An-Najah National University

Faculty of Graduate Studies

THE RELATIONSHIP BETWEEN FAMILY COHESION, ADAPTABILITY AND POSTPARTUM DEPRESSION AMONG PALESTINIAN WOMEN

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Dedication

This thesis is dedicated to my family, the source of love, encouragement, and endless support. In every step of this journey, who have been my greatest sources of inspiration and pillars of strength for success.

To my husband, who never fails to believe in my abilities. Your patience, understanding, and unwavering support have been my guiding light, illuminating the path even in the darkest of moments. Thank you for standing by me, you have been grounding me with your love and encouragement, and for that, I am forever indebted to you.

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Boshra

Declaration

I, the undersigned, declare that I submitted the thesis entitled:

THE RELATIONSHIP BETWEEN FAMILY COHESION, ADAPTABILITY, AND POSTPARTUM DEPRESSION AMONG PALESTINIAN WOMEN

I declare that the work provided in this thesis, unless otherwise referenced, is the researcher's own work, and has not been submitted elsewhere for any other degree or qualification.

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Date: **09/10/2024**

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THE RELATIONSHIP BETWEEN FAMILY COHESION, ADAPTABILITY, AND POSTPARTUM DEPRESSION AMONG PALESTINIAN WOMEN

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Abstract

Background: The postpartum period involves significant changes for mothers and families, and the quality of family functioning can influence a mother's vulnerability to depression. Family environment, described using Olson's family function theory, is a factor in postpartum depression, yet few studies have explored its application to mothers with this condition.

Objective: To investigate the relationship between adaptation, family cohesion, and the risk of postpartum depression among Palestinian women and to identify the factors that predict family adaptation, family cohesion, and postpartum depression.

Methodology: A cross-sectional descriptive study including 570 mothers of healthy babies aged between 2 weeks to 12 months, attending primary health care clinics in the West Bank from September 2023 to December 2023. Participants completed the Edinburgh Postpartum Depression Scale (EPDS) and the Family Adaptability and Cohesion Evaluation Scale III (FACES III). SPSS was used for analysis, employing linear regression and Sperman's rank coefficient to assess associations between family cohesion, adaptability, and postpartum depressive symptoms.

Results: Most mothers (58.9%) were aged between 18-27 and (64.9%) were unemployed. The EPDS results indicated that 88.1% of mothers were at risk of postpartum depression, with severity ranging from no symptoms (11.9%) to severe symptoms (32.2%).

Family cohesion varied, with (32.28%) connected, (25.79%) separated, (32.81%) disengaged, and (9.12%) enmeshed. Regarding adaptability, (54.73%) showed chaotic adaptability, (33.51%) were flexible, 8.95% were structured, and (2.81%) were rigid.

Logistic regression showed that compared with connected families, enmeshed and separated were more likely to develop postpartum depression, while disengaged families were protective. Postpartum depression was not associated with any type of family adaptation, but all types were more protective against depression than flexible families.

Conclusions: The study highlights a high prevalence of postpartum depression among Palestinian mothers, influenced by psychosocial stressors and family cohesion. A lower risk of depression correlates with higher scores of family cohesion. Family income, a history of depression, the number of births, previous miscarriages, employment status, intended pregnancy, mode of delivery, and baby age are significant predictors of postpartum depression. Family cohesion is predicted by maternal age, education, geographical area, and income, while adaptation is influenced by maternal education and geography. The high prevalence of postpartum depression indicates the mental health risks experienced by Palestinian women, and this requires prior intervention from the Ministry of Health and Women's Affairs.

Keywords: Family cohesion, adaptability, Postpartum depressive symptoms, Palestine, FCAES III, EPDS.

Chapter One
Introduction

1.1 Background

The transition to parenthood is a significant life event that brings about numerous changes, challenges, and adjustments for both mothers and families. During this period, the presence of strong family cohesion and adaptability can play a critical role in how new mothers experience and deal with the postpartum period, including the risk of developing postpartum depression (PPD) (Maternity & Care, 2019). The postpartum period is a time of significant change for both mothers and families, and the quality of family functioning can influence a mother's vulnerability to PPD (Spelke & Erika Werner, 2018).

The emotional bonding, closeness, and interconnectedness among family members is known as family cohesion, while the family's ability to adjust and respond to changes and challenges in their environment refers to family adaptability (Masten, 2018). The relationship between family cohesion, adaptability, and postpartum depression has important implications for promoting maternal mental health and family well-being, preventing and handling a mother’s postpartum depression (Çankaya & Alan Dikmen, 2022). Understanding how these factors interact can guide the development of effective interventions and support systems for new mothers and their families (Beestin et al., 2014). By developing a strong family bond and enhancing adaptability during the postpartum period and the coming of a new member to the family, we can create a healthier, more nurturing, and supportive environment for new mothers, ultimately leading to improved maternal mental health, enhanced family dynamics and eventually, reducing the risk of postpartum depressive symptoms (Zhang et al., 2023). There are several aspects highlight the importance of this relationship.

First of all, the prevention and early intervention, one of the primary implications of understanding this relationship is the potential for early identification and prevention of postpartum depression. Recognizing families with low cohesion and adaptability can help healthcare providers to perform early interventions to support mothers during the postpartum period. Early identification and intervention can lead to reduced risk and

severity of PPD, promoting positive maternal mental health outcomes (Meltzer-Brody et al., 2018).

Second, Support for new fathers. While much of the focus on postpartum depression is directed towards new mothers, fathers can also experience emotional challenges during this period (Beestin et al., 2014). The association between postpartum depression, family adaptability, and family cohesion extends to fathers and other family members who may also experience stress and emotional changes. Understanding this relationship can lead to support systems that involve partners in the process of adjusting to parenthood, promoting shared responsibility and emotional security for the entire family (Honjo et al., 2018).

Third, Supportive parenting and child development. The relationship between postpartum depression, family cohesion, and family adaptability can significantly impact parenting performances and child development (Masten, 2018). A cohesive and adaptable family environment looks after secure attachments between parents and children, which is critical for healthy emotional development in infants (Maternity & Care, 2019). Parents experiencing postpartum depression may find it challenging to engage in responsive and nurturing parenting practices. However, with the support of a cohesive and adaptable family, these challenges can be addressed and mitigated, positively influencing the parent-child relationship and child development (Çankaya & Alan Dikmen, 2022).

Finally, Family-Based Interventions. The family-based interventions that target family cohesion and adaptability have shown results in preventing and treating postpartum depression. These interventions often involve developing effective communication, problem-solving skills, and emotional support within the family unit, benefiting both the mother's mental health and overall family functioning (Jiménez et al., 2019).

Considering the cultural context of Palestinian women is essential in understanding how family adaptability, family cohesion, and postpartum depression affect each other. Cultural norms, values, and practices shape family dynamics and may impact the experience of postpartum depression. Palestinian society places a strong emphasis on family relationships and collective support. Women often rely on their extended family for emotional support during the postpartum period which helps them to reduce stress

and enhance overall well-being in addition, family members also offer assistance with childcare, and household chores, allowing the mother to rest and recover both physically and mentally. The sense of belonging and emotional safety provided by the extended family fosters communal care, contributing to higher levels of maternal self-esteem which can reduce maternal stress and support postpartum recovery. Despite this positive impact of having extended family, its involvement can sometimes lead to negative effects, as over-involvement and the imposition of traditional expectations may place unnecessary pressure on the mother, causing stress and feelings of inadequacy. Also, conflicting advice from multiple family members regarding child healthcare can overwhelm the mother, negatively affecting her mental health. Additionally, the lack of privacy caused by the constant presence of extended family may lead to frustration and feelings of suffocation, potentially exacerbating depressive symptoms. In some cases, extended family members may perpetuate cultural stigmas surrounding mental health, discouraging the mother from seeking help for PPD due to fear of judgment or shame. Therefore, understanding how family cohesion and adaptability influence postpartum depression among Palestinian women is vital for developing culturally sensitive interventions and support systems (Spellings, 2014).

Research conducted in various cultural contexts has demonstrated that higher levels of family cohesion are associated with lower rates of postpartum depression, while lower levels of family cohesion are linked to increased risk. Similarly, greater family adaptability is protective against postpartum depression, while lower adaptability is associated with higher rates (Zhang et al., 2023).

1.2 Literature Review

The importance of psychological well-being has become more prominent in our lives, leading people to pay greater attention to their mental health along with their physical well-being. This increased awareness is a result of heightened cultural consciousness, greater environmental involvement, and improvements in overall living conditions.

Recent research has placed a significant focus on mental health, acknowledging it as an essential aspect of scientific inquiry. Diagnosis of mental health disorders has gained similar importance to that of physical ailments. Specialized medical professionals have emerged to address these disorders. According to the World Health Organization

(WHO, 2022), depression ranks as the most prevalent mental disorder worldwide, affecting approximately four hundred million individuals of all ages. This condition mainly affects women.

The birth of a child triggers a mix of positive emotions like joy and happiness, but it can also lead to fear and anxiety due to the new responsibilities of motherhood. In some cases, these negative feelings can heighten into postpartum depression (PPD), a phenomenon more commonly observed in new mothers (Yoneda et al., 2021). PPD emerges shortly after childbirth, often within the first few days. This type of depression is not indicative of a personality failing but rather a complication arising from the childbirth process itself. Immediate and appropriate treatment can help mothers overcome these emotions and symptoms. Techniques aimed at re-establishing the mother-child bond play a vital role in this process (Ayoub, 2014).

Postpartum depression (PPD) is considered to be a complex psychological health issue that affects mothers during their postpartum period. It represents an important area of concern in the world of maternal and infant health since it affects not just the mother but the health of the entire family. By gaining a deeper understanding of PPD, we can work toward better identification, intervention, and support for those affected mothers (Meltzer-Brody et al., 2018).

1.3 Postpartum depression

Postpartum depression is considered a type of mood disorder that occurs following childbirth either father or mother or both, typically occurring within the first few weeks to months following labor. While it shares some symptoms with major depressive disorder, PPD is marked by its temporal association with childbirth and the unique stressors inherent to the postpartum period that significantly impair a person's capacity to function and take care of both themselves and their baby during this critical period (Ross et al., 2006).

There are many terms used to describe the mood swing mothers may feel just after giving birth, as postpartum depression (PPD) can come in various types and ways defined by the symptoms, severity, and timing. As known that women can experience a range of symptoms (Leidy et al., 2010).

PPD differs from the more common "baby blues or Postpartum blues " which is considered a temporary and common emotional state, representing the mildest variation of postpartum depression, that many new mothers experience just after giving birth, and (85%) of women are affected, but up to 1 in 7 of mothers develop much more severe symptoms of mood disorder soon after (Alhammadi et al., 2023). It appears as mood swings, feelings of sadness, anxiety, and irritability. These feelings usually appear within a few days to a week after labor and go away on its own completely within two weeks (Zappas et al., 2021). Unlike the baby blues, PPD involves more persistent, prolonged, and severe symptoms, sharing characteristics with major depressive disorder (MDD) (Wisner et al., 2010). PPD typically develops within the first few weeks to 12 months after childbirth. The symptoms of PPD can interfere with the mother's daily routine, activities, bonding with the infant, occupational functioning, social relationships, and overall quality of life. These consequences are not a sign of weakness or personal failure, rather, it is a real medical condition that requires understanding, support, and proper treatment (Qandil et al., 2016).

Also, postpartum blues symptoms do not interfere with a woman's ability to function in daily life or her relationship with the baby and have no lasting impact on the mother or family as the symptoms pass quickly, which is another distinction between them and postpartum depression. These baby blues symptoms are considered normal for postpartum mothers as they are common and not serious.

The exact cause of baby blues is unknown, but hormonal changes, lack of sleep, physical discomfort, the challenges of adjusting to motherhood, and the huge responsibilities of caring for a newborn are believed to contribute to this emotional state (Horowitz & Goodman, 2005). The hormonal shifts that occur after childbirth, including a rapid drop in estrogen and progesterone levels, can play a role in these emotional fluctuations (Bass III & Bauer, 2018). Baby blues are generally considered normal and expected responses to the challenges of new motherhood. However, if these feelings persist after a couple of weeks, worsen in intensity, or begin to interfere with a mother's ability to care for herself or her baby, it could turn into postpartum depression, which is more serious and requires professional intervention and treatment (Ria et al., 2018).

The consequences of untreated PPD can have significant negative effects, affecting not only the mother's mental health but also her ability to care for and bond with their

newborn, as well as the overall family dynamic. Furthermore, the condition can put pressure on relationships, obstruct daily functioning, and have long-term implications for the entire family (Matthey et al., 2003).

1.3.1 Postpartum Depression in Palestine

Qandil, Jabr, Wagler, and Collin (2016) conducted a longitudinal study in Bethlehem to investigate the prevalence of PPD among Palestinian mothers, as well as the associated relation of this condition. found that the prevalence of PPD was 28% which is consistent with the (20–30%) prevalence reported in other Arabic communities, but higher than the (10–15%) prevalence reported for women worldwide (Qandil et al., 2016).

PPD prevalence was found to be (17%) in a cross-sectional study done in Nablus in 2014, which involved interviewing 246 mothers between the ages of 18 and 45 applying the Arabic version of the Edinburgh Postnatal Depression Scale (EPDS) at 7 to 12 weeks after giving birth with a cut-off of > 10, along with extra questions about PPD-related risk factors. The study also found that PPD is primarily associated with psychological stressors during pregnancy (Ayoub, 2014).

Another study in Amman (2021) targeted 251 Palestine refugee mothers who had given birth before three to sixteen weeks and were attending any of five UNRWA health centers and showed that 123 (49%) mothers were considered to be having postpartum depression. PPD was perceived as low levels of family and social support as a factor with 3.76 times in logistic regression (Yoneda et al., 2021).

In order to determine the prevalence of PDD and the risk factors among Palestinian mothers in the northern West Bank cities, Wildali and his colleagues (2022) conducted a cross-sectional study that found that the prevalence rate was 33.9%, 129 out of 380 of the mothers showed signs of PPD. The low family and husband’s support was one of the postpartum depression predictors with a 2.5 odd ratio.

A study was conducted on 1128 mothers who have babies aged between 6 weeks to 6 months, belonging to three groups in Israel: Palestinian-Arab, Jewish immigrants, and non-immigrant Jewish. The prevalence of PPD was significantly high among the Palestinian-Arab women group (20.8%) (Shwartz et al., 2019).

1.3.2 Diagnosing postpartum depression

According to The Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5) and International Classification of Diseases 11th (ICD-11), to be diagnosed with postpartum depression (peripartum depression) the patient must meet the six criteria based on the presence of certain signs and indications.

The first criterion, as in Major Depressive Disorder (MDD), to be diagnosed with postpartum depression, an individual (in our study is the mother) must experience five or more of the following symptoms nearly every day for at least 2 weeks, and these symptoms must represent a change from their normal functioning. At least one of the symptoms must be either a persistently depressed mood or a markedly loss of interest or pleasure (anhedonia), these symptoms are: depressed mood most of the day, as indicated by either the mother herself (I am feeling sad, empty, or hopeless) or observation by her family, obvious reduced interest or pleasure (anhedonia) in nearly all activities, major weight loss when not dieting or weight gain, or appetite problems, insomnia or hypersomnia, feelings of restlessness, fatigue and tiredness, feelings of unworthy or guilty, reduced ability to think or concentrate, difficulty making an emotional attachment with the baby, having negative feelings toward the baby, fear of being alone with the baby, and finally moving beyond the fear of death to having thoughts of death, with thoughts of harming herself or the baby, even if there's no intention to act based on them. These symptoms of postpartum depression occur within four weeks after giving birth, but they can persist for up to a year after childbirth.

The second criterion to diagnose is when the episode is associated with a significant withdrawal from social interactions and avoiding family and friends, or impairment in occupational, or other areas of functioning.

The third criterion is the episode cannot be the result of another medical disease or the physiological effects of substance usage.

Fourth Criteria, Schizoaffective disorder, schizophrenia, schizophreniform disorder, delusional disorder, other identified and nonspecific schizophrenia spectrum disorders, or other psychotic diseases do not provide a more compelling explanation for the development of the major depressive episode.

Fifth Criteria, there has never been a manic episode or a hypomanic episode.

Sixth Criteria, the disorder is not better explained by grief, for instance after the loss of a loved one, with similar symptoms such as marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms, or psychomotor retardation, which persist for longer than 2 months.

1.3.3 Etiology for Postpartum Depression

Postpartum depression usually occurs within 6–8 weeks after childbirth (Shwartz et al., 2019). It can start slowly or suddenly and can range from very mild and transient, to severe and lingering. For most mothers, it passes quickly (like in baby blues), but others will need professional help (Parsons et al., 2012).

The exact causes of PPD are not entirely clear because there are many cases of PPD still undiagnosed due to the social perception and acceptance of screening and how it is considered embarrassing for mothers because of the social stigma of being labeled an "unhappy depressed mother" and the public picture taken about the PPD (Thurgood et al., 2009).

Many studies have found that PPD is likely influenced by a combination of physical, emotional, and environmental factors that may cause postpartum depression (PPD).

First, Hormonal causes, after labor, hormone levels (estrogen, progesterone, and thyroid) rapidly drop, which may influence mood changes and depression, Higher levels of oxytocin in mid-pregnancy are used to predict postpartum depression within less than the first 2 weeks after labor (Ghaedrahmati et al., 2017).

Second, psychological and emotional causes, Factors such as a history of depression, anxiety, or previous episodes of PPD in earlier births can increase the probability and chances of developing PPD. Stressful life events, relationship difficulties, lack of support from their partner, marital conflict, or difficulties in family functioning can also contribute to an increase in the likelihood of experiencing postpartum depression (Yim et al., 2015).

Third, Physical factors, the new responsibilities can cause depression due to changes in the pattern of daily routine, lack of sleep, feeling tired, physical discomfort, and

recovering from childbirth which can lead to developing depression symptoms (Kim et al., 2009).

Fourth, Genetic causes, a relationship between personality and genetic factors, for example, Cytochrome P4502D6 (CYP2D6) has been confirmed. The rate of CYP2D6 metabolism in postpartum depressed mothers was more than predicted in other mothers. Also, it has been found that women are more likely to have PPD if there is a family history of depression or other mental health issues (Luo et al., 2023).

