Master of Science in Public Health

Association Of Post-Partum Mental Health and Breastfeeding Practices of Mothers Visiting MCH Centers Of Rawalpindi and Islamabad

A Mixed Method Study

By
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Declaration

In submitting this dissertation, I certify that I have read and understood the rules and regulations of DPH and QAU regarding assessment procedures and offenses and formally declare that all work contained within this document is my own apart from properly referenced quotations.

I understand that plagiarism is the use or presentation of any work by others, whether published or not, and can include the work of other candidates. I also understand that any quotation from the published or unpublished works of other persons, including other candidates, must be identified as such by being placed inside quotation marks and a full reference to their source must be provided in proper form.

This dissertation is the result of an independent investigation. Where my work is indebted to others, I have made acknowledgments.

I declare that this work has not been accepted in substance for any other degree, nor is it currently being submitted in candidature for any other degree.

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ABSTRACT

Introduction: Postpartum depression is a common, non-psychotic disorder that is faced by a mother within four to six weeks after delivery. A mother suffering from depression finds it difficult to create an affiliation with her child and finds motherhood overpowering and stressful. Poor mental health also affects the milk supply and breastfeeding practices of mothers.

Objective: To analyze the post-partum mental health of women coming to Mother-Child Healthcare centers of Rawalpindi/Islamabad and find the association of postpartum mental health with breastfeeding practices of mothers and their sociodemographic factors.

Methodology: A mixed-method study was used. The cross-sectional, quantitative study was conducted at the mother-child healthcare centers of Rawalpindi and Islamabad, Pakistan in June-July,2022 with a sample size of 380 participants. Data collection was done through Edinburgh post-natal depression scale questionnaire and SPSS 20 was used for data analysis. Phenomenology study design along with a feminism worldview was used for the qualitative study.

Results: Out of 380 participants 308(81%) women belonged to the age group 23-30 years. Most of the participants were housewives 189(48.8%) with intermediate education. Forty-seven percent (n=178/380) of participants breastfeed their child and only 38% of women had husband/family support. The chi-square test of association indicated a significant association between Postpartum depression and breastfeeding.

Conclusion: Early cessation of breastfeeding can cause PPD and vice versa PPD may lead to a decrease in the milk supply, hence the cessation of breastfeeding.

Keywords: Post-partum, breastfeeding, awareness, social support

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CHAPTER I: INTRODUCTION

Childbirth is a life-changing experience physically and emotionally for mothers. For both women and men, the arrival of a child is a major developmental phase of life. It profoundly impacts the parents' identities and couples' relationships. It has been estimated that 50% to 80% of women suffer from baby blues after childbirth. The postpartum period is crucial and full of new challenges that have a major impact on mothers' mental health. Research examining psychological problems after birth has a considerable focus on depression in the postnatal period (Hubner-Liebermann B, 2012) Postpartum depression is a common, non-psychotic mood or mental disorder that is faced by a mother within four to six weeks after delivery, and its traces may extend to one year or more. Postpartum depression is characterized as a persistent low mood, which is often accompanied by feelings of sadness, worthlessness, negative thoughts, or hopelessness.

The arrival of a new child is an overwhelming and exciting event for the family, but the manifestation of ill mental health can cause disturbance and distress in the family and particularly the new mother which limits her tendency to show affection and care for her newborn. A mother suffering from depression finds it difficult to create an affiliation with her child and finds motherhood overpowering and stressful the National Institute of Mental Health (NIMH), 10-15% of women suffer from maternal depression worldwide. The percentage is even higher in low- and middle-income countries, i.e., 18-25% (Fisher J, 2012). PPD is a significant public health issue that affects women as well as child's physical and mental health and cognitive and interactive development, thus making the child vulnerable to developing psychiatric disorders during adolescence (Pawlby S, 2008) Infants of depressed mothers have shown poor nutrition, poor general health, and more frequent

diarrheal episodes. If left untreated, PPD may lead to poor mother-infant attachment and long-term maternal morbidity (Wisner KL, 20013). The prevalence rate of PPD varies vastly (3.5 - 63.3%) across Asian countries, with the lowest rates reported in Malaysia and some extremely high rates in Pakistan (28-63%) (Klainin P, 2009). Many factors influence the high prevalence rate of PPD in Pakistan such as lack of screening tools, cultural norms, insufficient social support, peer pressure, illiteracy, old-school myths about the postpartum period, and most especially lack of knowledge. The notable prevalence of postpartum depression and its consequences for mothers, newborn children, and immediate family establish this problem as an important public health concern. (Almond, 2009)

There are several important variables associated with PPD including the lack of breastfeeding. (O'Hara MW, 2013)) A report on breastfeeding in developed countries stated that mothers who do not breastfeed or breastfeed for short durations are at increased risk of PPD ((Glasheen, Richardson, 2009)). Pakistan Demographic and Health Survey 2017-18 estimated that only 20% of children are breastfed in the initial first hour of delivery, 56% are breastfed within the day of birth and 48% of children are exclusively breastfed under 6 months. It is expected event that exclusive breastfeeding declines with age, but the decline is quite rapid. Only 35% of children aged 4- 5 months are exclusively breastfed compared with 56% of children aged 0-1 months and 52% of children aged 2-3 months. A qualitative study in the United Arab Emirates reported that one of the factors contributing to PPD according to focus group members was poor bonding with the baby. This poor bonding or lack of bonding may directly relate to a lack of breastfeeding (Ghusbash R, Eapen V -2007). In their studies (Insaf and Tabassum,2011) indicated an important link between postpartum depression and breastfeeding practices that early cessation of breastfeeding may cause PPD and vice versa PPD may lead to a decrease in the milk supply, hence the cessation of

breastfeeding. The relationship between postpartum and breastfeeding is bidirectional, and the probability of any event may cause severe episodes of anxiety and stress. Moreover, antenatal depression in women may also lead to less likelihood or intention to breastfeed their infant. Mothers can be both a reason and a consequence of their depression.

Every mother intends to give the best possible nourishment to their child and breastfed milk is the foremost essential diet for a child's development. Breastfeeding undoubtedly; has been associated with numerous positive health outcomes for both the child and the mother that is very important for the maintenance of a mother's psychological and physical health. (Jones and Aaron,2004) reported that raised levels of plasma pro-inflammatory cytokines have been linked to depression as possible causative agents. From the medical point of view, there is elevated inflammatory responsiveness in the serum during PPD which facilitates activation of the inflammatory response system. Lately, it has been found that breastfeeding can be a curative agent for mental health, as it is anti-inflammatory in nature, hence regulating the stress and inflammatory response in the body. Breastfeeding is an essential practice for an infant's health as well as for maintaining a healthy bonding between mother and child. It is a natural process that with time, breast milk supply decreases but unfortunately many mothers beforehand shift to or adopt formula feed for their baby due to the inability to feed for a longer duration and the burden of house chores and responsibilities. For working women, a shorter duration of maternity leave prompts an early cessation of exclusive breastfeeding. A new mother faces a lot of societal pressure, and she tries to prove herself to be a good mother while compromising her mental health. The maternal perception of not having enough milk supply, the stress of an infant not getting a sufficient diet, or not growing up will leads to thoughts of failing motherhood and cause depression and bf cessation. A

mother's psychological health directly impacts the child's health therefore, only a happy mother can raise a happy child.

Apart from depression, many other factors are associated with early exclusive breastfeeding interruption or cessation, such as socioeconomic factors, receiving advice for formula feeding, cultural norms, household income, postpartum knowledge, and spouse and family support. The socio-economic background of women has a direct association with their mental health. The educational and employment status of parents has a great impact on parenting methods. In addition, family and social support are especially important to balance the responsibilities of parenthood as they can help reduce the symptoms of depression (Jennifer I. Manuel, 2012).

The only pleasant thing about PPD is that it is treatable and can be cured when recognized. There are different ways to treat PPD, depending upon the severity and condition of the mother's suffering and the most common methods include therapy and counseling. However, in extreme cases Electroconvulsive therapy (ECT) is used to treat severe postpartum depression. This is the dilemma of our society seeking mental help is considered taboo and people avoid discussing it. The involvement of the family especially the husband plays an important role in such cases. They need to encourage her to get psychological counselling or consultation so that PPD can be treated at the earliest. Other than that, a mother should be given enough time to rest and heal up. The fact is that who-so-ever goes through postpartum depression, a mother, or a father, does not make them bad parents. It is a natural process and happened due to sudden changes in the human body and lifestyle. Moreover, men also need to be vocal about their feelings, express love for their wives and baby, help her with the chores and spend quality time with them (Patricia A. Sealy, 2009).

People with postpartum depression may not recognize their changing behaviors and how it affects their breastfeeding and relation with the baby. They may not be aware of the signs and symptoms of depression and anxiety. If you suspect that a friend or loved one has some unexpected anger, anxiety, mood swings, and distress in their post-natal period and is developing post-partum psychosis, help them seek medical care immediately and do not leave such a person alone in the hope of self-improvement. There is only little evidence of research done on the relationship between PPD and breastfeeding in Pakistan. Such issues should be presented to the relevant authorities for the promotion of breastfeeding by mothers.

1.1. Rationale:

Postpartum mental health is a considerable issue in women. According to the National Institute of Mental Health (NIMH), 10-15% of women suffer from maternal depression worldwide (Fisher J,2012) and remain untreated. In low- and middle-income Asian countries, the percentage of post-natal depression is even higher, i.e., 18-25% with the highest prevalence rate of PPD reported in Pakistan, i.e., 28-63% (Gulamani SS,2013).

Pakistan Demographic and Health Survey 2017-18 estimated that only 20% of children are breastfed in the initial hour after delivery and 48% of children are exclusively breastfed under 6 months. Post-partum depression has a significant influence on breastfeeding and the mother-child relationships. Qualitative research that focuses on women's actual experiences and conceptualizations of postnatal distress outside of diagnostic categories is therefore also necessary.

There is a need to address this significant public health issue that affects women's health as well as child's physical and mental health and promote the early initiations of breastfeeding after delivery.

1.2. Objectives:

1. To assess the post-partum mental health of women coming to Mother-Child healthcare centres of Rawalpindi and Islamabad.

2. To look for breastfeeding practices among women in their postpartum period

3. To find the association of postpartum mental health with breastfeeding practices of mothers and their sociodemographic factors

CHAPTER II: LITERATURE REVIEW

2.1. Post-Partum Depression:

Maternal post-partum depression (PPD) is a severe and complicated disorder that affects about one in seven new moms around the globe where the incidence rate of PPD is much higher in developing countries. It is an underrated issue, and a lot of people have zero knowledge about it, and they are completely unaware that how it occurs and its consequences on mother-child health. It ranges from mild to severe, where a mother could harm herself and in severe cases, a mother could harm her infant too. The onset of post-partum despair can disrupt the existence of the latest mother and compromise the potential to attend to her infant (Wisner, & Sit, 2006). For women stricken by PPD, the transition to motherhood can be confusing and overpowering which may compromise their breastfeeding practice. Studies revealed that infants of postnatally depressed mothers are also at risk of impaired movements and behavioural troubles at some specified time in the future of formative years. Moreover, these kids are three to five times more likely to experience depression at a later age (Earls, 2010).

