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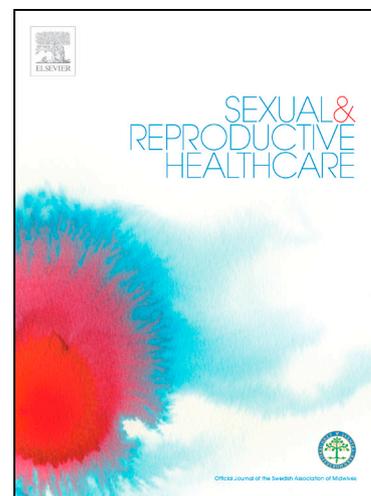
Fathers' experience of starting family life with an infant born prematurely due to mothers' severe illness

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Introduction

Becoming a father is often a happy event: the moment of birth can be exhilarating and might be accompanied by a deepened sense of connection to the newborn infant and partner [1]. However, occasionally, severe illness can force a premature birth. Severe preeclampsia is one condition that often necessitates premature birth, being a major cause of serious illness, long-term disability, and death of both the mother and infant [2, 3]. Severe preeclampsia is characterized by high systolic pressure, pulmonary edema, and/or new-onset cerebral or visual disturbances. HELLP syndrome (hemolysis, elevated liver enzymes, and low platelet count) is the most serious related condition [3]. Because early onset preeclampsia that develops before gestational week 35 tends to progress more rapidly, hospitalization along with the necessary resources for maternal and neonatal intensive care is necessary. The mothers should then be given corticosteroids to increase fetal lung maturity, and birth should be delayed by 48 hours, if possible [4].

Fathers of a premature infant often experience a range of feelings, such as anxiety and fear [5, 6], although many are reluctant to admit these feelings [7]. Deeney et al. [8] reported that fathers often believed it important to appear strong and stoic in such situations. However, Mackley et al. [9] reported that the emotional needs of fathers in the neonatal intensive care unit (NICU) might be neglected.

Studies have shown that maternal health has an impact on how the period after the birth of a premature infant is experienced. Some fathers have reported being afraid of losing both their partner and child [10], and often continue to worry about this possibility after the birth [7, 11]. Furthermore, fathers might find it difficult to choose whether to stay with the infant or partner when the infant transferred to the NICU [12].

The first hours and days after birth are important for establishing the bond between parents and infant [13]. Fathers tended to first focus on the mother [10], and shifted their focus to the infant after the partner had stabilized. These fathers were often the first person to bond with the newborns [11]. Studies have shown that mothers' health might influence fathers' involvement with the infant. If the mothers had poor health after birth, fathers often spent more time with the infant in the NICU, which deepened their involvement with the child [14]. Fathers' pattern of involvement with the child in the NICU can be divided into three

groups: those whose involvement is equal to mothers', those who considered the mother more important than the father, and those who were reluctant to become involved. A characteristic of the first group was that the mother was unwell after birth. These fathers spent much of their time in the NICU, when the mothers were unable to do so [15].

Provenzi and Santoro [16] found that fathers who were involved with their child in the NICU used two major coping strategies: hiding from their own feelings and returning to work. Pohlman [17] similarly found that the fathers of preterm infants tended to prioritize work and acted as observers in infant care rather than as active participants. According to Feeley et al. [14] fathers' various other life responsibilities—such as housework, caring for older children, work, and supporting their partners—hindered their involvement in the care of the newborn in the NICU. The factors that promoted their involvement in this care were physical contact and a desire to bond with the infant. Wigert et al. [18] also found that the need to care for other children at home could hinder fathers' involvement with the preterm infant in the NICU. However, in further support of the findings mentioned previously, mothers' poor postpartum health caused fathers to be more present in the NICU.

Serious preeclampsia often forces a premature birth to save the mother's and infant's lives. In these cases, the beginning of family life is characterized by the mother's severe preeclampsia and the infant's prematurity. Although there have been studies focusing on fathers' experiences in the NICU, including after a premature birth, few studies have included mothers' health in the puerperium as an additional contextual factor. Thus, the aim of this study is to describe fathers' experience of starting family life with an infant born prematurely out of necessity to save the mother's and infant's lives due to mothers' severe preeclampsia.

