Parents’ experiences of having a preterm infant

A descriptive literature review

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Abstract

Background: The incidence of premature births has been increasing in most countries, global preterm infants are about 15million, which, more than 1 in 10 born babies worldwide every year. Understanding the experiences of parents having preterm infants is beneficial to help nurses develop better nursing plans for parents.

Aim: To describe parents’ experiences of having a preterm infant.

Method: All scientific articles were searched in CINAHL and PubMed databases. 10 articles that authors selected were carefully read and proceed to obtain the similarities and differences of parents’ experiences of having a preterm infant.

Result: The results were divided into four themes based on 10 articles which were related to parents’ experiences of having a preterm infant. Four themes were: feelings of parents of preterm infants, difficulties and challenges met as roles of parents, supports that parents received and supports parents needed, and positive coping.

Conclusion: Parents of preterm infants experienced many difficulties and challenges, experienced fatigue and sleep deprivation and many psychological feelings and social feelings. They got many supports in this experience. Simultaneously, some parents still expressed specific needs for supports in order to hope to get better supports. Additionally, parents also positively coped to adapt to the influence brought by having preterm infants. Meanwhile, nurses play a significant part in helping parents get out of this experience and better adapt this reality through providing informational and emotional supports.

Key words: Experience; Infants, Parents, Premature.
摘要

背景：在大多数国家，早产率一直在上升，全球早产婴儿约为1500万，每年全世界有超过十分之一的早产婴儿出生。了解早产儿父母的经验有助于护士更好地为父母制定护理计划。

目的：为了综述早产儿父母的生活经历。

方法：在CINAHL和PubMed数据库中检索科学论文。对所选的10篇文章进行仔细阅读和加工，以获得拥有早产儿的父母经历的异同点。

结果：根据10篇与父母早产经历相关的文章，研究结果被分成4个主题。四个主题是：早产儿父母的感受，作为父母的角色遇到的困难，父母得到的支持和父母需要的支持和积极的应对。

结论：早产儿的父母经历了许多困难和挑战，经历了身体疲劳和睡眠不足，以及许多心理感受和社会感受。在这次经历中，他们得到了各种各样的支持。同时，为了得到更好的支持，一些父母仍然表达了对支持的具体需求。此外，早产儿的父母也采取积极的应对策略来适应早产儿带来的影响。同时，护士通过提供信息支持和情感安慰，在帮助父母走出这段经历，更好地适应这一现实方面发挥着重要作用。

关键词：经历，婴儿，父母亲，早产。
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APPENDIX I

Table 2. Overview of selected articles.

Table 3. Overview of selected articles’ aims and main results.

Table 4. Synthesized finding, categories and findings from the included studies.
1. Introduction

Preterm birth happens not only in low and middle income countries, but also in high income (World Health Organization [WHO], 2015). In addition, preterm birth is the main reason of sickness and death of the newborns in many areas in the world (Hamilton, Martin, Osterman, Curtin & Matthews, 2015). In fact, preterm birth ranks only second to pneumonia in reasons of death of children under 5 years old (Liu et al., 2012). Every year, global preterm infants are about 15 million, which, more than 1 in 10 born infants (WHO, 2018). Simultaneously, this number is increasing in recent times (WHO, 2018). Preterm birth also influences health of family members in addition to threatening infants’ health (Mccain, 1990). Besides, preterm birth also creates lots of stress for families (Melnyk et al., 2006).

1.1 Definition

1.1.1 Preterm infants - definition
Preterm infant refers to infant born before 259 days of gestation (WHO, 2015). And preterm infants are usually low weight infants. It is reported that every year about 64,000 preterm infants’ birth weight in the America are <1500 grams (Heron et al., 2010).

1.1.2 Experience - definition
The experience refers to an important event that leaves an indelible influence on someone (Oxford Living Dictionaries, 2018). In this study, the experience refers to how parents live after having a preterm infant. The experiences may include difficulties and challenges met as roles of parents and so on.

1.1.3 Parents - definition
Parents refer to father and mother of a person (Oxford Living Dictionaries, 2019). In this study, parents refer to fathers and mothers of preterm infants.
1.2 Epidemiology of preterm birth

According to Blencowe et al. (2013), in different countries and regions, the rates of preterm birth vary widely. Except a different condition that a part of high income countries had quite high preterm birth rates, the preterm rates of low income countries were about 11.8% on average, followed by lower middle income countries were 11.3% and lower for upper middle income and high income countries were respectively 9.4% and 9.3%. According to Torchin and Ancel (2016), in 2010, eleven percent of the world’s infants were preterm infants. Approximately 5% of preterm infants were “extremely preterm” infants, “very preterm” infants were about 10% and “moderate to late preterm” infants were 85%. Besides, South Asia and sub-Saharan Africa had 9.1 million preterm infants in every year and these two regions account for more than 60% of preterm birth in the world (Blencowe et al., 2013). From 1990 to 2010, in 65 countries that belong to the Americas, Australasia and Europe, the preterm birth rates were constantly increasing (Howson, Kimmey, McDougall & Lawn, 2013). Taking the United States as an example, in 2006, the rate of preterm birth were 12.8%, which up 21% compared to 1990 (Martin et al., 2007).

1.3 The nurses’ role

1.3.1 Nurses as information and communication facilitators
Nurses play a significant part in promoting information that could enable families to know the condition of patient and the treatment that patient needed (Adams, Mannix & Harrington, 2015). Nurses should provide some information about their infants’ condition, parenting and development needs to parents (Adams et al., 2015). When parents bring their babies to home, nurses in the community should strengthen follow-up to provide some information and knowledge about solutions to the difficulties they might encounter (Adams et al., 2015). Nurses also should help parents of preterm infants communicate with others, such as doctors, other parents of preterm infants and so on (Adams et al., 2015).

1.3.2 Nurses as family support providers
Nurses as family support providers need to do the following: supporting families’ hopes, gaining families’ trust, supporting families who wanted to be close proximity to the patient and assisting in the support of spiritual needs (Adams et al., 2015). Nurses as
emotional supporters, when parents of preterm infants have trouble interacting with babies, encouraging parents to physically contact with babies is a vital task for nurses, who can play an important role in promoting parent-infant interaction (Grieve, 1990). Nurses also should provide emotional comfort to reduce negative feelings of parents (Adams et al., 2015).

1.4 Family-centered care theory
Family-centered care (FCC) refers to a mode of taking care of children and their families within the scope of medical services, which guarantees that the care plan is centered on all family members and they are all treated as objects of care, not just individual child (Shields, Pratt & Hunter, 2006). Family-centered care can be considered as a philosophy, a model of care, or a practical theory (Hutchfield, 1999). Family-centred care has its principles, such as respecting for the family as the constant in the child’s life, family/professional cooperation, exchanging entire and impersonal information and so on (Shelton & Stepanek, 1995). In the term of information, according to Shelton and Stepanek (1995), constantly exchanging unbiased information between families and professionals is essential to family-centered process. Health care professionals have to cooperatively exchange and elicit information of both the children and the family, and knowing the information that family hopes is a great start. According to Gooding et al. (2011), one of the cornerstones of family-centered care is that manage care of infants by cooperation between family members and medical personnel. When their infants are in neonatal intensive care unit (NICU), parents should be allowed to participate as fully as possible in the nursing works of caring infants so that they build self-confidence in care of babies long before going home. When parents prepare to home, parent education courses should be conducted so as to offer parents the chances to learn technical abilities like infant cardiopulmonary resuscitation.