Fifth, Neurochemical factors, differences in neurotransmitters that regulate mood, such as serotonin and tryptophan levels in the blood play a role in depression (Abdollahi et al., 2016).

Finally, there is the environmental cause, several studies have indicated that women living in large cities are more likely to develop depression due to lower levels of social support (Luo et al., 2023).

1.3.4 Predictors and risk factors of postpartum depression

Several studies have revealed several risk factors which can cause maternal depression, these risk factors may be related to the mother, the new baby, or both.

The first is the relation between maternal depression and the infant’s gender. The first risk factor, several studies found that the PPD rate increased in mothers who have a female infant compared to those who have a male infant. we can explain the relationship between having a baby girl and PPD due to lack of social support after female birth, and preference for boys it's the most dominant Arab counters (Alshikh Ahmad et al., 2021).

Second, many studies discussed the association between maternal depression and the mother's age. They found that older mothers were more likely to have PPD than younger mothers. Women of advanced maternal age have significantly higher rates of depression than younger women (Muraca & Joseph, 2014). In contrast, some researchers found that the lower the age the higher the possibility, Because younger mothers are physically and mentally unable to take responsibility for their children unlike older mothers who are mentally incapable (Öztora et al., 2019).

Third, many studies discussed the relationship between the mode of birth and

postpartum depression. They found that due to the anesthesia and cesarean surgery procedures, mothers who gave birth via cesarean had more depressive symptoms than mothers who gave birth vaginally. They suggested that cesarean delivery for women who prefer normal vaginal delivery increases the risk for PPD in the early post-partum period (Zhao & Zhang, 2020). But some study results discovered that the mode of delivery (vaginal versus cesarean section) was rarely associated with depression (Kaya & Çiğdem, 2019).

Fourth, there are many studies available on the relationship between the number of children (Multiple births) and PPD, researchers found that there was a statistically significant relation between PPD and the number of children, and mothers of multiple births such as twins or triplets are more likely to experience PPD than mothers of single babies (Zhao & Zhang, 2020).

Fifth, the association between maternal depression and economic situation. Some studies found that there's a direct relationship between PPD and economic status, and found that the economic contraction had a significant impact on the mental health of women (McGovern et al., 2022).

Sixth, there are few studies have discussed the association between maternal depression and the place of residence, The findings of these studies indicate that women who live in large cities are more likely to suffer from postpartum depression disorder compared with women in other regions because of the lack of supportive familial relationship and social networks (Vigod et al., 2013).

Seventh, the relationship between previous history of depression and PPD, most studies show a significant relation between previous history of depression and the occurrence of PPD. The risk of PPD is 1:20 times higher in women with past a history of depression compared to women with no previous depression diagnosis (Stewart & Vigod, 2019).

Eighth, with regards to stressful life events, women's birth experiences, and their relation to PPD there's a considerable number of studies discussing it. they found that stressful life events play a major role in PPD and that women who had a stressful experience during pregnancy are more likely to develop PPD (Zanardo et al., 2022).

Ninth, poor marital relationships might be one of the risk factors for PPD. It's suggested

that depressed mothers have low scores on marriage satisfaction scales and marital relationships. Marital problems seem to be one of the stressful events that can lead to PPD. The studies didn't explain if these poor relationships cause PPD or if marital relationship is influenced by mother's depression (Zhao & Zhang, 2020). However, some studies provide evidence that low marital status is not considered to be a significant factor for PPD as is commonly believed (Oppo et al., 2009).

Tenth, there is several studies described the association between social support and PPD. The result of these studies found a high incidence of depression symptoms were associated with social support, the bigger the social network of a mother, the less postpartum depression occurs, as family and partner support are very important to the woman. Therefore, social support plays a role in protecting mothers from PPD (Yamada et al., 2020).

Eleventh, there is some studies discussed the association between previous miscarriage and postpartum depression and found that women who experienced miscarriages were more vulnerable to postpartum depression during the next pregnancy for the first month postpartum than women without prior miscarriage after the first month this factor did not appear to persist (Małus et al., 2016).

twelfth, the association between unexpected pregnancy and PPD, mothers who intend to get pregnant are less likely to develop PPD than those who had unplanned or unwanted pregnancies (Qiu et al., 2020).

Thirteenth, another protective factor from PPD is the employment status of mothers before and after giving birth, as mothers should consider the effect of employment on their odds of having postpartum symptoms (Lewis et al., 2017).

Fourteenth, considering the relation between PPD and ABO blood groups was insignificant (Alhammadi et al., 2023). However, in a study on Chinese mothers was found that mothers with blood groups A, AB, or O had higher odds of PPDS compared to mothers with blood group B, so it might be that the B blood group may be considered to be less risk for PPDS (Song et al., 2018).

Finally, in terms of the relation between a mother's education level and PPD, they found that a lower education level was an independent risk factor for PPD, because of the lack

of knowledge about childbirth, child responsibility, and problem-related to him and how to deal with the new life situation and low education is associated to reduced awareness about postpartum care and good parenting practices (Dubey et al., 2021; Matsumura et al., 2019).

1.4 Family Cohesion and Adaptability

Two crucial elements of family functioning that influence a family unit's general well-being and functionality are cohesiveness and adaptation. We need to find a balance between being too close and being too far in order to achieve the most complete and effective marital and family growth. On the adaptability dimension, there must also be a balance between too little and too much change. We can evaluate and assess the level of these aspects to use it in determining the different types of families. These concepts of cohesion and adaptability are often discussed in the context of family systems theory, which explores how families operate as a whole (Olson, 2000).

creating a balance between these dimensions is a priority, as it allows families to maintain strong emotional bonds while effectively dealing with changes, and stressors and smoothly crossing between negative and positive experiences (Paley & Hajal, 2022). Understanding the factors that influence cohesion and adaptability and their impact on family dynamics can help families work towards developing healthier, more functional family systems, and create an environment where individuals feel supported, connected, and capable of growing well through life's challenges (Gaspar et al., 2022). As these family relationships and bonds become more and more important as the individuals get older their social networks become limited (Paley & Hajal, 2022).

These two domains of cohesion and adaptability are correlated, and their balance can vary depending on the family's needs and circumstances. we can divide families according to this dimension into six types of families (Sanders & Bell, 2011). These types of families are often represented in a model known as “The Circumplex Model of Marital and Family Systems”, which is considered one of the most popular models for describing and analyzing family dynamics. The model is especially helpful when used as a “relational diagnosis”, combines and places family cohesion and adaptability on two intersecting axes to categorize families into different types, and provides a comprehensive framework for assessing family functioning across these dimensions we

will talk about it later on (Coulacoglou & Saklofske, 2017).

The first type of families is the balanced families, these families have a healthy level of cohesion and adaptability, striking a good balance between emotional closeness and flexibility. They are emotionally connected, communicate effectively, and can adjust to change without losing their core identity. We can say in the language of numbers measured as a family type with high levels of healthy functioning and low levels of problematic functioning is indicated by the greatest scores on the balanced subscales of flexibility and cohesion, and the lowest scores on all other unbalanced scales, except for rigidity. Eventually, balanced families tend to handle stress and change well (Olson & Gorall, 2006).

Second, flexibly unbalanced families, these families have high adaptability but low cohesion, we can see in the FACES scale that have high scores on all of the subscales other than cohesion, where moderate to low scores are characteristic. These families often experience unpredictability and instability, and they may struggle with clear boundaries and consistency because of the lack of emotional closeness which indicates problematic functioning. On the other hand, these families due to their high scores on the adaptability subscale are more able to modify problematic functions when it is needed. Clear communication and emotional connection can help bring balance to such families (Sanders & Bell, 2011).

Third, chaotically disengaged also referred to as “Isolated Islands”, this category has low adaptability and cohesion levels, showing low scores on the balanced subscales and high scores on the chaotic and disengaged subscales, highlighting strict characters and rules, which can lead to lack of emotional connection and adaptability. based on the lack of emotional closeness, these families are expected to be high-problem families. We can help these families increase adaptability and cohesion through open communication and a willingness to adjust roles and rules, when necessary, which may be beneficial for them (Olson et al., 2013).

Fourth, rigidly cohesive, these families have high cohesion but lower adaptability, obtain high closeness scores, moderate change, and enmeshed scores, and low chaos scores. Presenting emotional closeness but with rigid roles and rules, they have a strong sense of connection but may need to increase adaptability when faced with change or

transitions, maintaining open channels of communication is crucial. The great level of connection within this kind of family allows them to function effectively. However, because of their high rigidity, individuals could find it challenging to adapt to environmental or developmental changes (Rada, 2014).

Fifth, midrange families, these families exhibit a moderate level in both cohesion and adaptability with moderate scores on all of the subscales with the exception of the rigid subscale. The values of the rigid scale are either high or low. These families reveal a healthy balance between closeness and independence and being reasonably adaptable to life's challenges (Olson & Gorall, 2006).

Finally, unbalanced families, are almost a reflection of the balanced family type image, characterized by high scores on all of the unbalanced scales, and low scores on the balanced scales, showing uneven or extreme levels of adaptability or rigidity in addition to uneven or extreme levels of emotional closeness or distance among family members. For the overall functioning, this type of families is assumed to be the most problematic because of the high scores on the unbalanced scales. This is the family type most likely to be seen in therapy (Everri et al., 2016).

These six family types vary from the most healthy and happy to the unhealthy and most problematic.

Eventually, we can use this knowledge of understanding the family's level of cohesion and adaptability to detect the areas that may need improvement and provide insights into how the family functions in various situations, and how to understand its impact on the family as individuals and as a group (Joh et al., 2013). These family dynamics can change over time in response to life events and developmental stages or even just the passage of time (Thomas et al., 2017).

1.4.1 Family Cohesion

According to the Family systems theory, focusing on interactions of behavior between family members as their patterns of interaction is considered the first step toward maintaining and extending both problem and nonproblematic behaviors (Johnson & Ray, 2016).

Family cohesion describe as the emotional closeness and linkage that exist between

family members and expression of how family members are concerned and obligation to each other (Xiang et al., 2020). Cohesion can describe the “we-feeling” of a family and how we want to be part of this family. It involves the degree to which family members feel connected to one another, share their thoughts and feelings, and provide support to each other. Family cohesion can be measured, as low cohesion indicating a lack of emotional connection, and high cohesion indicating strong emotional bonds (Villarreal-Zegarra & Paz-Jesús, 2018).

In families with low cohesion, in this type of family, members have a high level of independence and low commitment to one another, members may feel separated and distant from each other, have limited communication, experience a lack of emotional support, and there may be a sense of isolation and disconnection between family members (Thomas et al., 2017). In contrast, Families with high cohesion have a high sense of belonging and bonding, feel stronger with emotionally supportive members, communicate openly, and have shared activities and hobbies (Johnson & Ray, 2016). They have higher commitment and unselfishness with their members, they put the benefit of the family before the individual needs so that the family can maintain interconnection and confront problems, these families can make decisions more quickly especially since families sometimes depend on quick decision-making (Bogdan et al., 2022). While high cohesion can be positive, it can also lead to confusion, where boundaries between family members are not clear (Olson et al., 2013).

Increased emotional support and a sense of fit among family members have been associated with higher levels of family cohesion. This emotional support serves as a protection against psychological issues and mental distress, many studies show that social support from family members enhances resilience in stressful situations (Leidy et al., 2010). In cohesive families, they tend to communicate more openly and effectively, which enhances understanding and problem-solving. Strong bonds between family members are the best tool to deal with difficulties, such as after childbirth, illness, financial challenges, or loss (Rivera et al., 2008). Being in a cohesive family is linked with positive child outcomes not only adults, including social competence and a chance to grow up in a free distressed atmosphere (Xiang et al., 2020).

We can assess and measure the level of family cohesion by using standardized tools and questionnaires. One commonly used instrument is the Family Adaptability and

Cohesion Evaluation Scales III (FACES III), developed by Olson and colleagues in 1985. FACES measures family cohesion on a parameter, ranging from high to low, from disconnected to enmeshed (Olson et al., 2013).

In families with low cohesion, members who are emotionally distant and lack involvement in each other's lives are known as disengaged (disconnected) families. They have a high level of independence, there communication is limited, and individuals may feel apart within the family (Dansie & Brian Hill, 2014).

Separated families are closer to the middle of the scale and are considered more healthy than disengaged families. They continue to have a high degree of personal autonomy and independence and emotional distance even if it may be physically distant from each other. Each member has different interests and they make their own decisions with minimal involvement from other family members. This balance allows for both family cohesion and individual freedom as family members may come together for important events or decisions, but their day-to-day lives are often marked by independence and self-reliance. The limits between parents and children are a little bit clear, but they still have emotional closeness (Olson et al., 2013).

Families in the Connected type have a balanced level of cohesion. They maintain healthy emotional bonds and closeness without becoming extremely enmeshed and respect one another’s personal space and autonomy. They have common interests and activities making spending time together more fun and enjoyable (Olson, 2000).

High cohesion Enmeshed families are at the extreme end of the scale with high levels of connection and dependence, considering the family as a sacred bond, they must commit and obligate to her as family comes first (Barnes & Olson, 1985). They may experience boundary issues, where individual identities become fused, leading to difficulties in autonomy and independence and an absence of boundaries and limits between parents and their kids which is considered unhealthy for privacy and personal development (Olson, 2011).

Several factors can influence positively or negatively the level of cohesion within a family. first, Cultural backgrounds and societal rules play a significant role in shaping family cohesion. Some cultures emphasize strong family bonds and interdependence, while others prioritize individual autonomy (Bámaca-Colbert et al., 2019). Second,

family experiences, such as the presence of secure attachments during childhood, can impact one's ability to form cohesive relationships within their own family. Third, effective and open communication promotes family cohesion, while poor communication can lead to misunderstandings and conflicts (Kienhuis et al., 2010). Another factor that may influence the cohesion level is major life events, such as marriage, the birth of a child, or the loss of a loved one, which can either strengthen family cohesion through shared experiences or introduce stressors that challenge cohesion (Dansie & Brian Hill, 2014). Finally, Parenting styles that balance warmth and support with appropriate boundaries tend to promote healthy family cohesion. Authoritative parenting, for example, is associated with positive family dynamics (Qi et al., 2022).

1.4.1.1 Family Cohesion in the Palestinian Context

Family cohesion is one of the priorities for Arab peoples, serving as a basis for their social hierarchy, determining their identity, and providing them with support and social security systems, especially when this cohesion is linked with a region marked by a complex history and sociopolitical challenges like Palestine. They are strongly built it, form it, and raise their children according to it as “family comes first”. For this, it plays a fundamental role in shaping the lives of individuals and communities, impacting everything from social interactions to economic support systems (Beitin & Aprahamian, 2014). In Palestine, which puts great importance on family bonds and cohesion, family cohesion is deeply rooted in the culture, traditions, and daily lives of its people (Punamäki et al., 2017).

In Arab societies, they are known for their “collectivist values”, which prioritize the benefit of the group over individual interests. The source of this collectivist philosophy is the family unit, where the collective identity of the family replaces individual self-needs. This collectivist orientation promotes strong family bonds and a deep sense of cohesion (Bejanyan et al., 2015).

These “collectivist values” can be enhanced by one of the distinctive features of Arab societies, including Palestine, which is the prevalence of extended family. These families involve not only the parents and their children but also the whole family from grandparents, aunts, uncles, and cousins that are living nearby or maintaining contact

with extended family members amplifies social support and strengthens family cohesion. Even religion and tradition can be a reinforcement for family cohesion as they encourage family members to come together (Prioste et al., 2015).

In Arab societies as well as in Palestine, extended family members play essential roles in supporting newlyweds and parents, as they consider it as an investment to emphasize the collective nature of familial relationships. For this, marriage and parenthood are highly esteemed. They serve as critical life institutions that enhance family bonds and set the foundation for a healthy family (Barakat, 2005). As a tradition, many Palestinian families live in multigenerational households, where grandparents, parents, and children reside together. This living arrangement is a cornerstone of the family's adaptability to changing circumstances, enabling them gathering resources to support one another around them. consequently, mentioning a high level of cohesion and adaptability (Taraki, 2006). On the other hand, in nuclear families consisting of parents and their children, support is more concentrated, fostering strong emotional bonds within the family unit. This tight structure allows for deep mutual reliance and focused care. With a greater sense of independence and privacy, nuclear families tend to rely primarily on each other, reinforcing internal cohesion. Their smaller size also enhances adaptability, making it easier to manage and respond to changes and challenges, ensuring that family cohesion remains intact in changing circumstances (Dansie & Brian Hill, 2014).

When we talk about family cohesion in Palestine, we should keep in mind that it has a special situation that differs from other Arab countries. The Palestinian experience is marked by a complex history, starting with forced displacement, conflict, and occupation. This Israeli-Palestinian conflict has had a profound and lasting impact on Palestinian society. For irony, these historical and sociopolitical challenges play an important role in preserving Palestinian cultural and national identity in the face of occupation. This common identity enhances internal solidarity and strengthens the importance of family cohesion and bonding as a way for survival and resilience, as well as a source of support and closeness. As this conflict has led to the development of strong support networks within extended families and communities. These networks help provide emotional support, reinforcing family cohesion as members rely on each other to cope with challenges.

As we said about the complex situation in Palestine, many Palestinians reside in

diaspora communities around the world they were able to maintain family cohesion and adaptability across geographical distances presents a unique challenge but is essential for preserving family cohesion and mutual support systems (Abbott, 2009).

Despite the difficulties and the differences in time, place, and circumstances, the Palestinian people were and are still able to preserve and increase their attachment to legacies about the importance of the family and its cohesion and its impact on individuals.

The other side of the impact of the Israeli-Palestinian conflict is that he introduced significant stressors that can erode family cohesion, particularly through, displacement and geographical separation can reduce daily interaction, making it harder to maintain close relationships, trauma as constant exposure to violence, stress, financial instability, and loss can weaken family cohesion, and generational conflicts in coping strategies and attitudes toward resistance and survival, leading to tensions between older and younger family members. This can reduce family cohesion and lead to fragmented relationships and weakened family ties.

