

Case Study

Emotive Experiences of Novice Parents at Neonatal Intensive Care Unit

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Abstract

Objective: To explore the emotive experiences of novice parents at the Neonatal Intensive Care Unit

Study design: It was a Exploratory Case study.

Place and duration of study: The study was conducted in NICU of Ziauddin Hospital

Material and Methods: An exploratory case study design grounded in critical realism was adopted with an inductive approach. The study was conducted in the NICU at Ziauddin Hospital, Karachi. Data were collected through semi-structured interviews with five pairs of first-time parents. Colaizzi's seven-step method of thematic analysis was used to analyze the data

Results: Six significant themes emerged: neuroticism, distress, resilience, environmental facilitators, enthusiasm, and financial challenges. The findings highlighted a broad spectrum of emotions ranging from anxiety and stress to resilience and hope, illustrating the complex emotional landscape experienced by parents.

Conclusion: The study underscored the emotional and psychological challenges novice parents face in the NICU, emphasizing the need for comprehensive support systems that address their emotional, psychological, and financial needs. The results call for healthcare practices and policies that promote individualized, patient-centered care to enhance the NICU experience for both parents and neonates.

Keywords: Parent infant Bonding, Neonates, Emotional Bonding, Psychological, First time Parents.

1. Introduction

Neonatal intensive care unit is a critical experience in the lives of infants and their families, where the uncertainty of life meets with the resilience of hope. ⁽¹⁾ The dedicated department provides specialized care for infants who are born with complex medical conditions and required an urgent and intensive medical attention. ⁽²⁾ Majority of the parents encounter the Neonatal Intensive Care Unit (NICU) as an unanticipated and emotionally charged locale, where they contend with apprehension, distress, and an intense desire to safeguard and care for their delicate infants. ⁽³⁾ The admission of the neonate to the NICU often hinder the maternal-infant bonding process that is essential for both the parents and neonate. ⁽⁴⁾ Both physical and emotional closeness are considered essential for parent and infant health and wellbeing (Robert & Brown, 2004). Physical closeness is

defined as parent and infant being spatially close, while emotional closeness refers to feelings of an emotional connection to the infant such as feelings of love, warmth and affection. ⁽³⁾

In Karachi, Pakistan, the annual birth rate is around 5000, resulting in 1200-1300 NICU admissions per year. ⁽⁵⁾ This reflects a larger issue in Pakistan, where 900,000 premature babies are born annually contributing to a neonatal mortality rate of 42 per thousand live births (Gulshan et al., 2023). In Iran, preterm birth rates stand at 10%, and premature infants face various difficulties, including neurological, developmental, motor, behavioral, vision, and hearing impairments. The NICU experience disrupts normal infant care processes and profoundly affects parents. ⁽⁶⁾ Up to 12% of babies born in hospital worldwide will be admitted to a neonatal intensive care unit (NICU). ⁽⁷⁾ In the

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United States, around 10% of infants require NICU hospitalization, leading to prolonged separation from their mothers during critical developmental stages, causing distress and uncertainty for both parents and infants. ^(1,8) Globally, preterm birth affects 15 million infants annually, highlighting the urgent need to study and understand the emotional experiences of NICU parents. ⁽⁶⁾

NICU admission has a stressful impact on both parents as they are restricted to physical contact and parenting role for their susceptible neonate. ⁽⁷⁾ Likewise, parents also face dissatisfaction with medical information about the illness of the baby, treatment efficacy, the time frame of the illness, neonatal conditions, and available supports. ⁽⁹⁾ Thereby, Novice's parents navigating the NICU for the first time as a terrifying place by facing unique hurdles as they strive to bond with their infants amidst clinical intricacies. Thus, the aim of the current qualitative case study was to delve into the emotional journey of these novice parents, shedding light on their emotive experiences within the NICU environment.

Research Objectives

- To explore the emotive experiences of novice parents at Neonatal Intensive Care Unit.

