RESEARCH ARTICLE

Stakeholders' Perceptions of Hospital-Based Early Childhood Parenting Education Services: A Thematic Analysis

Shelina Bhamani[1], Fatima Shafique, Misbah Shams[1], Sara Sheikh[1], Hajra Malik[1], Zaibunissa Karim[1], Lumaan Sheikh[1]

1 Aga Khan University

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Abstract

Background: Postnatal parental education is deficient yet necessary to enhance the implementation of evidence-based newborn care practices among families. Educating both mother and father is crucial for optimal childhood development, and interventions targeting families can improve childcare practices. Implementing these interventions through systematic policies and protocols in LMIC hospitals is essential. This study explores the perceptions of pregnant women, parents, and healthcare workers regarding parenting education in a tertiary care hospital in Karachi, Pakistan.

Methods: In a qualitative study conducted in a tertiary care hospital in Karachi, Pakistan, participants included pregnant women, parents, and healthcare workers. The study used in-depth interviews with purposively selected participants, consisting of two individuals from each category. Interviews were conducted using a prepared guide, and data collection was performed by trained staff. Interviews were conducted until data saturation was achieved. The interviews were conducted in Urdu, transcribed, and translated into English. Thematic analysis was carried out manually.

Results: The analysis of pregnant women's experiences identified themes of personal pregnancy experiences, support systems, and hospital facilities. Women discussed physical, emotional, and financial challenges during pregnancy. They valued support from family and physicians but expressed a need for better educational resources in hospitals. For parents with children under one-year-old, themes included personal experiences, hospital experiences, and educational resources. Parents faced emotional changes, financial challenges, and desired improved work-life balance. They appreciated outpatient care but found lacking in inpatient experiences, particularly in the NICU. Healthcare workers emphasized the role of parents, families, and hospitals, highlighting the importance of teaching and understanding family dynamics. Also suggested improvement in holistic approaches, mandatory educational programs, and integrating parenting readiness into primary care.

Conclusion: Hospital-based postpartum parenting education enhance overall baby care. Expanding literature emphasizes the importance of high-quality parenting for lifelong development. Identifying efficient programs and

resources to enhance parental abilities and foster positive child growth is increasingly important.

Shelina Bhamani[1,*], **Fatima Shafique**[1], **Misbah Shams**[1], **Sara Sheikh**[1], **Hajra Malik**[1], **Zaibunissa Karim**[1], and **Lumaan Sheikh**[1]

[1]*Aga Khan University, Karachi Pakistan*

[*]Corresponding author: Dr. Shelina Bhamani, Assistant Professor, Department of Obstetrics and Gynecology, Aga Khan University, Karachi, Pakistan 74800. shelina.bhamani@aku.edu

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Introduction

The healthcare system globally is transitioning towards a more family-oriented care system. Providing newborn education services and standardized counseling to parents as they transit from the hospital to home-based care is vital to ensure a continuum of care. However, Low, and Middle-Income Countries (LMICs) are far behind in the efforts to adopt this model [1]. Several deficiencies can be identified, which include, but aren't limited to, inappropriate methods of communication, optimum content relevant to parent needs, inadequate content for clarity of parent education, and ineffective rapport building between parents and health care workers [2]. This can lead to a developmental dearth in children, a weak mother-child bond, inappropriate childcare, higher readmission rates, and poor outcomes. Essential components of family-centered care are a collaboration between family members and health care providers, consideration of family context, ideas, beliefs, policies, and procedures to implement and standardize the provision of counseling, and education of families and health care providers [3].

Family-centered patient care is particularly significant in the obstetric-care centers, as family members are the primary caretakers of neonates and postpartum mothers. Postnatal education is a deficient yet necessary to enhance implementation of evidence-based newborn care practices among families. In recent times, antenatal care practices and counseling have gradually increased in LMICs. However, postnatal care is still unavailable or underdeveloped in many hospitals and childcare centers [4][5]. The developmental and academic disparities were identified more in resource-limited facilities compared to large hospitals through a survey in Accra, Ghana. Which reported 83% of hospital facilities were without a postnatal care program. Even in these centers, the education that was administered regarding maternal and newborn danger signs was not completely retained by participants. Moreover, 77% of the participants were not aware of whom to contact in case of a query or concern [6].

