to van Manen (1997)</td>
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<tr>
<td>Authors</td>
<td>Summary</td>
<td>Description</td>
<td>Methodology</td>
<td>Number</td>
<td>Age</td>
<td>Gender</td>
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<td>Lindberg, Öhrling 2008+Sweden</td>
<td>The aim of this study was to describe the mothers’ experience of having a prematurely born infant</td>
<td>Experience of having a premature infant from the perspective of mothers in northern Sweden</td>
<td>Descriptive Qualitative</td>
<td>6 mothers</td>
<td>25 and 35 years</td>
<td>female</td>
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<td>Hall &amp; Brinchmann 2009</td>
<td>The aim of this study was to investigate preterm mothers’ experiences and recollections of the neonatal room</td>
<td>Mothers of preterm infants: Experiences of space, tone and transfer in the neonatal care unit</td>
<td>Explorative Qualitative</td>
<td>5 mothers</td>
<td>no information</td>
<td>female</td>
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<td>Study</td>
<td>Description</td>
<td>Method</td>
<td>Ref.</td>
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<td>Ntswane-Lebang et al +2010</td>
<td>This study explored the experiences of mothers of very low birth weight premature infants in a neonatal unit of a public hospital in Johannesburg.</td>
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<td>Tesch’s method (Creswell, 2008:186)</td>
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<td>Mothers’ experiences of caring for very low birth weight premature infants in one public hospital in Johannesburg, South Africa</td>
<td>Explorative, descriptive and contextual, within a qualitative paradigm.</td>
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<td>Number: 13 mothers Age: older than 15 years old Gender: female Baby weight: They had given birth to very low birth weight premature infants of less than 1 500g Condition of participants: no information</td>
<td>individual in-depth interview All interviews were recorded on audiotape, with the permission of the participants then translated into English and transcribed verbatim</td>
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<td>Obeidat &amp; Callister 2010 +USA</td>
<td>The purpose of this phenomenological study was to describe the lived experience of Jordanian Muslim mothers having their preterm infants admitted to the neonatal intensive care unit at a large Jordanian hospital in Amman, the Hashemite Kingdom of Jordan</td>
<td></td>
<td>Nine-step phenomenological process--Colaizzi’s method(Colazzi,1978; Beck, 1998)</td>
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<td>The lived experience of Jordanian mothers with a preterm infant in the neonatal intensive care unit</td>
<td>Descriptive Qualitative study</td>
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<td>Number: 20 Muslim mothers Age: no information Gender: female Baby weight: mothers having preterm infant at the NICU born before 37 weeks of gestation Condition of participants: no information</td>
<td>face-to-face contact Interviews use opening questions The audio-taped interviews were transcribed verbatim and translated from Arabic to English then back translated from English to Arabic and then to English</td>
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<td>Study</td>
<td>Population and Method</td>
<td>Findings and Implications</td>
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<td>Baum et al. 2012/Sweden</td>
<td>To present the findings of a qualitative examination of 30 mothers of very-low-birth-weight babies.</td>
<td>No Longer Pregnant, Not Yet a Mother: Giving Birth Prematurely to A Very-Low-Birth-Weight Baby</td>
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|      | Descriptive Qualitative study | Number: 30 mothers  
Age: 21 to 41 years  
Gender: female  
Baby weight: 15 gave birth between weeks 25 and 28, and 15 between weeks 29 and 33 of their pregnancy. Seven gave birth to twins. Preterm infant at the NICU born before 37 weeks of gestation  
Condition of participants: Most of them were married, 3 had never been married, and 2 were cohabiting with their partner.  
Face-to-face, in-depth, semistructured interviews.  
The interviews lasted between 0.5 and 1.5 hours  
Interviews use opening questions  
All information were tape-recorded and transcribed  
Phenomenological approach (Giorgi, 1997) |
| Lasiuk et al. 2013/Canada | The aim of this inquiry is to understand parents’ experience of PTB to inform the design of subsequent studies of the direct and indirect cost of PTB. | Unexpected: an interpretive description of parental traumas associated with preterm birth |
|      | Interpretive description (ID) Qualitative study | Number: 14 parents (11 women and 3 men) and 7 parents (4 women and 3 men).  
Age: no information  
Gender: female and male  
Baby weight: Their infants were born between 25 and 36 weeks gestation  
Condition of participants: no information  
Semi-structured conversational interviews (face-to-face interview and telephone interviews)  
The conversational interviews were audio-recorded, transcribed, and reviewed to ensure clarity and accuracy of transcription  
Holistic and line-by-line readings of transcripts were performed for thematic exploration of lived experience description (Meyrick, 2006; Murkoff, 2008) |
| Spinelli et al. 2015/French | The present study aimed to analyse the experience of the transition to motherhood of preterm infants’ “I Still Have Difficulties Feeling like a Mother”: the Transition to Motherhood of Preterm Infants Mothers | Description Qualitative study |
|      | Number: 30 mothers  
Age: 34 years (range: 23–41)  
Gender: female  
Baby weight: Their preterm babies born between 24 and 36 weeks.  
Condition of participants: The 12 of them had experienced previous abortions, and 10 of the pregnancies were a result of an assisted  
Semi-structured interview  
The interviews lasted an average of 1 h  
Interview administered in an open way with a non-interventionist style in an empathic and |
|      | Qualitative analysis of the interview transcripts was performed using inductive thematic analysis (Braun & Clarke, 2006; Flick, 2009) | |

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<table>
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<tr>
<th>mothers</th>
<th>reproduction procedure. Twenty-four participants were first-time mothers, and six of them had twins.</th>
<th>understanding climate. Interviews were audio recorded and subsequently transcribed word by word</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arnold et al. 2013+UK</td>
<td>To assess parents’ first experiences of their very preterm babies and the neonatal intensive care unit (NICU).</td>
<td>Explorative Qualitative study</td>
</tr>
<tr>
<td>Number: 32 mothers and 7 fathers Age: between 25 and 44 years Gender: female and male Baby weight: Their babies were born between 24 and 32 weeks gestation Condition of participants: no information</td>
<td>Individual interviews for about 45 min interview schedule contained 12 open-ended questions, 3 background questions on experiences during birth; 3 questions examining parents’ very first experiences of their baby and 6 looking at care during labour and delivery. Interviews were recorded and transcribed, removing any identifying information.</td>
<td>Inductive systematic thematic analysis(Boyatzis, 1998; Braun, 2006)</td>
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