1.4.2 Family Adaptability

Family adaptability or as known “Family flexibility”, is one of the main components of family resilience whereas resilience can inspire positive adaptation. Back to the family's ability to adjust and respond to changes, transitions, and stressors healthily and functionally (Ma et al., 2022). It reflects the family's capability to adjust and change its roles, rules, and communication patterns when faced with challenges or shifts which can have an impact on couple and family functioning (Walsh, 2016).

Families with low adaptability may be strict to change. They may have strict rules and roles that are not easily modified, which can lead to difficulties when unexpected events or transitions happen (Fogel et al., 2022). In contrast, Families with high adaptability are more flexible and open to change. They can adjust their roles, rules, and communication styles as needed to deal with new circumstances “like the coming of a new child into the family” and challenges (Calarco & Gurvis, 2006). However, extremely high adaptability without a foundation of stability can lead to confusion (Walker et al., 2004).

One of the good side of adaptability is that families that shows “adaptability” are prepared to face both every day and unpredictable stressful events and transitions, such as job changes, the death of a loved one, or health crises (Krysan et al., 1990). also, adaptability is linked to family resilience, allowing families to bounce back from adversity and maintain stability, as Olson assumes that when individuals are satisfied and convinced with family dynamics, they function effectively (Olson et al., 2014). Finally, adaptive families can adjust their boundaries as needed, ensuring that individual autonomy and family closeness are both respected (Ma et al., 2022).

The assessment of family adaptability is done at the same time as the assessment of cohesion Using the same scale, the FACES model. The FACES model includes an adaptability continuum, ranging from rigid to chaotic.

The first type is rigid families. In rigid families, there is minimum adaptability, have the lowest score on the scale, roles and rules are fixed, and change is met with resistance. This lack of flexibility can lead to stagnation and dysfunction and results in children with high discipline and strictness (Olson, 2000).

The second type is structured families which show moderate adaptability. They maintain some flexibility while also preserving a degree of stability and consistency, and there is sometimes shared leadership. The role is unchanging only when it is demanded and sometimes there are democratic decisions and discipline (Zhang et al., 2019).

Families with high adaptability that are open to change and readily adjust their roles, rules, and communication patterns as needed are known as Flexible families. This type of family has shared leadership, role-sharing change, has to make democratic decisions and their rules change when it necessary. however, they maintain a sense of stability among change (Sanders & Bell, 2011).

Finally, chaotic families stand for excessive adaptability but lack stability, and have the highest score in the scale. They may experience frequent and unpredictable changes, which can result in confusion and insecurity, they lack leadership and the rules are easily broken (Kouneski, 2000).

The structured and flexible types are considered the balanced unhealthy levels of family adaptability. On the other hand, rigid and chaotic are the two extreme types which considered to be unbalanced and unhealthy levels of family adaptability (Joh et al., 2013).

Several factors can influence a family's adaptability. As the effective communication is essential for adaptability, families that communicate openly and honestly can discuss and implement changes more effectively (Kienhuis et al., 2010). Also, flexible roles within the family allow for adaptability, families that rigidly adhere to traditional roles may struggle to adapt to changing circumstances (Matejevic et al., 2014). Another factor is family Resilience which tends to be more adaptable, resilience involves the family's ability to handle stress and adversity constructively (Walker et al., 2004). Final factor is how a family manages crises and transitions can impact its adaptability. Effective problem-solving strategies and managing mechanisms are important (Joh et al., 2013).

1.4.2.1 Family Adaptability in the Palestinian Context

Adaptability as we said is a critical aspect of family functioning that reflects a family's capacity to adjust and respond to changes, stressors, and life transitions. In Palestine, it is a skill and ability for Palestinian families to adjust to the changes they may go through, family adaptability is not only a cultural strength but also a survival strategy. Therefore, the understanding of family adaptability in the Palestinian context is important due to that Palestine a region marked by a complex sociopolitical landscape, family adaptability takes on added significance as families deal with the impacts of conflict and occupation. Palestinian families have a long history of resilience in facing difficulties. Families often draw on their adaptability to cope with historical challenges, sociopolitical factors, and external pressures, fostering a culture of resilience and adaptability within the family unit.

This family adaptability can be enhanced by the concept of “interdependence” which is integral to the Palestinian family. Family members rely on each other for emotional support, financial assistance, and caregiving. This interdependence strengthens the family's ability to adapt to changing circumstances (Banat et al., 2021).

The Israeli-Palestinian conflict gave Palestinian families the ability to develop strategies and ways to adapt and deal with the continuously changing circumstances as restrictions on movement, economic challenges, and the ever-present threat of conflict. In this condition, Palestinian families have developed a remarkable capacity for resilience and coping. They draw on their adaptability to reduce the impacts of occupation, finding ways to meet their basic needs and support one another.

Traditional gender roles are prevalent and deeply rooted in Palestinian society. Men are typically seen as providers, responsible for the external matters and the economic well-being of the family, while women handle domestic affairs, regarded as caregivers, nurturing the emotional and social fabric of the family. These roles reflect a form of adaptability where family members adjust to their responsibilities based on their gender roles and promote interdependence and shared responsibilities, further strengthening family cohesion (Banat et al., 2021).

One of the challenges that may face adaptability in Palestine is the increased access to education and employment chances, which have led to shifts in traditional gender roles. As women follow careers and higher education, this can both empower women and create new dynamics within families and family members must adapt to these changes, redefining their roles and responsibilities within the family (Shah et al., 2016).

1.4.3 The Impact on Family Functioning

The level of family cohesion and adaptability has a great impact on various aspects of family functioning such as communication, high cohesion and adaptability help open and effective communication within the family. Family members feel comfortable sharing their thoughts and feelings and this will influence positively on their psychological adjustment (Phillips-Salimi et al., 2014). Conflict Resolution, Families with balanced cohesion and adaptability can resolve conflicts positively, as they can adapt their communication and problem-solving strategies as needed, not only that but it can also improve family social problem-solving skills and social self-efficacy (Leidy et al., 2010). Parenting and Child Development, the family environment significantly influences child development. Cohesive and adaptable families provide a nurturing and supportive environment that raises healthy child development, and in contrast how the multiple features of the family environment have a role in the developmental unfolding

of mental disorders later on, with evidence that the origins of mental health, disorder, and corollary neurodevelopmental disruptions begin even before birth (Bush et al., 2020). Mental Health, families with strong cohesion can provide emotional support, which is protective against mental health issues. Adaptability allows families to deal with stressors and challenges that may arise. Family relationships provide a resource to help a member of the family to be able dealing with stress, engage in healthier behaviors, and increase self-esteem, leading to higher well-being. However, poor relationship quality, intense caregiving for family members, and marital dissolution are all stressors that can negatively affect an person's security and well-being (Thomas et al., 2017). Resilience, cohesive, and adaptable families are more resilient in facing life difficulties. They can adapt to changing circumstances, maintain stability, and bounce back from setbacks, whereas it was found a negative correlation exists between depressive symptoms and family cohesion and adaptability from the perspectives of both parents and their children. Furthermore, the perceived family cohesion and adaptability of parents and children and the harmony between them can be predicted by the depressive symptoms (Li et al., 2021).

1.5 Family Cohesion, Adaptability, and Postpartum Depression

In the past years, many studies focused on how families and social support affect the mother's mental health issues, especially in the postnatal period, its effect on its appearance and severity, and how we can use it in prevention and treatment.

According to Alshikh Ahmad and his colleagues after Reviewing 15 studies, these studies were conducted between 2006 and 2020 in several Middle Eastern countries, showing that the prevalence of postnatal depression in Middle East mothers was very high 27%. This percentage was interpreted to find out its causes and risk factors because it is considered higher than in other regions of the world. The inadequate social support from family members and lack of communication in addition to the inability to deal with changes and stressors put the mother under pressure and constant worry after just giving birth (Alshikh Ahmad et al., 2021).

When we talk about postpartum depression and family cohesion and adaptability it is necessary to know that there is a relationship and mutual influence of each of them on the other. As we realize that the consequences of this condition extend far beyond the

individual. PPD can have both direct and indirect effects on family dynamics, leading to anxious and uncomfortable relationships, disruption of daily routines, and increased stress between family members. However, this impact of PPD can be avoided by being able to understand this period of the mother's mental health, being supportive, and providing her with appropriate treatment. Eventually, the negative impacts of PPD can be controlled and reduced (Kim et al., 2009).

In parallel, families have an impact on the onset of PPD symptoms, the family is the first and most important source of support and care for a mother before and after experiencing PPD, and its role in her recovery cannot be overstated. It requires a collective effort from the family to understand the challenges forced by PPD and to provide the necessary support and sympathy for the affected mother (XIE et al., 2010).

In this regard, previous studies were conducted to investigate the mutual effect of family cohesion and adaptability and PPD. According to Çankaya & Alan Dikmen (2022) in a descriptive, cross-sectional study, for example, conducted a study to find the effect of family dynamics on postpartum depressed mothers. Their study sample was 337 postpartum mothers. The results showed that 55 mothers recorded scores above the depression scale cutoff point (above 13) were having low family relationships and adaptation. This result confirms the importance of family functioning on the mother's mental health and how we can prevent PPD symptoms by improving family relationships (Çankaya & Alan Dikmen, 2022).

In doing so, families can’t only help the mother on her journey to handling recovery but also work to improve their own bonds, resilience, and adaptability in the face of distress.

This can be confirmed by Zhang and colleagues (2023) who conducted a retrospective analysis at a single center to look at the relationship between postpartum depression symptoms risk and family cohesion and adaptability. It was retrospectively analyzed 1446 patients. Baseline and clinical data were compared between groups using the Edinburgh Postpartum Depression Scale (EPDS) and the Chinese version of the Family Cohesion and Adaptability Assessment Scale II (FACES II-CV). showed that factors influencing postpartum depression symptoms include the type of family as well as the level of cohesion and adaptation within the family. Postpartum depression was

more common in family cohesiveness types that were disengaged and separated than in connection types; in contrast, postpartum depressive symptoms were less common in enmeshed types. Rigid and structured families had a higher risk of postpartum depressive symptoms than flexible families, whereas chaotic families protected against postpartum depressive symptoms (Zhang et al., 2023).

Kim and his colleagues (2009), conducted a preliminary study to search the connections between postpartum depression disorders and cohesiveness and flexibility. Before and after giving delivery, 24 women were prospectively evaluated for postpartum depression risk factors. The Beck Anxiety Inventory (BAI), Family Adaptability-Cohesion Evaluation Scale (FACES), and Edinburgh Postnatal Depression Scale (EPDS) were evaluated at gestational age between 36 and 40 weeks. After childbirth, an International Neuropsychiatric Interview (MINI) structured diagnostic interview was used to diagnose PPD. At 4-6 weeks postpartum, EPDS and BAI were also evaluated. The result confirmed that family cohesiveness and flexibility were associated with postpartum depression in comparison with non-postpartum depressive disorder mothers. Furthermore, there was a significant relationship between low prenatal family adaptability and cohesion and PPD (Kim et al., 2009).

As we investigate deeper into this complex relationship between PPD and family dynamics, it becomes clear that knowledge, sympathy, and positive intervention are essential. By admitting the profound impact of PPD on family cohesion and adaptability, we take a critical step toward creating a more supportive and understanding environment for mothers and families passing these challenges, especially in Arab countries, some of which consider postpartum depression a “petty style” and not an existing condition that occurs to various women around the world, and underestimating this aggravation and increase in severity.

This intricate relationship between PPD and family cohesion and adaptability is at the head of research and clinical attention, as it underlines the connection between maternal mental health and the well-being of the entire family system. Seeing that PPD symptoms can disrupt the emotional bonds that support family cohesion. The emotional closeness and connection among family members may decay and vanish as the mother struggles with the overwhelming symptoms of depression and sadness, leading to tension in relationships. Furthermore, the PPD can lead to difficulties in communication

and emotional expression within the family (Bass III & Bauer, 2018; Faisal-Cury et al., 2021).

Likewise, PPD can directly affect the family's adaptability, and their ability to adjust and face the challenges presented by the presence of the mother with PPD symptoms. As the mother's symptoms influence her daily functioning and routine, the family may find itself handling shifts in roles and responsibilities due to the mother's “absence”, this leads to the lode of caregiving, and taking care of the new baby may fall more heavily on other family members. These alterations can be a source of stress and conflict, potentially weakening the family's adaptability to the new situation (Kienhuis et al., 2010; Zhang et al., 2023).

An example of this, Kim and his colleagues in 2007, conducted a study to investigate the impact of maternal depression on family functions. Questionnaires completed by 257 mothers who had 0–36-month-old children were used to measure depressive symptoms in mothers and family function, these questionnaires were the EPDS and the FACES. This study showed that maternal depression had a negative influence on family adaptability and family cohesion (Kim et al., 2007).

In this complex relationship between PPD and family cohesion and adaptability, it becomes evident that addressing maternal mental health is not only an individual concern but a shared one including all family members. Recognizing the signs and symptoms of PPD, providing immediate and adequate support, and enhancing free and open communication within the family are critical steps in preserving cohesion and enhancing adaptability (Honjo et al., 2018). The journey toward recovery from PPD often involves the entire family, highlighting the importance of full maternal mental health support.

As we see in Li et al. (2021) conducted a cohort study about postnatal postpartum depression (PPD) within 3 years after childbirth, and investigated the impact of original family cohesion and adaptability on PPD. Using the Edinburgh postnatal depression scale and Family Adaption and Cohesion Evaluation Scale-Chinese Version, they took 211 women 0-36 months postpartum and investigated them online. It was found that 34.1% of postnatal women show postpartum depression symptoms (PPDS) within 3 years after childbirth. Mothers from families with low family cohesion, rigid family

adaptability, and extreme family type had higher scores of postpartum depression. These results can be explained as family cohesion had negatively influenced the degree of postpartum depression, while the extreme type of family had positively influenced the degree of postpartum depression (Li et al., 2021).

In another previous study of the relationship between postpartum depression, family cohesion, and adaptability, Hawes et al. (2016), conducted a cross-sectional study to examine the association of maternal mental health, perceptions of readiness at neonatal intensive care unit (NICU) discharge, and social risk factors with depressive symptoms one-month post-discharge. 734 Mothers of preterm infants cared for less than 5 days in the NICU, using a Transition Home Program completed the Infant Parent Readiness Evaluation before discharge for infant well-being, maternal well-being, and maternal comfort. A mental health history and social risk factors were achieved. After one-month post-discharge, the Edinburgh Postnatal Depression Scale was done. The result showed that mothers with a previous mental health disorder decreased perception of maternal well-being, decreased maternal comfort regarding infant, and decreased perception of family cohesion at NICU discharge were at increased risk for depressive symptomatology one-month post-discharge regardless of infant gestational age (Hawes et al., 2016).

In this study, we will find the relationship between postpartum depression, family cohesion, and adaptability in the Palestinian context, how it differs from other regions, what factors could affect it, whether positively or negatively, and how we can use this result in prevention and early intervention.

1.6 Problem statement

Postpartum depression (PPD) is a mental health concern affecting (17.22%) of mothers worldwide, including Palestinian women (Wang et al., 2021). PPD can have detrimental effects on maternal quality, parenting, and overall family functioning. Previous studies have highlighted the high prevalence of postpartum depression (PPD) and its detrimental effects on maternal well-being, family relationships, and child development. However, there remains a significant gap in research specifically focusing on PPD among Palestinian women, who face unique cultural, social, and political challenges. This lack of targeted research underscores the need for further investigation to better understand the prevalence, risk factors, and impact of PPD in Palestinian women, and to

develop culturally appropriate interventions to support their mental health and family cohesion.

Despite the research on postpartum depression and its high prevalence, little is known about how family dynamics, particularly family cohesion and adaptability, influence the prevalence and severity of PPD among Palestinian women. Understanding the relationship between postpartum depression, family adaptability, and family cohesion in the Palestinian cultural context is essential for developing targeted interventions and support systems in healthcare centers.

The existing literature suggests that family cohesion, shown in emotional bonding, support, and togetherness within the family, may serve as a protective agent against postpartum depressive symptoms. Similarly, family adaptability, which shows in the family's ability to adjust and respond to changes, can play a key role in facilitating maternal experience. However, there is a lack of research exploring the relationship between postpartum depression (PPD), family cohesion, and adaptability in the context of Palestine, leaving a critical gap in understanding how these factors interact in this specific cultural setting. This study aims to address this gap by investigating these relationships.

Therefore, the current study aims to investigate the relationship between family cohesion and adaptability with postpartum depression among Palestinian women. The findings of this study will contribute to a better understanding of the factors influencing postpartum depression in Palestinian women and develop a culturally social meeting to raise awareness and provide support services.

1.7 research questions

- What is the prevalence and severity of postpartum depressive symptoms among Palestinian women?
- What is the level of family cohesion, family adaptability, and family function among Palestinian women during the postpartum period?
- What is the relationship between family cohesion and postpartum depressive symptoms among Palestinian women?
- What is the relationship between family adaptability and postpartum depressive symptoms among Palestinian women?

- What are the predictors for postpartum depression, family cohesion types, and family adaptation types?

1.8 Objectives

1.8.1 General objective

The general objective of this study is to determine the relationship between family cohesion, adaptability, and postpartum depression among Palestinian women at the Maternal and Child Health Centers (MCH) and clinics in the northern regions of the West Bank in Palestine.

1.8.2 Specific objective

- Determining the prevalence of and severity of postpartum depression in Palestinian women.
- To explore what is the postpartum depression's common risk factors during the postpartum period.
- To examine the level of family cohesion and adaptability among Palestinian women during the postpartum period.
- To identify potential mediating factors that may influence the relationship between postpartum depression, family adaptability, and family cohesion among Palestinian women.
- To reveal factors that may affect family cohesion, adaptability, and postpartum depression among Palestinian women during the postpartum period.

1.9 Study hypothesis

H1: There is a significant relationship between family cohesion, adaptability, and postpartum depression among Palestinian women.

H0: Postpartum depression is not significantly prevalent among Palestinian women.

H0: At the p-value ≤ 0.05 level, there is no statistically significant correlation between the risk factors for postpartum depression and its prevalence in Palestinian women.