A survey from three states of India (n=13,000) showed willingness to improve postnatal education of mothers and families about their enactment of newborn care practices at home [1]. Childbirth is an exhausting process for the mother and the

family. Information and instructions given are often not retained by the patient [7]. The parent education content may be very information dense and needs to be systematically designed to counsel patients with regards to proper care for the newborn, develop a strong mother-child bond, enhance the neonate's cognitive and physical development, provide an environment that is conducive to healthy emotional development, and how mothers can cope with the changes in their own body and emotions [8]. A study conducted at Kenya, with postpartum mothers identified significant knowledge gaps in mothers regarding cord care, eye care, and immunization of their newborn. Lack of education provision regarding newborn care was a significantly associated factor with poor knowledge [9].

The role of both mother and father is identified as a vital part of healthy childhood development. Contemporary research highlights the role of fathers in maternal and childcare. To study the impact of fathers in childcare, an experimental study in Vietnam with community-based interventions was conducted to see if educating fathers was related to improved early implementation and exclusive breastfeeding practices. Spouses (n=802) of pregnant women from 12-27 weeks of gestational age participated. Those in the intervention group were counseled and educated in health care facilities, during antenatal visits, at the time of delivery, and on postnatal home visits. A fathers' club was also initiated, and group educators and peer counseling were conducted. The results showed that after one year of interventions, 13.4% more women with husbands in the intervention group were likely to initiate breastfeeding in comparison to the control group [10]. Breastfeeding is just one of the many domains where family-centered model peer groups and technology have been studied to enable mothers to achieve the goals of child and self-care. This highlights the impact education and counseling interventions can have on the outcomes of childcare. Furthermore, it sets forth the fact that involvement and education of whole families through such programs have significant impact on child's development [11].

The process of transitioning into motherhood is complex and can take a toll on the mother's mental health as well. Perinatal psychological stress should be understood and adequately addressed by those providing support and care for the mother. Caregivers should also be educated on when to refer a psychiatrist, psychologist, or psychotherapist [12].

Similarly, the mother-child bond can be improved by various interventions. As per the research after birth, 20-40% of women are likely to experience some form of postpartum depressive symptoms. Skin-to-skin contact is one intervention that has been proven to improve symptoms of depression and low moods in the mother and enhance the physical and psychological development of the infant [13]. It has also been reported to improve the mother-child bond. Such interventions are cost-effective methods that can alter the course of the neonate and mother's life but are not practiced due to the lack of awareness. This information can be made available to parents through parenting education programs if they are systematically adopted into the policies and protocols of the hospitals in LMICs [2][8].

Context

The availability of parenting education in hospitals and community settings in Pakistan faces significant gaps and challenges. Alike other LMICs, one major barrier is the limited availability of postpartum parenting education services [1]. Only a few hospitals and healthcare setups in Pakistan offer comprehensive education and training on parenting and early

childhood development (ECD). Additionally, parental education and literacy present obstacles as many parents lack awareness about postpartum care and child development [14].

Moreover, cultural and traditional practices have influenced the approach to providing nutrition and care for children, which has had an impact on overall infant health. In Pakistan, there is a prevalent practice of introducing unsupported liquids such as honey and gutti to infants at a very early stage, which can have adverse effects on their well-being [15].

Another crucial factor is maternal empowerment within the household. In LMICs like Pakistan, decision-making power for pre- and postpartum matters often lies with males. As a result, mothers alone may not have the authority to enroll in education programs and make informed choices [14].

Financial constraints also play a significant role, as families from lower socioeconomic backgrounds may lack the necessary resources to participate in such programs. This further widens the gap in access to parenting education and support [16].

Furthermore, there is a deficiency in the education and training of healthcare workers to deliver effective parenting education programs to parents [17]. This lack of preparation and knowledge among healthcare professionals further contributes to the existing gaps in parenting education in Pakistan. Therefore, this study explores the perceptions of pregnant women, parents, and healthcare workers regarding parenting education in a tertiary care hospital in Karachi, Pakistan.

Methods

Study design and setting

A qualitative study with a Phenomenological approach was conducted in a tertiary care hospital in Karachi, Pakistan. The tertiary care hospital is well equipped with mother and child services and catering for the whole country's population. The hospital has 128 bedded Obstetrics and Gynecology (OBGYN) department, accounting for 6000 babies delivered annually.