Method

We used a descriptive, qualitative design, and explored the phenomenon of interest using Dahlberg et al.'s reflective lifeworld research (RLR) [19]. RLR focuses on individuals' "lifeworld"—namely, the world that we experience through our bodies. It is based on phenomenology, in particular the philosophies of Edmund Husserl and Maurice Merleau-Ponty. The goal of RLR is to reveal the study phenomenon and thereafter describe it in a clear and understandable way. Here, the "phenomenon" refers to the fathers' experiences. Phenomenology's concept of "bracketing" is called "briding" in RLR. More specifically, the researcher must be open, respectful, and sensitive, as well as attentive to the material of interest. While it is impossible to set aside all presumptions, the researcher must be as critical

and reflective as possible. The purpose of “bridling” is to slow down the analysis process to permit the appearance of the phenomenon during the researcher’s search for meaning [20].

Sample/data collection

Participants comprised a convenience sample [21] of six fathers whose partners had preeclampsia resulting in premature birth. The aim of a phenomenological study is to achieve deep knowledge of the research question, and thus the number of informants is unimportant so long as deep knowledge is achieved [22]. A rich variation in data will lead to a comprehensive understanding of the phenomenon and is as important as the number of informants [19].

Inclusion criteria were as follows: being the partner of a woman suffering from severe preeclampsia that led to delivery before gestational week 34, living together with the woman, and understanding and speaking Norwegian. Exclusion criteria were the death of the infant and having a partner with a chronic illness. The fathers were recruited from three university hospitals and one regional hospital in different areas of Norway (Table 1). They were recruited by midwives or nurses at the maternity wards or in the NICUs. To obtain a comprehensive description of the experience, including the infant’s stay in the NICU, all informants were interviewed twice. Some informants expressed a variety of experiences in the two interviews; others more or less confirmed the first interview. The first interviews were performed between 6 and 24 days after delivery, while the last interviews were conducted around discharge from the NICU (4–22 weeks post-partum). The differences in interview time were due to differences in the conditions of the mother and / or infant. The first author conducted the interviews, recorded, and transcribed verbatim. The data collection was performed from July 2013 to March 2014.

The interview guide had a very open initial question: “Please describe, in as much detail as possible, how you have experienced becoming a father to premature infant, while your partner was seriously ill”. Some examples of follow up questions included: “Do you think that the mother’s illness has influenced the experience of having a premature infant?”, “How has this experience influenced you in becoming a father?” “How have you experienced the time in the NICU?” The following themes were also of interest: “To become a family”, “Experiences with mother and the infant”, “To become acquainted with the infant”. All of the fathers could initially be together with the mother and infant on a daily basis after birth. They had taken parental leave from work for a period ranging from several days to several months. The Norwegian social security policy [23] entitles fathers’ to have parental leave from work depending on the infant’s condition. In this case, the fathers’ leave lasted as long as the infant needed respiratory support. Three of the fathers were staying with the mother at the hospital

or at a hotel connected to the hospital, while the remaining three were staying at home. When mother and / or infant were stable, two of them had to leave mother and child in order to go to work. All of them practiced skin-to-skin care.

Data analysis

The analysis was conducted according to Dahlberg et al. [19]. Initially, to obtain an overview of the data all of the interview transcripts were examined carefully. Both interviews for each informant were read together. Then, so-called meaning units were differentiated. The emerging meanings and thoughts related to these meanings were noted alongside the interview text. Meanings that appeared to be related were placed into contemporary clusters. Patterns of meaning were then searched for by examining how the clusters were associated with each other. The constant shifting of attention between the clusters and specific details led to the emergence of the phenomenon of interest. "Bridling" was used to keep the clusters flexible and avoid defining meanings too quickly. In this way, the phenomenon gradually emerged. The findings will first be presented as an essential structure of meanings; afterwards the various constituents of this structure will be described in order to elucidate the variations and nuances of the phenomenon (Table 2).