1.10 Significance of the Study

The literature review summary indicates clearly that the postpartum stage is thought to

be an important stage in the emergence of depression symptoms. Moreover, the studies reveal that postpartum depression has consequences on the mother-family bonding and ability to adjust. This study will contribute to more understanding of the relationship between PPD, family cohesion, and adaptability in the context of Palestine using Olson's circumplex model and the FACES III, an area that has not yet been studied or published.

In addition, the findings of this study may inform the development of culturally appropriate interventions and types of support needed to reduce the risk of PPD and improve family cohesion and adaptability for Palestinian women. Also, a better understanding of the factors influencing postpartum depression and inform the development of targeted interventions for Palestinian women. So, the study will highlight the importance of addressing PPD as a public health issue in Palestine.

Further research in Palestine is needed to understand the types of families and the effect of family cohesion and adaptability in our lives. As a result, the study's findings will be a valuable resource and guide for researchers looking to expand and do more investigation about family cohesion and adaptability.

1.11 Definition of terms

Postpartum depression: is a subclinical and major depression (a type of mood disorder) considered a complication of childbirth that happens in the postnatal period, usually within the first few weeks after birth, with peak prevalence around 4 to 6 weeks postpartum and may last several months or a year (Ross et al., 2006). It affects approximately 10- 20% of new mothers worldwide, making it one of the most prevalent maternal mental health issues (Matthey et al., 2003). The symptoms of postpartum depression can vary in severity and are represented by three main indicators, including the emotional indicator represented by low mood, loss of self-confidence, fear, and lack of desire, a behavioral indicator represented by frequent crying and isolation, a change in appetite and sleep, and others, and finally, thoughts that appear in inability to think, making decisions, and obsessive thoughts of self-harm or harming their infants. Beck believes that loss of control is the most important symptom of postpartum depression (Leahy-Warren et al., 2012).

Family cohesion: refers to the emotional bonding, closeness, and shared support among

family members. It represents the extent to which families function as cohesive units, providing emotional support and a sense of belonging to individual family members (Cumsille & Epstein, 1994). High levels of family cohesion are associated with positive outcomes for family members, including improved mental health and resilience during times of stress (Masten, 2018).

Family adaptability: is the ability of a family to deal with changes and difficulties in their surroundings (Place et al., 2005). Families with high levels of adaptability can flexibly adjust to these changes and maintain stability (Masten, 2018). Families with low adaptability have difficulties in dealing with the changes, leading to increased stress and potential conflicts (Trillingsgaard et al., 2014).

Prevalence: It is how common something, a particular condition, or disease is in a specific group or population at a certain point in time.

family function: Olsen defined it as family intimacy, the concept of family function refers to the roles and interactions between family members that facilitate bonding and closeness between them including how families provide emotional support, spend quality time together to maintain effective communication, solve problems, manage stress, and adapt to changes to build a strong mutual support system, members feeling valued and loved to ensure that the family unit remains stable and cohesive (Olson et al., 2013).

Chapter Two
Methodology

2.1 Study design

A prospective cross-sectional study conducted from August 2023 to April 2024 used validated and standardized evaluation scales in family cohesion, adaptability, and postpartum depression.

2.2 Study setting

The major health centers of the Maternal and Child Health Centers (MCH) in the northern, central, and southern governorates of the West Bank—Jericho, Jenin, Tulkarm, Tubas, Nablus, Qalqilya, Salfit, Ramallah, Al-Bireh, Bethlehem, North Hebron Health, and South Hebron Health, as well as some pediatric and obstetrics and

gynecology clinics in the governorate of Nablus, served as the study's sites.

2.3 Study population

Mothers with a healthy baby under 12 months old who went to one of the primary health care clinics in the West Bank governorates or any of the pediatric and obstetrics and gynecology clinics in the Nablus governorate for any post-delivery reason (postpartum follow-up, vaccine follow-up, baby follow-up, any disease).

According to the range of postpartum periods that have been studied, the twelve-month cut-off point was used.

2.4 Sampling Procedure and Sample Size Calculation

A non-probability convenience sampling was used in this study, specifically adopting the availability sampling method, which is gathering data from community members who were conveniently accessible and available to participate in the study.

The sample size included 570 mothers in the West Bank who have not been diagnosed with any mental illness especially depression symptoms during the postpartum period. As the Palestinian Ministry of Health's data report in 2022 states that the number of mothers who gave birth was 11148 mothers in total (The Palestinian Ministry of Health, 2022), in addition to pediatric and obstetrics and gynecology clinics in the Nablus governorate.

2.5 Inclusion and exclusion criteria

Inclusion Criteria:

- All mothers who had a healthy child up to the age of 12 months and attended in government primary care clinics for maternal and child health in the governorates of the West Bank or one of the pediatric, obstetric, and gynecological clinics in the governorate of Nablus.
- Mothers who gave their consent to take part in this research.
- Mothers between the ages of 18 and 45 who are during their postpartum period.
- Mothers who have given birth to a live baby in their last pregnancy.
- Mothers having a baby with no known health problem.
- Mothers living in one of the study areas during the postpartum period.
- Mothers who are available during the postpartum period throughout the time of study.

Exclusion Criteria:

- Mothers who ended their postpartum period, up to one year.
- Mothers who do not reside in one of the study areas.
- Mothers who have shown no interest in taking part in this study.
- Mothers who were receiving mental health therapy at the time the study was being conducted.

2.6 Data collection instrument

For data collection, three sections of self-questionnaires in the Arabic version were used to gather the required information.

2.6.1 Sociodemographic and clinical data

Section one is the demographic information form, including open-ended questions about general information that have been approved with the help of the researcher's supervisor and consultation from mental health professionals after reviewing various relevant literature and previous publications.

The first section consisted of three factors:

– Socio-demographic data: (mother's age, father's age, level of education, place of residency, employment status, level of income, and living closeness to the mother's or husband's family's" proximity of residence").
– Medical and psychiatric history: (Use of medications during pregnancy, previous miscarriages (if any), history of depression, and mother's ABO blood type).
– Childbirth experiences: (baby's age and sex, mode of delivery, number of children, and planned versus unplanned pregnancy).

2.6.2 Edinburgh Postnatal Depression Scale (EPDS)

Section two is the postpartum depression, The Arabic version of the Edinburgh Postpartum depressive Scale (EPDS), created by John Cox and Jeni Holden in 1987 was used to measure and assess depressive symptoms in women related to the postpartum period (Multicultural Health Communication Service., 2019). The scale consists of 10 items, and each item addresses different emotional and behavioral symptoms associated with depression. These items cover feelings of sadness, anxiety, guilt, sleep disturbances, and others. The responses to each item are graded from 0 to 3, where

higher scores correspond to more severe symptoms. The sum of all item scores determines the total score, which can range from 0 to 30. To identify clinical depression, a cut-off EPDS score of 10 was ideal, with a sensitivity and specificity of 0.91 and 0.84, respectively (Wildali et al., 2022).

2.6.2.1 EPDS correction

The EPDS scale consists of 10 items, with four answers for each item. Items 1, 2, and 4 are corrected by giving the answers from top to bottom in the item's answer scale with scores 0, 1, 2, and 3. Items 3, 5, 6, 7, 8, 9, and 10 are corrected in reverse, where the answers are given from top to bottom in the item's answer scale with scores (3, 2, 1, 0), and the maximum score obtained by the mothers will be (30). Categories of Postpartum depression have been divided according to total scores.

2.6.3 Family Adaptability and Cohesion Evaluation Scale III (FACES III)

Section three is the family adaptability and cohesion were assessed by using the Family Adaptability and Cohesion Evaluation Scale III (FACES III) developed by Dr. David H. L. Olson in 1985 (Olson, 1985) to assess family dynamics and the degree of cohesion and adaptability within family systems in two major dimensions on the circumplex model, adaptation and cohesion of the family. The scale includes the following two subdimensions and with a total of 20 items: Family Adaptability (the 10 even items) and Family Cohesion (the 10 odd items). To find the family type score (1-8), we add the (1-8) family adaptability score to the (1-8) family cohesion score and divide by 2. A five-point Likert scale is used to score the responses to the items. ranging from 1 to 5, with potential ranges of 20 to 100 (1 = rarely, 2 = once in a while, 3 = sometimes, 4 = frequently, 5 = almost always). There are four optimal cutting points for the adaptability and cohesion levels and type. see table 1.

In Olson's circumplex model, we can find that there are three general types (balanced, mid-range, and extreme) and sixteen family types are identified. There are four levels of family adaptability: rigid (10-19), structured (20-24), flexible (25-29), and very flexible or chaotic (30-50). The two mid-levels (structured and flexible) are considered the balanced levels of family adaptability, and the two extreme levels (rigid and very flexible) are considered the unbalanced levels of family adaptability. Also, there are four levels of family cohesion: disengaged (10-34), separated (36-40), connected (41-

45), and very connected or enmeshed (46-50). Similar to that for family adaptability, the two mid-levels (separated and connected) are considered to be the balanced levels of family cohesion, and the two extreme levels (disengaged and very connected) are considered to be the unbalanced levels of family cohesion.

Table 1

Levels of family cohesion and family adaptability

	Type of cohesion			Type of adaptability			Family type (family function)	
8	50 48 47		8	50 41 40		8		
7		Very connected (Enmeshed)	7		Very flexible (Chaotic)	7		Balanced
6	46 45 43 42		6	30 29 27 26		6		
5		Connected	5		Flexible	5		Moderately balanced
4	41 40 38 37		4	25 24 23 22		4		
3		Separated	3		Structured	3		Mid-range
2	36 34 25		2	20 19 15		2		Extreme
1	24 10	Disengaged	1	14 10	Rigid	1		

2.7 Translation Process for FACES III

Before the beginning of the study, the FACES Working Group at the University of Minnesota granted permission to translate and use the scale; with a list of the translation procedures. The FACES III items, instructions for use, and scoring guidelines were translated by three professional translators in their fields from English to Arabic. An expert in Arabic grammar reviewed and proofread all three translations. A fourth researcher then translated the scale backward. Lastly, experienced researchers from the FACES group approved the final version after assessing the translated and back-translated versions. Still, the translated scale was further checked and modified to suit the Palestinian context and if there were any grammatical errors, verb conventions, and linguistic patterns during the pilot stage. The assessment of content-related validity involves determining if the measurement method includes all the necessary components that are relevant to the topic being assessed. Five experts in the field who were interested in the relevant topics assessed the study tool to establish content-related validity. To help the specialists comprehend the goals of the study, the research

tools and objectives were provided to them. All their comments and modifications were taken into consideration to find the last version of the questionnaire before starting the pilot study.

2.8 Pilot Study

A pilot analysis was conducted on 31 postpartum women, to gather feedback on the questionnaire, verify its validity and reliability, assess response rates, calculate the accurate time needed to complete the 570 questionnaires, identify any language vulnerabilities, and serve as a pre-test before the start of the actual data collection. The majority of the thirty-one women who answered qualitatively were positively and satisfactorily, indicating that the FACES III was accepted. The questionnaire and the answers of the pilot sample were reviewed by five university doctors related to the nature of the study, to confirm the validity and reliability of questionnaire items and after the questionnaire was piloted, the pilot results were added to the entire number of participants; no significant changes or amendments were made.

2.9 Validity and Reliability of FACES III and EPDS Questionnaires

FACES III is a widely and well-known scale, with reliable Cronbach's α for adaptability = 0.81 and 0.77 for cohesion (Kim & Park, 2002). Also, FACES III has been translated into several languages and used in studies that have also been conducted to assess its reliability and validity. It was noted that Cronbach's Alpha reliability coefficient for the overall scale was found to be ∝= 0.80 in the reliability analysis performed for the FACES III in our study. The coefficient for the subscale: family adaptability was ∝ = 0.774, and for family cohesion was ∝=0.858. As for the EPDS, the reliable Cronbach's α for the scale is 0.80 in most studies. In this study, Cronbach's α was 0.858.

Also, for validity, the questionnaire was sent back to the arbitrators and researchers with academic certificates and expertise in psychology and mental health to determine and judge whether the questionnaire was scientifically correct and if it was well organized to

study the variables and the relation, to provide evaluation and recommendations on the questionnaire's applicability and if it measures what it built for, and to assess if the questions were practical and easy to answer. After the pilot study, they approved the questionnaire without any modification.

Table 2

Reliability for the Edinburgh Postnatal Depression Scale and Family Adaptability and Cohesion Evaluation Scale

Scale	N of Items	Cronbach's Alpha
the Edinburgh Postnatal Depression Scale (EPDS)	10	0.858
Family Adaptability and Cohesion Evaluation Scale	20	0.800
Family Adaptability	10	0.774
Family Cohesion	10	0.858

2.10 Data collection procedure

Following approval by the Institutional Review Board (IRB) of An-Najah National University, the Palestinian Ministry of Health's Research Ethics Committee and arranging appointments with the centers and clinics targeted in the study to arrange meetings with the mothers, the data was collected by the researcher from September 2023 to December 2023, from the government primary health care clinics in the West Bank governorates, specifically the Maternal Child Health (MCH) centers affiliated with the Palestinian Ministry of Health. As well as some of the pediatric obstetrics and gynecology clinics in the Nablus governorate.

The researcher went to two clinics in each governorate and gave the mothers the questionnaire to answer after providing full instructions to the mothers and explanations about the study, its purposes, and the importance of providing the most answers that best express her condition. This was also applied in the pediatric, obstetrics, and gynecology clinics in the Nablus governorate. The interview was conducted in a timely manner, taking into account all ethical issues to avoid causing any disruption. After getting the mothers' informed consent, a self-reported questionnaire with a form of demographic data, the Arabic version of the Edinburgh Postnatal Depression Scale (EPDS) along with the FACES-PS, accomplished with an internet link that gave participants access to the questionnaire online, in addition to using a hard copy of the questionnaire for mothers who prefer paper to electronic copy or do not have access to

the internet. The mothers had enough time in the clinic to finish the questionnaire and to ensure that all the items in the questionnaire were answered, the online form was designed to ensure the mother could not submit her responses if any of the items were missing.

2.11 Statistical Analysis

each questionnaire was reviewed and checked by the researcher to ensure it had internal consistency and completeness. Next, the IBM Statistical Package for Social Sciences (SPSS Version 23) was later used for data entry, processing, coding, interpreting, and evaluating the information gathered. We used descriptive analysis to represent the variables frequencies and percentages of variables, in addition to the personal and socio-demographic information of the participants. The association between postpartum depression development and independent variables, including women's demographics, medical and psychiatric histories, delivery experiences, and family cohesion and adaptation factors, was determined using logistic regression. The strength of the relationship was measured using an odds ratio at a (95%) confidence interval, and a P-value of 0.05 was considered a significant relationship.

2.12 Ethical Consideration

The study was carried out by the World Medical Association's Declaration of Helsinki Ethical Principles for medical research involving human subjects developed by The World Medical Association (WMA) (Shrestha & Dunn, 2019). The researcher dedicated herself to investigating ethical considerations and general ethical protocols in order to accomplish this thesis. An-Najah National University (NNU) obtained its approval from the Institutional Review Board (IRB). The researcher got permission to collect data from the research area by a letter of consent from the Palestinian Ministry of Health's Research Ethics Committee. To ensure that the completion of a questionnaire is conducted ethically and responsibly and respecting the rights of participation. Each participant was asked to participate and obtained a consent form to ensure data privacy. The participation was voluntary, and mothers had the right to withdraw freely from the study at any moment they want and for any reason.

Chapter Three

Results

3.1 Introduction

This section provides the findings obtained from the data collected and analyzed to achieve the study's objectives.

3.2.1 Demographic characteristics

This study surveyed 573 responses collected from the study area, 3 of which were excluded due to incomplete information. Most of the participants (52.5%) were from the Northern region. Regarding participant's age, the majority (58.9%) were aged between 18-27. Regarding the husband's age, (47.7%) were aged between 26-32.

The majority of the participants were unemployed (64.9%) and 434 (76.1%) obtained a diploma or bachelor's degree. Likewise, the husband's educational level of the majority was found to have a diploma or bachelor's degree (51.6%).

The majority of the participants (75.6%) came from families with income between 3,000 and 5,000 shekels per month., and 268 (47.1%) of participants were living near the husband's family. Table 11 lists the sociodemographic information of the participants.

3.2.2 Health history of the participants

It has been found that 70.5% of the mothers in this study had never experienced depression before. In addition, (74.7%) hadn't had any previous miscarriages, and (58.6%) of participants were not using any medication, whether these medications related to the pregnancy itself or the mother's own health before pregnancy. Finally, regarding to mother's blood type, (40.2%) of mothers were type A. See Table (12).

3.2.3 Childbirth experiences of the participants

Regarding the baby, (44.2%) of the babies were aged between 6-12 months and (54.2%) were male. The majority of these births were planned (60.9%), 230 (40.4%) of the mothers had their first birth experience. Furthermore, regarding the mode of delivery, (50.5%) of participants had a normal delivery mood. See Table (13).

3.3 The prevalence and severity of symptoms of postpartum depression

To find the prevalence and severity degrees of PPD among Palestinian women in the West Bank, the frequency and percentages for each category were obtained from the answers of the mothers on the EPDS as shown in the following Table (3).

Table 3

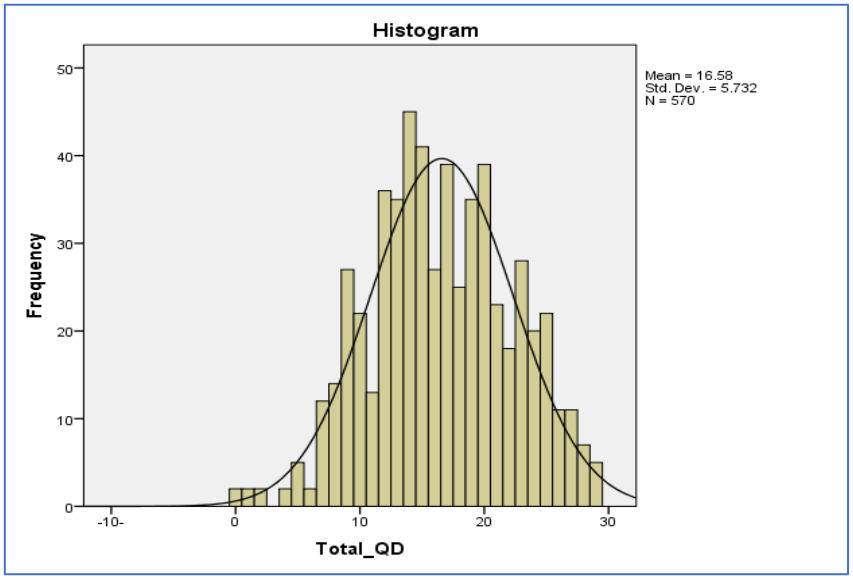
The frequency and percentages for the answers of the EPDS for each category

Severity of symptoms of postpartum depression	Frequency	%
Minimal or No Depression Symptoms	68	11.9
Mild Depression Symptoms	71	12.5
Moderate Depression Symptoms	247	43.3
Severe Depression Symptoms	184	32.3

According to Figure 1, the mean of EPDS score for the mothers, which has possible ranges of 0 to 30, was 16.85 out of 30. Additionally, the means of nearly 69.8% of mothers' PPD scores ranged from 10 to 22 out of 30.