Given the significance of maternal post-partum depression and the results it has on the health and well-being of women and infants, this illness represents a considerable public health concern. There are considerable studies and research on PPD in foreign countries, but Pakistan lacks basic knowledge and awareness regarding it due to the scarcity of data and research in this field. In our country, it is common that a woman must take care of all the house chores and despite normal/ caesarian delivery, she is expected to look after the house immediately. There is another dilemma that a mother always has a societal pressure of breastfeeding her child and if she is unable to do, she is tagged as a careless and bad mother.

Depression has its deep roots which not only traumatize the mental health of a mother but also affect her biological and physical health.

The birth of a child is usually the most precious and joyful experience for a mother and the entire family, but it can sometimes have negative consequences when the mother suffers from depression and anxiety. Post-partum depression is a complex and challenging disorder that may traumatize the whole family and can have long-term consequences (Clay & Seehusen, 2004). Approximately 25%-50% of mothers with post-partum depression have episodes lasting from 6 months to 1 year. This prevalence was determined mostly from studies conducted in Western countries and interestingly, in Pakistan the prevalence rate of PPD ranges from 28-63%, placing it among the highest in Asia (Gulamani, Shaikh, & Chagani, 2013). In the literature examining risk factors of PPD, socioeconomic factors and social support are the most common. It is a heart-wrenching fact that in Pakistan, the maximum population belongs to rural areas where the literacy rate is very low and does not bother the mental health of a woman. In most cases, the women face criticism and degradation during PPD which triggers their anxiety.

There is another term linked with post-natal distress i.e., Baby blues which is different from post-partum depression. Baby blues are for a short period and can end up on their own whereas, PPD needs to be treated and has a longer duration. The baby blues include mood swings, crying spells, difficulty in sleeping and anxiety. All we need to do is to recognize the condition and seek medical help at once.

2.2. Breastfeeding and Post-partum depression:

Going through all the relevant studies, it has been found that postnatal depression also affects the breastfeeding practices of mothers, and it can be the major reason for early bf cessation.

A systematic review explored a relationship between PPD, and breastfeeding duration and the results were consistent among diverse groups of women (from Australia, Barbados, Canada, Pakistan, the United States, United Kingdom) and observed that increased ratings of depression are associated with earlier discontinuation of breastfeeding (i.e., decreased breastfeeding duration). Increased depressive symptomatology was also found to be associated with increased breastfeeding difficulties and decreased breastfeeding self-efficacy (Dennis and McQueen,2009). The association between breastfeeding and postpartum depression has been studied by several researchers, who have investigated the link between breastfeeding and postpartum depression, but it is still unclear how the two are related or whether they were even connected or not. Numerous studies about breastfeeding and postpartum depression have shown conflicting results, which is probably due to the interaction of the complex physiological, psychological, and sociocultural mechanisms that are responsible for the association. More specifically, evidence suggested that breastfeeding moms have a higher risk of depression. However, women whom formula feed their infants have higher rates of depression than women who breastfeed and vice-versa mothers who experience postpartum depression are at greater risk of early breastfeeding cessation (Pope & Mazmanian, 2016).

2.3. Qualitative perspective of the association between Postpartum depression and Breastfeeding:

There is far less qualitative research examining experiences of postnatal anxiety. In common with qualitative research on postnatal depression women spoke of a relationship between high expectations, perceived lack of competence as a mother and anxiety, loneliness and feeling overwhelmed. Lack of social support was also an important factor in experiences of anxiety. A meta-synthesis of ten qualitative studies of women's perceptions and experiences

of traumatic birth identified themes of feeling out of control, feeling inhumanely treated, feeling trapped with the childbirth experience, a rollercoaster of emotions, disrupted relationships and finding ways of succeeding as a mother after feeling their mothering ability had been hampered by a traumatic birth (Elmir and Schmied,2010). Breastfeeding overshadowed all other aspects of daily life with women reporting feelings of anxiety, stress, and frustration about their feeding experiences. A determination to breastfeed was present even if women felt that it took all their time and resources to succeed at this. Sometimes the determination to breastfeed led to women feeling that they were engaged in a fight to succeed. Studies explained that mothers should be better prepared for feeding difficulties (Beck & Watson, 2008). Qualitative research that focuses on women's actual experiences and conceptualizations of postnatal distress outside of diagnostic categories is therefore necessary. The key research question was to determine how women themselves conceptualize their postnatal distress and to obtain more information about women with breastfeeding trouble and how they were treated in their distress. The data highlights the lived experiences of mothers and psychological processes across different types of distress in the context of defining moments in becoming a mother, birth, and breastfeeding.

2.4. Factors involved in post-partum depression:

There are many factors involved in causing post-partum depression other than that it can happen on its as well (without any factor being involved). Several studies suggested that it can occur from multiple hormonal-biological, psychological, familial, social, and cultural factors (Clay & Seehusen, 2004; O'Hara MW, 2013).

2.4.1. Sociodemographic factors:

Postpartum depression is also examined in association with socio-demographic, maternal general health, obstetric, gynecologic, and infant health variables. Socio-demographic

variables including maternal age (above 35 years), education, income, smoking, and employment status can affect and alter mood status. There is conflicting data on this aspect: for example, some studies found that less educated mothers were more likely to develop postpartum depression and they are less likely to initiate breastfeeding in the first hour after childbirth (Pakistan Demographic and Health Survey, 2017-18). Whereas other studies did not find a statistically significant relationship between socio-demographic variables and postpartum depression (Decasto and Filipa,2007). Low income is also associated with the risk of PPD. The husband's employment status and education also have a relationship with the onset of PPD. Other stressors may include job loss, financial burdens, any stressful event and the death of a friend or family member.

2.4.2. Obstetric risk factors:

Obstetric risk factors are considerable causative agents of post-partum depression. More high-risk pregnancy has increased the chances of post-natal depression. Also, some women desperately look forward to a vaginal/normal delivery but end up having an emergency C-section. This becomes a triggering factor for them to face PPD. Other complications such as prolonged labour, umbilical cord prolapse, and obstetric haemorrhages. Also, post-partum depression increases with an increase in the number of pregnancies, but the number of children is not the only factor contributing to risk. It has been reported that women who exclusively breastfeed their infants in the first three post-natal months showed a lower level on Edinburgh Postnatal Depression Scale than the women who do not breastfeed.

2.4.3. Psychological factors:

Usually, women with a history of depression are at more risk of developing post-partum depression but most people are not aware of the fact that there is a close relationship between pre-natal and post-natal depression because these women are more susceptible to hormonal

changes. Also, females with premenstrual syndrome (PMS) are at more risk of getting PPD. In addition, other psychological factors include negative attitudes toward pregnancy, history of sexual abuse in past and tragic life events that are unforgettable and often came up as nightmares. Medical attention and counselling are required at such a point and should not be left untreated.

2.4.4. Social factors:

Our society and surrounding play an important role in encouraging or degrading women in their post-natal period. Social support is very important for a woman been gone through PPD. Support from spouses and in-laws plays a significant role in the recovery of a mother. The spouse's sexual violence and domestic violence during pregnancy are seen as contributing factors to PPD. There is also an association between postpartum depression and giving birth to a male or a female It is estimated that 13% of women are affected by postpartum depression within one year of birth. The risk of postpartum depression increases dramatically to 41% in women with antenatal depression. Women may also feel anxious and depressed after childbirth due to new responsibilities or the feeling that they had no time for themselves anymore.

2.5 Operational definitions:

2.5.1 Postpartum depression: Post-partum depression is suffered by a mother following childbirth, typically arising from the combination of hormonal changes, psychological adjustment to motherhood, and fatigue, postnatal depression. Post-partum has significant effect on mother's mental health and her relationship with infant.

2.5.2 Breastfeeding: The World Health Organization (WHO) recommends that breastfeeding should begin within the first hour of a baby's life and continue as often and as

much as the baby wants. Breastmilk is the most efficient nutrient for an infant's diet. A mother can go through early breastfeeding cessation due to post-partum depression

2.5.3 Mental Health Awareness: Mental health awareness is the effort to reduce the mental illness and post-partum depression in mothers by sharing their individual experiences and providing them with enough knowledge about post-partum period.

2.5.4 Social support: It refers to support, care and comfort from husband and family at the time of need or crises in post-partum period. Social support enhances the quality of life and buffers positive self-image.

2.5.5 Sociodemographic factors: A combination of social and demographic factors that define people in a specific group or population. The social and demographic features help us know what members of a group have in common.

2.5.6 Post-partum blues: Postpartum "blues" are defined as low mood and mild depressive symptoms that are transient and self-limited. The depressive symptoms include sadness, crying, exhaustion, irritability, anxiety, decreased sleep, decreased concentration, and labile mood.

2.5.7 Antenatal care: Antenatal care is the care a woman gets from health professionals during her pregnancy. It is sometimes called pregnancy care or maternity care.

2.5.8 Post-natal care: Postnatal care is the care given to the mother and her newborn baby immediately after the birth of the placenta and for the first six weeks of life. Most maternal and neonatal deaths occur during childbirth and the postpartum period.

CHAPTER III: METHODOLOGY

It was a mixed-method study. The sequential explanatory design of mixed-method study was used where quantitative data was collected and analyzed first, followed by the qualitative data.

3. Quantitative Research Methodology

3.1. Study Design:

This proposed study is a cross-sectional study that is designed to determine the frequency of post-partum depression and its association with breastfeeding practices and sociodemographic factors among women visiting MCH centres of Rawalpindi during their post-natal period.

3.2. Study Setting:

The data were collected from the mothers visiting Mother and Child Healthcare centres (MCH) in Rawalpindi. Chosen MCH centres were MCH-EPI centre Dispensary 22 no., Dr Asma Maternity and childcare clinic, City care hospital and MaxCare Hospital.

3.3. Study Duration:

The duration of the study was 6 months approximately (March 2022 – August 2022).

3.4. Sample Size:

The sample size calculated was 380 using OpenEpi Software with the previous prevalence of 45.5% (Sadia Shah,2017) at a 95% confidence interval, 5% precision and 5% non-response rate.

3.5. Sampling Technique:

A convenience sampling technique was used to collect our data.

3.6. Sampling Unit:

Women in their post-partum period visiting MCH centres of Rawalpindi city.