Ethical considerations

The Regional Committee for Medical and Health Research Ethics West, Norway approved the study. The study followed the principles of the Declaration of Helsinki [24]. The informants received a written explanation of the study purpose, after which they gave their written informed consent. They were also informed of the opportunity to use the existing follow-up services, like consulting psychologist or priest at their hospitals.

Findings

Essence of fathers' experiences

The essence of the fathers' experience of establishing a family with a seriously ill mother and a premature infant can be described as a process of becoming a family through reflection about life and death in a context of separation.

Fatherhood began with worrying about the mother's severe condition and the birth of the premature infant, which manifested as reflection on existential issues. Although not all of the fathers subjectively perceived the situation to be a life threatening one, they all knew that the birth was necessary to save both the mother's and the infant's life. For some of the fathers,

the first days or weeks of post-partum life were characterized by anxiety about the mother's or infant's health.

In this situation, the father initially was the only means of connecting the family. In other words, they found themselves as the point of connection between the mother, premature infant, and any older children. Mothers were at first too ill to visit or take care of the infant. Furthermore, if the couple had older children, the father had to take care of them as well as their partners and the infant in the hospital.

The relationship with the infant developed from a sense of estrangement into affection. Both the mother's condition and the NICU setting influenced the process of closeness and affection towards the infant, and the fathers ended up being the first to engage in skin-to-skin contact with their infants because the mothers were unable to do so.

Finally, fathers needed to acquaint themselves with the newborn infant in an unfamiliar setting—namely, the NICU. Some perceived the lack of privacy in this setting as challenging, whereas others adjusted well and found it reassuring to have the staff around. By the time the infant were discharged from the hospital, fathers had learnt to know their infants.

The following constituents are describing and elucidating the phenomenon: (1) starting fatherhood while facing existential issues; (2) connecting the family together; (3) becoming familiar with the infant; and (4) becoming a father in a public area.

Starting fatherhood while facing existential issues

All fathers experienced that birth was necessary to save mothers' and infants' life. The degree of acuteness varied as some mothers were hospitalized and both the mother's and infant's condition were carefully monitored. Nevertheless, they all recognized the seriousness of the situation, reflecting on how preeclampsia could result in the death of both mother and infant. One father, who had older children, experienced the birth of his infant son as very different from earlier childbirths:

“The focus was quite the opposite compared to a normal birth. Now the focus was on her; on saving her life and only that... twice I thought that we were about to lose the boy and several times I was uncertain whether she [my partner] would survive.”

Both the mother's and infant's conditions triggered thoughts about the possibility of their deaths. The infant's forced premature birth had made the start of that infant's life exceedingly complicated. One father avoided trying to plan for more than one day at a time. He thought about all of the possible outcomes, and found that very useful:

“I took a night to think through what might happen. The thoughts [I had] were sad. [But] I let myself think through all of the thoughts that I really did not like, as I am a very positive person. When the serious thoughts came, I did not try to push them away. I think I benefited from this.”

One strategy was to focus on the fact that the mother and child survived, rather than on any possible negative outcome. One father who was unable to be together with his partner during the birth of the premature infant because of the acuteness of the preeclampsia expressed his experience in this way:

“All I knew was that she was sent in an ambulance with sirens, so I am forever grateful that both of them are well...I don't want to spend energy on thinking of what could have happened; I would rather concentrate on what I have”

Having earlier experience with preeclampsia and premature birth made the experience more manageable for some fathers. However, to experience the partner suffering because of the illness was upsetting.

Connecting the family

Because the mothers initially were unable to be together with their infants, the fathers had to establish contact and become affectionate towards the newborn before the mother. This generally began just after birth; it could be difficult to choose between staying with the ill mother or with the newborn infant, as one father said:

“Where should I stay? I was running back and forth between them for two days. It was not an ideal situation.”

The fathers could also be a point of connection between mother and infant; such as by telling and giving information about the infant, bringing news and pictures. The fathers could have a seriously ill wife and an unstable newborn infant. As one father reported:

“I was visiting him; some small pit stops, to see that he was stable and OK... my focus was on her from when the pain started that night and until she was discharged from the ICU.”