Figure 1

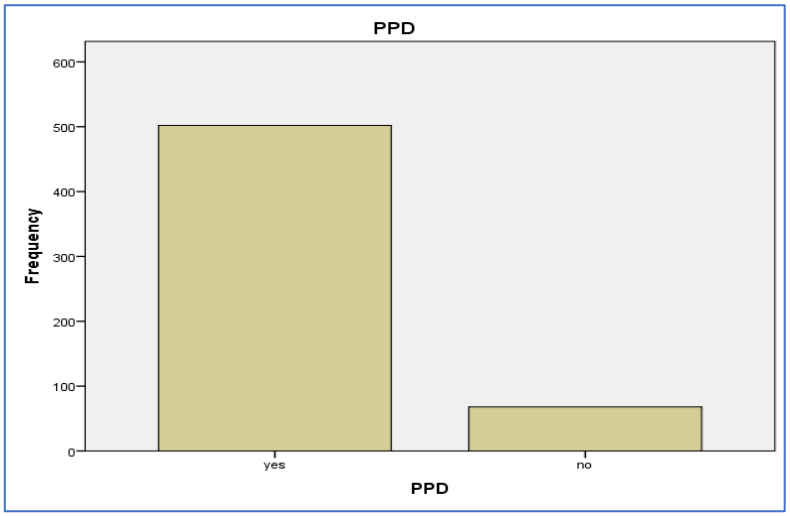
The PPD score distribution among the study participants



Out of all the postpartum women who took part in the study, 68 out of 570 (11.9%) did not have postpartum depression symptoms; the remaining (88.1%) did, based on the overall EPDS score, which had a cut-off score of 10 for detecting clinical levels of depression. As shown in Figure 2.

Figure 2

The prevalence of PPD among study participants



3.4 The family cohesion and adaptability level among Palestinian women during the postpartum period.

in order to answer the question regarding the level of adaptability and cohesion of a Palestinian woman's family during the postpartum time, the arithmetic means and

standard deviations of the study sample members' responses on the FACES and sub-dimensions were shown in Table 4.

It appears from Table (4) that the arithmetic means of the responses of the sample members to the dimensions of the FACES ranged between (3.03-3.67) and the first dimension “family cohesion” came with an arithmetic mean (of 3.67 out of 5) at a medium level, while the arithmetic means for the second dimension, "family adaptability," was 3.03 out of 5. Additionally, the arithmetic mean of the entire scale is 5.01 out of 8, indicating a high level of family function in the sample.

Table 4

The scale's arithmetic means, standard deviations, and values for each FACES subscale dimension.

No.	Dimensions	Items	Mean	SD	Level
1	Type of cohesion	the 10 odd items	3.67	0.72	Medium
2	Type of adaptability	the 10 even items	3.03	0.52	Medium
Family type			5.01	1.28	High

Note: the arithmetic means of the dimensions is (5) and the arithmetic means of the total score (family type) is (8).

3.4.1 FACES III and its sub-dimensions

3.4.1.1 Family Cohesion

For each subscale dimension of the FACES scale, the study participants' arithmetic means and standard deviations were extracted separately.

Table (5) indicates that the participants' arithmetic means for the items in the sub-dimension "family cohesion" ranged from (3.13 to 3.94 out of 5), where the highest response (3.94) was to item 6 saying “Family members feel very close to each other” which indicates a high level of cohesion. The lower response (3.13) was to item 8 that says “We can easily think of things to do together as a family”. which indicates a medium level of cohesion.

Table 5

The items in the "family cohesion" sub-dimension's arithmetic means and standard deviations

No.	Items of family cohesion:	Mean	SD	Level
1	Family members ask each other for help.	3.75	1.09	High
2	We approve of each other’s friends.	3.68	1.10	High

3	We like to do things with just our immediate family.	3.67	1.03	Medium
4	Family members feel closer to other family members than to people outside the family.	3.32	1.32	Medium
5	Family members like to spend free time with each other.	3.71	1.07	High
6	Family members feel very close to each other.	3.94	1.05	High
7	When our family gets together for activities, everybody is present.	3.88	1.06	High
8	We can easily think of things to do together as a family.	3.13	1.09	Medium
9	Family members consult other family members on their decisions.	3.77	1.02	High
10	Family togetherness is very important.	3.88	0.94	High

Note: The arithmetic means of (5).

3.4.1.2 Family Adaptability

Table (6) shows the participants' arithmetic means for the items in the sub-dimension "family adaptability" ranged from 2.06-3.74 out of 5, with item 8 which states, “We shift household responsibilities from person to person.” which suggests a high level of adaptation. In contrast, item 10's response (2.06) to the statement, “It is hard to tell who does which household chores.” was lower, which indicates a low level of adaptability.

Table 6

The items in the "family adaptability" sub-dimension's arithmetic means and standard deviations

No.	Items of family adaptability:	Mean	SD	Level
1	In solving problems, the children’s suggestions are followed.	3.22	1.17	Medium
2	Children have a say in their discipline.	2.55	1.23	Medium
3	Different persons act as leaders in our family.	3.15	1.25	Medium
4	Our family changes its way of	3.38	1.13	Medium

	handling tasks.			
5	Parent(s) and children discuss punishment together.	2.93	1.12	Medium
6	The children make the decisions in our family.	2.98	1.11	Medium
7	Rules change in our family.	3.20	0.97	Medium
8	We shift household responsibilities from person to person.	3.74	1.03	High
9	It is hard to identify the leader(s) in our family.	3.04	1.26	Medium
10	It is hard to tell who does which household chores.	2.06	1.09	low

Note: The arithmetic means of (5).

3.5 Association between PPD and types of family

3.5.1 Association between PPD and Family Cohesion

To find the relationship between family cohesion and postpartum depression, Spearman's rank correlation coefficient was used as it is revealed in Table 7.

Table 7

Association between PPD and Family cohesion

Variable	Sig. (2-tailed)	Spearman's rank correlation
PPD*Family Cohesion	0.000	-0.404-**

**Correlation is significant at the 0.01 level.

The data presented in Table (7) indicate that the correlation coefficient for the relationship between postpartum depression and family cohesion among Palestinian women in the West Bank region was (-0.404) with statistical significance (0.000), and this indicates the existence of a statistically significant negative inverse relationship between postpartum depression and family cohesion, which mean that higher levels of family cohesion are associated with lower risk of postpartum depression symptoms

among Palestinian women, and vice versa.

3.5.2 Association between PPD and Family Adaptability

Spearman's rank correlation coefficient was used to determine the association between postpartum depression and family adaptation as it is revealed in Table 8.

Table 8

Association between PPD and Family Adaptability

Variable	Sig. (2-tailed)	Spearman's rank correlation
PPD*Family Adaptability	0.074	-0.075-

**Correlation is significant at the 0.01 level.

The data presented in Table (8) indicate that the correlation coefficient for the relationship between postpartum depression and family adaptation among Palestinian women in the West Bank region was (-0.075) with statistical significance (0.074), and that is more than 0.05 which mean that there is no statistically significant correlation between family adaptation and postpartum depression.

3.5.3 Association between PPD and Family Type (family function)

To find the relationship between family type and postpartum depression, Spearman's rank correlation coefficient was used as it is revealed in Table 9.

Table 9

Association between PPD and Family Type (family function)

Variable	Sig. (2-tailed)	Spearman's rank correlation
PPD*Family Type (family function)	0.000	-0.312**

**Correlation is significant at the 0.01 level.

The data presented in Table (9) indicate that the correlation coefficient for the relationship between postpartum depression and family type among Palestinian women in the West Bank region was (-0.312) with statistical significance (0.000), and this indicates the existence of a statistically significant negative inverse relationship between postpartum depression and family type, this means that the lower the risk of postpartum depression symptoms among Palestinian women the more balanced the family is, and vice versa.

3.6 Association between family adaptability, family cohesion postpartum depression, and independent variables

To examine the differences between the average score of postpartum depression and the scores of family cohesion and adaptability among women in the West Bank according to the Socio-demographic, medical and psychiatric history and childbirth experiences variables, arithmetic averages were found, and standard deviations of PPD scores and family cohesion and adaptability.

There was a negative association between postpartum depression and family income ($p = 0.002$). Additionally, it has been found significant difference and negative association between postpartum depression and the number of births ($p = 0.031$). See Table 14.

The significant positive correlations with PPD were employment status ($p < 0.001$), intended/planned pregnancy ($p < 0.001$), previous history of depression ($p < 0.001$), previous miscarriages ($p = 0.045$), mode of delivery ($p = 0.034$), and baby age ($p = 0.022$).

Regarding the family cohesion scores, as shown in Table 15 there were statistically significant differences and negative associations between family cohesion and mother's educational level ($p < 0.001$) and number of births ($p < 0.001$).

On the other hand, the statistically significant positive correlations with family cohesion were the mother's age ($p = 0.012$), geographical area ($p < 0.005$), family income ($p < 0.001$), previous history of depression ($p < 0.001$), and previous miscarriages ($p < 0.001$).

As shown in Table 16, there were significant statistical differences and positive correlations between family adaptability and the mother's educational level ($p = 0.006$), previous miscarriages ($p = 0.049$), and baby's age ($p = 0.016$).

While only the significant negative correlations with family adaptability were the geographical area ($p < 0.001$), and number of births ($p = 0.033$).

3.7 Association between prevalence of PPD, family adaptability, family cohesion, and family type (family function)

3.7.1 Family cohesion and adaptability of postpartum women

The total scores for family cohesion and adaptability were significantly lower in the postpartum depressive symptoms group than in the group without postpartum depressive symptoms. the p-value for family cohesion was 0.000 (P < 0.001). Table 17.

3.7.2 Association between different types of family cohesion and postpartum depressive symptoms

As shown in Table 18, For the variable family cohesion, the chi-square statistical test p-value was (14.006), and the statistical significance value was (0.003), which is less than 0.05, indicating statistical significance.

As shown in Table 19, the results of the logistic regression analysis showed that different types of family cohesion were associated with postpartum depressive symptoms (P < 0.05). The enmeshed families (Exp (B) = 4.800, 95%CI: 1.977-11.656) and separated families (Exp (B) = 2.816, 95%CI: 1.318-6.017) had a higher risk of postpartum depressive symptoms than the connection families, whereas the disengaged type (Exp (B) = 0.293, 95%CI: 1.080-4.837) was a protective factor against symptoms of postpartum depression.

3.7.3 Association between postpartum depression and different types of family adaptability

The results of the correlation chi-square statistical test were (6.654) and the p statistical significance was (0.084), indicating that there was no statistically significant association between family adaptation and postpartum depression (p values were above 0.05). Table 20.

As shown in Table 21, the results of the logistic regression analysis showed that there are no different family adaptability types were associated with postpartum depressive symptoms (P > 0.05). all types of family adaptability are protected against postpartum depression more than flexible families.

3.7.4 Association between postpartum depression and different family types (family function)

The p-value of the chi-square statistical test for the variable family types was (21.806), while the value of the statistical significance was (p-value <0.001), and that is less than 0.05, the family types had a relationship with postpartum depression development. Table 22.

The results of the logistic regression analysis show, according to Table 23, that postpartum depression is associated with different family types (P < 0.05). The extreme families (Exp (B) = 1.202, 95%CI: 0.000) had a higher risk for PPD than the balanced families, while the moderately balanced type (Exp (B) = 0.743, 95%CI: 0.345-1.603) and mid-range type were a protective factor of postpartum depressive symptoms.

3.8 Multivariate linear regression analysis of PPD

To determine how the variables related to one another, linear regression analysis was used. Using the PPD scores as the dependent variable and the other correlated variables as independent variables, we were able to determine which variable was correlated.

The Model Summary table for the linear regression analysis provides information about the overall fit of the regression model for PPD. The model included all independent variables: the Socio-demographic, medical and psychiatric history, and childbirth experiences variables. In addition, the "postpartum depression scores" are considered the dependent variable.

In the table, the “R” column clarifies the correlation coefficient between the independent and the dependent variable (PPD scores). It has been found that the correlation coefficient is 0.426, which indicates a moderate positive correlation between the independent variables and the dependent variables.

On the other hand, the "R Square" column shows the proportion of the variance in the dependent variable (PPD scores) that can be explained by the independent variables. In this study, the R square value is 0.382, which indicates that around 38.2% of the variance in “postpartum depression scores” can be moderately explained by the

independent variables in the model.

Table 10

Model Summary for PPD Scores

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.426	0.382	0.158	5.259

According to this, Tables 24 and 25 show the results of a regression analysis that assesses the relationship between several variables (the Socio-demographic, medical and psychiatric history, childbirth experiences, family cohesion, family adaptability, and family type) and the PPD scores as dependent variables.

The results indicate that previous history of depression, baby age, mode of delivery, intended pregnancy, and employment status have statistically significant positive effects on PPD scores, as it shows by the positive “t value”. On the other hand, the family type, number of births, and family cohesion have a statistically significant negative effect on PPD as obvious from the negative t value.

Furthermore, the other independent variables did not have statistically significant associations with postpartum depression scores.

Based on the results, it can be found that (baby age), (mode of delivery), (intended pregnancy), and (employment status) showed a significant impact on PPD. This means that postpartum mothers who are employed, planned the pregnancy, have normal labor, and the baby's age is high are more likely to have low levels of depression during their postpartum period.

On the other hand, if this baby is the first for the mother and the presence of a previous history of depression has a statistically significant negative impact on the development of PPD, which means that postpartum mothers who experience depression before and having their first baby are more likely expected to have PPD.

In regard the family cohesion and type of family, mothers who have a more balanced family type are less likely to develop postpartum depression, and the more cohesion their family has, the less chance to develop PPD.

The other variables did not have a statistically significant effect which means that they do not affect the development of postpartum depression.

Chapter Four

Discussion

4.1 Overview

The current study investigated family adaptability, cohesion, and their relationship with postnatal depression among Palestinian women. In addition, finding the prevalence of PPD among Palestinian women and the factors that may influence PPD. Participants were gathered from primary health care clinics in the West Bank governorates and some privet clinics in the Nablus governorate and were requested to complete a survey comprising three sections: sociodemographic information, EPDS, and FACES III. The EPDS, which was part of the survey, examined the participant's depression symptoms specific to the postpartum period, whereas the Family Adaptability and Cohesion Evaluation Scale III (FACES III) was used to evaluate family dynamics and the degree of cohesion and adaptability within family systems. The study's results were analyzed to determine the association and correlation between variables.

4.2 The prevalence of PPD

The current study's findings indicate that 88.1 percent (502/570) of women (with a total score of 10 or higher) had postpartum depression. The PPD score mean for over (69.8%) of participants ranged from 10 to 22 out of 30. This is close to the findings of a study conducted in the Bethlehem Governorate on postpartum depression in Palestinian women, which revealed that (56.6%) of 290 postpartum mothers aged less than 48 years old had PPD on average (Shaheen et al., 2015). Another study in Bethlehem Governorate (Qandil et al., 2016) showed that the majority of depression symptoms appeared within a month after giving birth, and during the six-month follow-up period, (27.7%) (28/101) of the women met the requirements for PPD (EPDS score ≥11). According to the results of Wildali et al. (2024) (Wildali et al., 2024) 129 out of 380 women between the ages of 18 and 44 had an EPDS score of 13 or above, meaning that (33.9%) of women in the northern West Bank had PPD. The lowest rate was found in a study in Damascus, in 2019, which found that (28.2%) had a score of 13 in EPDS from 1105 participating women (Roumieh et al., 2019). Furthermore, A study conducted on Palestine refugee mothers in Amman, Jordan found that 123 (49%) out of 251 women aged range 18–42 years were classified as having PPD with a score greater than 12 in the EPDS (Yoneda et al., 2021).

In a systematic review and meta-analysis of fifteen studies that have been published between 2006 and 2020, the researchers assessed that overall, (27%) of

Middle Eastern mothers experienced postpartum depression. The prevalence in the first three months of postpartum has been documented in nine studies, with the remaining studies reporting data during the first year (Alshikh Ahmad et al., 2021).

According to a North Carolina study, 151 women aged between 16-40 years who received postpartum health services found that postpartum depression symptoms were over (23%) (Baker et al., 2005). In 2017, a prospective study aimed to find the prevalence of PPD among 2706 Italian mothers using a cut-off score = 12 in the EPDS, revealed that (4.7%) of the mothers were found to be positive for PPD (Clavenna et al., 2017).

The high prevalence of postpartum depression among Arab mothers in general and Palestinian mothers in specific compared to other regions of the world returns to the increasing focus on the physical health of the mother and newborn, excluding the psychological health of the mother, which is rarely taken into consideration. The women's awareness of their primary role of caring for a new baby is linked to the prevalence of postpartum depression among mothers, which is likely to reduce attention to their needs to meet the needs of their children. Other reasons that lead to this wide range of PPD reporting might be due to consideration as an effect of setbacks and displacement during crises and to the cross-cultural variation, socio-economic conditions which might include actual or perceived levels of social support, stressful life events, poverty, the social ignoring and attitudes towards depression or other psychological illnesses during and after pregnancy, and women are reluctant to seek help when they feel psychologically distressed and depressed, as they consider their feelings to be a natural reaction to these new conditions. Moreover, when taking the huge pressures and stressors that face the Palestinian people and Palestinian mothers in particular into consideration, one of the reasons for the high prevalence of PPD in the study is the time of collecting data, which coincided with the 7th of October and the Gaza's War, which may have a psychological impact on the Palestinian people and mothers in particular.