Nurses play a significant part in promoting information that could enable families to know the condition of patient and the treatment that patient needed (Adams et al., 2015). Nurses as family support providers should give emotional comfort to relive parents’ stress (Adams et al., 2015).
1.5 Previous research

Previously, some authors have written reviews about relevant experiences of fathers or mothers of preterm infants. In the review of Provenzi and Santoro (2015), it systematically described experiences of fathers of preterm infants in neonatal intensive care unit (NICU), the results indicated they had ambivalent feelings, caused various different needs, took corresponding coping strategies, and modified self-representation in this journey to maintain caregiving involvement and transition to roles as parents (Provenzi & Santoro, 2015). In another review, it described mothers’ experiences of having a preterm infant in neonatal intensive care unit, the results showed they gradually perceived that children belong to themselves, tried to be real normal mothers, participated in caregiving of infants and took coping strategies (Aagaard & Hall, 2008). In the study of Ikonen, Paavilainen and Kaunonen (2015), it described the experiences of preterm infants’ mothers in breastfeeding, and results indicated that how they coped with the birth of a preterm baby by breastfeeding and coped with challenges in breastfeeding.

1.6 Problem statement

Recently, the number of preterm infants is increasing. Besides, preterm infants have many different situation compared with normal babies, which causes fathers and mothers to come into being a series of problems and these problems cannot be ignored. So nurses should not only take care of preterm infants, but also help parents of preterm infants. Some authors only focus on the experiences of either fathers or mothers having preterm infants (Provenzi & Santoro; 2015; Aagaard & Hall, 2008; Ikonen et al., 2015), and few reviews pay attention to both parents’ experiences of having a preterm infant. But having a preterm infant can affect both parents. And only knowing both parents’ experiences having a preterm infant, nursing plan developed and nursing measures implemented for helping parents will be complete and will widely apply to both parents so that help both of them get through this experience. This review describes the parents’ experiences of having a preterm infant. And these articles cited in the results section are all published in recent years. Hence, this review can provide the latest information to readers and provide a direction for clinical research.
1.7 Aim and research questions

The aim of the review was to describe parents’ experiences of having a preterm infant.

- How do parents experience having a preterm infant?

2. Method

2.1 Design

The study was a descriptive literature review (Polit & Beck, 2017).

2.2 Search term and search strategies

In this review, the related articles were searched in the databases of PubMed and CINAHL. Search terms were parents [MeSH], Infant, Premature [MeSH] and experience (free text word), view (free text word), perception (free text word), these terms were combined in different combination with “AND”, “OR” (Polit & Beck, 2017). Limits were used in the search so as to more relevant articles that were in line with the aim adequately were obtained. In PubMed, the following limits were applied: 10 years, English. In CINAHL, the following limits were applied: Linked full text, Peer review, English, Publication Date (2008-2018). Besides, one article was also chosen from reference list of the studies have already been found in table 1.

2.3 Selection criteria

Exclusion criteria: (1) quantitative studies and other review such as systemic review and literature review, (2) participants only including either fathers or mothers, (3) the studies were not concerned about the parents’ experiences of having a preterm infant.

Inclusion criteria: (1) empirical study with qualitative approach, (2) participants including fathers and mothers, (3) the article describes the parents’ experiences of having a preterm infant.
2.4 Selection process and outcome of potential articles

At first, 367 possible articles in total were found in searches from two databases which including PubMed and CINAHL. Then the authors carefully read the titles and abstracts of articles so as to judge whether these articles can answer this article’s aim. 367 articles were founded by using these search terms: “infant, premature”, “parents”, “view”, “perception”, “Experience” through PubMed and CINAHL, and 1 article was chosen by looking at the references of selected article. Through looking through these 367 articles, 23 articles were preliminarily selected because of topic relevance. Then closer and fuller scrutiny of these articles was carried through so that 9 articles were found to be truly useful. Furthermore, 1 article was selected through looking at the references of selected article. The used databases and the limits, search date, search terms, number of hits and possible articles were presented in Table 1. Then, the process of determining the final articles was shown in the Figure 1.

Table 1. Outcome of the 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>
<tbody>
<tr>
<td>Medline through PubMed</td>
<td>10 years, English, 2018-07-07</td>
<td>“Parents”[MeSH]</td>
<td>42944</td>
<td></td>
</tr>
<tr>
<td>Source</td>
<td>Timeframe</td>
<td>Search Criteria</td>
<td>Results</td>
<td></td>
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<tr>
<td>------------------------</td>
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<td>--------------------------------------------------------------------------------</td>
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<td></td>
</tr>
<tr>
<td>Medline via Cinahl</td>
<td>Linked full text, Peer review, English, Publication Date (2008-2018), 2018-07-07</td>
<td>Parents</td>
<td>32035</td>
<td></td>
</tr>
<tr>
<td>Medline via Cinahl</td>
<td>Linked full text, Peer review, English, Publication Date (2008-2018), 2018-07-07</td>
<td>Infant, premature</td>
<td>8447</td>
<td></td>
</tr>
<tr>
<td>Medline via Cinahl</td>
<td>Linked full text, Peer review, English, Publication Date (2008-2018), 2018-07-07</td>
<td>parents AND (experience OR view OR perception) AND infant, premature</td>
<td>195</td>
<td></td>
</tr>
<tr>
<td>Manual search</td>
<td>10 years, English, 2018-07-07</td>
<td>Relevance for inclusion criteria, aim and specific questions</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Total 24
2.5 Data analysis

According to Lommi, Matarrese, Alvaro, Piredda and De Marinis (2015), the authors used two tables to show the main content of the selected articles. Table 2 (appendix) showed that title, author name(s), country of publication, year of publication, participants, design, data collection methods and data analysis methods. Table 3 (appendix) presented the articles’ information, which included authors, aim and results. And these important
descriptive details of articles the authors chose were carefully read by two authors one by one and were excerpted. The authors read the result section in the selected articles over and over again and discussed together to try to understand result section. In the table 3 (appendix), it presented result sections of every article. And the results of every article were marked by a code that was made of the letter distributed to every article (A–J), which according to Polit and Beck (2017) a great tool for people fetching and organizing information is code. According to Joanna Briggs Institute (2014), the authors code each finding in every article in accordance to its meaning, and in accordance with the similarities and differences of the coding in every article, the authors classified different categories in table 4 (appendix).

2.6 Ethical considerations

These articles were read and made comments by authors without their own opinions. The results of this literature review were based on these published articles that had gained ethical approval and objectively recorded by authors rather than biased. The degree project did not plagiarize and only own words were used to summarize. And the references were written if citing articles. These practice all made the risk of ethical dilemmas reduce.