Study population and eligibility criteria

Four pregnant women participating in antenatal classes were selected, excluding those with high-risk pregnancies. Four parents who had given birth at the tertiary care hospital (study setting) were chosen, specifically those with typical, healthy newborn babies. Any parents with atypical newborns were excluded from the selection. Additionally, two healthcare workers serving as heads of the Obstetrics and Gynecology (OBGYN) and Pediatrics departments were selected, along with two stream lead obstetricians and two nurse managers.

Data collection and analysis

In-depth interviews with purposely selected participants, two from each category, i.e., two pregnant women, two fathers, two mothers, two healthcare workers, and two community leaders. In-depth Interviews were conducted on a prepared in-depth interview guide. Data collection was done by trained staff. The time limit was 20-25 minutes. In-depth interviews continued until the saturation was achieved. All interviews were conducted in a hospital setting. Questions were asked in Urdu, and responses were recorded with the participants' permission. The data were later transcribed and translated into English. A thematic analysis was carried out. Firstly, a list of codes was developed. After developing the codes, those codes were converted into themes. Later the themes were transformed into sub-themes. NVivo software was used for the data analysis.

Results

The following themes emerged after the in-depth interviews (table 1).

Table 1. Key themes emerged after the in-depth interviews.

Stakeholders	Key themes	n
Pregnant women	Theme 1: Women's personal pregnancy experience Theme 2: The support system through pregnancy Theme 3: Facilities at the hospital	4
Parents	Theme 1: Parents personal experience Theme 2: Hospital experiences Theme 3: Educational resources	4
Healthcare workers	Theme 1: Role of parents and families Theme 2: Role of healthcare workers Theme 3: Role of hospitals	4

Pregnant Women's Experiences

Three major themes emerged from analyzing the current data set of pregnant women. They were Women's personal pregnancy experiences, the support system they had through the experience, and the facilities at the hospital.

Theme 1: Women's personal pregnancy experience entails the following subthemes: physical changes, emotional changes, and financial problems.

Physical changes:

Most women discussed the physical changes with pregnancy in detail. They were concerned about weight gain, nausea, vomiting, and bloating symptoms. They said these changes were interfering with their daily routine and making them less functional. One of them commented:

> *"These are expected changes in pregnancy. Even though I was mentally prepared for them, I find it hard to manage them, especially since this is my first pregnancy. I am also often worried about the swelling and weight gain and wonder if I can shed the weight post-pregnancy."*

They also mentioned that they no longer enjoyed food because of morning sickness. One woman was concerned about not having gained enough weight during her pregnancy and if that could cause any future problems.

Emotional changes:

All the participating women reported emotional changes, especially first-timers, and women in their 20s. Symptoms of anxiety and irritability were common, and these were made worse when women experienced accompanying nausea and vomiting. Mood swings were reported and worsened with additional stressors like a lack of support from family and friends. One woman commented:

> *"I am always so anxious. I worry about being unable to manage my pregnancy with my work and studies. Just raising a child at this age (25) scares me, and I don't know what to do about this constant, nagging fear."*

Pregnancy also affected their sleep schedule, adding to the stress. Some were concerned about the effect this could have on the baby and if they could potentially develop postpartum depression and anxiety too.

Financial problems:

Regarding financial challenges, almost all the participants revealed that they were not currently facing any issues and had already planned for them. They had financial support from their husbands and, in some cases, from their parents. Half of the women were working women themselves. One participant described it as follows:

> *"This was part of our plan, how to deal with additional economic needs. I am a working woman, and my husband and I make enough to get through pregnancy and hopefully raise our child comfortably."*

The support system through pregnancy:

Theme 2: The support system through pregnancy entails the following sub-themes: support from family and support from a physician.

Support from family:

There were mixed responses to the support women had from their immediate surroundings, i.e., the in-laws in most cases. Husbands, too, had a difference in attitude for different women. Most of them said they would much rather be with their parents through pregnancy than with their husband's family. One woman said:

> *"I feel like I am too young, and the fact that I am still a student often seems like I don't have the support I should have. My husband is also young, and he is at university or work for the most part. These look like unchartered waters to navigate, and I know I can use more support from my in-laws."*

Support from physicians:

Women were satisfied with the support their physicians had extended. They found it to be sufficient and helpful, and the approach to be empathetic. They understood that being a hospital with a high patient load, they often had to wait for long hours, but they said their physicians were delivering good care to them despite the time constraints and physician fatigue.