When mothers needed days or weeks to rehabilitate, the fathers had to care for and support their wives and their newborn infants.

Fathers also helped connect the family when the couple had older children. When they did not have leave from work any longer, fathers took on the dual tasks of work and caring for their older children, which could be demanding for some. On the other hand, fathers reported

that when the mother had to be in the NICU, she found it difficult to be away from the rest of the family:

“She feels guilty because I have to take care of everything at home. I think that it has bothered her. She cannot take part in many things in regarding the older kids and show them that she cares”.

Becoming familiar with the infant

The fathers all established contact with their infants immediately after birth. If their infants were stable, the fathers held them skin-to-skin. The mother's serious preeclampsia influenced the time that they could spend with the newborn:

“If it had been a normal birth, I would have followed her until the infant was born, then it would be over and she would be able to participate in the care of the little infant who just had been born. Now he was, because of his mother's condition, not prioritized for a couple of days. It was very far from what I thought I would experience.”

The acuteness of the birth and the infant's prematurity influenced the fathers' first meeting with their newborn. The first meeting could be seeing the newborn that was wrapped in a plastic bag just after delivery. Furthermore, fathers perceived a feeling of physical distance from the infant due to the incubator and the medical equipment attached to the infant:

“...I was the first to hold her. Anyway, they are lying in the incubator continuously. You can look at her, but you don't get acquainted with her.”

This could be an obstacle in establishing an affectionate relation towards the infant. However, as one father realized, as time passed, that even though his infant slept most of the day, it was necessary for the parents to be with their infant.

Although they continually wished, for the infant's sake, that he or she had been born at term, the fathers ultimately adjusted to the fact that their infants were born preterm.

Furthermore, some fathers were prepared for the prematurity of the birth, because their partners had exhibited symptoms of preeclampsia and were admitted to the hospital before the birth. One father, whose infant daughter had been very premature, mentioned that he was affectionate toward his daughter from the first day:

“No; [I was] not afraid to become fond of her; I thought she deserved it. After all, she was our infant and it would be very sad to lose her. I think I would have regretted if I had not allowed myself to love her if anything serious had happened. I loved her with all of my heart from the first moment.”

In this way, the relation between the fathers and their infants developed from estrangement into affection. When the infants were stable, the fathers began developing their relationship with their infants via skin-to-skin contact. This helped them learn how to handle the premature infants' small bodies. They became used to the infants' breathing problems and the noise of the alarms, and appreciated when the infants were free of any medical equipment. Ultimately, the skin-to-skin contact that fathers practiced with their infants helped them learn about their infants and the infants' personalities.

Becoming a father in a public area

Because their infants had to remain in the NICU, fathers had the experience of needing to develop into fathers in a public arena. The NICU was where fathers first learned how to care for their premature infants. It did not matter if the fathers had older children, as the premature infants needed special care, which the fathers needed to learn. Fathers for whom the premature infant was their first found that their infants' prematurity and stay in the NICU had actually made the transition to fatherhood easier to handle. They were happy that the hospital staff was there to guide them. They obtained the opportunity gradually to learn the necessary skills to care for the infants.

One father reported that this was his second experience with the NICU as his wife had suffered from preeclampsia earlier. He perceived the stay and experience as having a clear routine without surprises:

“It is a routine (laughs). It would have been easier if the infant were term. Anyway, it is this I am accustomed to.”

The NICU setting could be challenging when establishing a new family and in the unfamiliar setting the fathers could feel distant from their infants. Due to the circumstances, the NICU was regarded to be the best place to stay. One father emphasized that although the process of becoming a family had started, the NICU environment was not the ideal place for this to occur:

“This is not the way it is supposed to be. Anyway, the alternative might have been that neither he nor she had been here. From that perspective, we are very happy that we eventually can try to become a family. We feel that we are starting to become a family, but in an unnatural setting.”

During some activities (e.g., practicing skin-to-skin care), fathers felt somewhat differently about the proximity of the staff and other parents. Privacy was challenged even

when sitting behind the screens. One father was disturbed the first time that he held his daughter skin-to-skin:

“It was the first time; you are very emotional, so you don’t want anyone sitting and look at you.”