3. Results

The results were based on 10 articles that were qualitative studies. These articles demonstrated the parents’ experiences of having a preterm infant. In the selected articles that were applied in our results, 9 articles used interview to collect data and 1 article used online survey to collect data. A total of 151 mothers and 49 fathers were included in 10 articles. These articles came from different regions, including Singapore (n=1), USA (n=3), South Africa (n=1), Australia (n=2), Colombia (n=1), Thailand (n=1), Portugal (n=1). In these articles, parents' experiences of having a preterm infant included experiences in the hospital, transition to home and post-hospital discharge. The categories and sub-categories of the results were shown in Figure 2.
3.1 Feelings of parents of preterm infants

3.1.1 Physical aspects (Sleep problems and fatigue)

The physical burden was felt by parents of preterm infants after discharge (Boykova, 2016; Aydon, Hauck, Murdoch, Siu & Sharp, 2017). Parents were overwhelmed by the caregiving tasks of preterm infants and they felt fatigue from sleep deprivation (Aydon et al., 2017). According to Boykova (2016), sleep deprivation was ascribed to tedious caregiving schedules and constant parental stress at home. Besides, as a result of too many caregiving tasks, parents also felt fatigue which caused them to have no time for themselves. And tasks having strict schedule also aggravated this feeling (Boykova, 2016).
3.1.2 Feelings on social routines

Feelings of parents of preterm infants on social routines included having difficulties in sharing feelings, feelings of social isolation and feeling misunderstanding from others (Boykova, 2016; Steyn et al., 2017; Whittingham, Boyd, Sanders & Colditz, 2014).

Many parents reported that had difficulties in sharing feelings with people who had close relationship with them (Boykova, 2016). Steyn et al. (2017) mentioned that parents found that sometimes this condition happened in communicating with family and friends, other parents of preterm infants. According to Wakely, Rae and Cooper (2010), all parents expressed that they had difficulties to quest supports from others because others were often unaware of what they were experiencing. According to Steyn et al. (2017), some parents felt isolated when their preterm infants were in neonatal intensive care unit because they difficultly explained the life in neonatal intensive care unit to family and friends. Sometimes they were considered competent parents by some other parents of preterm infants so that they couldn’t freely discuss their feelings.

In addition, after discharge, feelings of social isolation were expressed by parents especially in preterm infant’s first year (Whittingham et al., 2014). This part of reason was due to being trapped in house to prevent infants from any danger outside (Boykova, 2016; Whittingham et al., 2014). Some parents reported this feeling liked getting hit by a train (Boykova, 2016). Besides, Boykova (2016) mentioned that some parents even felt that others misunderstood preterm infants’ vulnerability, which also increased their feelings of isolation and difficulties in sharing feelings.

3.1.3 Psychological feelings

Parents described parents’ experiences of having a preterm infant as a psychologically traumatic ‘journey’ (Wakely et al., 2010), and they experienced a range of fluctuating psychological feelings (Yang et al., 2017).

For parents, they felt shocking for possessing preterm infants (Yang et al., 2017), and their infants’ initial conditions (Wakely et al., 2010). Beyond expressing shocking, parents also questioned how preterm birth could have happened to them (Yang et al.,
They blamed themselves and pinned infants’ suffering through medical procedures on their own faults (Yang et al., 2017). One participant said “it seems like we are the ones who failed, it seems that it was fault (...) I felt that maybe it was my fault that he was born like this” (Vieira Fernandes & Batoca Silva, 2015, p111).

**Fear and a feeling of uncertainty**

Parents of preterm infants felt uncertain about condition of their infants (Whittingham et al., 2014), which was because infants’ body organs were in danger (Sarapat et al., 2017). Fear was present from the moment that infants were born (Yang et al., 2017). Some parents who were separated from their infants were anxious and feared of losing infants because they felt uncertain their infants’ condition, especially when infants had precarious situations in the first few days of birth (Sarapat et al., 2017).

**Ill-prepared, traumatized and sad**

Besides, sadness was also expressed by parents on account of consequences of preterm birth which including infants’ initial appearance and treatment required (Yang et al., 2017). When seeing the fragility of preterm infants being surrounded by machines in the NICU, parent felt ill-prepared and traumatized (Steyn et al., 2017).

**An ambivalent feeling - joy and worry**

For arriving home, an ambivalent feeling was evident in the parents (Yang et al., 2017; Boykova, 2016; Osorio Galeano, Ochoa Marín & Semenic, 2017; Toral-López et al., 2016; Wakely et al., 2010). Along with joy, parents concerned about their abilities of caregiving without the help of healthcare professionals (Yang et al., 2017; Osorio Galeano et al., 2017; Toral-López et al., 2016; Aydon et al., 2017), and feared that didn’t recognize signs of illness so that caused re-hospitalization of their infants (Boykova, 2016; Osorio Galeano et al., 2017).
3.2 Difficulties and challenges met as roles of parents

3.2.1 Difficulties of grasping the roles as parents

Parents of preterm infants had difficulties of grasping the parental roles, which reflected in unprepared for being parents, lacking confidence, thinking themselves as ‘not being a parent’, impaired decision making and bad habits of parenting due to guilty (Whittingham et al., 2014; Vieira Fernandes & Batoca Silva, 2015; Boykova 2016).

Many parents described themselves as unprepared for being parents (Whittingham et al., 2014). Parts of parents even expressed that they didn’t want to bond with their infants in the beginning because they were fearful of infants dying (Whittingham et al., 2014). One participants said “we couldn’t hold, touch, kiss, embrace (...) we couldn’t do what other parents with a normal baby could” (Vieira Fernandes & Batoca Silva, 2015, p112).

Most parents had no confidence in taking care of their infants due to worrying put their infants at risk (Boykova 2016; Sarapat et al., 2017). According to Sarapat et al. (2017), some parents took care of their infants with insufficient skill because lacking prior experience caring for preterm infants, particularly during the first few times. Some parents only provided care under the special guidance of the nurses rather than on their own (Sarapat et al., 2017).

Besides, some parents thought themselves as ‘not being a parent’, which was related to infants’ special medical needs and dependent health professionals decision making (Boykova, 2016). Even some parents thought themselves like nurses and therapists rather than parents (Boykova, 2016).

Parents played passive recipient of medical care and were less involved in decision making in the hospital (Sarapat et al., 2017). So decision making on their own became a challenge for parents at home (Boykova, 2016). One participant pointed out that learning to care for their infants without medical staffs was one of challenges in first months after hospital discharge (Boykova, 2016).

According to Boykova (2016), parents’ guilty about giving preterm birth contorted parental role, influenced their mental health and their ways of caring for their infants. Parents tended to be overprotective and put a lot of effort into raising infants...
(Whittingham et al., 2014). Even some parents tended to give their infants everything they wanted (Boykova, 2016).

### 3.2.2 Feeding challenges

Some parents thought breastfeeding as the greatest challenge for them, specifically not producing enough breast milk (Boykova, 2016). Parents chose to eat some specific foods so as to produce enough (Sarapat et al., 2017). Some parents also decided to use the nipple shields or pump but they couldn’t latch properly even caused the symptoms like mastitis (Boykova, 2016). Besides, some parents faced the difficulties and bewilderments whether compel infants to suck (Sarapat et al., 2017).

According to Boykova (2016), feeding them was the other enormous challenge parents met. Some parents referred that infants could happen severe reflux and could not tolerate formula when feeding. Some parents also mentioned that feeding was persistent challenge for them. One participant said “…But for whatever reason, he just didn’t get enough from it, and we have had to supplement him almost all of the time. Now at 6 months adjusted, we are accepting that he doesn’t get enough from it and are moving to formula and using up the last of the frozen pumped milk” (Boykova, 2016, p60).