> *"I understand how hard it is for my doctor to juggle all this work between the clinics and the labor room-it must be a lot. But I have never been met with suboptimal care from her side. And I am thankful for that."*

Facilities at the hospital:

Theme 3: Facilities at the hospital entail infrastructure, food services, and educational resources.

Infrastructure:

The women unanimously agreed that the hospital offered excellent infrastructure and had the latest technology advances. However, one common complaint that was found was that the seating facilities outside clinics were not good enough for pregnant women, as one woman commented:

> *"Usually, we must wait at least 2-3 hours before our turn comes, and, in that case, we must sit outside. The seats available to us are very uncomfortable, and sometimes they are already occupied by non-pregnant patients. It is important that special seats are made for pregnant women, and nobody else is allowed to use those."*

Food:

Women were satisfied with the kind of available at the hospital. They found it nutritious, hygienic, and tasty. Those who had ward experience said the same thing. There were no changes that I thought were important in the food section:

> *"I think the food is very healthy and safe to consume. My family and I have never had any issues with it in terms of its taste or nutrition. It tends to be rather expensive, but it seems like an okay bargain given that it is prepared with so much caution."*

Educational resources:

All the women had heard about the ongoing antenatal classes available at the hospital, but none were enrolled. Common reasons cited were lack of time, difficulty in conveyance, and family permission. They said they were given brochures in the clinic, but those were not detailed enough, and they often ended up googling things as the physician was not available instantly. One woman remarked:

> *"I have many questions that keep arising in my mind, but the visit to the doctor is once a month or less. I usually forget what I had to ask, or on the day of the visit, I don't feel great due to all the waiting, and I end up not asking what I wanted to. I will note down each question as soon as it comes to my mind, but it would be much better if there were a better guidebook for use during pregnancy. The information on the internet is often misleading and scary."*

Even though physicians answered all questions sufficiently, women felt they needed more information from reliable resources. The use of better and more elaborate brochures was seen as necessary.

Parents' Experiences

Three major themes emerged from the analysis of the current data set of parents who have a child less than one year of age and are using the children's hospital. They were personal experiences, hospital experiences, and educational resources.

Personal experiences:

Theme 1: Personal experiences entail emotional changes, financial changes, and work-life balance.

Emotional changes:

Parents, especially first-timers, expressed that amidst the joy, they were feeling high levels of concern and worry concerning the health and safety of their kids. They were anxious to know if they were doing everything right and if there was something they could do differently. The high degree of responsibility has brought them feelings of stress even though they are beyond grateful about the experience, as one father commented:

> *"He is our first child. We are blessed to have him; he is very precious to us. This is why we are often worried if we are giving our best to his betterment. We want him to be healthy and safe."*

Financial changes:

Parents commented on how parenting should be facilitated by making things affordable to all socioeconomic classes. Parents complained that everything is too costly, from formula milk to diapers, which adds to their worry about their kids.

They do not want to compromise on their child's well-being and will do everything to offer them the best, but at the same time, they would feel more relieved if expenses were more manageable.

Work-life balance:

Parents agreed that since it is a big transition, getting used to it has taken some time. Their sleep schedule is different now as they take turns caring for the baby at night. They also expressed how not all employers can give adequate maternity or paternity leaves. They were feeling exhausted at work and during other house chores. However, some of them had a lot of help due to the family system in Pakistan, and they were thankful for that.

Hospital experiences:

Theme 2: Hospital experiences entail outpatient, inpatient, and infrastructure.

Outpatient experience:

Parents generally were delighted with the outpatient experience of their children and the pediatricians. They said they were given adequate time, education, and empathy in all areas of the child's issues, and they always looked forward to the outpatient visits. They admired the counseling skills of the doctors, and even the nursing staff in the pediatric clinics were found to be very helpful and approachable. One parent remarked:

> *"Our child's pediatrician is perhaps our biggest support system. I gave birth to twins a few months back, and they have had issues with their vision. If it weren't for the clinic visits with the pediatrician, we would have lost hope and been way more stressed than we are."*

Inpatient experience:

The inpatient experience of parents was not as favorable as the outpatient was, which included both the general ward and the NICU experiences. They were concerned that the staff was not as well trained for little children as they had expected them to be. For example, some staff members struggled with cannulating young ones, which should have come more easily. The same was the concern of the NICU staff. One parent shared:

> *"My babies were in the NICU for quite some time. Even though everyone was empathetic, I felt there was a gap in skills and knowing current guidelines. There was a lot of mismanagement in my experience, and this could have hurt us a lot, but fortunately, we got out of it in time. I would suggest that more robust training goes into the NICU."*

Infrastructure:

The parents unanimously agreed that the hospital offered excellent infrastructure and had the latest technology advances. Parents were delighted with the children's hospital infrastructure, from the seating arrangement to the equipment and machinery. They said the wards were child friendly, and there was always something to keep them entertained and busy.