The fathers felt that they had to balance the responsibilities of work and caring for the older children, partner, and newborn. All of them appreciated being able to share the responsibility of caring for the infant with their partners that recovered, although some felt obligated to return to work. Others regarded the situation as a temporary transition, which made it easier to care for the older children and work while also visiting the partner and infant in the NICU. Still other fathers reported that their partners were so ill that they were unable to care for the infant on their own, even after several weeks. One father was worried for his wife when he had to return to work.

“I am not comfortable that I don’t have leave [from work] anymore and have to travel back and forth from work to the mother and infant. She will have to take all responsibility and all tasks. I am not sure that she is capable of it. It is not a good situation.”

Discussion

Some of the fathers in this study faced the possibility of both partner and infant dying. Others, despite acknowledging the seriousness of the situation, were not confronted with death in the same way. Among those who did experience this confrontation, some chose to reflect on the existential issues accompanying it, while others did not. Instead, they chose to focus on what they had, and not what they could have lost. How people find meaning in such challenging situations in life is connected to their individual perspectives on the world and attitudes. Connectedness to others is also an important issue when finding meaning [25]. Some fathers emphasized the importance of not dwelling on possible fatal outcomes. These findings accord with those of Arockiasamy et al. [26], who reported that fathers' worldview was an important contributor to their ability to handle the situation. Furthermore, Deeney et al. [8] reported that control was important for fathers. The fathers were anxious about the mother's and infant's condition, this is in line with the findings of several other studies [7, 11, 27].

The family was separated, both at the hospital and at home. Many fathers strove to connect the family. Still, some felt that it was difficult to choose with whom they would stay the partner or the infant. Lindberg and Engström [12] also noted that fathers of infants in the NICU felt divided between the mother and infant. The fathers in Arockiasamy et al. [26]

regarded themselves as being responsible for the whole family. Overall, the experiences of the fathers in this study illustrate the challenges that they faced when mother and child need special care and the seriously ill mother and her newborn were separated.

Because of the mothers' preeclampsia, fathers in this study were the first to establish contact with the newborn. Some of them found it difficult to establish contact immediately, especially when the mothers were unstable. This finding is in line with Lindberg and Engström [12]. Additionally, some fathers needed time to bond with their newborn, whereas others bonded more easily, even when the infant's condition was unstable. All of the fathers practiced skin-to-skin care, reporting that this helped them to bond with their infant. Previous studies have noted that skin-to-skin contact can help fathers better fulfill their paternal role and manage the unforeseen situation of having a premature infant [28].

All fathers in this study began their family lives with their new infant in the NICU, wherein they become well acquainted with the infant. In this way, they more or less had to adjust to becoming fathers in a public area. They used their right to parental leave as long as the infant needed respiratory support. Afterwards they returned to work, as well as taking care of any older children. Feeley et al. [14] claimed that responsibilities at home, older children, and work were all barriers to fathers' spending time with their newborn at the NICU. In contrast to our findings, Pohlman [17], who conducted her study in the USA, found that the fathers of preterm infants felt distant from the infant, prioritized work, and did not actively participate in infant care. A possible reason for the difference in findings might be that there are better social security and gender policies in Norway.

Emotional, social, and developmental support are all integral aspects of health care [29]. Health can be understood from a lifeworld perspective. Indeed, Dahlberg and Segesten [25] outline health as a condition of wellbeing: if one feels well, one can work on both the small and the great projects of life. In other words, health is a form of wellbeing where one is able to act. One of the great projects of life is becoming a parent. However, the fathers in this study were initially not "able to" take care of the infant in the way that they had anticipated, because of the mother's health and the infant's prematurity.

This study has some limitations that must be addressed. The study has a relatively small number of informants. A rich variation in data was pursued in order to obtain comprehensive understanding of the phenomenon. The following aspects should assure this. The acuteness of their partner's preeclampsia varied. The informants experienced becoming fathers to premature infants of different gestational age. The time their infants stayed in the NICU varied because of this fact and their leaves were as long as the infant needed respiratory

support. They were recruited from different parts of Norway, their infants was from the first born to child number four.