### 3.3 Supports that parents received and supports that parents needed

#### 3.3.1 Supports that parents received

Support was got by parents of preterm infants from various sources, including healthcare professionals, other parents of preterm infants, policies and the rest of their community, which included their family, friends, and workplace (Yang et al., 2017).

Support from healthcare professionals was considered to play an important role by parents (Vieira Fernandes & Batoca Silva, 2015), especially nurses were believed to be significant role models (Toral-López et al., 2016; Aydon et al., 2017; Steyn et al., 2017). When meeting difficulties, good communication with the healthcare professionals was good for addressing both informational and emotional needs of parents (Osorio Galeano
et al., 2017). First, health professionals were informants. In the hospital, health professionals provided information and updates on their infants’ conditions to parents (Yang et al., 2017). Besides, some parents mentioned that they received much information about caring for preterm infants when preparing to go home (Aydon et al., Osorio Galeano et al., 2017), such as provision of educational materials (Osorio Galeano et al., 2017). Second, health professionals were emotional supporters. Family atmosphere that they created was emphasized by parents (Toral-López et al., 2016; Vieira Fernandes & Batoca Silva, 2015), and they dealt with parents’ emotional needs and provided emotional support (Toral-López et al., 2016; Yang et al., 2017). Moreover, after discharge, some parents also referred that they still got comfort from nurses when meeting difficulties though telephone after discharge (Osorio Galeano et al., 2017).

Acquiring emotional support from other parents of preterm infants was also a good source of support for some parents (Yang et al., 2017). They often communicated and shared their feelings, supported and encouraged each other (Vieira Fernandes & Batoca Silva, 2015; Osorio Galeano et al., 2017).

According to Sarapat et al. (2017), policies implementations including parental involvement policy and employee leave policy allowed parents to involve in infants’ care. Parental involvement policy facilitated bonding with infants and the developments of infants, such as the Baby-friendly Hospital Project. Besides, in accordance of the national Labour Protection Act in Thailand, female employees had long maternity leave and fathers also had time to handle family affairs every year, which enable them to involve in caring for infants.

Support from the rest of their community was also equally significance and actually, parents of preterm infants received much support from them (Yang et al., 2017). First, family support was stressed by parents of preterm infants (Vieira Fernandes & Batoca Silva, 2015), particularly support from grandmothers (Sarapat et al., 2017). Some parents said that family support gave them strength to cope with this experience (Vieira Fernandes & Batoca Silva, 2015). And family support was embodied in offering information and emotional support and doing housework (Sarapat et al., 2017). Second, for fathers, support from workplace was especially significant (Yang et al., 2017). A participant said
“...for my husband’s office also, they would say that if you are coming in late sometimes, because you have to go to the hospital...it was okay...” (Yang et al., 2017, p269).

### 3.3.2 Supports that parents needed

Parents of preterm infants mostly reported the supports that they received were positive, but some parents still expressed their own needs and suggestions about informational and professional support and emotional support so as to hope to get better support (Aydon et al., 2017; Yang et al., 2016; Boykova, 2016). These needs would render into valuable advice to improve support for parents (Yang et al., 2016).

#### Informational and professional support

In terms of informational needs, parents’ requirements were mainly reflected in their desire to obtain some relevant information and their requirements for the quality of information obtained. In the hospital, parents hoped to get information about their infants’ conditions at any time (Aydon et al., 2017). Meanwhile, parents desired to obtain some information about caring for preterm infants and resources and some of them advised to give a brochure with new additional information about support needs and development of preterm infants (Yang et al., 2017). Boykova (2016) mentioned that the learning needs of parents included specific techniques such as administrating medications, feeding and managing equipment. When preparing to go home from hospital, parents expressed their hope for acquiring much information regarding the discharge process and health care staffs giving them more notice and better plans about discharge (Aydon et al., 2017). In addition, about consistency in given information were parents strongly expressed desire (Aydon et al., 2017; Toral-López et al., 2016; Boykova, 2016). According to Toral-López et al. (2016), parents expressed their desires for standard care regimens about treatment of preterm infants.

In the study of Boykova (2016), one of the salient demands of parents for health professionals was that being specialists, having knowledgeable and better coordinating the care for their infants. Some parents wanted health care professionals to get back their questions in time and use the latest knowledge to care for infants (Yang et al., 2017).


**Emotional support**

Obtaining emotional support was a significant need identified by parents (Toral-López *et al.*, 2016). Their emotional needs included being close to their baby, tearing off the labels of their infants as ‘preemie’, being listened and releasing feelings (Sarapat *et al.*, 2017; Boykova, 2016; Toral-López *et al.*, 2016). According to Sarapat *et al.* (2017), as parents, most parents desired to be close to their preterm infants and wanted to perform their parental role by taking care of infants including in changing diapers, breastfeeding and spoon feeding. Parents had to touch and care for their infants in a hurry while visiting hours arrived so as to looking for occasion to participate in caring for infants. Even a part of parents wished that stayed and looked after infants in NICU. Besides, according to Boykova (2016), parents hoped that health professionals could tear off the labels of their infants as ‘preemie’ and regard their infants as unique or even normal. Meanwhile, parents wished their thoughts to be carefully listened by health care professionals when they met. Besides, some parents expressed hope for finding a place to release innermost feelings and identify their complex emotions like anger (Toral-López *et al.*, 2016).

**3.4 Positive coping**

Parents took various steps to cope after having preterm infants (Wakely *et al.*, 2010; Yang *et al.*, 2017; Sarapat *et al.*, 2017). Positive and optimistic coping was especially strong theme for parents (Wakely *et al.*, 2010). Parents tried to focus positive aspects of preterm infants to gain emotional strengthen (Yang *et al.*, 2017; Wakely *et al.*, 2010), such as focusing on the progressively health improvement of them (Yang *et al.*, 2017). Besides, in the study of Yang *et al.* (2017), parents frequently eased their emotions through close contact with their infants. Just as one participant described that providing kangaroo care for her daughter was beneficial to her daughter as well as herself. Furthermore, Sarapat *et al.* (2017) also mentioned that parents relieved negative psychological feelings when they bonded with their infants through breastfeeding. Besides, parents regarded holy idols as spiritual pillar and prayed to desire their infants to be healthy to help get through the bad time (Yang *et al.*, 2017; Sarapat *et al.*, 2017).
4. Discussion

4.1 Main results

The results were divided into four themes based on 10 articles which were related to parents’ experiences of having a preterm infant. Four themes were: feelings of parents of preterm infants (physical aspects (sleep problems and fatigue), feelings on social routines, psychological feelings), difficulties and challenges met as roles of parents (difficulties of grasping the roles as parents, feeding challenges), supports that parents received and supports that parents needed (supports that parents received, supports that parents needed), and positive coping.

4.2 Result discussion

4.2.1 Feelings of parents of preterm infants

After having preterm infants, parents had different feelings compared with previous lives. After discharge, due to the busy work of caring for preterm infants, parents felt sleep-deprived and fatigue physically. As Marthinsen, Helseth and Fegran (2018) mentioned that most parents of preterm infants thought their sleep experiences like soldier in combat, which was due to lots of tasks of taking care of preterm infants.

Parents also had their own deep feelings on social interaction which including feeling isolation, having trouble in sharing feelings and misunderstanding from others. Misunderstanding infants’ conditions from family and friends increased their sense of isolation and difficulty in sharing feelings. Besides, Coppola, Cassibba, Bosco and Papagna (2013) found that a sense of anger from fathers and a sense of guilty from mothers could delay in sharing their own feelings.