Parents commended the hard work that goes into maintaining the infrastructure.

Theme 3: Education resources entails the outpatient and inpatient settings.

Outpatient setting:

As stated above, parents were satisfied with the outpatient facilities. Because raising a first child can be challenging, they were asked in greater depth about the educational resources in each setting. They said most of the information came from the doctor verbally narrating it. Almost all questions were answered. However, the issue of not recalling questions remained, as one father comments:

> *"Child rearing can be hard, especially if it's your first child. Day and night, there are things we would like to know, and although our elders chip in, we want to resort to evidence-based solutions only. Hence, we googled much of the stuff, and the results can be scary. It would be helpful if a separate educational program or resource were established so that we could use round-the-clock."*

Inpatient setting:

Parents expressed that the educational resources in the inpatient setting were not satisfactory. They acknowledged that the hospital is too busy to cater to every single question but said that high quality at every front has always made it a great place, and it should continue to be this way.

> *"Understandably, the hospital has a very high patient load, but when we are in the ward and see our kid on a hospital bed, nothing matters more than our concern for them. We have many questions, some of which may be repetitive, but as parents, we want to be satisfied on every level because it is our child's health."*

Healthcare workers' Experiences

Three major themes emerged from the analysis of the current data set of healthcare workers. They were the role of parents and families, the role of healthcare workers, and the role of hospitals.

Theme 1: The role of parents and families in parenting readiness entails the role of the mother, spouse, and caretaking family.

Role of mother:

It was mutually agreed that the role of a mother in knowing about the parenting experience is essential in ensuring a smooth journey from pregnancy to child raising. A mother's knowledge about parenting techniques and their significance goes a long way, not just for the child but also for herself. If she knows the challenges beforehand, she can better handle the psychological, physical, and social distress that parenting can bring. One physician commented:

> *"The first 2000 days of a child are crucial for their long-term development. If the mother knows how to care for herself, she can better care for the baby. Children are naturally experiential learners; they imbibe what they see their caregivers doing. Being aware of these realities is essential for any mom-to-be."*

Role of the spouse:

Healthcare workers emphasized that the spouse has as much responsibility as the mother. Support from the husband gives the mom a lot of confidence to go through the tough times of pregnancy and delivery. His role is also crucial in the development of the kids as kids adopt good habits from fathers too. Spouses should contribute overall to making the process easier and smoother for the mother and the child.

Role of a family:

It is widely known that immediate families play a significant role in our society, especially in child raising, where more and more couples are working most of the time. The responsibility often falls to grandparents, aunts, uncles, etc. They should be in alignment with the parent's wishes, too, so that there are no conflicts and personal grievances, as one physician commented:

> *"Grandparents often play a huge role in the upbringing of children, and they do it most sincerely, which takes the burden off parents. It is important to realize that they should also be made aware of modern evidence-based care that children are recommended to get. There are many myths and misconceptions that can sometimes be harmful, like administering 'kajal' to kids to help make their eyes 'bigger'. They should discuss these ideas, and they should visit the doctors too."*

Theme 2: The role of healthcare workers in parenting readiness entails role of teaching and understanding family dynamics and the barriers healthcare workers face.

Role of teaching:

A doctor is essentially a teacher, and its perfect example is the role of doctors in a mother and child's life. Apart from using their medical knowledge, a healthcare provider must equip their patient with the best knowledge as that is permanent and can be carried forward to other people too. Parenting classes are an excellent way to convey all the information efficiently, but not a lot of parents enroll in them as one doctor commented:

> *"If we have 6000 deliveries a year, I can easily say that a minimal percentage signs up for parenting classes. I believe incentives should be provided to parents who join these classes, like a concession in doctor visits. They are beneficial."*

Understanding family dynamics:

Healthcare workers identified that it is essential to understand every woman's family situation and modify their approach. There are a lot of family constraints that take a toll on the mother and her health. Families usually recognize the doctor as an authority figure, so they must be assertive and ensure that the mom is adequately cared for at home. A small example would be asking the father to accompany the woman on antenatal visits. Understanding issues personally can also create more empathy in the healthcare workers and develop better trust between them and the mothers.