Research Question

- What are the emotive experiences of novice parents at Neonatal Intensive Care Unit Failure? Kidney failure can cause electrolyte imbalances, accumulation

2. Materials & Methods

This study employed an exploratory case study design, to explore the emotive experiences of novice parents in the Neonatal Intensive Care Unit (NICU), focusing on how their interactions and

perceptions shape these experiences by using an inductive approach, the research was designed as a case study that provides in-depth insights into the experiences of novice parents. Data was collected cross-sectionally at a single point in time within the NICU of Ziauddin Hospital, Nazimabad Campus, over two months. Purposive sampling was employed, selecting five novice parents (both mothers and fathers) for semi-structured interviews conducted in Urdu. These interviews explored the emotional and psychological challenges parents faced during their NICU stay. The interviews were recorded, transcribed into English, and analyzed using Colaizzi's seven-step thematic analysis. This process included familiarization with the data, coding, theme development, and refining, followed by the creation of a thematic map and final report validation. Ethical considerations included obtaining formal approval from the Ethical Review Board and hospital administration, securing informed consent from participants, ensuring confidentiality, and allowing participants the right to withdraw at any stage.

3. Results

Demographic data of the participants

In the demographic characteristic, according to the gender of the participants a total of 10 parents, who were the novice parents and their neonate are admitted in the Neonatal Intensive Care Unit. The age of the participants had showed a range of 25-42. According to the qualification 03 of the participants (02 father & 01 mother) had post graduate degrees. Furthermore, 04 participants held graduate degree (02 father & 02 mother). While the rest of the 03 participants (02 females & 01 male) were holding education of intermediate.

Table 1: Demographic Characteristics

Code	Gender	Age in years	Qualification
N1	Male	35 years	Post-Graduate
N2	Female	30 years	Graduate
N3	Male	39 years	Intermediate
N4	Female	34 years	Intermediate
N5	Male	32 years	Graduate
N6	Female	25 years	Intermediate
N7	Male	39 years	Post-Graduate
N8	Female	31 years	Graduate
N9	Male	42 years	Graduate
N10	Female	33 years	Post-Graduate

During data analysis, semi-verbatim transcriptions were created from the voice recordings using an iterative approach. Open coding resulted in 131 initial codes, which were refined to 37 categories after removing unnecessary ones. From these categories, six main themes were recognized are following: neuroticism, distress, resilience, environmental facilitators, enthusiasm, and financial challenges are debated by participants of study. These themes reflect the emotional and psychological experiences of novice parents in the NICU.

Theme – 01: Neuroticism

Emotional ambiguity, hopelessness, fear, anxiety, and futility are subcategories of neuroticism that were identified in the study. These subcategories reflect the emotional roller coaster that NICU parents frequently experience. The themes in the study emerged from participants' statements about their emotional experiences as novice parents in the NICU. Most participants expressed emotional

ambiguity at the start of their neonate's admission to intensive care.

“it’s really hard to see our first baby in this condition, we were excited for his entrance in our life. Some time I thinking myself as the helpless person for my child while the next moment gives me a hope by seeing his progress towards betterment.” [participants-01]

Participants also expressed feelings of hopelessness, as they were unfamiliar with the hospital environment as first-time parents. One participant mentioned that the term "intensive care unit" is frightening. Most had no prior experience with an ICU.

“When I saw my baby at neonatal intensive care unit among all those machines I was hooked up with a persistent fear, worries and hopelessness. On our first day, I was in the uncertainty of multiple hypothetical thoughts but when I saw the progress on the next day the happiness of the entire world was less valuable in front of that.” [Participants-03]

Most participants experienced ambiguous emotions while in the NICU, expressing feelings of despair, fear, anxiety, and occasional anger when witnessing their baby's struggles. However, they also reported experiencing joy during small improvements in their baby's health. “I had been passed from multiple emotional states during my stay in the neonatal intensive care units.

“I was much excited for my first baby and when I heard that she will be shifted to NICU. I can’t express that feelings it was like a dying moment for me but just a day after when I saw my princess in the incubator and she was sleeping with all that innocence reflecting from her face was the most pleasant moment of my life” [Participant-04].

Theme-02: Distress

The second theme highlights the psychological challenges faced by participants, who reported experiencing significant uncertainty during their

hospital stay. The subcategories of distress are characterized by Uncertainty, Worries, Stress, Frustration, Arguing and sleep deprived. Most expressed constant worry about their baby's condition, with one participant noting that the stressful environment made it difficult for them to sleep.