Moreover, variations in PPD prevalence depend on the assessment time (the weeks/months of the postpartum period), the EPDS cut point used (Ranged between 10-13), and the research's origin (country).

4.3 The types of families among Palestinian women during the postpartum period

Applying FACES III shows that generally Palestinian families have good closeness, a high level of adaptability, and a healthy communication potential. For the fact that this study applied to postpartum mothers, more studies are necessary to generalize these results.

In regard the cohesion family types, the cohesion within Palestinian families tends to have high range between connected families (32.28%) and separated families (25.79%), which represents a balanced type of cohesion. However, (32.81%) of participants show the disengaged type of cohesion, and (9.12%) are enmeshed families. The results of our study are compatible with another study in Romania (2014) to diagnose the Romanian family using the Family Adaptability and Cohesiveness Evaluation Scale III (Rada, 2014), found that (29.6%) (360 out of 1215) of participants are separated families, 28.6% are connected families, (28.5%) are disengaged families and (13.3%) are enmeshed families. But when compared with the study of Zhang et al., (2023), applying the FACES II-CV between 1446 postnatal Chinese women showed that (53.80%) (778 out of 1446) of participants fall into the enmeshed families, (28.40%) are connected families, (12.40%) are separated families and (5.40%) are disengaged families.

In other studies to find the relationship between adolescent behavior problems and the family's ability to adaptability, and their level of cohesion in Korea using FACES III shows that (40.7%) (162 out of 398) of participants belong to separated families, (29.6%) are connected families, (16.1%) are enmeshed families and (13.6%) are disengaged families (Joh et al., 2013). In Li et al., 2021 study conducted on two groups of samples, the adolescents group and the parents' group, regarding the adolescents' group, 1041 (12.3%) participants were separated families, 1718 (20.3%) were disengaged families, 1883 (22.2%) were connected families and 3841(45.3%) are enmeshed families. In the parent’s group, 444 (5.2%) of participants are separated families, 1189 (14.0%) are disengaged families, 2028 (23.9%) are connected families and 4822 (56.8%) are enmeshed families.

However, regarding Family adaptability, the findings of the study present a high level of adaptability. (54.73%) (312 out of 570) are showing chaotic type of adaptability, (33.51%) of participants are fixable families, (8.95% are structured families, and 2.81%

are rigid families. When compared with the study of Zhang et al., (2023), (14.5%) (210 out of 1446) are chaotic families, (19.5%) are fixable families, (36.4%) are structured families, and 29,6% are rigid families. In Joh et al., (2013) study, the result find that (15.6% (62 out of 398) of participants are chaotic families, 32.9% are fixable families, (36.9%) are structured families, and (14.6%) are rigid families. In Rada's study 2014, (37.6% (457 out of 1215) of participants were from chaotic families, (24.4%) were fixable families, (27.2%) were structured families, and (10.9%) were rigid families, which is also similar to our study result. In Li et al., 2021 study, which was conducted on two groups of samples, the adolescents group and the parents group, regarding adolescents group, 1367 (16.1%) adolescents show chaotic families, 2000 (23.6%) are fixable families, 2072 (24.4%) are structured families and 3044 (35.9%) are rigid families. In the parents' group, 1573 (18.5%) of particepants shows chaotic families, 2464 (29.0%) are fixable families, 2421 (28.5%) are structured families and 2025 (23.9%) are rigid families.

Regarding the family function distribution in the current study, which was established by the average of adaptabilities and cohesion scores based on Olson's method, showed that the balanced type has the largest number of family types with 361 (55.44%), followed by the mid-range type with 226 (39.65%) and the extreme type with 28 (4.91%).

A study to find the difference between 130 extended and nuclear families in Seoul and Gyeonggi-Do in their family function using FACES III, revealed that family type of extended families was (47.7%) at a balanced level, (44.6%) at a midrange level, and (7.7%) in extreme level. In the nuclear family, (32.2%) is balanced level, 56.9%) in the midrange level, and (10.8%) in the extreme level (Kang et al., 1994).

In Joh et al., (2013), 224 (56.3%) show a balanced family's functional level, followed by 27.9% (111) with mid-range type and 15.8% (63) with an extreme family's functional level. Furthermore, in Rada's study in 2014, The family type distribution shows (32.9%) balanced functional families, (43.9%) at the mid-range, and (23.2%) at the extreme functional families.

In Li et al., 2021, the study was applied to 8483 in two groups of participants, adolescents and parents, in the adolescent group 4263 (50.3%) showed a mid-range

type, 1705 (20.1%) were balanced functional families, and 2515 (29.6%) at the extreme functional families. On the other hand, the parents group shows 4562 (53.8%) in the mid-range type, 1770 (20.9%) was balanced functional families, and 2151 (25.4%) in the extreme functional families (Li et al., 2021).

The main factor in the difference in results is that these studies were conducted in countries that are not similar to the Arab environment attached to the family because of the Islamic influence that emphasizes family unity, and collective responsibility, which strengthens family cohesion and adaptability by govern marriage, divorce, inheritance, and child custody to maintain traditional structures of the family, in particular the Palestinian environment, which is also going through a difficult political situation, which has increased pressure on the importance of the family (Spellings, 2014). In comparison with Western cultures, Arab cultures are more collectivist and return individual achievements to family and community, and give value to them. In contrast, many Western cultures prioritize individualism with marginalization of the role of the family, leading to differences in family function. In addition, the economic situation fluctuated in Palestine, such as employment opportunities, financial stability, and Labor migration, affecting positively family adaptability with cohesion challenges (Matar, 2012).

The other differences in results are often due to different types of samples, different sample sizes, or using various versions of the FACES.

4.4 The association between PPD and various family types

In light of the relationship between family cohesion and postpartum depression among Palestinian women in the West Bank region, the correlation coefficient was -0.404 with statistical significance (*p-value* <0.001), which means that there is a negative relationship between PPD and the level of family cohesion. compared to the group without postpartum depression symptoms, the group with postpartum depression symptoms had significantly lower overall family cohesion scores, which suggested that higher levels of family cohesion are associated with a lower rate of postpartum depression symptoms among Palestinian women, and vice versa. Likewise, the relationship between postpartum depression (PPD) and family adaptability was found that the *p-value*= -0.075 which means that there is no statistically significance

relationship between adaptability and PPD.

When compared with the study of Zhang et al., (2023), it was found that the levels of family cohesion and adaptability in the non-postpartum depressive symptoms group were higher than those in the postpartum depressive symptoms group with a $p<0.001$. In a study of adolescents and their parents' family cohesiveness and adaptation to evaluate family cohesion, family adaptability, and depressive symptoms, the youth and their parents reported a significant negative correlation between family cohesion, adaptability, and depression. higher family adaptability lower depression symptoms in both adolescents and their parents, whereas higher family cohesion results in reduced depression rates (Li et al., 2021). Moreover, a study on the association between family cohesion, family adaptability, and family functioning among inpatients with bipolar disorder in Hebei, China, showed that improving the Hamilton Depression Rating Scale (HDRS) scores was related to families with high levels of coherence, adaptability, and functioning over time, although this was not significant. It was observed that the depression levels were lower in patients with bipolar disorder (BD) who had a balanced type of family than in those who had mid-range or extreme family types. They suggested that intervention measures for the family system may be needed in cases of BD (Zhang et al., 2019). Also, a preliminary study conducted on 24 childbearing mothers who were assessed for postpartum depression and its risk factors found that among various factors and scales, a high level of family adaptability and cohesion could be related to lower rates of postpartum depressive symptoms (Kim et al., 2009).

These studies are similar to the current study regarding the relationship between postpartum depression (PPD) and family cohesion, whereas compared to the non-postpartum depression mother group, the postpartum depression mother group's family cohesion levels were significantly lower, suggesting that mothers during the transition from pregnancy phase to childbirth phase, high levels of family cohesion can help to unite the efforts of family members. Together, they can focus on supporting the mother in managing childcare challenges and the associated demands as postpartum women often have poor self-functioning and rely on their families and surrounding environment (Zhang et al., 2023). This support mechanism may reduce psychological pressure experienced by women, in that way reducing the odds of developing PPD. which leads to a higher level of family cohesion resulting in lower rates of postpartum depressive

symptoms (Phillips-Salimi et al., 2014).

However, regarding family adaptability, the difference is that the current study has no statistically significant relationship between family adaptability and PPD compared to previous studies “High level of family adaptability led to low rates of PPD”. However, it has an indirect association by influencing family functioning, which, in turn, is related to postpartum depression (PPD).

In the current study, there are high rates of PPD with high levels of family adaptability, which means that Palestinian women “with the appropriate time” by nature are flexible and capable of adapting and adjusting strategies to deal with the new and extra responsibility after giving birth. That led to the result that adaptability is not a factor or predictor for PPD as the development of PPD them depends on the level of cohesion. Another reason for this difference is that none of the previous studies were conducted on Arab women in Arab environments, all of were conducted in countries with cultural differences. Also, few studies on psychological and behavioral disorders, family cohesion, and adaptation have been conducted, and these studies have mostly focused on groups including couples, adolescents, and postpartum mothers.

4.5 Factors associated with postpartum depression

To find the factors associated with PPD, Mann-Whitney U, and Kruskal-Wallis H analysis was used to compare the distribution and find the correlation between the independent variables and PPD scores.

Examining the sociodemographic distributions, medical and psychiatric history, and childbirth experiences of participants with their postpartum depression scores provides valuable insights into how various factors might affect the levels of depressive symptoms experienced by women during the postpartum period.

The employment status, family income, previous history of depression, previous miscarriages, baby age, unplanned pregnancy, number of births, and mode of delivery of the independent variables that have been investigated were associated with PPD levels according to Mann-Whitney U and Kruskal-Wallis H analysis. The PPD studies related to studying the risk factors revealed inconclusive results, as certain variables showed a significant correlation with PPD, while other variables showed no correlation

at all. The findings of Alshikh Ahmad et al., (2021) in their systematic review and meta-analysis are comparable to those of our study, which found that poor economic, type of delivery (cesarean section), and unplanned pregnancy were positively related to PPD. In addition, the findings of Dubey et al., (2021), which investigated 295 postpartum women discovered that lower family income and unemployed mothers are risk factors for PPD. Furthermore, Ria et al., study (2018) found that previous history of depression, mode of delivery (cesarean section), unwanted pregnancy, and low family income are direct risk factors for PPD. also, in Zhao & Zhang, (2020) show that previous history of depression, type of birth (cesarean section), and first childbirth experience were powerful risk factors for PPD. Finally, regarding the previous history of miscarriages, Bicking Kinsey et al., (2015) found that, compared to women without a history of miscarriage, women with a history of miscarriage had a higher risk of developing PPD one month after giving birth. This final result contrasted with the findings of Icking Kinsey et al. (2014), who reported that PPD ratings were identical for women with a history of miscarriage and women without one. In regard age of the baby as a risk factor for PPD, a study in 2019 investigating PPD among young women aged between 18 and 26 who are in the second week and the sixth month postpartum found that there is a positive relationship between PPD and baby age, which is consistence with the current study. This can be explained as the baby grows the care demands on the mother change and changes in infant behavior lead to ongoing stressors that may cause PPD. Concerning the type of birth as a factor for PPD, a study conducted in Jordan by Oweis find a relationship between postpartum depression (PPD) and vaginally delivering mothers and their birth experience. The study found a positive association between PPD and the perceived difficulty of labor, as well as the perceived stress of childbirth (Oweis, 2001).

As it's known poverty and financial difficulties can lead and contribute to anxiety, depression, chronic stress, feelings of helplessness, and worrying about providing the expenses for the baby and home. Unemployment status for mothers can have the same effect as those with low family income in addition to her feelings of inadequacy, and low social interaction. Unwanted pregnancy is one of the factors that can complicate the transition to motherhood because of the lack of preparedness, making it difficult to adapt to the new responsibilities of motherhood. As a result, mothers in the postpartum period can experience severe mental issues. Also, pregnancy complications are a

significant factor for PPD, as difficulties during the process of pregnancy and giving birth can be triggers for developing depression because of the increasing stress, pressure, prolonged physical recovery, and additional responsibility that the new mother needs to deal with. No previous births before and being a first-time mother is associated with a higher risk of postpartum depression. The transition into motherhood can increase the demands on the mother due to lack of experience (increased physical fatigue, sleep deprivation, and higher stress levels. In addition to the baby's responsibility who is completely dependent on the mother), difficulty with adjustment, social isolation, and unmet expectations (have expectations of greater support from partners and family), can all contribute to this elevated risk.

The emotional impact of past miscarriages can lead to anxiety and fear about the current pregnancy and the baby's health. One of the strongest indicators of postpartum depression is having a history of depressive illnesses, due to underlying vulnerabilities in their mental health. Women who experienced depression before or during their pregnancy, or whose family members have mental health issues, were found to be more likely to experience depression in the first year after delivery.

As for the other sociodemographic, medical, and psychiatric history and childbirth experiences variables, none of them was significantly associated between them and PPD in this study.

4.6 Predictors of PPD by Multivariate linear regression

All the previous associations were concluded by Mann-Whitney U and Kruskal-Wallis H analysis. The problem of having significant results by chance only is very important here Because there are so many factors to evaluate. To reduce the impact of confounding variables and identify the most important predictors of postpartum depression among Palestinian mothers in this study, all variables that were significantly associated with PPD ($p < 0.05$) (Table 13) were inserted into a linear regression model.

6 out of 8 factors tested in the regression model were significant predictors of PPD. The baby age [95% CI: 0.127-1.160, p=0.015], number of births [95% CI: -1.236-0.149-, p 0.013], previous history of depression was [95% CI: -5.550-3.563-, $p < 0.01$], Mode of delivery [95% CI: 0.460-2.232, $p < 0.01$], unplanned pregnancy

[95% CI: 0.551-2.414, p < 0.01] and employment status [95% CI: 0.107-2.136, p=0.030] are the most PPD predictors. Table 24 shows the regression analysis model's statistics and highlights the significant predictors.

4.7 Factors associated with the level of family cohesion

As in previous studies, the socio-demographic variables are the only ones investigated to find the relationship between them and the cohesion of the family. The level of education showed a negative correlation with family cohesion, with statistically significant difference. By contrast, family income, mother's age, and place of residence showed strong positive relationships with family cohesion.

A Romanian study in 2013, found that country “rural” families are better related to cohesion which indicates better protection against psychological factors, as urban areas can be associated with higher stress levels and less community cohesion. In contrast, rural areas might have stronger community ties. Meaning that the individual’s residential and geographical place influence his level of cohesion (Rada, 2014). In the same study the age role also as a factor for cohesion, individuals aged between 18 and 35 are trying to build a lifestyle to depend on themselves away from their families and be closer to people outside the family. For most people, they have difficulties in both educational and professional pursuits at this age, and stability doesn't come until they are about 35. As for that, mid-life families often report higher levels of cohesion due to greater stability and experience.

A study that included 168 caregivers of children with ASD in China, found that family monthly income and place of residence had a significant relationship with family cohesion (Lei & Kantor, 2020). In Li et al., (2021), the study was applied to 8483 in two groups of participants, adolescents, and parents, proved that there is a relationship between age and level of cohesion. Also, Joh et al., study in 2013, found that residence, education level, and socioeconomic status can all have an impact on family cohesion.

Families with high socioeconomic status provide their members more financial stability with access to better resources, such as housing, healthcare, and education.

Leading to a more supportive and less stressful environment, building stronger family bonds with fewer financial concerns. Which have an impact on reducing stress and anxiety related to economic insecurity. This stability allows family members to focus more on their relationships and bonds.

Parents with higher educational levels are usually with more effective parenting practices and better communication skills that tend to create more supportive home environments and create environments that support open communication, mutual respect, and providing emotional support with appropriate boundaries which enhances family cohesion.

Regarding the other socio-demographic factors, there was no significant correlation found in this study between any of them and the level of family cohesion.

4.8 Factors associated with the level of family adaptability

In regard the family adaptability and independent variables, there was one significant difference and positive correlation between family adaptability and the mother's educational level. While only the significant negative correlation with family adaptability was the geographical area.

According to Rosalini et al., 2019, families that had a low educational level, had a low family adaptability (Rosalini et al., 2019). Also, in study containing 62 Asian immigrant women living in South Korea, shows that their educational background affected the level of family adaptability (Kim et al., 2015). As higher education people have better problem-solving and coping skills as they are more capable of adapting and facing changes and challenges.

As in Rada, (2014) and Joh et al., (2013) studies show that place of residence is a factor associated with the level of family adaptability.

As for the other socio-demographics, none of them was significantly associated between them and the level of family cohesion in this study.

4.9 Conclusions

This study is one of the first studies about family cohesion and adaptability and their association with postpartum depression in Palestine, in which FACES III was used

to assess the levels of family cohesion, adaptability, and family function among mothers aged between 18-45 years throughout the West Bank districts. It was found that (55.44%) of Palestinian society are balanced functional families. In addition to the EPDS which was used to assess PPD prevalence. The prevalence of PPD was (88.1%) (EPDS cut-off ≥ 10), this high prevalence of postpartum depression highlights the urgent need for effective interventions. PPD not only affects the mental and physical well-being of mothers but also disrupts family dynamics and child development. Despite its impact, many women do not receive adequate care due to the “stigma” of society, lack of awareness, or limited access to mental health services.

The current study found that various types of factors including employment status, family income, past history of depression, prior miscarriages, baby age, unexpected pregnancy, number of births, and mode of delivery, were significantly associated with PPD.

Age, level of education, family income, and place of residence were the variables that were significantly associated with family cohesion.

Only two factors were significant predictors of family adaptability including educational level and place of residence.

It was found that Palestinian families have good closeness, a high level of adaptability, and a healthy communication potential. Also, PPD is associated with different psychological and social stressors and highly common among Palestinian mothers and it is. Furthermore, there is a connection between PPD and the cohesiveness and family function.

Because of this high prevalence of PPD, healthcare providers and decision-makers need to work together to screen for and identify this highly preventable condition early on. Then, with the support of families, develop more effective preventive measures to reduce the condition's effects on mothers, babies, and the entire family.