3.7. Data Collection:

Data was collected with the help of thirty-six items structured questionnaire which was also translated into the Urdu language for participants' convenience. Edinburgh post-natal depression scale (Sadia Shah,2017) was used to measure the post-partum mental health of women and the Breastfeeding Assessment Tool(Beck & Watson, 2008) was used to assess the breastfeeding outcome of a woman with PPD. Content validity of the questionnaire was ensured by literature review and reliability was checked by pilot testing. After pilot testing, the translated questionnaires were given to the targeted population ensuring anonymity of the data filled by them. The questionnaire consisted of two parts.

Section 1- Descriptive Statistics of women visiting MCH centres in their post-partum

3.7.1. Sociodemographic Information:

It contains questions regarding age, level of education, employment status, family system (joint/nuclear), no. of children, husband employment status, mode of delivery, history of miscarriage, no. of pregnancy, breastfeeding or not, use of formula milk, support from husband and in-laws and prenatal depression history.

Section 2- Inferential Statistics of women visiting MCH centres in their post-partum

3.7.2. Post-partum depression and breastfeeding:

Edinburgh post-natal depression scale was used to measure post-partum stress levels. The scale for every question was adopted as it is. EPDS is a ten questions scale that was simple to manage and helped to identify the level of depression among participants. Mothers rating above thirteen were considered to have depression whereas the EPDS score should not override medical judgement. The options on the scale were numbered 0-3 with the first option as zero and the last option to be marked as 3 whereas, question numbers 3,5 and 10 were scored reversely. The maximum score on the scale is 30 and the participant with a 13 or above score has possible indications of depression. Breastfeeding outcome was assessed by using Breastfeeding Assessment Tool having 11 items which were scored as 0-Yes, 1-No. The mean ratio calculated for this score was 17 and the individual who scored below 17 had low bf outcomes and could not breastfeed their child well.

3.7.3. Dependent Variable:

Edinburgh Postnatal Depression Scale (EPDS) for measurement of stress in the postpartum period (Cox J.L,1987) and Breastfeeding Assessment Tool (UNICEF, UK) to assess the breast-feeding practices of mothers during the post-natal period.

3.7.4. Independent Variable:

The socio-demographic data were taken as the independent variable.

3.8. Quantitative Data Analysis:

The data was entered and analyzed using SPSS version 21 and descriptive statistics were done for all the dependent and independent variables and statistics for frequency and percentages were calculated. A Chi-square test of association was performed to check the

significant association between sociodemographic variables and post-partum depression, sociodemographic factors and breastfeeding and post-partum depression with breastfeeding.

3.8.1. Categorical Variable:

Frequency and percentage

3.8.2. Continuous Variable:

Mean and standard deviation.

3.9. Qualitative Research Methodology

The qualitative part focuses on the in-depth experiences of mothers with postpartum depression and how this phase affects their breastfeeding and affiliation with the child and the importance of social support for a woman suffering from post-partum depression.

3.9.1. Study Design:

The study design used for the qualitative part is “Phenomenology.”

3.9.2. World view:

The world view found to be most suitable here is “Feminism.”

3.9.3. Sampling Technique:

Purposive sampling was used to collect data.

3.9.4. Study sample:

Women in their post-period were interviewed till saturation was achieved. About ten participants showed up to be interviewed whereas later, two respondents refused to share their experience and one left did not come for the interview. Seven participants were interviewed up to the saturation achievement.

3.9.5. Data Collection:

In-depth interviews and email interviews were conducted. Consent was taken from the interviewers before every interview and afterwards, they were made comfortable. Their privacy and confidentiality were ensured by a written consent form. Probing questions, sub-questions and leading questions were asked to achieve the required information.

3.9.6. Data Collection Tool:

The self-devised interview guide was used as a data collection tool. In-depth interviews were performed. Interviews were conducted, firstly as unstructured with general questions followed by semi-structured interview questions. The interviews were audio recorded with the permission of respondents with the help of an audio recorder where participants were asked to share their experiences of motherhood and postpartum depression.

3.9.7. Plan of analysis:

The data obtained from interviews were evaluated manually. Codes and categories were identified by analyzing the interviews repeatedly and logical themes were generated afterwards. Validation of the data was assured keeping aside the researcher's bias.

3.10. Eligibility Criteria

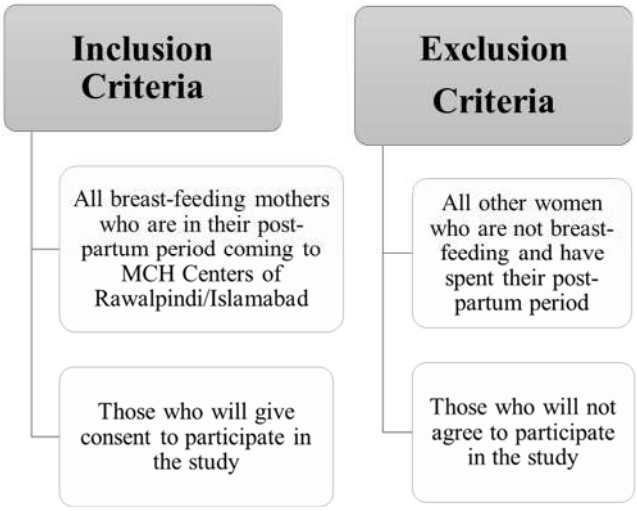

Figure 1: Eligibility Criteria

3.11. Ethical Considerations:

- Approval of IRB
- Each person who agrees to be interviewed was asked to read and signed an informed consent form
- Complete anonymity of the participants and confidentiality of data were ensured
- Ethical/legal permission of the MCH centres to conduct research in their vicinity
- This proposal was reviewed and approved by the AL-Shifa School of Public Health Institutional Research Board.

CHAPTER IV: RESULTS

Quantitative Research Results

4. Descriptive statistic results of women in their post-partum period

4.1.1. Sociodemographic Variables:

The sample population for this research consisted of 380 participants, (98.5%) who were mothers coming to MCH centres during their postpartum period. Out of these 380 participants, 308(81%) women belonged to the age group 23-30 years. Most of the population was literate with 156(41%) intermediates and 139(36.6%) having completed their graduation. Most of the participants were housewives 189(48.8%) with a maximum number of children i.e., Three 122(32.1%) or 113(30.8%) respectively. Almost 219(57.6%) of participants lived in a joint family system with an average household income. Table no.1 shows the demographic characteristics of the participants.

Table 1: Demographic Characteristics.

S.no	Variables	n (%)
1.	**Age:**	
	16-22 years	16(4.2)
	23-30 years	308(81.1)
	31-37 years	46(12.1)
	38-44 years	10(2.6)
2.	**Level of education:**	
	No formal education	12(3.2)
	Matric	73(19.2)
	Intermediate	156(41)
	Graduate	139(36.6)

3.	**Employment status:**	
	Housewife	186(48.9)
	Self-employed	79(20.8)
	Employed	115(30.3)
4.	**No. of children:**	
	One	117(30.8)
	Two	112(29.2)
	Three	122(32.1)
	Four	9(2.4)
5.	**Husband's employment status:**	
	Government job	36(9.5)
	Private job	166(43.7)
	Self-employed	130(34.20
6.	**Family system:**	
	Joint family	219(57.6)
	Nuclear family	160(42.1)

4.1.2. Postnatal care and initiation of breastfeeding:

This section of the questionnaire assessed the postnatal care and breastfeeding practice of mothers. Out of 380 participants, 167(43.9%) gave vaginal birth with 135(35.5) respondents having a history of miscarriage. Most of the participants seek health care services at maternity homes for their delivery (n= 171/380, 45 %). Forty-seven percent (n=178) of participants were able to breastfeed their child for a maximum period of 1 week 120 (31.6%). Many of the participants adopted breastfeeding plus formula milk 174(45.8%) as their feeding pattern. Thirty-eight percent of participants(n=145/380) answered that their husband and family were supportive during the postpartum period whereas, 19.2% (n=73/380)

respondents were not sure about any help from their husband/family. Table no.2 represents the postnatal care and breastfeeding practice of participants.

Table 2: Postnatal care and Initiation of breastfeeding.

S.no	Variables	n (%)
1.	**Mode of delivery:** Vaginal	167(43.9)
	Caesarian	213(56.1)
2.	**Previous miscarriage:** Yes	135(35.5)
	No	144(64.2)
3.	**Health service:** Government hospital	34(8.9)
	Private hospital	101(26.6)
	Maternity home	171(45.0)
	Home birth	72(18.9)
4.	**Breastfeed their child:** Yes	178(46.8)
	No	193(52.0)
5.	**Duration of breastfeeding:** 1 week	120(31.6)
	2-3 weeks	106(27.9)
	4-6 weeks	111(29.2)
	7-9 weeks	11(2.9)
	6 months and above	32(8.4)
6.	**Feeding pattern:** Exclusive breastfeeding	30(7.9)
	Exclusive pumping of breastmilk	74(19.5)
	Breastfeeding + Formula milk	174(45.8)
	Exclusive formula milk	102(26.8)
7.	**Husband/Family support** Yes	145(38.2)
	No	161(42.4)
	May be	73(19.2)

4.1.3. Postpartum Mental Health:

The next section assessed the postpartum mental health of participants in their postpartum period. About 177/380 (46.6%) respondents experience anxiety, overthinking, and stress throughout their postpartum period and 91/380(23.9%) respondents felt it very often. Many

respondents also had a history of antenatal depression (n= 169/380, 44.5%). Table no.3 represents the status of mental health in participants.

Table 3: Postpartum mental health.