Barriers faced by healthcare workers:

After recognizing how they should contribute, healthcare workers identified some barriers they must face even when they want to provide the best care. One is a lack of motivation on the parent's and family's sides. Sometimes, parents do not want to sign up for classes or spend time on these things, even when they can. The second thing is the lack of human resources to create educational services. Doctors commented on how they need more help in terms of infrastructure as well as monetary support if they want to initiate specific incentive-oriented learning resources.

Theme 3: The hospital's role entails current strategies and methods to improve them.

Strategies used currently:

Despite the challenges, it was mutually agreed that the hospital has a child-friendly vision. A general attitude of making life easy for the mom and her child is prevalent and often encouraged. A lot of emphasis is laid on breastfeeding and the facilities throughout the hospital. The certification of being a 'baby-friendly hospital' is already in place and made possible by the joint efforts of obstetricians, pediatricians, nursing staff, and leadership. The stay for moms is usually comfortable and taken good care of, and following deliveries, the nurseries are liked by the families.

Methods to improve service:

Healthcare workers mentioned a variety of ways how to make the hospital service even better, especially concerning parenting readiness. The approach to be taken should address mental, physical as well as social factors. They emphasized how a holistic approach is the way to go. To realize why something should be done, how, and then the final action. At an individual level, each healthcare worker should consciously try to educate parents and families. Formal programs should be made compulsory at an institute level based on different incentives.

One physician commented:

> *"It is essential to be there for the parents and the child, even months after delivery. Often parents do not follow up as much as they should because of the expenses. This is why the way to go is to make parenting readiness part of primary care, and every doctor should be equipped to educate families. When this is made possible so that every general practitioner can provide relevant information, we will see a rise in the number of people aware of parenting readiness."*

The detailed results are in table (supplementary table 1).

Discussion

By examining the views of pregnant women, parents, and healthcare workers, we aimed to gain insights into how we can enhance the quality of hospital-based parenting education and better meet the needs of women in the post-phase of their pregnancy.

Parental experiences informed that they are happy and concerned about the hospital-based parent education program. Certain elements support them during pregnancy and challenges that hinder them from getting postnatal education. Similarly, there are concerns of healthcare workers which inform that not only facilities, infrastructure, and support are essential, but parental awareness and willingness to attend the program.

In this study, the analysis of pregnant women's experiences revealed three main themes: personal pregnancy experiences, support systems, and hospital facilities. Women discussed physical changes, emotional changes, and financial challenges related to pregnancy. They reported concerns about weight gain, nausea, and mood swings. A Gambia, West Africa study with a similar objective reported that women frequently expressed physical challenges related to pregnancy and childbirth. The commonly reported symptoms were nausea, abdominal discomfort, reduced appetite, fatigue, and dizziness. However, these symptoms were generally perceived as expected and were not a significant cause of concern for most women [18].

They also highlighted the importance of support from family and physicians, although some felt a lack of support. Similarly, a study from Australia conducted focus group discussions (FGDs) with pregnant women, which reported a consensus that the physical presence and availability of professional support could help in the smooth transition to motherhood/ parenting [19].

Regarding hospital facilities, women appreciated the infrastructure and food services but desired better educational resources. This statement was supported by another study from Queensland, Australia, in which parents and educators emphasized the importance of the physical environment and infrastructure. According to them, infrastructure encourages learning and makes them feel safe [20].

Personal experiences, hospital experiences, and educational resources were the main themes that emerged after interviewing parents with children less than one-year-old in this study. Parents expressed emotional changes, financial challenges, and the need for work-life balance. Literature has supported parental response, a study from Sweden with first-time parents mentioned that with physical changes, specific emotional changes occur in parents during and after pregnancy. These emotional changes have no particular definition [21][22]. Furthermore, the literature adds that the support and promotion of maternal health should extend beyond the immediate postpartum period. Women have ongoing physical and emotional needs directly linked to pregnancy and childbirth, often requiring more than six weeks to resolve [21]. Literature also emphasizes financial literacy and understanding the financial challenges which can occur to families of a newborn or families expecting a child’s birth. Postnatal care and parenting education have a direct relationship with finances. Better income and savings lead to quality care before and during childbirth and postnatal care and acquiring newborn parental education [23]. With this, work-life balance was emphasized too. A study from Ireland

reported the significance of work-life balance for new parents, especially fathers. It mentions that dynamics have now changed. Men and women work nowadays, and providing care to children is the equal responsibility of fathers. Fathers agreed that work-life balance is fundamental to supporting the mother, family, and newborn. Also, this is an essential aspect of participating in parenting education programs [24].