The births of preterm infants also caused psychological hit to parents. Due to the stereotype that preterm infants were more vulnerable than full-term infants and preterm infants needed to be in NICU, a series of psychological feelings were came out by parents, such as unexpected, fear, uncertain and sad. In addition, when parents could take their infants home, their hearts were ambivalence because along with joy, they also doubted
their ability to take care of them and feared the recurrent diseases of preterm infants. Similar result can be found in Wraight, Mccoy and Meadow (2015), some parents feared of losing their infants and felt uncertain about their infants’ condition, and this fear expressed by parents was actually related to this uncertain feeling about the baby’s condition. And parents also felt overwhelmed and high levels of stress as a result of seeing their infants receive treatments in NICU. They also concerned about going home to care for their infants.

Family-centered care theory has been defined by some authors as giving children and their families professional support by engagement and sharing (Hostler, 1991). Support groups positively affected communications between parents and health care professionals, coping of parents, and parent-infant interactions (Gooding et al., 2011). So nurses can establish support groups which invite some parents of preterm infants to provide a pathway of communication for parents (Gooding et al., 2011). During the process of communication, they can also pour out their feelings which including physical, psychological and social aspects to someone who have same experiences of having preterm infants. And from communicating with other parents of preterm infants, parents also can get some experience about caring for preterm infants, getting along with people in social routines and get some great methods of easing psychological feelings (Gooding et al., 2011).

4.2.2 Difficulties and challenges met as roles of parents

Parents of preterm infants found their roles as parents were more difficult than those parents of normal full-term infants, which made it difficult to grasp the parental roles. As Fegran and Helseth (2009) mentioned that being parents of preterm infants deviated them from their expected and imagined parental role, so that it became difficult to grasp later. This review presented that parents had some difficulties to connect with their infants at first, and they also were not ready to become parents. They lacked confidence about caring for their infants so that they relied on health care professionals about caring for their infants. As Turner, Winefield and Chur-Hansen (2013) mentioned that most parents relied on the health care professionals to care for their infants in the hospital. Research also found this reliance on health care professionals made their decision making impair and made them thought themselves as ‘not being a parent’. As Gibbs, Boshoff and Stanley
(2015), parents reported they experienced that delayed in the role of their parents and took long time to think of themselves as parents. Besides, this review mentioned that because preterm infants were special compared to normal full-term infants, parents tended to be overwhelmed while caring for preterm infants. Out of guilt for their infants and fear of their infants getting hurt, parents often overprotected and coddled their infants.

In addition to having difficulty navigating their role as parents, parents also found it difficult to provide specific care. Among them, feeding was seen as one of the important challenges. This review reported some specific problems in breastfeeding, which included under-supplying of breast milk, proper breast locking, nipple and breast problems, which was consistent with the study (Ikonen et al., 2015). Besides, Ikonen et al. (2015) also mentioned that other problems in breastfeeding, such as positioning, and coordination at the breast, poor milk transfer and so on. Feeding was a persistent challenge for parents. Turner et al. (2013) mentioned that gradually teaching their preterm infants to suck milk from breast or bottle and learning to care for a feeding tube was a challenge for parents who must make their own feeding plans.

According to family-centered care theory, one of major components is the partnership that forms between the family and health care team to make sure that the care provided facilitates personalized care for the child and keeps family unity (Cartagena, Noorthoek, Wagner & McGrath, 2012). Nurses should cooperate with parents to assist them face the challenges and difficulties together and support them in the challenges and difficulties (Adams et al., 2015). Nurses are supposed to provide some information about parenting preterm infants and help them build up confidence (Adams et al., 2015). Besides, encouraging parents participate in decision making about caregiving of preterm infants in the hospital is of vital importance (Adams et al., 2015).

### 4.2.3 Supports that parents received and supports that parents needed

This review stated that supports were vital importance for parents and parents got supports from a variety of sources. The support from health care professionals all played an important role in every stage of parenthood of preterm infants. Health care professionals were the most reliable source of information about preterm infants, and in terms of emotional support, they also provided comfort to parents (Yang et al., 2017). As Gibbs et
\textit{al.} (2015) mentioned that nurses increased parental familiarity with infants by helping parents gain confidence and create comfort and support parents in caregiving and support from nurses helped parents coping.

Other parents of preterm infants were also regarded as significant source of support. Parents often communicated with other parents of preterm infants to obtain the information and emotional comfort. As Aliabadi \textit{et al.} (2014) mentioned that sharing information with other parents of preterm infants as a significant and valuable part of practice interventions on preterm infants.

This review stated that family members played a significant part in the support of parents, and most parents took care of their infants with help of grandmothers of preterm infants. As Gibbs \textit{et al.} (2015) mentioned that grandparents of preterm infants who were thought as key sources of support took a series of responsibilities like providing emotional support.

Meanwhile, the results of this review also clearly indicated their needs for support in the informational, professional and emotional aspects as parents of preterm infants. And these needs that some parents expressed would make supporters give the further supports more targeted, so that could improve care for parents. In the aspect of information, they wanted health professionals to provide information about the preterm infants’ current situation, care and development needs, which was consistent with the study (Jones, Taylor, Watson, Fenwick & Dordic, 2015). Jones \textit{et al.} (2015) mentioned that parents desired to know everything about their preterm infants like their condition and progress. Some parents were perplexed as result of the apparent lack of information in the first few days at the hospital, and they didn’t know how to take care of their infants (Aydon \textit{et al.}, 2017). As Mousavi \textit{et al.} (2016) mentioned that providing parents continuous and appropriate information about preterm infants’ conditions could make sure that parents became more proactive partners in caring for their infants. This review identified that parents hoped health professionals could improve their professional levels to caring their infants, at the same time, parents wanted health care professionals could provide consistent information to them. Guillaume \textit{et al.} (2013) also stated that the consistency of communication has always been considered as is significant. So healthcare professionals should develop consistent information based on standards.
Emotional needs of parents of preterm infants were strongest when their infants were in the NICU. In particular, most parents wanted to have access to their infants because they were eager to play the role of parents. This strong desire for close contact with their infants and wish to care their infants were generally liked to the parental attachment to infants, which started at pregnancy and kept going after birth (Sarapat et al., 2017). This finding was consistent with the study (Flacking, Thomson & Axelin, 2016). As Mousavi et al. (2016) mentioned that in Iran, the need to be close to babies came first for parents of preterm infants. In addition, this review stated that parents wanted health professionals to care about them, communicate with them and listen to their feelings. As Jones et al. (2015) mentioned that using language that showed ‘genuine respect’ ‘goodness’ and ‘sensitivity’ for parents was considered important by both parents and nurses, and nurses who were ‘empathic’ and were good listeners were very valued.

The family-centered care theory mentioned that when providing support for parents, being able to listen to parents’ suggestions and needs might make it easier for parents’ coping (Davidson et al., 2017). Hence, when social groups provided support to parents, nurses should act as a guide to help them to know about needs and thoughts of parents of preterm infants so as to provide better help to parents of preterm infants (Shelton & Stepanek, 1995). When nurses provided supports to parents, they also should know parents’ needs and suggestions at first (Shelton & Stepanek, 1995).