According to Dahlberg et al [19], findings from RLR can be generalized and theories can be created. However, they must be problematized. Generalization is dependent on the phenomenon, the study and its context. The fathers in this study benefited from the high-quality social security in Norway [23], and all of them had work leave from the time of birth and approximately as long as the infant needed respiratory support. This may differ from the context of others studies. On the other hand, as the findings points at some basic experiences as facing serious illness and becoming a father in an unexpected environment may be experiences that can be transferable beyond the particular context.

Clinical implications

The fathers were able to develop their relationship to their infants; this emphasizes the importance of the fathers being able to spend their time in the NICU. The privacy of the fathers were more or less challenged, health professionals should be aware of individualizing their approach to the fathers. The study reveals that separation is still a condition, when mother and infant need special care after a birth. Health professionals should try to ensure that the family should be together. Mutual guidelines between the wards that treat mother and child should be implemented. When new mother and child-centers are planned, a family friendly environment should be prioritized.

Conclusion

This study shows that fatherhood began with worrying about mother's health and the prematurity of the infant, which led to a reflection about life and death. At the same time, the fathers found themselves initially split between the ill mother and the newborn infant in the NICU, at times not knowing who to focus their attention on. Because the mother and infant were initially separated, the fathers found themselves responsible for connecting the family. They also attempted to support the mother, establish contact with the newborn infant, and care for the older children. They more or less adjusted themselves to becoming fathers in a public area.

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Table 1 Characteristics of sample

Informant	Age	Children	Education	Infant's gestational age	Health status of infant
1	46	1	Secondary school	31.6	Healthy
2	33	3	Secondary school, Bachelor's student	24	Ventilator, CPAP
3	33	2	Secondary school	27	Ventilator, CPAP
4	44	4	Two-year high school	31.5	CPAP
5	33	2	Three-year high school	31	CPAP
6	28	1	Secondary school, high school student	31.1	CPAP

Abbreviations: CPAP, continuous positive airway pressure

Table 2 Examples from the analysis process

Examples of meaning units	Variations	Constituents
<p>It is a quite serious disease, preeclampsia. It is fatal, if you don't do anything about it. As a matter of fact, I was worried.</p> <p>When I arrived immediately before the caesarean delivery, she was in a very poor condition. It was not a pleasant experience. I don't want to think about what may have happened.</p>	<p>Not thinking about negative issues, focusing on positive matters.</p> <p>Confronting the possible death of the partner and infant</p>	<p>Starting fatherhood while facing existential issues</p>
<p>I was very busy; I should have been with the mother and child at the same time.</p> <p>Since she has recovered, I have been at home with the siblings.</p> <p>It was practically challenging when she was in one part of the hospital and our infant was in another. So I had to be mostly with her, as she needed it most.</p>	<p>Prioritizing being with the mother</p> <p>Feelings of connecting the mother and child</p>	<p>Connecting the family</p>
<p>I have seen her [my child] going through the stages that normally are shown on ultrasound. When things happened, I considered myself lucky.</p> <p>I am not experienced with such small babies, but I can see that she has a personality.</p> <p>You can't get near to your own infant. I understand that it has be like this, but I don't like it.</p>	<p>Getting to know the infant before leaving the NICU.</p> <p>Feeling distant due to the circumstances</p>	<p>Becoming familiar with your infant</p>
<p>We hold her and are included in changing the diaper, and in taking care of her.</p> <p>It is OK; you are getting acquainted with your infant and you have nurses and doctors around.</p> <p>The first time I held my infant, two others stared at me. I wanted to say "turn away."</p>	<p>Feeling of a lack of privacy when establishing contact with the infant.</p> <p>Appreciating the nearness of the staff.</p>	<p>Becoming a father in a public area</p>

Abbreviations: NICU, neonatal intensive care unit

Highlights:

- Fatherhood began in a context of separation
- Fathers were split between the ill mother in the ICU and newborn infant in the NICU
- Fathers connected the ill mother, newborn infant, and any older siblings
- The fathers more or less adjusted to beginning fatherhood in a public area