In this study, the role of parents and families, the role of healthcare workers, and the role of hospitals were prominent themes from the responses by healthcare workers. The role of mothers, spouses, and extended family members in parenting education readiness was emphasized. Similarly, literature emphasized the role of mothers, fathers, and extended family in acquiring comprehensive education programs to strengthen parent-child relationships, promoting physical and emotional health [25].

Further, healthcare workers emphasized the holistic approach to integrating parenting education programs into primary care. This is how the program can be less expensive and open on a large scale. Literature also suggests that training physicians and staff to educate parents while receiving antennal care solves the problem of financial constraints and postnatal loss to follow-up [26].

Phillips, Celeste R. (2003) mentioned that hospitals and healthcare organizations should support Family Centered Maternity Care (FCMC) rather than Staff Centered Maternity Care. The core principle of FCMC is enabling families to navigate childbirth and parenting challenges. FCMC allows the whole family to be involved in antenatal and postnatal care and make decisions about education and care. This also ensures that families receive the necessary support and care during this transformative period, leading to satisfied and happy families [27][28].

Strengths and Limitations

This is one of the studies in Pakistan exploring the perceptions of different stakeholders regarding hospital-based newborn education services. Previously no study has been done in Pakistan to explore such experiences.

The limitations included a lack of generalizability due to single-center private tertiary care hospital study. Moreover, it lacks the involvement of the community. Since this qualitative study used purposive sampling and lacked specific inclusion criteria, it may have incurred selection bias.

Conclusion

Parent education and counseling are essential for early childhood development, and guidelines must be developed to improve the long-term physical and mental outcomes of new mothers, neonates, and other family members. Hospital-based postpartum parenting education is found to help enhance parental care for their children but involves families in the overall care of the baby. The literature concerning parent education is expanding at a rapid pace. As multiple sources suggest that high-quality parenting is a strong indicator of an individual's lifelong development, it has become more

important to pinpoint the most efficient programs and resources for enhancing parental abilities and fostering favorable child growth.

Supplementary Table 1: Detailed themes and subthemes with phrases

Stakeholder	Theme 1: Women's personal pregnancy experience		**n**
	Sub-themes	**Phrases**	
Pregnant women	Physical changes, Emotional changes, Financial problems	*These are expected changes in pregnancy. Even though I was mentally prepared for them, I find it hard to manage them, especially since this is my first pregnancy. I am also often worried about swelling and weight gain and wonder if I can shed weight post-pregnancy.* *I am always so anxious. I worry about being unable to manage my pregnancy with my work and studies. Just raising a child at this age (25) scares me, and I don't know what to do about this constant, nagging fear.* *This was part of our plan, how to deal with additional economic needs. I am a working woman, and my husband and I make enough to get through pregnancy and hopefully raise our child comfortably.*	4
	Theme 2: The support system through pregnancy		
	Sub-themes	**Phrases**	
	Support from family, Support from a physician	*I feel like I am too young, and the fact that I am still a student often seems like I don't have the support I should have. My husband is also young, and he is at university or work for the most part. These look like unchartered waters to navigate, and I know I can use more support from my in-laws.* *I understand how hard it is for my doctor to juggle all this work between the clinics and the labor room-it must be a lot. But I have never been met with suboptimal care from her side. And I am thankful for that.*	
	Theme 3: Facilities at the hospital		
	Sub-themes	**Phrases**	
	Food services, Educational resources	*Usually, we must wait at least 2-3 hours before our turn comes, and, in that case, we must sit outside. The seats available to us are very uncomfortable, and sometimes they are already occupied by non-pregnant patients. It is important that special seats are made for pregnant women, and nobody else is allowed to use those.* *I think the food is very healthy and safe to consume. My family and I have never had any issues with it in terms of its taste or nutrition. It tends to be rather expensive, but it seems like an okay bargain given that it is prepared with so much caution.* *I have many questions that keep arising in my mind, but the visit to the doctor is once a month or less. I usually forget what I had to ask, or on the day of the visit, I don't feel great due to all the waiting, and I end up not asking what I wanted to. I will note down each question as soon as it comes to my mind, but it would be much better if there were a better guidebook for use during pregnancy. The information on the internet is often misleading and scary.*	
Stakeholder	Theme 1: Parents personal experience		**n**
	Sub-themes	**Phrases**	