4.2.4 Positive coping

Parents of preterm infants used various positive coping methods to try to alleviate their negative psychological feelings and adapt to the life changes brought by having preterm infants. Research stated that coping with optimistic was the general way adopted by parents, such as focusing on the positive aspects of their infants, interacting and bonding with infants by breastfeeding and providing kangaroo care. Similar result can be found in Aliabadi et al. (2014), some parents used some confront strategies to face this stressful condition, such as trying to stop thinking to the possibility of their infants’ death and disability, shifting their attention from negative aspects to positive aspects of the condition of their infants, using emotional expression to reduce negative psychological
feelings like “crying” and complaining to staff including physician and nurse. Besides, this review mentioned that to reduce negative psychological feelings, some parents of preterm infants often prayed to god for the health of their preterm infants. Similar result can be found in Wraight et al. (2015), some parents of preterm infants were very dependent on god to cope and firmly believe that god could be in control of their infants’ health.

The family-centered care theory mentioned that nurses should realize that having a preterm infant has significant impact on parents (Davidson et al., 2017). They got through a lot of struggles and pain that most parents having normal full term infants could not imagine. So when parents took measures to adapt to the change of life, nurses should still help them, communicate more with them so that parents can smoothly get through the experiences. For example, when parents of preterm infants providing kangaroo care to coping, they should offer the knowledge and information of kangaroo care and teach parents some essential skills of kangaroo care.

4.3 Method discussion

According Polit and Beck (2017), a review is an evidence-based summary of research question and requires a comprehensive retrospect of previous studies. This review could provide readers a skeleton about parents’ experiences of having a preterm infant.

Specific, rigorous and clear inclusion and exclusion criteria to choose articles were identified by the authors to made the the process of article screening more reasonable and improve the accuracy of this study. However, these selection criteria might also cause some limitations. First, one of criterion of selecting articles was that articles must be published between 2008 and 2018, which might cause authors to miss some of the better articles that were published before 2008. Second, one of selecting criterion was that the articles were published in English, which might make authors miss some very important articles that were written in other languages. And because native language of the authors is Chinese and not English, some meanings of sentences in the articles that they selected may be not well understood and even misunderstood by the authors. Third, another limitation was that articles only were selected from two databases which including
PubMed and CINAHL, so that the authors may miss relevant, useful and great articles that were in other databases.

The aim of this study which was a descriptive review was to describe parents’ experiences of having a preterm infant. And the results were based on qualitative studies that accord with aim of this study. According Polit and Beck (2017), qualitative studies seem be a great choice to conduct a review which aim was to describe a person’s experience of something.

According to Polit and Beck (2017), the authors searched articles in two different databases which including PubMed and CINAHL to ensure the reliability of results. It included many articles related to parents’ experiences having a preterm infant. The authors used MeSH terms, Headings, Synonym and free texts, and the Boolean search operator “AND” and “OR” was used to combined the search terms which included parents, Infant, Premature and experience, view and perception so as to get more articles that were in line with the aim of this study (Polit & Beck, 2017).

Before writing the results, the two authors did not communicate with each other and respectively read the articles that they chose, and objectively and independently thought about the contents of articles and reflected these contents without any personal views and subjective feelings. Then the authors started to discuss and summarize the contents of selecting articles.

As for the strength of this review, the interviewees of the selected articles included fathers and mothers so that the result of this review about parents’ experiences of having a preterm infant was more convincing. Besides, the authors provided a comprehensive description from multiple aspects for readers to understand the parents’ experiences of having a preterm infant.

As for the limitation of this review, first, there were no way to know the difference of experiences between the fathers and mothers. Second, in selecting articles that were applied to the results, male participants were far less than female participants.
4.4 Clinical implications for nursing

The results about parents’ experiences of having a preterm infant of this study showed that parents experienced physically fatigue and sleep deprivation, had many psychological and social negative feelings. Therefore, nurses should provide some skills about parenting for preterm infants to parents so that they can smoothly care for their infants, which can reduce their feelings of fatigue and sleep deprivation. Meanwhile, nurses should talk with parents’ friends and family members about preterm infants, try to make them understand the parents of preterm infants and also encourage parents to communicate with others so as to alleviate their negative social feelings. Besides, nurses should care, understand and comfort parents and carefully listen to their psychological feelings. Parents also encountered many difficulties and challenges when they played parental roles. Nurses should provide some knowledge and information about taking care of preterm infants to help parents overcome difficulties and challenges met as roles of parents, such as providing some information about feeding. Meanwhile, nurses should encourage parents participate in decision making about caregiving of preterm infants when preterm infants in the hospital (Adams et al., 2015). Parents also longed for some informational and emotional supports, hence, nurses should be aware of parents’ needs and give them the support they needed (Davidson et al., 2017), such as providing some information about preterm infants’ current situation, care and development, offering some emotional support like comforting.

4.5 Suggestions for further research

In most of the selected articles, parents of preterm infants were interviewed only once. Interviewing the parents many times and during longer time (repeated and longitudinal studies) can better know and understand their experiences. In the process of research, the authors found that there were few reviews about research questions of the present study in the database. However, in order to further improve nurse’s opportunities to provide high-quality care to populations affected by preterm birth, research from the perspective of parents is desirable and importance. Meanwhile, it will also be interesting to conduct studies which also include the grandparents so as to better understand their challenges, difficulties and needs as parents of preterm infants. In addition, there were few studies at
home and abroad on the experiences of parents who already have one or more children give birth to preterm infants, but this direction is worth exploring and studying for follow-up scholars.

5. Conclusions

Parents of preterm infants experienced many difficulties and challenges, experienced fatigue and sleep deprivation and many psychological feelings and social feelings. They got many supports in this experience. Simultaneously, some parents still expressed specific needs for supports in order to hope to get better supports. Additionally, parents also positively coped to adapt to the influence brought by having preterm infants. Meanwhile, nurses play a significant part in helping parents get out of this experience and better adapt this reality through providing informational and emotional supports.

References


# APPENDIX Ⅰ

## Table 2. Overview of selected articles.

<table>
<thead>
<tr>
<th>Authors and year/country of publication</th>
<th>Title</th>
<th>Design (possibly approach)</th>
<th>Participants</th>
<th>Data collection method(s)</th>
<th>Data analysis method(s)</th>
<th>Study code</th>
</tr>
</thead>
</table>
**Age:** Age between 32-36  
**Gender:** female and male parents with preterm infants who were hospitalized in a Singapore-based neonatal intensive care unit | Semi-structured, in-depth interviews using an interview guide (face-to-face interview).  
Length of interview: not mentioned  
The interviews were audio-recorded and transcribed verbatim. | Thematic analysis | A |
<table>
<thead>
<tr>
<th>Boykova, M.</th>
<th>Life After Discharge: What Parents of Preterm Infants Say About Their Transition to Home</th>
<th><strong>Number:</strong> 52 participants. <strong>Age:</strong> Participants’ mean age was 34.2 (age between 20-47 years). <strong>Gender:</strong> female and male</th>
<th>The study was conducted online using the Survey Monkey® Web platform. The survey consisted of 11 questions.</th>
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</thead>
<tbody>
<tr>
<td>Year of publication: 2016</td>
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<td>Country: USA</td>
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<tr>
<th>Whittingham, K., Roslyn N., Boyd, R.N., Sanders, M. R., &amp; Colditz, P.</th>
<th>Parenting and Prematurity: Understanding Parent Experience and Preferences for Support</th>
<th><strong>Number:</strong> 18 participants. <strong>Age:</strong> Participants’ mean age was 36.89 <strong>Gender:</strong> female and male</th>
<th>Focus group interviews Thematic analysis</th>
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<tbody>
<tr>
<td>Year of publication: 2014</td>
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<tr>
<td>Country: America</td>
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The interviews were recorded and transcribed verbatim.
A descriptive exploratory design/ A qualitative approach.