“I had never gone through a proper sleep sine last three days and made it challenging for me to focus anything else. My mental state is being feeling isolated and suffered mentally. I argued more than usual due to the overwhelming situation. I am not capable to navigate a small matter.” [Participants-04]

Theme-03: Resilience

The findings revealed that most participants demonstrated resilience during their time in the NICU. Many expressed that hope became their strength, ultimately strengthening their partnership as life partners. Initially apprehensive about the ICU, participants grew more hopeful and patient over time as their baby's condition improved. They described the experience as transformative, highlighting the strength of the human spirit and the power of hope in real-life situations. The subcategories of the subject that comprised this theme were hopefulness, Joy on progress, Adaptation, Strength of spirit, Stronger and Patience.

“We ultimately became more resilient as a result of the difficult experience we endured. It taught us to find happiness in small triumphs and reinforced the power of hope during the most difficult circumstances. We learned that the most valuable demands in difficult situation are love and support via which you can conquer any sort of challenges.” [Participants-03]

Theme-04: Environmental Facilitator

The findings indicated that most participants viewed the NICU staff as heroes in their lives, attributing their emotional and psychological strength to the staff's compassionate care and

expertise, which provided reassurance and hope during challenging times. The facilitators from which the theme was emerged in the study were support, Expertise, Compassion, Dedication, guidance and reassurance. This theme underscores the staff's critical role in creating an empathetic and supportive environment that fosters hope and resilience among parents. Additionally, many participants acknowledged the support and courage they received from other parents in similar situations, describing them as incredible people they encountered during this experience.

“I meet with some incredible people in this journey that includes the staff and the parents of the babies. At one time when I saw my babies on ventilator, I was about to cry that a nurse put his hand on my shoulder and stated that a lot of neonates have been gone to the hands of their parents from such conditions.....” [Participants-05]

Theme-05: Enthusiasm:

In the study finding, when the participants were asked about their feeling toward their baby most of the participants showed excitement and emotions towards their baby. The theme emerged from the sub categories of overjoyed with progress, emotionally draining, heartwarming, Tears of joy and emotional responses. According to participants being a novice parents it always an excitement to take our baby in hands and how they will respond that reflect the emotional responses of the parents.

When I went there and my baby wrapped the tiny finger around mine gives me a power and I was thankful to ALLAH for a precious gift with whom I was blessed. [participant-01].”

“In the morning when I visited toward my baby and the baby look at me was a moment that can be spared on anything I have in my entire career. I was just thinking that how this little baby will handle all that pressure and it was their surgery day.” [Participants – 03]

Theme-06: Financial Challenges

In the current study, when participants discussed the impact of the NICU on their mental health, many highlighted the financial challenges they faced. Multiple responses indicated that their financial situation was closely linked to their stress levels. The theme arises from the subcategories of hospital billing, thoughts of neonate and money, utilized what's being saved affordability, and overburden. One participant remarked that their baby was a valuable asset, regardless of cost, and that they had used their savings meant for future planning to cover expenses. Similar sentiments were expressed by other participants, emphasizing how financial strain affected their mental well-being.

"I am much worried about the finance as I have no more affordability in this crisis situation of the country. It's our 5th day and multiple procedures were being performed that had costed us behind our affordability. I am more thinking about the finance because as a head of the family all the responsibilities is on my shoulder". [Participant-03]

"Every new day bring new challenges for us the things are now overburden on us. Yesterday, I borrowed loan from my cousin and this was the first time in my life that I had gone through such consensus. The more excitement and emotion are there for our baby they more it gets challenging for." [Participants-04]

Discussion

The primary theme identified in the present study was "Neuroticism" among novice parents in the NICU. The current study findings of neuroticism are consistent with the results reported in the wider body of literature. A study conducted by the Ivashchuk et al. (2021) in which they examined the effect of the NICU environment on parental stress, with an emphasis on protective factors. Although no statistically significant correlation was found between the aforementioned factors and decreased stress, the elevated levels of