Variables	n (%)
Feel Anxiety, overthinking, and stress Yes, every time	177(46.6)
Yes, very often	91(23.9)
Rarely	85(22.4)
Never	27(7.1)
Antenatal Depression Yes	169(44.5)
No	207(54.5)

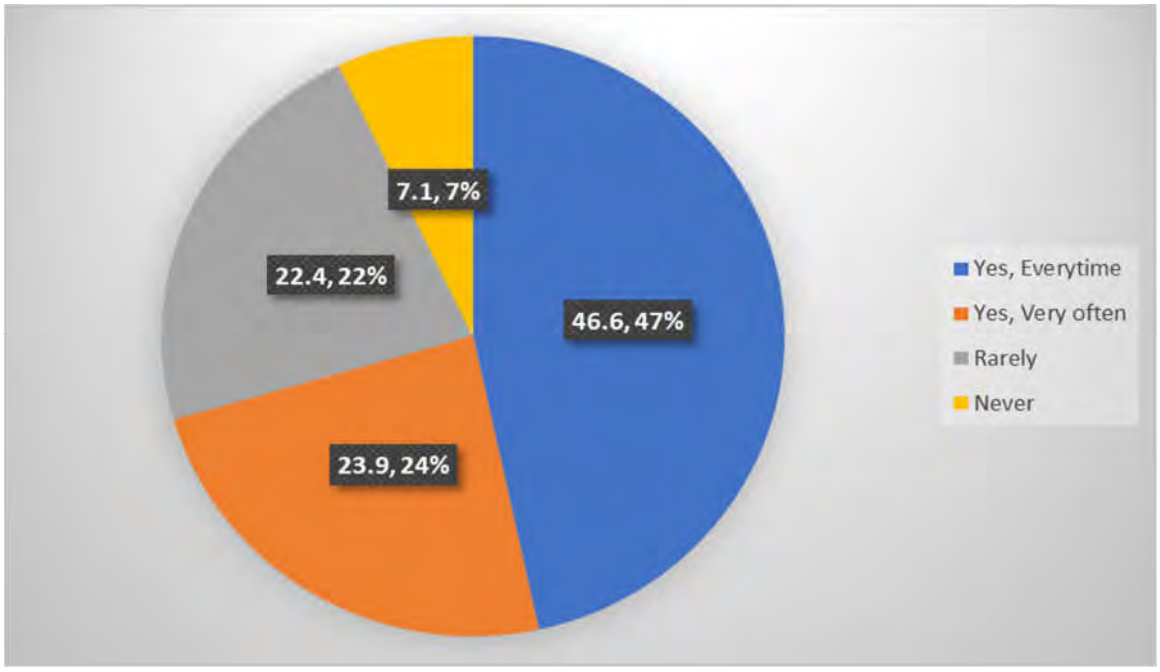

Figure 2: Proportion of anxiety and stress among women during Postpartum

4.1.4. Exposure to Postpartum Depression (Edinburgh Postnatal Depression Scale-EPDS):

Postpartum depression was analyzed among respondents using the Edinburgh Postnatal Depression Scale (EPDS) where participants indicated their level of depression by ranking the highest scale and lower scale accordingly. The scale for this research has been adopted as it is. Most of the respondents 181(47.6%) and 213(56.1) indicated that they could not see the funny side of things and do not look forward to enjoying things as they used to do, respectively. About 239(62.9) blamed themselves for every bad thing that happened. Most respondents (n= 169/380, 44.5% and 155/380, 40.8%) felt anxious and panicked for no reason but only 23(6.1%) felt difficulty sleeping due to sadness. Thirty-four per cent (n=130/380) of respondents felt quite unhappy that they used to cry, whereas 85(22.4%) individuals thought of harming themselves. Table no.4 represents the frequency of the EPDS scale.

Table 4: Edinburgh Postnatal Depression Scale and its most common responses.

Sr.no	Items	Responses	N (%)
1.	I have been able to laugh and see the funny side of things	As much as I always could	20(5.3)
		Not quite so much	82(21.6)
		Not so much now	181(47.6)
		Not at all	97(25.5)
2.	I have looked forward with enjoyment to things	As much as I ever did	15(3.9)
		Rather less than I used to	213(56.1)
		Less than I used to	86(22.6)
		Hardly at all	66(17.4)
3.	I have blamed myself unnecessarily when things went wrong	Yes, most of the time	79(20.8)
		Yes, some of the time	239(62.9)
		Not very often	24(6.3)
		No, never	38(10.0)
4.	I have been anxious or worried for no reason	No, not at all	18(4.7)
		Hardly ever	85(22.4)
		Yes, sometimes	169(44.5)
		Yes, very often	108(28.4)
5.	I have felt scared or panicked for no reason	Yes, quite a lot	155(40.8)
		Yes, sometimes	147(38.7)
		No, not much	63(16.6)

		Not, not at all	15(3.9)
6.	**Things have been getting to me**	Yes, most of the time I have not been able to cope at all	33(8.7)
		Yes, sometimes I have been coping as well as usual	131(34.5)
		No, most of the time I cope quite well	151(39.7)
		No, I have been coping as well as ever	65(17.1)
7.	**I have been so unhappy that I have had difficulty sleeping**	Yes, most of the time	23(6.1)
		Yes, sometimes	187(49.2)
		No, not very often	114(30.0)
		No, not at all	56(14.7)
8.	**I have felt sad or miserable**	Yes, most of the time	26(6.8)
		Yes, quite often	179(47.1)
		Not very often	123(32.4)
		No, not at all	52(13.7)
9.	**I have been so unhappy that I have been crying**	Yes, most of the time	32(8.4)
		Yes, quite often	130(34.2)
		Only occasionally	157(41.3)
		No, never	61(16.1)
10.	**The thought of harming myself has occurred to me**	Yes, quite often	85(22.4)
		Sometimes	118(31.1)
		Hardly ever	151(39.7)
		Never	25(6.6)

4.1.5. Total exposure to post-partum depression:

The cumulative exposure of depression among depressed and non-depressed participants was estimated as 51.2% (n=191/380) respondents were found to be depressed and the rest 48.8%(n=189/380) were not depressed. Table no. 5 shows the total depression.

Table 5: Total depression

Total Post-partum Depression		
	Frequency (n)	**Percentage (%)**
Depressed	191	51.2
Not depressed	189	48.8
Total	380	100

4.1.6. Breastfeeding among depressed mothers (Breastfeeding Assessment Tool):

There is a profound relationship between postpartum depression and the breastfeeding of mothers. In this section of the questionnaire, the breastfeeding practices of respondents were analyzed using Breastfeeding Assessment Tool (Stanford University, The Well Fed Baby Checklist). Most of the respondents 224(58.9%) answered No when asked if their breastfeeding is going well during the postnatal period. Many respondents reported that their baby could not latch and suck rhythmically at the breasts i.e. (207/380, 54.5% and 209/380, 55.0 %) respectively. Only 41 %(n=157/380) answered that their baby eats from both breasts whereas, 165(43.4%) of respondents felt their breasts were full before feeding. In response to the last three questions, 173(45.5%) respondents enjoyed each feeding, and 166(43.7%) individuals felt intense pain and soreness in their breasts initially. About 62% (n=234/380) of participants reported that their baby does not seem satisfied after feeding.

Table 6: Breastfeeding Assessment Tool (10 items).

Sr.no	Items	Responses	N (%)
1.	**Do you feel that breastfeeding is going well for you?**	Yes	156(41.1)
		No	224(58.9)
2.	**Has your milk come in yet? (Breasts are full and firm)**	Yes	156(41.1)
		No	224(58.9)
3.	**Does your baby latch on to the breast easily?**	Yes	173(45.5)
		No	207(54.5)
4.	**Is your baby able to keep sucking rhythmically at the breast for 5-10 minutes for each feeding?**	Yes	171(45.0)
		No	209(55.0)
5.	**Does your baby wake up to eat at least every 3 hours at night?**	Yes	170(44.7)
		No	210(55.3)
6.	**Does your baby eat from both breasts during most feedings?**	Yes	157(41.3)
		No	223(58.7)
7.	**Do your breasts feel full before feedings?**	Yes	165(43.4)
		No	215(56.6)

8.	**Do you enjoy each feeding?**	Yes	173(45.5)
		No	207(54.5)
9.	**Did you feel intense pain and soreness in the breasts initially?**	Yes	166(43.7)
		No	214(56.3)
10.	**Does your baby seem satisfied or full almost after every feed?**	Yes	146(38.4)
		No	234(61.6)

4.1.7. Total Breastfeeding Assessment:

The cumulative breastfeeding practices of participants were estimated as 150(39.5) participants breastfeed their child well during the post-partum period whereas the rest 230 participants could not breastfeed their infant well in PPD.

Table 7: Total Breastfeeding Practices

Total Breastfeeding		
	Frequency (n)	**Percentage (%)**
Breastfeed well	150	39.5
Breastfeed not well	230	60.5
Total	380	100

4.2. Inferential statistical results of women in their post-partum period:

4.2.1. Chi-square test of association of Sociodemographic(independent) variables with Postpartum mental health:

The Chi-square test of association indicated a significant relationship between the level of education and postpartum depression $x^2(1) = 16.738$, p-value=0.001, and husband employment status $x^2(1) = 16.482$, p-value=0.001. The health service sought for delivery also showed a significant relation with the PPD i.e., $x^2(1) = 10.286$, p- value=0.036. The prevalence of PPD is higher in breastfeeding mothers as compared to non-breastfeeding mothers with a significant value of $x^2(1) = 9.458$, p-value=0.049. Similarly, the respondents who felt anxiety and stress during the postpartum period are more likely to have postpartum

depression $x^2(1) = 6.617$, p-value= 0.010. The sociodemographic variables do not show any relation to breastfeeding assessment, hence, this association is not represented in the tables.

Table 8: Cross-tabulation of sociodemographic variables * Exposure to postpartum depression.

Variables	Exposure to Postpartum Depression		x^2(df)	P value
	Not Depressed N (%)	Depressed N (%)		
Age: 16-22 years	6(37.5)	10(62.5)	3.084(1)	0.37
23-30 years	150(48.9)	157(51.1)		
31-37 years	25(54.3)	21(45.7)		
38-44 years	7(70.0)	3(30.0)		
Level of education: No formal education	4(33.3)	8(66.7)	16.738(1)	*0.001
Matric	28(38.4)	45(61.6)		
Intermediate	69(44.2)	87(55.8)		
Graduate	87(63.0)	51(37.0)		
Husband's employment status: Government job	10(28.6)	25(71.4)	16.482	*0.001
Private job	72(43.4)	94(56.6)		
Self-employed	75(57.7)	55(42.3)		
Health service: Government hospital	22(64.7)	12(35.3)	10.286(1)	*0.036
Private hospital	48(48.0)	52(52.0)		
Maternity home	91(53.2)	80(46.8)		
Home birth	27(37.5)	45(62.5)		
Breastfeed their child: Yes	98(55.4)	79(44.6)	9.458(1)	*0.049
No	87(45.1)	106(54.9)		
Duration of breastfeeding: 1 week	57(47.5)	63(52.5)		

2-3 weeks	50(47.2)	56(52.8)	7.328(1)	0.12
4-6 weeks	52(46.8)	59(53.2)		
7-9 weeks	7(63.6)	4(36.4)		
6 months and above	22(71.0)	9(29.0)		
Feeding pattern: Exclusive breastfeeding	17(58.6)	12(41.4)	5.086(1)	0.166
Exclusive pumping of breastmilk	38(51.4)	36(48.6)		
Breastfeeding + Formula milk	76(43.7)	98(56.3)		
Exclusive formula milk	57(55.9)	45(44.1)		
Feel Anxiety, overthinking, and stress Yes, every time	17(63.0)	10(37.0)	6.617(1)	***0.010**
Yes, very often	36(42.4)	49(57.6)		
Rarely	91(51.7)	85(48.3)		
Never	44(48.4)	47(51.6)		
Antenatal Depression Yes	91(54.2)	77(45.8)	3.873(1)	0.276
No	95(45.9)	112(54.1)		

Fisher Exact Test value: Values in bold are significant at > 0.05 alpha, 95% confidence interval, and 5% precision.