4.10 Limitations of the Study

The study's sample may not be representative of all Palestinian mothers, because the study sample was convenient rather than random, which may cause "selection bias"

by excluding some of the clinics in the West Bank districts, and because the study's findings may be limited to the participants who are willing to participate in the study or who have access to the primary healthcare facilities. This might make it harder for the results to be generalized to include a larger population.

Additionally, samples for this study were collected during the Gaza War and the events of October 7, which could have affected the results.

In addition, the presence of the Israeli occupation authorities' military barriers, makes it hard to get access to clinics, increasing time, and effort, and reducing the sample number.

4.11 Recommendations

Activating the role of clinical psychologists by holding pre-pregnancy and childbirth counseling sessions to prepare and introduce the mothers to changes through the childbirth stages, and to understand these changes that occur to their psychological and emotional state.

It recommends the Edinburgh Postnatal Depression Scale be adopted and integrated by the Palestinian Ministry of Health as it is simple, quick to complete, and effective in identifying mothers who are more likely to experience PPD or any scales to measure depression within a comprehensive measure of the mother's mental health after childbirth, to follow up on the mother's psychological state, provide support and guidance sessions, and raise awareness of mental health through individual or group sessions in the primary health care clinics and during maternal visits to support the mother throughout the postpartum phase, promote the healthy development of the child, and prevent further complications.

The high prevalence of PPD that was found underscores the critical need for targeted interventions that focus on early identification, culturally sensitive treatment, and support systems to reduce the prevalence and consequences of PPD. Without intervention, the far-reaching effects on families and society will continue to grow.

When considering the impact of postpartum depression (PPD) on mothers, we need to focus on the father's role in family functioning, particularly in terms of cohesion and adaptability, as Fathers play a crucial role in supporting their partners

emotionally and practically during the postpartum period, and their involvement can significantly strengthen family bonds and help the family adapt to the child coming and the new challenges. To better prepare and equip couples, it is important to conduct training and workshops for young men and women, especially those about to get married or become parents. These programs can provide valuable education on the importance of mutual support, how to deal with changes and challenges, recognizing signs of PPD, and fostering a cohesive and adaptable family environment. By empowering both partners, such interventions can promote healthier family dynamics and better mental health outcomes for mothers.

To the best of the researcher's knowledge, this analytical cross-sectional study is the first investigation of the cohesion and flexibility of families in Palestine (in the West Bank and Gaza) and identifies the different types of Palestinian families. To obtain more accurate and comprehensive results regarding family cohesion and adaptability in Palestinian society, future research should investigate differences in these dimensions in various family types as well as be conducted in various sample groups to include all age groups and genders.

We recommend further research to be conducted on family functions and postpartum depression, to investigate the complex connection between maternal mental health and family dynamics, to identify the variations in family adaptability and cohesion among various types of family and their impact on PPD, and develop targeted interventions and support systems that enhance the postpartum experience for new mothers and their families.

Also, as shown in studies about PPD prevention and using family cohesion as an approach for the treatment of PPD, the researcher recommends that the supportive family roles, whether provided by the husband, parents, or other family members, should be maintained and enhanced in those in which it has been found that the presence of family cohesion during the postpartum period is a protective factor for PPD. and using that to treat and prevent postpartum depression symptoms by enhancing mother-family bonding and adaptability.

List of Abbreviations

Abbreviation	Meaning
EPDS	Edinburgh Postnatal Depression Scale.
MCH	Maternal Child Health Centers
BAI	Beck Anxiety Inventory
CS	Cesarean Section
PPD	Postpartum Depression
SD	Standard Deviation
SPSS	Statistical Package for Social Sciences
WHO	World Health Organization
IRB	Institutional Review Board
MDD	Major Depressive Disorder
WMA	The World Medical Association.
FACES II-CV	Family Adaptability and Cohesion Evaluation Scale-Chinese Version
PPDS	Postpartum Depression Symptoms
FACES	Family Adaptability and Cohesion Evaluation Scale
MINI	International Neuropsychiatric Interview
UNRWA	The United Nations Relief and Works Agency for Palestine Refugees in the Near East
NICU	The Neonatal Intensive Care Unit
DSM-5	The Diagnostic and Statistical Manual of Mental Disorders, 5th Edition
ICD-11	International Classification of Diseases 11th.
CYP2D6	Cytochrome P4502D6

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Appendices

Appendix A

IRB approval

An-Najah National University
Faculty of Medicine & Health Sciences
Institutional Review Board

جامعة النجاح الوطنية
كلية الطب و علوم الصحة
لجنة الدراسات البحث العلمي

Ref: Mas.August 2023/13

IRB Approval Letter

Title of Research:

The Relationship Between Family Cohesion, Adaptability and Postpartum Depression Among Palestinian Women

Submitted by:
Boshra Samer Mayaleh

Supervisor:
Ahmad Hanani, Thseen Nazir

Aproved:
7th August. 2023

Your Study Title "***The Relationship Between Family Cohesion, Adaptability and Postpartum Depression Among Palestinian Women.***" reviewed by An-Najah National University IRB committee and was approved on 7th August. 2023

Hasan Fitian, MD

IRB Committee Chairman

Nablus - P.O Box :7 or 707 | Tel (970) (09) 2342902/4/7/8/14 | Faxmile (970) (09) 2342910| E-mail IRB@najah.edu

Appendix B

Permission letter from the Palestinian Ministry of Health

جامعة النجاح الوطنية
An-Najah National Unive
مكتب نائب رئيس الجامعة للشؤون الأكاديمية
Vice President for Academic Affairs Office

الرقم: ن ك ص/37/أب/2023

التاريخ: 2023/8/23

حضرة الدكتور عبد الله القواسمي المحترم
مدير عام التعليم الصحي – وزارة الصحة

تحية طيبة وبعد

الموضوع: تسهيل مهمة

تهديكم أطيب التحيات ونعلمكم بأن بشرى سامر مياله طالبة دراسات عليا تخصص ماجستير علم النفس الاكلينيكي وهي بصدد اعداد اطروحة الماجستير الخاصة بها والتي بعنوان: العلاقة بين التماسك الأسري والقدرة على التكيف واكتئاب ما بعد الولادة بين النساء الفلسطينيات" ولإتمام الرسالة تحتاج الطالبة إلى توزيع استبانه على مراكز الأمومة والطفولة في الرعاية الصحية في مديريات الصحة لجمع المعلومات اللازمة، يرجى من حضرتكم الايعاز للمعنيين في مراكز الرعاية بتسهيل مهمة الطالبة علما بأن المعلومات ستستخدم لأغراض البحث العلمي فقط وسيتم المحافظة على السرية التامه للمعلمات.

شاكرين لكم تعاونكم ومساعدتكم للعملية التعليمية.

مع وافر الاحترام والتقدير

نائب الرئيس للشؤون الأكاديمية
د. عبد السلام الخياط

نسخة: الدراسات العليا.
نسخة: الملف.

Appendix C

Study questionnaires (ENGLISH VERSION)

SECTION 1: SOCIODEMOGRAPHIC AND CLINICAL DATA

This part includes personal information about the respondents' background, so please put an (x) in the place that applies to your situation.

The age of the mother (Years): □ 18-27 □ 28-37 □ over 38

The age of the husband's (Years): □ 18-25 □ 26-32 □ 33-39 □ over 40

Mother's Educational Level: □ high school or below (≤ Tawjihi) □ Diploma or Bachelor's □ Postgraduate

Husband's Educational Level: □ high school or below (≤ Tawjihi) □ Diploma or Bachelor's □ Postgraduate

Place of residence: □ Northern region □ Southern region □ Central region

Family Income: □ Less than 3000 shekels □ 3000-5000 shekels □ More than 5000 shekels

Employment Status: □ Employed □ Unemployed

living near family: □ Near the husband's family □ near the mother's family □ Close to both families □ Far from both families

Number of births: □ First □ Second □ Third □ Fourth □ Five or more

The age of baby (months): □ 0-3m □ 3m-6m □ 6m-12m

Use of any medication during pregnancy: □ Yes □ No

This pregnancy has been: □ Planned □ Unplanned

The current baby's gender: □ Male □ Female

Mode of delivery: □ Vaginal □ Caesarean section (CS)

Previous history of depression: □ Yes □ No

Previous history of miscarriage: □ Yes □ No

Mother's blood type: □ A □ B □ O □ AB

SECTION 2: Edinburgh Postnatal Depression Scale (EPDS)

Please select the answer that comes closest to how you have felt in the past 2 weeks:

- **I have been able to laugh and see the funny side of things**
    1. As much as I always could
    2. Not quite so much now
    3. Definitely not so much now
    4. Not at all

- **I have looked forward with enjoyment to things**
    1. As much as I ever did
    2. Rather less than I used to
    3. Definitely less than I used to
    4. Hardly at all

- **I have blamed myself unnecessarily when things went wrong**
    1. Yes, most of the time
    2. Yes, some of the time
    3. Not very often
    4. No, never

- **I have been anxious or worried for no good reason**
    1. No, not at all
    2. Hardly ever
    3. Yes, sometimes
    4. Yes, very often

- **I have felt scared or panicky for no very good reason**
    1. Yes, quite a lot
    2. Yes, sometimes
    3. No, not much
    4. No, not at all

- **Things have been getting on top of me**
    1. Yes, most of the time I haven't been able to cope at all
    2. Yes, sometimes I haven't been coping as well as usual
    3. No, most of the time I have coped quite well
    4. No, I have been coping as well as ever

- **I have been so unhappy that I have had difficulty sleeping**
    1. Yes, most of the time
    2. Yes, sometimes
    3. Not very often
    4. No, not at all

- **I have felt sad or miserable**
    1. Yes, most of the time
    2. Yes, quite often
    3. Not very often
    4. No, not at all

- **I have been so unhappy that I have been crying**
    1. Yes, most of the time
    2. Yes, quite often
    3. Only occasionally
    4. No, never

- **The thought of harming myself has occurred to me**
    1. Yes, quite often
    2. Sometimes
    3. Hardly ever
    4. Never

SECTION 3: Family Cohesion and Adaptability Scale (FACES II)

Please mark an (X) in the box that applies to your situation

item Family Cohesion and Adaptability Scale	Never	rarely	Sometimes	Often	Always
1. In solving problems, the children's suggestions are followed.					
2. Family members ask each other for help.					
3. Children have a say in their discipline.					
4. We approve of each other's friends.					
5. Different persons act as leaders in our family.					
6. We like to do things with just our immediate family.					
7. Our family changes its way of handling tasks.					
8. Family members feel closer to other family members than to people outside the family.					
9. Parent(s) and children discuss punishment together.					
10. Family members like to spend free time with each other.					
11. The children make the decisions in our family.					
12. Family members feel very close to each other.					
13. Rules change in our family.					
14. When our family gets together for activities, everybody is present.					

15. We shift household responsibilities from person to person.					
16. We can easily think of things to do together as a family.					
17. It is hard to identify the leader(s) in our family.					
18. Family members consult other family members on their decisions.					
19. It is hard to tell who does which household chores.					
20. Family togetherness is very important.					

Appendix D

Arabic version of the questionnaire

تقوم الباحثة بإجراء دراسة حول اكتئاب ما بعد الولادة وعلاقته بالتماسك الاسري والقدرة على التكيف لدى النساء الفلسطينيات في منطقة الضفة الغربية.

يرجى منكن التكرم بالإجابة عن جميع الفقرات بصدق وموضوعية، مع العلم ان هذه الآراء سوف تستخدم لأغراض البحث العلمي فقط.

القسم الأول: معلومات عامة

يتضمن هذا الجزء معلومات شخصية حول خلفية المشتركين في الاستبيان. يرجى وضع علامة xفي الخانة التي تنطبق على حالتك

عمر الام: □ 18-27 □ 28-37 □ 38 او أكثر

عمر المولود: □ 0-3 أشهر □ 3-6 أشهر □ 6-12 أشهر

عمر الاب: □ 18-25 □ 25-32 □ 33-40 □ 40 او أكثر

عدد الولادات: □ الأولى □ الثانية □ الثالثة □ الرابعة □ الخامسة او أكثر

طريقة ولادة المولود الأخير: □ طبيعية □ قيصرية

حالات اجهاض سابقة: □ نعم □ لا

حالات اكتئاب سابقة: □ نعم □ لا

استخدام ادوية خلال الحمل (لا يشمل الفيتامينات التي توصف بشكل طبيعي لجميع النساء خلال الحمل)**:** □ نعم □ لا

الحمل الاخير كان: □ مخطط □ غير مخطط

جنس المولود: □ ذكر □ انثى

مكان السكن: □ منطقة الشمال (نابلس، جنين، طولكرم، طوباس، قلقيلية) □ منطقة الوسط (رام الله، سلفيت) □ منطقة الجنوب (بيت لحم، الخليل)

دخل الاسرة: □ أقل من 3000 شيكل □ من 3000-5000 شيكل □ أكثر من 5000 شيكل

المؤهل العلمي للام: □ ثانوي او اقل □ بكالوريوس/ دبلوم □ دراسات عليا

المؤهل العلمي للأب: □ ثانوي او اقل □ بكالوريوس / دبلوم □ دراسات عليا

التوظيف للام: □ موظفة □ ربة منزل

فصيلة الدم للام: □ A □ B □ O □ AB

هل تسكنين بالقرب من: □ أهل الزوج □ أهلك □ بالقرب من كليهما □ اسكن بعيدا عنهم

القسم الثاني: مقياس أدنبره لاكتئاب ما بعد الولاد

بما أنك قد رزقت مؤخرا بطفل، نود ان نعرف كيف تشعرين. يُرجى تحديد الإجابة الأقرب الى ما شعرتِ به في الأسبوعين الماضيين، وليس فقط ما تشعرين به اليوم.

<u>خلال الأسبوعين الماضيين</u>:

- **كنت قادرا على الابتسامة والاستمتاع بالأشياء**

1. بشكل كبيرا جدا

2. بشكل كبير
3. ليس كثيرا
4. على الاطلاق

❖ **كنت انظر للأشياء بنوع من الاستمتاع**

1. بقدر ما فعلت من قبل
2. تقريبا اقل من المعتاد
3. بالتأكيد اقل من المعتاد بكثير
4. لا على الاطلاق

❖ **لمت نفسي بلا داعٍ عندما سارت الامور على غير ما يرام**

1. في معظم الأوقات
2. في بعض الأوقات
3. قليلا جدا
4. لا على الاطلاق

❖ **لقد قلقت او شعرت بالانزعاج دون وجود سبب وجيه**

1. لا على الاطلاق
2. قليلا جدا
3. نعم، في بعض الاوقات
4. نعم، في اغلب الاوقات

❖ **لقد شعرت بالخوف او الذعر دون وجود سبب وجيه**

1. دائما
2. غالبا
3. أحيانا
4. نادرا

❖ **المشكلات التي واجهتني**

1. غالبا لم أستطع مواجهتها
2. أحيانا كنت قادرة على مواجهتها كما ينبغي
3. في معظم الوقت كنت قادرة على مواجهتها
4. كنت قادرة على مواجهتها أكثر من أي وقت مضى

❖ **كنت مستاءة للغاية لدرجة انني واجهت صعوبة في النوم**

1. معظم الوقت
2. أحيانا
3. نادرا
4. إطلاقا

❖ **لقد شعرت بالحزن أو البؤس**

1. معظم الوقت
2. بعض الوقت
3. في المناسبات فقط
4. إطلاقا

❖ **لقد كنت مستاءة للغاية لدرجة انني كنتُ ابكي**

1. معظم الوقت
2. في كثير من الأحيان
3. في بعض الأحيان
4. اطلاقا

❖ **اعتراني التفكير في إيذاء نفسي جسدياً**

1. معظم الوقت
2. في كثير من الأحيان
3. نادرا
4. إطلاقا

القسم الثالث: مقياس التماسك الاسري والقدرة على التكيف

يرجى وضع علامة x في الخانة التي تنطبق على حالتك

فقرات القياس	دائما	غالبا	احيانا	نادرا	ابدا

					1. يطلب أفراد أسرتي المساعدة من بعضهم البعض.
					2. في حل المشاكلات، يتم الاستماع الى اقتراحات الأطفال.
					3. نحن نوافق على أصدقاء بعضنا البعض .
					4. يمكن للأطفال في اسرتي إعطاء رأيهم عند وضع ضوابط السلوك.
					5. في اسرتي، نحب أن نفعل الأشياء سويا.
					6. هناك أكثر من قائد في اسرتنا.
					7. يشعر أفراد اسرتي بأنهم أقرب إلى أفراد الأسرة الآخرين من الأشخاص خارج الأسرة.
					8. تستطيع اسرتي تغير طريقتها في التعامل مع الواجبات حسب الظروف.
					9. يحب أفراد اسرتي قضاء وقت الفراغ مع بعضهم البعض .
					10. نُشرك أطفالنا في اتخاذ نوع العقاب الذي يستحقونه عندما يخطئون.
					11. يشعر أفراد اسرتي بأنهم قريبون جدا من بعضهم البعض .
					12. في اسرتي، يمكن للأطفال اتخاذ القرارات .
					13. عندما تجتمع اسرتنا معا للأنشطة، يكون الجميع حاضرين.
					14. تتغير القواعد والقوانين في اسرتي.
					15. يمكننا بسهولة التفكير في الأشياء التي يجب القيام بها معا كأسرة.
					16. نحول المسؤوليات في منزلنا من شخص لآخر حسب الظروف.
					17. نتشاور مع أفراد الأسرة بشأن قراراتنا.
					18. من الصعب تحديد القائد والمسؤول في اسرتنا.
					19. التكاتف والعمل الجماعي العائلي مهم جدا لنا.
					20. نتشارك القيام بالأعمال المنزلية كأسرة.

Appendix E

Tables of Study

Table 11

Socio-demographic Characteristics of the participants.