**Number:** 8 participants.

**Age:** Age were 30-40.

**Gender:** female and male

Eight parents, four married couples, four mothers and four fathers with premature babies in an ICU in a private hospital in Johannesburg, Gauteng, South Africa.

in-depth phenomenological interviews and take field notes

Thematic analysis

Length of interview: not mentioned

The interviews were audio-taped and transcribed verbatim
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Design</th>
<th>Number</th>
<th>Gender</th>
<th>Country</th>
<th>Methodology</th>
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</thead>
<tbody>
<tr>
<td>Wakely, L. T.,</td>
<td>Stoic survival: the journey of parenting a premature infant in the bush</td>
<td>A descriptive exploratory design/A qualitative approach.</td>
<td>7 participants.</td>
<td>female and male</td>
<td>Australia</td>
<td>Hermeneutic phenomological approach</td>
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<tr>
<td>Rae, K., &amp;</td>
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<td>Cooper, R.</td>
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<td>Year of publication: 2010</td>
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<tr>
<td>Country: Australia</td>
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<tr>
<td>Parents who care for a premature infant during the first 12 months of the child’s life while living in a regional town in New South Wales, Australia</td>
<td>Semi-structured and separately Interviews with open-ended questions.</td>
<td>Length of interview: 60-90 min</td>
<td>The interviews were audiotaped and transcribed verbatim.</td>
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<tr>
<td>Needs Perceived by Parents of Preterm Infants: Integrating Care Into the Early Discharge Process</td>
<td>Number: 23 participants.</td>
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<tr>
<td>A descriptive design/A qualitative approach.</td>
<td>Semi-structured interviews.</td>
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<tr>
<td><strong>Age:</strong> The mean age of the parents was 34.26 years.</td>
<td>Thematic analysis.</td>
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<tr>
<td><strong>Gender:</strong> female and male Parents of preterm infants who had been treated at the neonatal care unit of the Virgen de las Nieves University Hospital (Granada, Spain)</td>
<td>Length of interview: 35-45 min</td>
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<td>The interviews were digitally recorded and transcribed verbatim.</td>
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<tr>
<td>Author(s)</td>
<td>Title</td>
<td>Year of publication</td>
<td>Country</td>
<td>Methodology</td>
<td>Number</td>
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<tr>
<td>Aydon, L., Hauck, Y., Murdoch, J., Siu, D., &amp; Sharp, M.</td>
<td>Transition from hospital to home: Parents’ perception of their preparation and readiness for discharge with their preterm infant</td>
<td>2017</td>
<td>Australia</td>
<td>A descriptive design/A qualitative approach.</td>
<td>40</td>
<td>The mean maternal age was 29 years (21–42), and the mean paternal age was 32 years (21–43)</td>
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<tr>
<td>Osorio Galeano, S. P., Ochoa Marin, S. C., &amp; Semenic, S.</td>
<td>Preparing for post-discharge care of premature infants: Experiences of parents</td>
<td>2017</td>
<td></td>
<td>A descriptive design/A qualitative approach.</td>
<td>10</td>
<td>The youngest mother was 18 years of age at the moment of the interview and the eldest was 31 years old. No information about the fathers’ age.</td>
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<tr>
<td>Country: Colombia</td>
<td>Gender: female and male</td>
<td>The interviews were audi-recorded and transcribed textually</td>
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<tr>
<td>Perceptions and Practices of Parents in Caring for their Hospitalized Preterm Infants</td>
<td>Parents (mothers or fathers) who had a preterm infant hospitalized in the neonatal unit and who were near the time of discharge.</td>
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<tr>
<td>Sarapat, P., Fongkaew, W., Jintrawet, U., Mesukko, J., &amp; Ray, L.</td>
<td>Number: 27 participants.</td>
<td>In-depth interviews with open-ended questions and the aid of interview guide and take filed notes</td>
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<tr>
<td>Year of publication: 2017</td>
<td>Age: Parents ages between 20-42 years old, the two grandmothers ranged from 52-53, Nurse informants were aged between 24-55 years old.</td>
<td>Length of interview: 20-90 min</td>
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<td>Country: Thailand</td>
<td>Gender: female and male</td>
<td>The interviews were digitally audio-recorded and transcribed verbatim</td>
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<td>Participants were Thai parents who involved in caring for hospitalized preterm infants and also</td>
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</table>
Vieira Fernandes, N. G., & Batoca Silva, E. M. (2015). Parents’ experience during the hospitalisation of the preterm infant. A descriptive exploratory design/A qualitative approach. Number: 12 participants. Age: No information about the participants’ age. Gender: female and male. Participants had to be parents of newborns with gestational ages of less than 34 weeks, hospitalised for more than one month, in the period between 2010 and 2012.

Semi-structured interviews
Length of interview: 10 minutes on average.

The interviews were audio recorded and transcribed verbatim.

Content analysis
Table 3. Overview of selected articles’ aims and main results.