stress confirmed the neurotic tendencies that was observed in the current study.⁽¹⁰⁾ In a similar vein, Okito et al. (2022) investigated parental resilience and psychological distress in the NICU in another study. Further supporting the findings of the current study, as the study emphasizes the psychological stress that parents experience, which might show up as neurotic symptoms.⁽¹¹⁾ Moreover, a study conducted by Bern studied the relationship between parental stress and mental health symptoms in the neonatal intensive care unit (NICU), highlighting the high incidence of neurotic symptoms among parents in such environments.⁽¹²⁾ These results indicate that neuroticism is a substantial problem which is parallel to the findings of the current study.⁽¹²⁾ An extensive emotional experience marked by neuroticism is experienced by novice parents in the NICU. Researcher marked it consistently that novice parents face emotional ambiguity, hopelessness, fear, anxiety, and futility which is a parallel outcome related to the current study findings. The second theme that was generated from the findings of the current study was 'Distress' highlighting the psychological distress experienced by the novice parents in the NICU environments. According to attachment theory, 'Distress' in the NICU emphasizes the challenges parents have in bonding with their babies. Parents' anxieties about providing regular and responsive care, which is necessary for safe attachment, may cause discomfort. NICU parents experience psychological stress, according to several research. According to a study conducted by Ivashchuk et al. (2021), in which the researcher examined the stress and protective variables for parents in the NICU. The lack of a significant correlation between parental protective variables and self-reported parental stress suggests that parental distress in the NICU context is a complicated issue that protective factors alone may not be able to resolve.⁽¹⁰⁾ Similarly, Okito et al. (2022) explored the relationship between parental resilience and

psychological distress in the NICU, underscoring the psychological challenges parents face in such environments.⁽¹⁸⁾ In addition, the study by Bernardo et al. (2021) on parental stress and mental health symptoms in the NICU provides further context to this study findings. It emphasizes the need for recognition and intervention in addressing parental stress and mental health symptoms in NICU settings.⁽²⁾ The concept of "Resilience," which emerged from the current study's findings, captures a major facet of what parents go through in the NICU. The concept of 'Resilience' is enhanced by attachment theory, which posits that numerous parents employ adaptive strategies in order to establish a secure attachment with their neonate in the NICU, not with standing the obstacles they encounter. The study findings indicate that despite the overwhelming challenges, many parents exhibit remarkable resilience, characterized by hope, joy in progress, adaptation, and strength of spirit. This resilience aligns with Okito et al. (2022), who explored the relationship between parental resilience and psychological distress in the NICU. In their study, they noted that despite facing significant stressors, many parents develop coping mechanisms that demonstrate resilience over time.⁽¹⁸⁾ In the same spirit, Bernardo et al. (2021) addressed this facet, emphasizing the significance of resilience in managing the psychological difficulties that arise within the neonatal intensive care unit setting. According to their research, resilience is an essential aspect that help by promoting parents get through this hard time at NICU.⁽²⁾ Thus, hereby the theme of Resilience provides a vital insight into the adaptive capacities of novice parents in the NICU. In the light of the research work the findings highlight the flexibility of the parents at the NICU. The theme of 'Environmental Facilitators' in the current study had highlighted the significant role of the NICU environment on the experiences of novice parents. All these factors were crucial in shaping the parents' journey. From the perspective

of attachment theory, "Environmental Facilitators" in the NICU ought to encourage the growth of stable bonds between new parents and their babies. According to the study "Helping Parents Cope in the NICU" by Marlyse F. Haward et al. (2020), parents in the NICU undergo a difficult emotional journey that requires them to quickly adjust to the realities of intensive care. To assist parents in coping during and after their NICU experience, they emphasize the significance of NICU clinicians conveying affirming and supportive messages.^(13,14,15) Additionally, Caporali et al. (2020) highlight the substantial influence of the NICU environment on parental stress in their meta-analysis of global parental stress in NICUs. The researchers discovered that the most significant cause of stress for both mothers and fathers was parental role alteration. This underscores the importance of providing individualized assistance to alleviate parental stress and enhance emotional welfare.⁽¹⁶⁾ Similarly, "Parental mental health screening in the NICU: a psychosocial team initiative" by Victoria A. Grunberg et al. (2022) found that forty to fifty percent of parents with children in NICUs suffer from clinically significant levels of anxiety, depression, and trauma; this finding emphasizes the critical nature of identifying and assisting parents at risk of clinical distress at an early stage.⁽¹⁷⁾ Moreover, a study published in the Journal of Perinatology examines suggestions for improving the psychosocial support of parents in the Neonatal Intensive Care Unit (NICU) via staff education and support. These recommendations emphasize the criticality of staff education in delivering the highest quality of psychosocial care and assistance to families. It is essential to adopt this strategy in order to guarantee that the care provided encompasses not only medical and developmental assistance for the infant, but also support for the family.⁽¹⁸⁾ Thus, it's being concluded that the theme of Environmental Facilitators provides important insights into how the NICU