4.2.2. Association of post-partum depression with Breastfeeding

The chi-square test indicated a significant association between Postpartum depression and breastfeeding x2(1) =4.752, p-value=0.025. About 58% (n=121/191) of respondents with PPD could not breastfeed their baby well, whereas n= 70 (41.1%) of respondents with postpartum depression breastfeed their infants easily.

Table 9: Chi-square test of association between Postpartum depression and Breastfeeding.

Postpartum depression	**Breastfeeding practices**			**x^2 (df)**	**P value**
	Breastfeed well N (%)	**Breastfeed not well N (%)**	**Total**		
No PPD	80(47.7)	109(52.3)	189	4.752(1)	***0.025**
PPD	70(41.1)	121(58.2)	191		
Total	150	230	380		

Fisher Exact Test value: Values in bold are significant at > 0.05 alpha, 95% confidence interval and 5% precision.

Qualitative Analysis of post-partum depression and breastfeeding practices:

The purpose of this study was to follow up on quantitative research and explore the lived experiences of mothers during their post-natal period. All the interviews were semi-structured preceded by an interview guide. At first, informal/formal consent was taken with a brief introduction of the researcher and his/her purpose for the study. The following research questions guided this study:

1) Introduce yourself and your family

2) How was your experience of becoming a mother?

3) How was your affiliation with your baby?

4) How and when did you realize that you are going through post-partum depression, kindly tell me every detail.

5) How did you cope with it and manage your motherhood responsibilities?

6) Did you breastfeed your baby and how was the experience of feeding your child?

7) Did you introduce formula milk to the baby at any stage?

8) Did your mental health affect your breastfeeding practice and affiliation with your child?

9) What was the reaction of your husband and family when they observed your changed behaviors? And did they recognize your condition?

10) Was your husband/ family supportive in this tough time?

11) How much time did you take to get out of depression and what helped you?

12) In your opinion, how mothers can avoid the possibility of PPD?

Audi taped conversations and interviews via email, asynchronously (respondents answered the question at their own pace and over a long period) were analyzed. Excerpts of the interview are provided in this chapter to aid in support of data analysis. Within the excerpts, all capital letters are used to reflect when the participants emphasized something, and the sentences written in italics are respondents' quotes. All the interpretations were done precisely and carefully, keeping aside the researcher's bias.

4.3. The Participants (background):

Ten participants volunteered to be a part of this study but two could not make up their commitment and dropped out and later another participant refuse to talk about her postpartum depression. Hence, seven women who went through PPD were interviewed via audiotaped in-depth conversations and email interviews. The participants were recruited through Facebook and Instagram recruitment postings and other social media apps. Their ages ranged from 20 to 35 years. Most of the women faced PPD after giving birth to their first child whereas two mothers faced it after the second child's birth. Three of them did not face any difficulty in breastfeeding during postpartum while the rest found it quite difficult to breastfeed and pump during PPD. All of them held the same opinion about PPD that they were not aware of the baby blues and severity of anxiety and its consequences during the postpartum period.

Table 10: A summary of the participants' demographics is presented.

Respondents' Sr. No	Current Age	Postpartum manifested at the time of	Came out of depression after	Duration of breastfeeding	Got social support
A	28	1st childbirth	8-9 months, still have traces	3 weeks	Biased support
B	28	1st childbirth	2 months	6-9 months	Biased support
C	28	2nd childbirth	6 months	4 months	Yes
D	26	1st childbirth	2-3 months	2 months	Not enough
E	32	1st childbirth	1 year or more	Could not breastfeed	Only from husband
F	34	3rd childbirth	2-3 weeks	6 months	Yes
G	29	1st childbirth	2 months	4 months	No

From each transcript, significant phrases or sentences that belonged directly to the experiences and breastfeeding hurdles of the PPD mothers were keenly identified. Underlying meanings were then formulated from the significant statements and phrases. These formulated meanings were then grouped into categories and themes, which aided the emergence of themes that were common across all the transcripts. The results were then incorporated into an in-depth and exhaustive description of the phenomenon.

4.4. Themes:

Gloomy Phase	Self-Doubts	Breastfeeding Guilt	Biased Support	Respondent's Say
Bliss & burden	Worried	Could not breastfeed my child	My husband was oblivious to my situation	No prior awareness
Lots of responsibilities	Fear of SIDS (sudden infant death syndrome)	Sore nipples	The husband got irritated initially	No idea about this real change
Panic	Bad mom	Introduce formula milk	Lots of expectations	Internet knowledge
Divided attention	Blamed me	Being unable to breastfeed leads to my PPD	Did not even bother to help	Read articles
Lost my mind	Hopelessness	Pumping gets affected when I am stressed	Only my mother was helpful	Motivational videos
Tiring and stressful	Will not be able to take care of baby	I am a failure	In-laws only help with baby care	Watched seasons
Motherhood is dutiful	No time for a bath	Tried all ways to increase milk supply	Nobody took care of me	Comedy shows
Feeling low	Constant pressure	The constant fear of early bf cessation	Husband was supportive	Distract me
Sleepless nights	Look horrible	No affiliation with baby	Taunts and comments	People do not visit the hospital
Hard time	Cannot smile and laugh	Crying while breastfeeding	Degrade me every time	Need Counselling
Frustrating	Hard to manage	Inverted nipples	Biased care	Less time
Engulfed my joy	My husband is not mine anymore	Rely on formula milk	Took for granted	Therapy
Cry for no reason	Cannot see my face in the mirror	The baby is not healthy	The husband stayed out till late	Stay positive
Feeling down	Fat and chubby	Breastfeeding was difficult initially	All alone in this	Recite Darood sharif to stay calm
Affecting my life	The husband does not like me anymore	Not exclusive bf	In-laws helped and	No professional help

			taunted at the same time	
Felt alone	Crying all day	Milk supply decreased gradually	Only my parents supported	Time heals everything
Toxic	Sit in darkness	No energy for bf	Uneducated	Did not know about my mental health
Negative thoughts	No one loves me	Drained	Everyone criticizes	Counsel moms and dads to be
Bad relationship with husband	I am not normal	Constant pain and trauma	Did not cooperate	Mental health awareness
Nights heavy dark days	Made me hollow inside	Mental stress	Hurts till date	See Lactation consultant
Immense pain	My career is ended	Wanted to bf for a long time	In-laws were helping	Try ways out
Emptiness and sadness	I will not be able to go out	Latching issue	Kids supported	Help each other
Anger for no reason	Lost my freedom	Constant pain and soreness in breasts	Old school thoughts	
Low appetite	The husband will find someone else	The baby did not suck	Myths and superstitions	
Helpless	Useless	Milk seems very thin	Very little help	
Hate-love relationship with the baby	Traumatized		My husband took me out of PPD	
Do not know how to manage this situation	Hair falls and acne		Did not let my husband know	
Exhausted so much	Lost physical appearance		This generation is lazy	
Hardest phase	Do not want to get dressed		Careless mother	
No way out			Changed behaviours	
Depressed and scared			My husband was not there	

Arranging the formulated meanings into clusters resulted in seven themes, which thoroughly the consequences of postpartum depression and its effect on breastfeeding with minimal support from family. All the respondents spoke about how miserable they felt during the

postnatal period and how the fear of breastfeeding cessation boost their anxiety. These common threads meandered throughout all the interviews. Life changes occurred in physical, emotional, self-insecurity, guilts, and social realms. Figure 2 below represents the overarching theme.

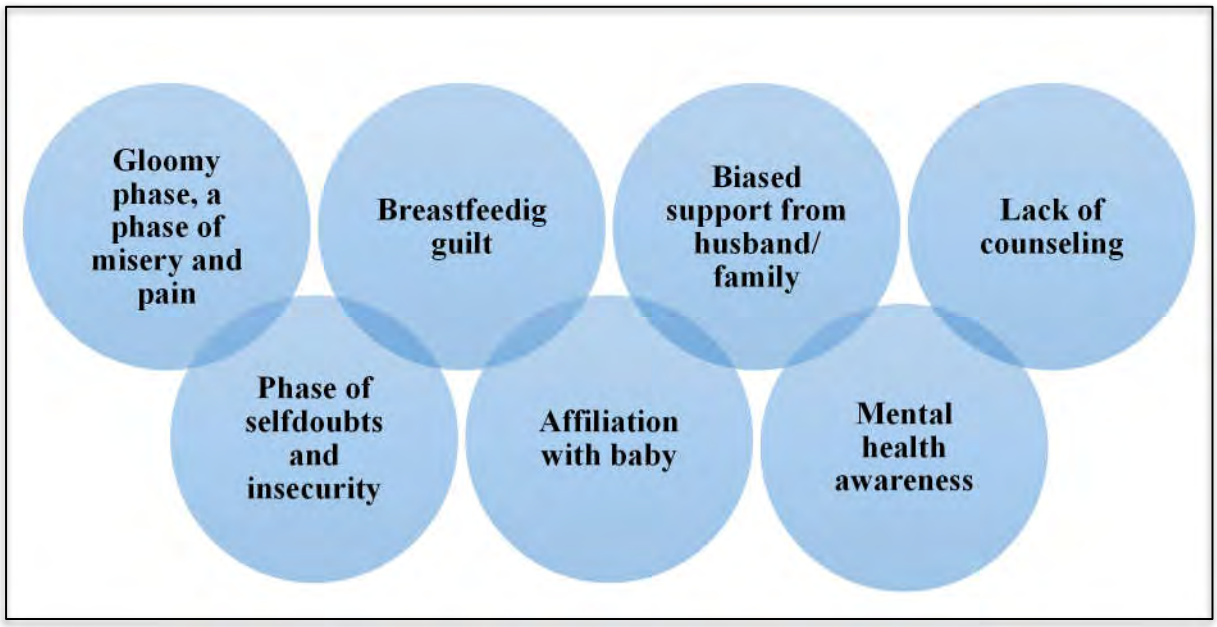

Figure 3: Overlapped themes

4.4.1. Gloomy phase, a phase of misery and pain:

Most of the respondents had commo**n** symptoms of fear, stress, and anxiety in their postpartum period. The pain that all the respondents went through still haunts them and it was visible in their eyes. They said that their motherhood was spoiled by that trauma and frustration. Those days were quite difficult for them. All the respondents had similar feelings of fear, guilt, and shame for no reason. They wanted to feel normal but were helpless. The feeling of hopelessness was emphasized by every respondent. The burden of new responsibilities accompanied by depression was the hardest phase of their lives. All of them have recovered by now but a few said that they still feel the traces of postpartum depression and consider it an unforgettable experience.