Parents	Emotional changes, Financial changes, Work-life balance	*He is our first child. We are blessed to have him; he is very precious to us. This is why we are often worried if we are giving our best to his betterment. We want him to be healthy and safe.*	4
	Theme 2: Hospital experiences		
	Sub-themes	**Phrases**	
	Outpatient, Inpatient, Infrastructure.	*Our child's pediatrician is perhaps our biggest support system. I gave birth to twins a few months back, and they have had issues with their vision. If it weren't for the clinic visits with the pediatrician, we would have lost hope and been way more stressed than we are.* *My babies were in the NICU for quite some time. Even though everyone was empathetic, I felt there was a gap in skills and knowing current guidelines. There was a lot of mismanagement in my experience, and this could have hurt us a lot, but fortunately, we got out of it in time. I would suggest that more robust training goes into the NICU.*	
	Theme 3: Educational resources		
	Sub-themes	**Phrases**	
	Outpatient, Inpatient,	*Child rearing can be hard, especially if it's your first child. Day and night, there are things we would like to know, and although our elders chip in, we want to resort to evidence-based solutions only. Hence, we googled much of the stuff, and the results can be scary. It would be helpful if a separate educational program or resource were established so that we could use round-the-clock.* *Understandably, the hospital has a very high patient load, but when we are in the ward and see our kid on a hospital bed, nothing matters more than our concern for them. We have many questions, some of which may be repetitive, but as parents, we want to be satisfied on every level because it is our child's health.*	
Stakeholder	Theme 1: Role of parents and families		**n**
	Sub-themes	**Phrases**	
Healthcare workers	Mother's role Spouse's role, Role of caretaking family.	*The first 2000 days of a child are crucial for their long-term development. If the mother knows how to care for herself, she can better care for the baby. Children are naturally experiential learners; they imbibe what they see their caregivers doing. Being aware of these realities is essential for any mom-to-be.* *Grandparents often play a huge role in the upbringing of children, and they do it most sincerely, which takes the burden off parents. It is important to realize that they should also be made aware of modern evidence-based care that children are recommended to get. There are many myths and misconceptions that can sometimes be harmful, like administering 'kajal' to kids to help make their eyes 'bigger'. They should discuss these ideas, and they should visit the doctors too.*	4
	Theme 2: Role of healthcare workers		
	Sub-themes	**Phrases**	
	Role of teaching, Understanding family dynamics, Barriers that	*If we have 6000 deliveries a year, I can easily say that a minimal percentage signs up for parenting classes. I believe incentives should be provided to parents who join these classes, like a concession in doctor visits. They are beneficial.*	

	Barriers that healthcare workers face.	
	Theme 3: Role of hospitals	
	Sub-themes	**Phrases**
	Strategies used currently, Methods to improve service	*It is essential to be there for the parents and the child, even months after delivery. Often parents do not follow up as much as they should because of the expenses. This is why the way to go is to make parenting readiness part of primary care, and every doctor should be equipped to educate families. When this is made possible so that every general practitioner can provide relevant information, we will see a rise in the number of people aware of parenting readiness.*

Abbreviations

- ECD- Early Childhood Development
- FCMC- Family Centered Maternity Care
- FGDs- Focus Group Discussions
- LMICs- Low & Middle-Income Countries

Statements and Declarations

Ethical approval and consent to participate

All the research work was carried considering "*declaration of Helsinki*." Ethical approval was obtained from the Aga Khan University, Karachi Pakistan. Informed written consent and permission to audio record interviews were taken from all participants before the data collection.

Availability of data and materials

Available to corresponding author on reasonable request.

Conflict of interests

No conflict of interests

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Author's contributions

- SB- Conceptualization, methodology, writing, reviewing, and editing final draft.
- LS- Supervision
- FS- Data curation, formal analysis, writing, reviewing, and editing original draft.
- SB 7 ZK- Conceptualization, methodology, writing, reviewing, and editing final draft.
- LS- Supervision and review
- FS, MS, SF, HM, KA- Data curation, formal analysis, writing, reviewing, and editing original draft.

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