environment, particularly the role of healthcare staff, plays a pivotal role in shaping the experiences of novice parents. The theme 'Enthusiasm' underlines the reflective emotional excitement and reactions of novice parents in the Neonatal Intensive Care Unit. Research conducted in the neonatal intensive care unit provided support for the notion that positive emotions hold considerable importance. Attachment theory speculates that positive affective reactions, such as enthusiasm, may manifest in parents despite the presence of stressors, as they observe their infants' progress. According to one study published in BMC Psychology in 2023 investigated the concept of post-traumatic growth in relation to parents of premature infants who were admitted to neonatal intensive care unit.⁽¹⁹⁾ post-traumatic growth is recognized as a beneficial psychological transformation that facilitates the process of recuperating from trauma, underscoring the criticality of centering attention on positive emotional encounters within the NICU. This suggests that a nurturing environment has the potential to cultivate positive affective states such as enthusiasm among parents.⁽¹⁹⁾ This aligns with the findings from your study, where parents expressed overwhelming joy and gratitude in moments with their newborns, as noted in the experiences of participants like Participant-01 and Participant-03. Another significant piece of research, an integrative review published in the Journal of Perinatology (2023), investigated the impact of sensory-based interventions in the NICU on both infant development and parent well-being.⁽¹⁹⁾ This review emphasized the improvement in safety and quality of care in the NICU through consistent positive sensory exposures. Such interventions, including kangaroo care, music, and language exposure, have been shown to improve infant development and physiology, as well as lower maternal stress, thereby fostering positive emotional experiences like enthusiasm among parents.⁽²⁰⁾ These studies suggest that fostering

environments that support positive sensory experiences and acknowledge the emotional journey of parents can enhance the NICU experience for both parents and infants. This underscores the necessity of a supportive and well-informed NICU environment to bolster the positive aspects of the parenting experience in such settings. The theme of 'Financial Challenges' in the current study reflects the significant economic burdens faced by parents with infants in the Neonatal Intensive Care Unit (NICU). The attachment process may be indirectly impacted by financial stressors through the exacerbation of parental anxiety and tension, which may impede the development of a secure attachment. The findings of the current study are supported by the findings of a study conducted by Lakshmanan et al. , in 2022, in which the researcher surveyed 365 parents of preterm infants, finding that 53% worried about healthcare costs post-NICU discharge. This study highlighted the link between out-of-pocket NICU costs and increased financial worry, while enrollment in SSI was associated with decreased financial worry.⁽²¹⁾ Similarly, another study published in PubMed conducted a systematic review on the financial impact on families during a NICU stay or after discharge. The review, spanning studies from 1990-2020, found significant out-of-pocket costs and loss of productivity, causing stress and potentially impacting patient care.⁽²²⁾ These studies underscore the need for comprehensive support systems addressing not only medical and emotional needs but also the significant financial burdens faced by families during and after NICU stays. This comprehensive approach is crucial for ensuring the well-being of infants and their families.

Conclusion:

The current study explored the emotional and psychological experiences of novice parents in the

NICU through six themes: Neuroticism, Distress, Resilience, Environmental Facilitators, Enthusiasm, and Financial Challenges. Findings revealed that neuroticism is prevalent among parents, reflecting the emotional turmoil associated with the NICU. Distress highlighted psychological stress and uncertainty, impacting bonding. In contrast, Resilience showcased parents' optimism despite challenges. Environmental Facilitators underscored the crucial role of healthcare workers in supporting parents. Enthusiasm captured positive emotional moments amid difficulties. Additionally, financial struggles increased stress and affected bonding, emphasizing the need for holistic support systems to address parents' emotional, psychological, and financial needs.

Disclosure /Conflict of interest:

Authors declare no conflict of interest.

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