4.4.2. The phase of self-doubts and insecurity:

Entering motherhood brings ecstasy to life but disturbed mental health severely damages her personality emotionally and physically. Though the phase of depression was not very long its consequences and insecurities last for a longer duration. Mothers were drained because of tiredness, sleepless nights, panic, and anxiety about managing things together. Many mothers doubted themselves to be good mothers and were insecure about their ability to raise a child. Respondents C said that *I had a constant worry to keep my child alive, I had thoughts that what if I forgot him somewhere or if he fell and broke his head, I had this constant fear of SIDS (sudden infant death syndrome).* Another respondent said *I used to hate myself for no reason, I became so toxic that I doubted my husband for having an affair outside. I felt like I am all alone and nobody cares about me.* Another recalled it as *I used to cry all day and felt like no one loves me and the only centre of attention is this baby and he is the reason my husband is not mine anymore.* The rest of the respondents gave a similar response that *I thought my life is over, I have lost my freedom.* Insecurities and self-doubts enhance the level of negative thoughts which made them depressed and uncomfortable with themselves. Only a happy mother can raise a happy child and vice versa a depressed mother raises a weak child inherited with low self-esteem and insecurities.

4.4.3. Breastfeeding guilt:

Most of the mothers were unable to breastfeed their child initially and some of them experienced cessation of bf in early 3-6 months. Many mothers said they felt that they were letting down their babies when they had trouble with breastfeeding and revealed that they are ashamed of introducing formula milk to their children. One respondent said that *my in-laws think that I am not breastfeeding by choice to keep up my beauty, but I am a mother, how can I even think of myself before my child?* Almost every respondent quoted that they

experience a lot of societal pressure regarding breastfeeding. They were blamed for not feeding their children naturally and these comments were frustrating and pinching. Respondent B said, *I could not breastfeed when I had episodes of panic and stress and I felt no affiliation with the baby at that time, so I prefer formula milk mostly.* Another respondent said, *whenever I had to go out with the baby, I was very anxious the day before as I got SIDS, and that was reflected in my pumping session.* Respondent E narrated with immense pain that *she was not able to feed her baby because of inverted nipples so that thing disturbed her mental health very badly and said that in my opinion, this could be the reason for my postpartum depression and hate for self.* Respondents who breastfed their child for longer durations said that it was very painful and difficult initially but with time they get used to it and the baby started latching properly. Respondent F quoted that *breastfeeding was difficult initially, but it was also very loving to spend time with my little one.*

4.4.4. Affiliation with the baby:

The mother-child relationship is the most beautiful and closest relationship that nature has made. Mother is the most concerned person for her child and the post-partum period is the time for this strong bonding and affiliation. Unfortunately, if a mother went through postpartum depression, her bonding with the baby is badly affected. Most of the respondents were reluctant to talk about this trauma as if to be judged as a bad mom. Respondent E, who had severe PPD narrated with extreme pain that *I had a hate-love relationship with my child. I thought he has snatched my husband from me and did not feel any affiliation with him. I often had thoughts of smashing him to the wall, which I regrated a lot later. I could not carry my child in my arms because I did not feel any love for him initially.* Another respondent had a similar experience in that *I thought my husband is being distant from me and felt my baby was a burden who has ruined my independent life. But I am very guilty over my thoughts*

now. And my connection with the baby gradually increased with time. One respondent quoted that *I was fed up with overburdened responsibilities and that I wanted to run away from home to get rid of all of this. I was not comfortable with diaper changing and feeding all day long. I used to complain to my husband that I do not want to be like this. But my baby changed my perspective with his beautiful smiles and love. And now I cannot imagine leaving him for a second.* A mother of two children said that *I had a problem in making a bond with the third child as I was busier with my first two children* Rest of the mothers said that their depression did not affect their affiliation and love for their child but rather their infants were the only hope that helped them to get out of this miserable phase.

4.4.5. Biased support from husband/in-laws:

Social support is extremely important for new mothers. Especially for mothers with C-section delivery according to a recent study. A healthy support system plays a major role to get a mother out of a gloomy phase of life. In this section of the interview, women were asked about the social support provided by their spouses, and by their own family and in-laws. There were only two ladies whose husbands were supportive and helped them throughout but most of them did not get any support from in-laws. Many of them said that the support from their husbands and in-laws was biased as they only helped with the baby, but nobody was bothered about the mother's health. The husband's support and care are all that matter to a woman. A respondent said, *my husband was oblivious to what I am going through mostly because I never mentioned anything, and he never noticed.* One of the respondents mentioned that her husband was going through the same anxiety, she said *initially my husband felt the same anxiety and weak bond with the child as routine changed and responsibilities increased. He got irritated with it and often avoid us and stay outside till late.* Respondent A narrated, that *I faced constant criticism and taunts from my in-laws,*

they told me that I am a lazy mother and could not take care of my baby. Many respondents narrated similar stories that their in-laws were toxic, and it made it more difficult for them. Some of the husbands were caring for their wives but they got criticized as well for being supportive. One respondent said *my husband was the one who recognized my changed behaviours as he is a medical professional and he helped me to get out of PPD. He was my only hope as I did not have a good affiliation with the baby at that time, but my in-laws did not like it and they kept on taunting us.* Some of them said that their in-laws expected them to start house chores the very next day after delivery which was very painful and heartbreaking.

4.4.6. Mental Health Awareness:

At the end of the interview, all the respondents were asked how they cope with their PPD and how much awareness they had about it before. Most of the respondents said that they had heard about postpartum depression, but they were not aware of the severity and distress. Above all, they did not have an idea that PPD will affect their breastfeeding this much. One respondent mentioned *we do not think about real change, I thought only infant care is important after delivery. Now I get to know how important a mother's mental health is. Becoming a mother is a life-changing process and one should know how to deal with it before it is too late.* The rest of them were sad about the fact that the awareness about PPD is very little and especially in government hospitals no one talk about the mental health of a mother. Many individuals quoted that although they managed to get out of their PPD, it was the hardest experience of their lives. One respondent mentioned with a heavy heart that *I am a clinical psychologist by profession and still I could not help myself. I was not aware of my mental health until my husband realized it and helped me out.* Hence, only the knowledge

of PPD is not important, women should be aware of its severity and consequences and there should be a support system in hospitals for this problem.

4.4.7. Lack of counselling:

All the participants had a common query for their mental health WHERE TO GO? Most of the respondents said they had no place to go when they discover their PPD and there was no one to talk to. As in our society mental illness is still taken as taboo and whoever seeks help is considered an insane person. None of the respondents got any counselling or therapy sessions because they were afraid of society. Respondent A, who is a doctor herself suggested that *I knew everything about PPD, but I could not do anything about it. I needed a psychiatrist too as PPD is not fatal and is curable if you get the right help at right time.* Another participant said *I think my gynaecologist should have told me about PPD and I wish they had counselling sessions or couple therapy.* Unfortunately, in Pakistan, mental illness is not considered a medical emergency and is out of approach. While doing this research, I came across an application named GOUD that had been created by a Pakistani woman to help new mothers in breastfeeding counselling and offers a platform to discuss post-natal problems and medical professionals to suggest possible solutions to mothers but still, there is a long way to go. Only a small population of women know such apps and utilize them, otherwise, the majority are illiterate and do not have knowledge and access to such inventions. Therefore, the MCH centres or maternity homes should provide antennal and postnatal mental health services.

CHAPTER V: DISCUSSION

Post-partum anxiety and depression are major public health concerns because of their adverse consequences not only the cognitive and social development of the infant are affected but his psychological health is also compromised. In the post-partum period about half to two-thirds of women suffer from anxiety, stress, and depression, for most symptoms, are relatively mild, known as post-partum blues and settle spontaneously within four weeks. There, post-partum depression is typically diagnosed during the 4-12 weeks after childbirth. This is the critical period for the development of affective mental disorders from birth to the first year of post-partum. Hence, the depression and anxiety that occurs within the first post-natal year can be labelled as post-partum depression. (Niloufer, Bader & Iqbal, 2009). Varying figures for PPD have been reported from different countries from as low as 11% to as high as 45.5%. Studies conducted in urban tertiary care settings in Pakistan had reported figures ranging from 24%-42%. Whereas community-based studies from rural Pakistan have reported persistent PPD (found depression at all three points in the first postnatal year) of 56%. In this study, the PPD was estimated to be 46.6% (n=171/380) in women visiting MCH centres of Rawalpindi and Islamabad. Risk factors of PPD already identified as a personal history of earlier depression, Illiteracy of mother and family, low socio-economic status, prenatal depression, stressful events in past, female infant gender, low levels of social support and poor marital relationship. Most of these risk factors have been demonstrated the developing countries like Pakistan.

The quantitative perspective of PPD and its effects:

Several studies have been conducted on the prevalence and determinants of PPD in the western world, but there is still a scarcity of data in the local context. Therefore, we aimed for this study to determine post-partum depression and its association with breastfeeding

outcomes in a multi-ethnic population. And to check the level of social support from the immediate family and society, as it plays a major role in the speedy recovery of the new mother. Here we have used the term post-partum anxiety, as anxiety is a more prominent feature of PPD than depression.

Post-partum anxiety has many profound effects on the daily life of a mother like disturbed sleep cycle, low appetite, relationship with spouse and child, sadness, loss of focus and anger episodes. Above all, PPD also affects the breastfeeding ability and practice of mothers' post-partum. Several studies have reported that there is a connection between PPD and breastfeeding. Researchers have found that lack of breastfeeding is associated with an increased risk of PPD. The relationship between breastfeeding and postpartum depression is bidirectional. A depressed pregnant woman is less likely to breastfeed her infant to initiate and maintain breastfeeding during the postpartum period (Insaf and Tabassum,2011). Whether postpartum maternal depression may cause early cessation of breastfeeding, and depressive symptoms may precede breastfeeding cessation or the cessation of breastfeeding may also appear as a major cause of depression in postpartum. In our study, we have found that post-partum depression has a significant association with breastfeeding. The results were measured using the chi-square test of association. A recent study also linked PPD to the lower educational level of mothers in the lower-income groups. It has been found that there is a significant relationship between the educational level of mothers with PPD i.e., 0.001 significance level keeping a 95% confidence level. Likewise, a recent international study linked PPD to fetal attachment which is very important as it not only affects the mother but her baby too. Ninety-four pregnant women completed five self-report questions. Two hierarchical regression analyses were conducted to examine the influence of trait anxiety, symptoms of distress and social support on two factors of maternal-fetal attachment quality

score, trait anxiety ($p < .05$) and social support ($p < .01$) were significant predictors, accounting for 18% of the variance. In the second model with the dependent measure as the maternal-fetal attachment intensity score, trait anxiety ($p < .05$) and social support ($p < .01$) were significant predators, accounting for 23% variance. (Joyce Hopkins, 2018)

Qualitative perception of post-partum depression and breastfeeding:

For the qualitative section of the study, the previous evidence indicated a considerable likelihood of breastfeeding troubles in PPD mothers (Elmir and Schmied,2010).