<table>
<thead>
<tr>
<th>Authors and year/country of publication</th>
<th>Aim</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yang, Y. Y., He, H. G., Lee, S. Y., Holrody, E., Shorey, S., &amp; Koh, S. S. L.</td>
<td>To explore the experiences of parents with preterm infants who were hospitalized in a NICU in Singapore.</td>
<td>A1 negative emotions versus positive emotions</td>
</tr>
<tr>
<td>Year of publication: 2017</td>
<td></td>
<td>A2 finding ways forwards</td>
</tr>
<tr>
<td>Country: Singapore</td>
<td></td>
<td>A3 nature of support received from various sources</td>
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<tr>
<td></td>
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<td>A4 need more informational and professional support</td>
</tr>
<tr>
<td>Boykova, M.</td>
<td>To explore and describe the experiences of preterm infants' parents post-hospital discharge.</td>
<td>B1 joy with worry</td>
</tr>
<tr>
<td>Year of publication: 2016</td>
<td></td>
<td>B2 leaning and informational needs</td>
</tr>
<tr>
<td>Country: USA</td>
<td></td>
<td>B3 feeding challenges</td>
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<td></td>
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<td>B4 sleep deprivation,</td>
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<td>B6 schedule</td>
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<td>B7 alter the parental perception of their role as a parents (unconfidence, being not a parent, guilt caused the change of parenting, impaired decision making)</td>
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<tr>
<td>Whittingham, K., Roslyn N., Boyd, R.N., Sanders, M. R., &amp; Colditz, P.</td>
<td>(1) to identify, from the parents’ own perspective, the unique aspects of parenting an infant born very preterm and (2) to assess parent preferences for support including opinions of a new, tailored parenting intervention, Preterm Baby Positive Parenting Program</td>
<td>C1 feel uncertain in the hospital</td>
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<tr>
<td>Year of publication: 2014</td>
<td></td>
<td>C2 parents hope to health professionals’ support</td>
</tr>
<tr>
<td>Country: America</td>
<td></td>
<td>C3 unprepared for parenthood</td>
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<td></td>
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<td>C4 grief</td>
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<td>C5 getting into bad parenting habits</td>
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<td></td>
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<td>C6 isolation</td>
</tr>
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<table>
<thead>
<tr>
<th>Steyn, E., Poggenpoel, M., &amp; Myburgh, C.</th>
<th>To gain understanding of parents’ experiences of having premature babies in an ICU</th>
<th>D1 parents experienced emotions while their premature babies were in the ICU (ill-prepared, traumatized, sadness)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year of publication: 2017</td>
<td></td>
<td>D2 difficulties in sharing feelings with their spouses, other parents of preterm infants, family and friends</td>
</tr>
<tr>
<td>Country: South Africa</td>
<td></td>
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<tr>
<td>Authors</td>
<td>Summary</td>
<td>Themes</td>
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<tr>
<td>Wakely, L. T., Rae, K., &amp; Cooper, R.</td>
<td>To examine parents’ lived experiences of caring for a premature infant during the first 12 months of the child’s life while living in a rural area.</td>
<td>E1 psychological feeling, E2 questing support from others was difficulties, E3 coping through optimism, E4 stoic survival</td>
</tr>
<tr>
<td>Toral-López, I., Fernández-Alcántara, M., González-Carrión, P., Cruz-Quintana, F., Rivas-Campos, A., &amp; Pérez-Marfil, N.</td>
<td>To identify the experiences and obstacles of fathers and mothers of preterm infants during hospitalization and after discharge, who did or did not participate in the Virgen de las Nieves hospital's early discharge program.</td>
<td>F1 a feeling of uncertainty, strong feelings, F2 coping strategies, F3 social support (support from healthcare professionals), F4 need for consistency of information, F5 need a place to release feelings, F6 ambivalent feeling</td>
</tr>
<tr>
<td>Aydon, L., Hauck, Y., Murdoch, J., Siu, D., &amp; Sharp, M.</td>
<td>To explore the experiences of parents with babies born between 28–32 weeks’ gestation during transition through the</td>
<td>G1 feel overwhelmed and scared, sadness, G2 feeling scared and excited (ambivalent feeling)</td>
</tr>
</tbody>
</table>
| Country: Australia | neonatal intensive care unit and discharge to home. | G3 need to get information that they hoped (my need for information changes over time, regarding the discharge process)  
G4 need for consistency of information  
G5 nurses need to understand what they needs are  
G6 support from healthcare professionals  
G7 sleep deprivation  
G8 fatigue |
| Osorio Galeano, S. P., Ochoa Marin, S. C., & Semenic, S. | To describe the experiences of parents of premature children regarding discharge from the neonatal unit. | H1 joy, fright  
H2 facilitators (support) |
| Year of publication: 2017 |  |  |
| Country: Colombia |  |  |
| Sarapat, P., Fongkaew, W., Jintrawet, U., Mesukko, J., & Ray, L. | To explore perceptions and caregiving practices of parents regarding involvement in caring for their hospitalized preterm infants and the socio-cultural influences involved in this. | I1 worrying about the child’s condition and lack of confidence in caring for their preterm babies  
I2 pray to holy idols for their child’s well-being (turning to spiritual faith)  
I3 desire to be close to their preterm infants, long to perform a maternal role, seek opportunity to be involved in caring for their babies |
| Year of publication: 2017 |  |  |
| Country: Thailand |  |  |
I4 attempt to produce enough milk supply, confront problems of breastfeeding
I5 bonding with their babies through breastfeeding
I6 Lack of confidence in providing care for their preterm babies
I7 parental involvement policy, employee leave policy and family support
I8 passive recipient of health care

Year of publication: 2015
Country: Portugal

To identify the feelings experienced by parents at the anticipated birth of a child and demonstrate the influence of hospitalisation on the adaptation to parenthood.

J1 parents’ negative feelings/emotions
J2 constraints to attachment/relationship, impeded the mother/father and child relationship
J3 support received by parents

Table 4. Synthesized finding, categories and findings from the included studies. (Lommi, Matarese, Alvaro, Piredda, & De Marinis, 2015).

<table>
<thead>
<tr>
<th>Synthesized finding</th>
<th>Categories</th>
<th>Study finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feelings of parents of preterm infants</td>
<td>Sleep problems and fatigue</td>
<td>B4 sleep deprivation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B5 fatigue</td>
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<tr>
<td>Feelings on social routines</td>
<td>B6 schedule</td>
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<td></td>
<td>G7 sleep deprivation</td>
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<td>G8 fatigue</td>
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<td></td>
<td>B13 social disruption (social isolation, difficulties in sharing feelings, misunderstanding from others)</td>
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<td></td>
<td>C6 isolation</td>
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<td>D2 difficulties in sharing feelings with their spouses, other parents of preterm infants, family and friends</td>
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<td></td>
<td>E2 questing support from others was difficulties</td>
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<tr>
<td>Psychological feelings</td>
<td>A1 negative emotions versus positive emotions</td>
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<td></td>
<td>B1 (G2, F6) joy with worry (ambivalent feeling)</td>
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<td>Difficulties and challenges met as roles of parents</td>
<td>Difficulties of grasping the roles as parents</td>
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<td>I8 passive recipient of health care</td>
<td>J2 constraints to attachment/relationship, impeded the mother/father and child relationship</td>
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<td>J1 parents’ negative feelings/emotions</td>
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<tr>
<td>Feeding challenges</td>
<td>B3 feeding challenges</td>
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<tr>
<td>I4 attempt to produce enough milk supply, confront problems of breastfeeding</td>
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<tr>
<th>Supports that parents received and supports that parents needed</th>
<th>Supports that parents received</th>
</tr>
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<tbody>
<tr>
<td>A3 nature of support received from various sources</td>
<td>E4 stoic survival</td>
</tr>
<tr>
<td>F3 social support (support from healthcare professionals)</td>
<td>F4 need for consistency of information</td>
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<td>F5 support from healthcare professionals</td>
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<td>G6 support from healthcare professionals</td>
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<td>H2 facilitators (support)</td>
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<tr>
<td>I7 parental involvement policy, employee leave policy and family support</td>
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<td>J3 support received by parents</td>
<td></td>
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<tr>
<th>Supports that parents needed</th>
<th>A4 need more informational and professional support</th>
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<tr>
<td>B2 leaning and informational needs</td>
<td></td>
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<tr>
<td>B10 need professionals having knowledge</td>
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<tr>
<td>F4 need for consistency of information</td>
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<tr>
<td>Positive coping</td>
<td>Positive coping</td>
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<tr>
<td>A2 finding ways forwards</td>
<td></td>
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<tr>
<td>I2 turning to spiritual faith</td>
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<tr>
<td>A9 interacting and bonding with infant</td>
<td></td>
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<tr>
<td>E3 coping through optimism</td>
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<tr>
<td>F2 coping strategies</td>
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</tbody>
</table>

G3 need to get information that they hoped (my need for information changes over time, regarding the discharge process)

G4 need for consistency of information

G5 nurses need to understand what they need are

B9 requirements for the attitudes of health professionals

F5 need a place to release feelings

I3 desire to be close to their preterm infants, long to perform a maternal role, seek opportunity to be involved in caring for their babies