After interviewing the post-natal mothers, and identifying codes and categories from the scripts, logical themes were generated like the reference qualitative studies. Most of the women went through a gloomy phase (phase of pain and misery) of their lives with self-doubts and self-blame. There were traces of guilt for not breastfeeding their child well along with problems in affiliation with the infant. Those mothers went through a lot, and they quoted this time as the worse experience of their lives.

Another study linked stress with social support and sociodemographic factors. A large body of literature documented the link between social support, stress and sociodemographic factors and women's mental health during pregnancy and the postpartum period. However, specific dimensions of social support that may be influential (family type or sources of support) have largely been neglected. Using the data from fragile families and children in Child Well-Being Study (n= 4150) were examined to have pathways between social support, stress and PPD. Findings reveal that social support is a significant, protective factor for post-partum depression, and the variety of support providers in a women's social network is important, especially in the context of family type. (Corrigan)

Hence, these studies reveal a considerable association between post-partum depression and breastfeeding outcomes with social support and sociodemographic factors. However, no

evidence was found to have an association between breastfeeding and sociodemographic factors.

5.1 Strengths:

The study highlights the dilemma of PPD and its effects on breastfeeding and the reluctance among people towards awareness of mental health. Without due attention to this issue, it can become a threat to both the mother and the child. It is the first qualitative or mixed-method study in Pakistan that highlighted the association between PPD and breastfeeding. This study not only enlighten the struggles of survivors but also facilitated the participants' process of validation through seeing a common thread with others who had similar experiences.

5.2 Limitations:

Time constraint was the major hurdle in this project, six months were not enough to collect wide data. This research has only focused on MCH centres where only a specific class of society visits. District hospitals and tertiary care units are not included because of time limits and the heavy load of patients out there. The mode of recruiting the participants for interviews for the study was via Facebook and Instagram only. This online recruitment could only reach out to those people who have internet access. Moreover, the study population was geographically centralized, and the data was collected only from the participants residing in Rawalpindi and Islamabad. A more geographically diverse population would serve to explore the influence of geographical location and culture. This study has also excluded the experience of fathers of a newborn. Postpartum depression in a wife has a significant effect on the husband's mental health as well.

Recommendations:

As this study has made an important contribution to the existing literature review by providing quantitative estimates of the significant association between post-partum depression and breastfeeding outcomes. This study has also analyzed the qualitative perspective of the research question which has highlighted the lived experiences and trauma of women going through PPD. We hope that these findings inspire future attempts to create health interventions that improve the health and well-being of people affected by this serious problem.

Following interventions can be made on Health policymaking to individual levels:

- This research should be extended at the macro-level to generalize the findings and incorporate them at the policy level
- Health Department should launch National level public awareness campaigns through mass media and community media to create awareness and realization of post-partum mental health and early breastfeeding initiation
- The hospitals should introduce pre-natal and post-natal counselling sessions for mothers to provide them with enough knowledge on mental health and how to deal with postpartum depression or baby blues
- At the social level, the family and close relatives should provide social support in terms of helping with the infant's care and house chores
- The most required support for a woman is her husband, who needs to understand her, care for her, express affection and love and help her to deal with her depression
- Lastly, the woman needs to have enough knowledge about post-partum depression and seek mental health help when requires without hesitation.

Chapter VI: CONCLUSION

Exclusive breastfeeding has a strong association with PPD. Women across the country need to be supported and educated about many benefits of exclusive breastfeeding, including potential protective effect from PPD. There is also a need to introduce PPD screening after 6 weeks of child's birth at local and national levels for timely and appropriate management. Mothers with third or fourth pregnancies have also shown the symptoms of postpartum stress with extreme severities accompanied by breastfeeding difficulties and early cessation of breastfeeding. Therefore, post-natal counselling and PPD knowledge is essential with follow-up checkups after delivery.

New knowledge discovered by this study focused on the fact that because there is less mental health awareness among individuals about PPD so there is less social support provided by husbands and immediate family members.

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APPENDIX A – QUESTIONNAIRE

ASSESSMENT OF POST-PARTUM MENTAL HEALTH AND IT'S ASSOCIATION WITH BREAST-FEEDING PRACTICES OF MOTHERS

پوسٹ پارٹم ذہنی صحت کا اندازہ اور ماؤں کے دودھ پلانے کے طریقوں کے ساتھ اس کا تعلق

1. What is your age?

آپ کی عمر کیا ہے؟

16-22 years — سال 16-22

23-30 years — سال 23-30

31-37 years — سال 31-37

38-44 years — سال 38-44

2. What is the highest degree or level of education you have achieved?

آپ نے کون سی اعلیٰ ترین ڈگری یا تعلیم حاصل کی ہے؟

No formal education — کوئی رسمی تعلیم نہیں۔

Matric — میٹرک

Intermediate — انٹرمیڈیٹ

Graduation — گریجویشن

3. What is your current employment status?

آپ کی موجودہ ملازمت کی حیثیت کیا ہے؟

Housewife — گھریلو خاتون

Self employed — کاروباری خاتون

Employed — ملازم

4. How many children do you have?

آپ کے کتنے بچے ہیں؟

One — ایک

Two — دو

Three — تین

Four — چار

More than four — چار سے زیادہ

5. What was the mode of recent delivery?

حالیہ پیدائش کا طریقہ کیا تھا؟

Vaginal/Normal — اندام نہانی/ نارمل

Caesarian/ C-section — سیزرین/سی سیکشن

6. Did you ever have a miscarriage?

کیا آپ کا کبھی اسقاط حمل ہوا ہے؟

Yes — جی ہاں

No — نہیں

7. Did you breastfeed your baby?

کیا آپ نے اپنے بچے کو دودھ پلایا؟

Yes — جی ہاں

No — نہیں

8. If yes, how long did you breastfeed?

اگر ہاں، تو آپ نے اپنے بچے کو کتنے ہفتوں تک دودھ پلایا؟

1 week — 1 ہفتہ

2-3 weeks — 2-3 ہفتے

4-6 weeks — 4-6 ہفتے

7-9 weeks — 7-9 ہفتے

6 months an above — 6 ماہ سے زیادہ

9. What was your feeding pattern?

آپ کا دودھ پلانے کا انداز کیا تھا؟

Exclusive breastfeeding — خصوصی دودھ پلانا

Exclusive pumping of breast milk — چھاتی کے دودھ کی خصوصی پمپنگ

Breastfeeding + formula milk — دودھ پلانا + فارمولا دودھ

Exclusive formula milk — خصوصی فارمولا دودھ

10. What type of family set up do you live in?

آپ کس قسم کی فیملی سیٹ اپ میں رہتے ہیں؟

Joint family — مشترکہ خاندان

Nuclear family — انفرادی خاندان

11.Which is the recent pregnancy you have gone through?

آپ کا حالیہ حمل کون سا ہے؟

1st	1st
2nd	2nd
3rd	3rd
4th	4th
Other:	دیگر

12.Type of health service you seek in your area

صحت کی خدمت کی قسم جو آپ اپنے علاقے میں تلاش کرتے ہیں؟

Government hospital	سرکاری ہسپتال
Private hospital/clinic	پرائیویٹ ہسپتال/کلینک
Maternity home	میٹرنٹی ہوم
Home birth	گھر کی پیدائش
Other:	دیگر

13.What is your husband's employment status?

آپ کے شوہر کی ملازمت کی حیثیت کیا ہے؟

Government job	سرکاری نوکری
Private job	پرائیویٹ نوکری
Self employed	تاجر
Other:	دیگر

14.Is your husband/family supportive with child-care?

کیا آپ کا شوہر/خاندان بچوں کی دیکھ بھال میں معاون ہے؟

Yes	جی ہاں
No	نہیں
Maybe	شاید

15.Did you feel anxiety, overthinking or stress in your post-partum period or afterwards?

کیا آپ نے اپنی زچگی کے بعد یا بعد میں بے چینی، زیادہ سوچنا یا تناؤ محسوس کیا؟

Yes, Every time	ہاں، ہر وقت
Very Often	بہت اکثر
Rarely	شاذ و نادر ہی
Never	کبھی نہی

16.Did you feel depression or anxiety during pregnancy?

کیا آپ حمل کے دوران ڈپریشن یا پریشانی محسوس کر تی تھی؟

Yes	جی ہاں
No	نہیں

17.I have been able to laugh and see the funny side of things:

میں ہنسنے اور چیزوں کا مضحکہ خیز پہلو دیکھنے میں کامیاب رہی ہوں؟

As much as I always could	جتنا میں ہمیشہ کر سکتی تھی ۔
Not quite so much now	اب اتنا زیادہ نہیں۔
Definitely not so much now	یقینی طور پر اب اتنا نہیں ہے۔
Not at all	بلکل بھی نہیں

18.I have looked forward with enjoyment to things:

میں نے لطف اندوزی کے ساتھ چیزوں کا انتظار کیا ہے؟

As much as I ever did	جتنا میں نے کبھی کیا تھا۔
Rather less than I used to	بلکہ پہلے سے کم
Definitely less than I used to	یقینی طور پر پہلے سے کم
Hardly at all	شاید ہی بالکل

19.I have blamed myself unnecessarily when things went wrong:

جب چیزیں غلط ہوئیں تو میں نے خود کو غیر ضروری طور پر مورد الزام ٹھہرایا؟

Yes, most of the time	ہاں، زیادہ تر وقت
Yes, some of the time	ہاں، کچھ وقت
Not very often	اکثر نہیں۔
No, never	کبھی نہیں

20.I have been anxious or worried for no good reason:

میں بغیر کسی معقول وجہ کے پریشان ہوں؟

No, not at all	بلکل بھی نہیں
Hardly eve	مشکل سے
Yes, sometimes	ہاں کبھی کبھی
Yes, very often	ہاں، اکثر

21.I have felt scared or panic for no good reason:

میں نے بغیر کسی وجہ کے خوف یا گھبراہٹ محسوس کی ہے؟

Yes, quite a lot	ہاں، کافی حد تک
Yes, sometimes	ہاں کبھی کبھی
No, not much	نہیں، زیادہ نہیں۔
No, not at all	کوئی بالکل نہیں

22.Things have been getting to me:

چیزیں مجھ تک پہنچ رہی ہیں؟

Yes, most of the time I haven't been able to cope at all

جی ہاں، زیادہ تر وقت میں بالکل بھی نمٹنے کے قابل نہیں رہی ہوں۔

Yes, sometimes I haven't been coping as well as usual

ہاں، کبھی کبھی میں معمول کے مطابق مقابلہ نہیں کر رہی ہوں۔

No, most of the time I have coped quite well

نہیں، زیادہ تر وقت میں نے بہت اچھی طرح سے مقابلہ کیا ہے

No, I have been coping as well as ever

نہیں، میں ہمیشہ کی طرح اس کا مقابلہ کر رہی ہوں۔

23.I have been so unhappy that I have had difficulty sleeping:

میں اتنا ناخوش رہی ہوں کہ مجھے سونے میں دشواری ہوئی ہے؟

Yes, most of the time	ہاں، زیادہ تر وقت
Yes, sometimes	ہاں کبھی کبھی
No, not very often	نہیں، اکثر نہیں۔
No, not at all	کوئی بالکل نہیں

24.I have felt sad or miserable:

میں نے اداس یا دکھی محسوس کیا ہے؟

Yes, most of the time	ہاں، زیادہ تر وقت
Yes, quite often	ہاں، اکثر
Not very often	اکثر نہیں۔
No, not at all	کوئی بالکل نہیں

25.I have been so unhappy that I have been crying:

میں اتنا ناخوش ہوں کہ میں رو رہی ہوں؟

Yes, most of the time	ہاں، زیادہ تر وقت
Yes, quite often	ہاں، اکثر
Only occasionally	صرف کبھی کبھار
No, never	کبھی نہیں

26.The thought of harming myself has occurred to me:

خود کو نقصان پہنچانے کا خیال میرے ذہن میں آیا؟

Yes, quite often	ہاں، اکثر
Sometimes	کبھی کبھی
Hardly ever	شاید ہی کبھی
Never	کبھی نہیں۔

27.Do you feel that breastfeeding is going well for you so far?

کیا آپ کو لگتا ہے کہ دودھ پلانا اب تک آپ کے لیے اچھا چل رہا ہے؟

Yes	جی ہاں
No	نہیں

28.Has your milk come in yet? (Have your breasts felt firm and full since your baby was born?)

کیا آپ کا دودھ ابھی تک آیا ہے؟ (کیا آپ کے بچے کی پیدائش کے بعد سے آپ کی چھاتی مضبوط اور بھری ہوئی محسوس ہوئی ہے؟)

Yes	جی ہاں
No	نہیں

29.Does your baby latch on to the breast easily?

کیا آپ کا بچہ آسانی سے چھاتی سے چمٹ جاتا ہے؟

Yes جی ہاں

No نہیں

30.Is your baby able to keep sucking rhythmically at the breast for 5-10 minutes each feeding?

کیا آپ کا بچہ ہر دودھ پلانے پر 5-10 منٹ تک چھاتی کو تال کے ساتھ چوسنے کے قابل ہے؟

Yes جی ہاں

No نہیں

31.Does your baby wake up to eat on his/her own at least every 3 hours?

کیا آپ کا بچہ کم از کم ہر 3 گھنٹے بعد خود کھانے کے لیے بیدار ہوتا ہے؟

Yes جی ہاں

No نہیں

32.Does your baby eat from both breasts most feedings?

کیا آپ کا بچہ سب سے زیادہ دودھ دونوں چھاتیوں سے پیتا ہے؟

Yes جی ہاں

No نہیں

33.Do your breasts feel full before feedings?

کیا آپ کے سینوں کو دودھ پلانے سے پہلے بھرا ہوا محسوس ہو تی ہے؟

Yes جی ہاں

No نہیں

34.Do you enjoy each feeding (there is no nipple soreness causing you to dread the next feeding?)

کیا آپ ہر خوراک سے لطف اندوز ہو تی ہیں (نپل میں کوئی درد نہیں ہے جس کی وجہ سے آپ اگلی خوراک سے ڈرتے ہیں؟)

Yes جی ہاں

No نہیں

35.Did you feel intense pain and soring of breasts initially?

کیا آپ کو ابتدائی طور پر چھاتی میں شدید درد اور درد محسوس ہوا؟

Yes جی ہاں

No نہیں

36.Does your baby seem satisfied or full after most feedings?

کیا آپ کا بچہ زیادہ تر کھانا کھلانے کے بعد مطمئن یا بھرا نظر آتا ہے؟

Yes جی ہاں

No نہیں

37.Are your breasts free of soreness, tenderness and redness?

کیا آپ کی چھاتیاں درد، کومل اور لالی سے پاک ہیں؟

Yes جی ہاں

No نہیں

APPENDIX B – CONSENT FORM

.

I _____ [patient, or patient's surrogate, or guardian, or attorney in fact's name], hereby state that I have read, and been fully informed of, the above facts and I understand that my participation is voluntary, and I can withdraw anytime without giving any reason and charges. I informed them that I will be given a copy of this consent form. I am willing to take part in this study.

I voluntarily agree to participate in this research study.

- YES
- NO

I understand that I will be given a copy of this signed Consent Form.

Participant’s Name (Print): _____

Participant’s Signature: _____ Date: _____

APPENDIX C- INTERVIEW GUIDE

The following research questions guided this study:

1) Introduce yourself and your family

2) How was your experience of becoming a mother?

3) How was your affiliation with your baby?

4) How and when did you realize that you are going through post-partum depression, kindly tell me every detail.

5) How did you cope with it and manage your motherhood responsibilities?

6) Did you breastfeed your baby and how was the experience of feeding your child?

7) Did you introduce formula milk to the baby at any stage?

8) Did your mental health affect your breastfeeding practice and affiliation with your child?

9) What was the reaction of your husband and family when they observed your changed behaviour? And did they recognize your condition?

10) Was your husband/ family supportive in this tough time?

11) How much time did you take to get out of depression and what helped you?

12) In your opinion, how mothers can avoid the possibility of PPD?

APPENDIX D - IRB APPROVAL LETTER

AL-SHIFA SCHOOL OF PUBLIC HEALTH
PAKISTAN INSTITUTE OF OPHTHALMOLOGY
AL-SHIFA TRUST, RAWALPINDI

No. MSPH-IRB/13-10
24th March, 2022

TO WHOM IT MAY CONCERN

This is to certify that **Mahnoor Khalil** D/O **Muhammad Khalil** is a student of Master of Science in Public Health (MSPH) final semester at Al-Shifa School of Public Health, PIO, Al-Shifa Trust Rawalpindi. He/she has to conduct a research project as part of curriculum & compulsory requirement for the award of degree by the Quaid-i-Azam University, Islamabad. His/her research topic which has already been approved by the Institutional Review Board (IRB) is **"Effect of postpartum mental health and breast-feeding practices in women coming to MCH centers of Rawalpindi/Islamabad; A mixed method study".**

Please provide his/her necessary help and support in completion of the research project. Thank you.

Sincerely,

Dr. Ayesha Babar Kawish
Head
School of Public Health, PIO
Al-Shifa Trust, Rawalpindi

AL-SHIFA TRUST, JEHLUM ROAD, RAWALPINDI – PAKISTAN
Tel: +92-51-5487820-472 Fax: +92-51-5487827
Email: info@alshifaeye.org Web Site: www.alshifeye.org

APPENDIX E- CRONBACH ALPHA

Reliability

[DataSet1] C:\Users\Umar\Desktop\Thesis Data_1.sav

Scale: ALL VARIABLES

Case Processing Summary

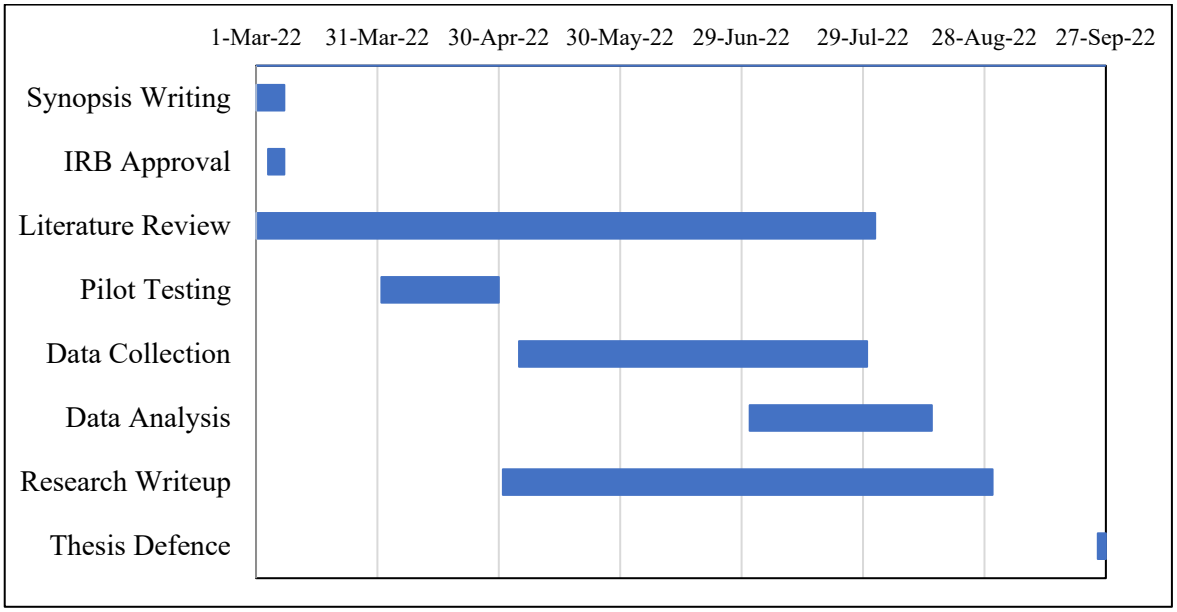
		N	%
Cases	Valid	380	100.0
	Excluded[a]	0	0.0
	Total	380	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.710	36

APPENDIX F - GANTT CHART



APPENDIX G – BUDGET OF RESEARCH PROJECT

ITEMS	Internet Services and Stationery	Transport	Printing	Publishing
Literature Review	Rs. 500	Rs. 1000	Rs.500	
Validated Tool (Questionnaires)	Rs.500	Rs. 500	Rs.2500	
Pilot Study	Rs.200	-	Rs.500	
Data Collection Procedure	Rs.1000	Rs.2000	Rs.3000	
Research Writeup	Rs. 1000	Rs.300	Rs.5000	
Total Cost	Rs.3200	Rs.3800	11,500	
Grand Total		**Rs.18,500**		

APPENDIX H – SNAPSHOTS OF INTERVIEW