Variable	Category	Frequency	%
Geographical Area	Northern Region	299	52.5
	Central Region	124	21.8
	Southern Region	147	25.8
Mother's Age (Years)	18-27	336	58.9
	28-37	160	28.1
	≥38	74	13
Husband's Age (Years)	18-25	25	4.4
	26-32	272	47.7
	33-39	193	33.9
	≥ 40	80	14
Mother's Educational Level	≤ Tawjihi	70	12.3
	Diploma or Bachelor's degree	434	76.1
	> Bachelor's	66	11.6
Husband's Educational Level	≤ Tawjihi	210	36.8
	Diploma or Bachelor's degree	294	51.6
	>Bachelor's	66	11.6
Employment Status	Unemployed	370	64.9
	Employed	200	35.1
living near family	near the husband's family	268	47.1
	near the mother's family	0	0
	close to both families	112	19.6
	far from both families	190	33.3
Family Income	>3000 shekels	91	16
	3000-5000 shekels	431	75.6
	>5000 shekels	48	8.4

Table 12

Health history of the participants.

Variable	Category	Frequency	%
Previous history of depression	Yes	168	29.5
	No	402	70.5

Previous miscarriages	Yes	426	74.7
	No	144	25.3
Use of medications during pregnancy	Yes	236	41.1
	No	334	58.6
Mother's blood type	A	229	40.2
	B	84	14,7
	O	190	33.3
	AB	67	11.8

Table 13

Childbirth experiences of the participants.

Variable	Category	Frequency	%
Baby age (months)	0-3	139	33.9
	3-6	125	21.9
	6-12	252	44.2
Intended/planned pregnancy	Yes	347	60.9
	No	223	39.1
Number of births	First	230	40.4
	Second	138	24.2
	Third	113	19.8
	Fourth	64	11.2
	Five or more	25	4.4
Mode of delivery	Normal	288	50.5
	CS	282	49.5
Current baby gender	Male	309	54.2
	Female	261	45.8

Table 14

Postpartum depression total score correlations

	Variable	N	Frequency	Mean	Std. Deviation	Mean Rank	p-value
Geographical Area	Northern	299	52.5	16.56	16.56	284.48	0.973

	region						
	Central region	124	21.8	16.64	5.40	284.75	
	Southern region	147	25.8	16.56	5.96	288.18	
Mother's Age	18-27	336	58.9	16.52	5.61	284.04	0.411
(Years)	27-37	160	28.1	17.18	5.64	297.15	
	≥38	74	13	15.52	6.32	266.90	
Husband's Age	18-25	25	4.4	16.52	6.52	276.10	0.723
(Years)	26-32	272	47.7	16.77	5.67	290.32	
	33-39	193	33.9	16.59	5.84	287.46	
	≥ 40	80	14	15.92	5.44	267.29	
Mother's	≤ Tawjihi	70	12.3	17.10	6.17	299.89	0.702
Educational Level	Diploma or Bachelor's degree	434	76.1	16.56	5.40	284.36	
	> Bachelor's	66	11.6	16.12	7.19	277.70	
Husband's	≤ Tawjihi	210	36.8	16.92	5.89	294.33	0.173
Educational Level	Diploma or Bachelor's degree	294	51.6	16.63	5.69	286.89	
	> Bachelor's	66	11.6	15.24	5.22	251.15	
Employment Status	unemployed	370	64.9	17.14	5.70	252.45	0.000
	employed	200	35.1	15.56	5.66	252.45	
Living Near Family	near the husband's family	268	47.1	18.54	5.68	229.68	0.172
	near the mother's family	0	0	0	0	0	
	close to both families	112	19.6	17.30	5.61	225.85	
	far from both families	190	33.3	15.47	5.85	220.88	
Family Income	>3000 shekels	91	16	16.81	6.32	292.06	0.002
	3000-5000 shekels	431	75.6	16.21	5.55	275.47	
	>5000 shekels	48	8.4	19.47	5.39	363.11	
previous history of	No	168	29.5	15.39	5.77	250.89	0.000
depression	Yes	402	70.5	19.43	4.50	368.31	
Previous	No	426	74.7	16.40	5.73	277.47	0.045
miscarriages.	Yes	144	25.3	17.13	5.70	309.22	
Use of medications during pregnancy.	No	236	41.1	16.52	5.74	284.79	0.903
	Yes	334	58.6	16.67	5.72	286.49	
Mother's blood	A	229	40.2	16.37	5.83	280.65	0.145
type.	B	84	14,7	16.59	5.45	287.78	
	O	190	33.3	16.27	5.68	275.37	
	AB	67	11.8	18.11	5.73	327.89	
Baby age (months)	0-3	139	33.9	16.03	5.74	271.03	0.022

	3-6	125	21.9	15.94	5.91	265.10	
	6-12	252	44.2	17.32	5.56	306.69	
Intended/planned pregnancy	Yes	347	60.9	15.97	5.87	267.12	0.001
	No	223	39.1	17.54	5.37	314.08	
Current baby gender	Male	309	54.2	16.77	5.56	291.31	0.358
	Female	261	45.8	16.36	5.92	278.61	
Number of births	First	230	40.4	16.41	6.01	279.77	0.031
	Second	138	24.2	16.86	5.28	291.27	
	Third	113	19.8	17.58	5.53	316.72	
	Fourth	64	11.2	14.65	5.67	235.25	
	Five or more	25	4.4	16.92	5.51	293.80	
Mode of delivery	Normal	139	33.9	15.97	5.58	271.10	0.034
	CS	125	21.9	17.21	5.54	300.19	

**Mann-Whitney U and Kruskal-Wallis H

Table 15

Family cohesion total score correlations

	Variable	N	Frequency	Mean	Std. Deviation	Mean Rank	p-value
Geographical Area	Northern region	299	52.5	36.74	7.22	286.77	0.005
	Central region	124	21.8	35.29	6.97	248.84	
	Southern region	147	25.8	37.89	7.00	313.83	
Mother's Age (Years)	18-27	336	58.9	37.11	7.35	296.54	0.012
	28-37	160	28.1	35.56	6.95	253.21	
	≥38	74	13	37.45	6.48	305.16	
Husband's Age (Years)	18-25	25	4.4	32.44	9.63	220.86	0.073
	26-32	272	47.7	36.97	7.41	292.47	
	33-39	193	33.9	37.28	6.58	294.78	
	≥ 40	80	14	35.88	6.31	259.58	
Mother's Educational Level	≤ Tawjihi	70	12.3	33.82	7.05	220.11	0.001
	Diploma or Bachelor's degree	434	76.1	37.30	7.09	298.34	
	> Bachelor's	66	11.6	35.96	6.95	270.40	
Husband's Educational Level	≤ Tawjihi	210	36.8	35.82	8.20	271.56	0.063
	Diploma or Bachelor's degree	294	51.6	36.96	6.52	286.37	
	> Bachelor's	66	11.6	38.50	5.85	325.92	
Employment Status	unemployed	370	64.9	36.31	7.39	276.23	0.067
	employed	200	35.1	37.50	6.66	302.64	
Living Near Family	near the husband's family	268	47.1	37.12	7.80	224.50	0.777
	near the mother's family	0	0	0	0	0	
	close to both families	112	19.6	37.90	7.97	226.60	

	far from both families	190	33.3	38.35	9.05	227.76	
Family Income	>3000 shekels	91	16	40.13	5.83	368.05	0.000
	3000-5000 shekels	431	75.6	36.54	6.93	278.77	
	>5000 shekels	48	8.4	31.87	8.30	189.41	
previous history of depression	No	168	29.5	37.41	7.211	301.61	0.000
	Yes	402	70.5	35.10	6.78	246.94	
Previous miscarriages.	No	426	74.7	37.34	6.97	299.22	0.001
	Yes	144	25.3	34.92	7.42	244.88	
Use of medications during pregnancy.	No	236	41.1	36.78	6.92	285.05	0.939
	Yes	334	58.6	36.65	7.50	286.12	
Mother's blood type.	A	229	40.2	36.51	6.85	278.47	0.319
	B	84	14,7	38.10	6.24	316.35	
	O	190	33.3	36.58	7.41	281.49	
	AB	67	11.8	36.13	8.36	282.19	
Baby age (months)	0-3	139	33.9	35.95	6.97	262.84	0.060
	3-6	125	21.9	36.98	7.02	293.91	
	6-12	252	44.2	37.19	7.33	298.67	
Intended/planned pregnancy	Yes	347	60.9	37.27	6.68	295.49	0.070
	No	223	39.1	35.88	7.78	269.95	
Current baby gender	Male	309	54.2	36.61	7.18	280.92	0.469
	Female	261	45.8	36.86	7.14	290.91	
Number of births	First	230	40.4	38.38	6.96	326.43	0.000
	Second	138	24.2	35.71	7.34	259.73	
	Third	113	19.8	35.11	7.31	247.46	
	Fourth	64	11.2	36.40	5.58	269.91	
	Five or more	25	4.4	35.16	8.11	262.94	
Mode of delivery	Normal	139	33.9	36.61	7.24	283.82	0.805
	CS	125	21.9	36.85	7.08	287.21	

**Mann-Whitney U and Kruskal-Wallis H

Table 16

Family adaptability total score correlations

	Variable	N	Frequency	Mean	Std. Deviation	Mean Rank	p-value
Geographical Area	Northern region	299	52.5	30.75	5.48	302.29	0.000
	Central	124	21.8	28.87	4.56	231.37	

	region						
	Southern region	147	25.8	30.44	4.92	296.98	
Mother's Age (Years)	18-27	336	58.9	30.27	5.30	286.41	0.958
	28-37	160	28.1	30.03	5.01	282.42	
	≥38	74	13	30.74	5.16	288.01	
Husband's Age (Years)	18-25	25	4.4	29.00	6.13	241.36	0.124
	26-32	272	47.7	30.64	5.01	299.60	
	33-39	193	33.9	30.20	5.45	281.62	
	≥ 40	80	14	29.51	4.82	260.67	
Mother's Educational Level	≤ Tawjihi	70	12.3	29.14	5.43	254.30	0.006
	Diploma or Bachelor's degree	434	76.1	30.62	5.23	297.51	
	> Bachelor's	66	11.6	29.07	4.38	239.54	
Husband's Educational Level	≤ Tawjihi	210	36.8	29.98	4.93	278.76	0.588
	Diploma or Bachelor's degree	294	51.6	30.35	5.51	286.52	
	> Bachelor's	66	11.6	30.78	4.58	302.38	
Employment Status	unemployed	370	64.9	30.25	5.29	284.50	0.844
	employed	200	35.1	30.30	5.05	287.33	
Living Near Family	near the husband's family	268	47.1	28.70	6.01	222.27	0.232
	near the mother's family	0	0	0	0	0	
	close to both families	112	19.6	31.90	4.84	300.15	
	far from both families	190	33.3	31.11	4.72	280.82	
Family Income	>3000 shekels	91	16	30.83	4.57	303.62	0.483
	3000-5000 shekels	431	75.6	30.18	5.27	282.98	
	>5000 shekels	48	8.4	29.87	5.68	273.77	
previous history of depression	No	168	29.5	30.31	5.00	284.53	0.828
	Yes	402	70.5	30.17	5.66	287.80	
Previous miscarriages.	No	426	74.7	30.49	4.89	293.34	0.049
	Yes	144	25.3	29.59	5.99	262.29	
Use of medications during pregnancy.	No	236	41.1	30.14	5.32	279.03	0.263
	Yes	334	58.6	30.44	5.03	294.65	
Mother's blood type.	A	229	40.2	30.10	4.61	283.31	0.682
	B	84	14,7	30.88	4.39	298.30	
	O	190	33.3	30.28	6.00	277.48	
	AB	67	11.8	30.00	5.60	299.64	
Baby age (months)	0-3	139	33.9	29.75	5.17	261.27	0.016
	3-6	125	21.9	30.80	5.62	314.06	
	6-12	252	44.2	30.38	4.99	289.88	

Intended/planned pregnancy	Yes	347	60.9	30.31	5.03	287.62	0.700
	No	223	39.1	30.20	5.46	282.19	
Current baby gender	Male	309	54.2	30.71	5.07	296.72	0.075
	Female	261	45.8	29.74	5.31	272.21	
Number of births	First	230	40.4	30.61	5.18	296.19	0.033
	Second	138	24.2	30.35	5.87	287.27	
	Third	113	19.8	30.39	5.00	295.21	
	Fourth	64	11.2	29.48	4.51	261.80	
	Five or more	25	4.4	27.92	3.01	194.06	
Mode of delivery	Normal	139	33.9	30.11	5.02	284.12	0.839
	CS	125	21.9	30.42	5.38	286.90	

**Mann-Whitney U and Kruskal-Wallis H

Table 17

Family cohesion and adaptability scores of postpartum women (n = 570) (mean ± SD)

FACES III	With postpartum depressive symptoms (n = 502)	Without postpartum depressive symptoms (n = 68)	t value	P value
Cohesion	36.27 ± 7.214	40.10 ± 5.751	-4.204	0.000
Adaptability	30.25 ± 5.346	30.41 ± 4.012	-0.248	0.804

**FACES III: Family Cohesion and Adaptability Scale.

Table 18

Association between types of family cohesion and postpartum depression (n = 570)

		PPD							
		No		Yes		Total			
Variable	Category	N	%	N	%	N	%	t value	P value
Family Cohesion	Disengaged	11	16.18	176	35.06	187	32.81	14.006	0.003
	Separated	23	33.82	161	32.07	184	32.28		
	Connected	22	32.35	125	24.90	147	25.79		
	Enmeshed	12	17.65	40	7.97	52	9.12		

**Chi-square test

Table 19

Regression analysis for the association between types of family cohesion and postpartum depression (n = 570)

Variable	Category	N	Rate	Exp(B)	95%CI	P value
Family Cohesion	Connected	187	32.81	1.00		.005
	Disengaged	184	32.28	2.286	1.080-4.837	.031
	Separated	147	25.79	0.293	1.318-6.017	.008
	Enmeshed	52	9.12	4.800	1.977-11.656	.001

**Logistic regression analysis

Table 20

Association between types of family adaptability and postpartum depression (n = 570)

		PPD							
		No		Yes		Total			
Variable	Category	N	%	N	%	N	%	t value	P value
Family Adaptability	Flexible	28	41.18	163	32.47	191	33.51	6.654	0.084
	Rigid	0	0	16	3.19	16	2.81		
	Structured	2	2.94	49	9.76	51	8.95		
	Chaotic	38	55.88	274	54.58	312	54.73		

**Chi-square test

Table 21

Regression analysis for the association between types of family adaptability and postpartum depression (n = 570)

Variable	Category	N	Rate	Exp(B)	95%CI	P value
Family adaptability	Flexible	191	33.51	1.00		0.279
	Rigid	16	2.81	0.000	0.138-0.625	0.998
	Structured	51	8.95	0.238	0.558-1.989	0.055
	Chaotic	312	54.73	0.807	0.775-3.750	0.425

**Logistic regression analysis

Table 22

Association between family types (family function) and postpartum depression (n = 570)

		PPD							
		No		Yes		Total			
Variable	Category	N	%	N	%	N	%	t value	P value
Family Types	Extreme	0	0	28	5.58	28	4.91	21.806	0.000
	Mid-range	13	19.12	213	42.43	226	39.65		
	Moderately balanced	45	66.18	224	44.62	269	47.19		
	Balanced	10	14.70	37	7.37	47	8.25		

**Chi-square test

Table 23

Regression analysis for the association between types of family and postpartum depression (n = 570)

Variable	Category	N	Rate	Exp(B)	95%CI	P value
Family Types	Balanced	47	8.25	1.00		0.001
	Moderately Balanced	269	47.19	0.743	0.345-1.603	0.009
	Mid-Range	226	39.65	0.226	0.092-0.553	0.001
	Extreme	28	4.91	1.202	0.000	0.033

**Logistic regression analysis

Table 24

regression analysis for postpartum depression scores

Variables	Unstandardized coefficients		Standardized coefficient	t	p-value	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
Mother age	0.518	0.512	0.064	1.011	0.312	-0.488-	1.524
Baby age	0.644	0.263	0.099	2.449	0.015	0.127	1.160
Father age	-0.392-	0.410	-0.054-	-0.958-	0.338	-1.197-	0.412
Number of births	-.0693-	0.277	-0.144-	-2.503-	0.013	-1.236-	-0.149-
Previous history of depression	4.557	0.506	0.363	9.009	0.000	-5.550-	-3.563-
Mode of delivery	1.346	0.451	0.118	2.983	0.003	0.460	2.232
Previous miscarriages	0.635	0.547	0.048	1.162	0.246	-1.709-	0.438
Use of medications	0.458	0.471	0.039	0.973	0.331	-0.467-	1.383
Intended/planned pregnancy	1.483	0.474	0.126	3.127	0.002	0.551	2.414
Current baby gender	-.0380-	0.457	-0.033-	-0.833-	0.405	-1.278-	0.517
Place of residence	0.233	0.271	0.034	0.861	0.389	-0.299-	0.766
Family income	-0.497-	0.476	-0.042-	-1.043-	0.297	-1.432-	0.439
Mother education level	0.388	0.527	0.033	0.736	0.462	-0.648-	1.424
Father education level	0.141	0.392	0.016	0.359	0.720	-0.629-	0.911
Employment	1.121	0.516	0.093	2.171	0.030	0.107	2.136
Mother blood type	-0.088-	0.207	-0.017-	-0.424-	0.672	-0.494-	0.319
living near family	-0.972-	0.585	-0.231-	-1.660-	0.103	-0.249-	1.766

**Linear Regression*

Table 25

regression analysis for postpartum depression scores, family cohesion, family adaptability, and family type (family function)

Variables	Unstandardized coefficients		Standardized coefficient	t	p value	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
Family cohesion	0.474	0.072	-0.450-	-4.988-	0.000	-0.503-	-0.219-
Family	0.055	0.072	0.050	0.766	0.444	-0.086-	0.196

adaptability							
Family type	-0.871-	0.515	0.035	-0.308-	0.038	-0.853-	1.169

**Linear Regression*

جامعة النجاح الوطنية

كلية الدراسات العليا

العلاقة بين التماسك الأسري والقدرة على التكيف واكتئاب ما بعد الولادة بين النساء الفلسطينيات

إعداد

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قدمت هذه الرسالة استكمالا لمتطلبات الحصول على درجة الماجستير في علم النفس الإكلينيكي، من كلية الدراسات العليا، في جامعة النجاح الوطنية، نابلس-فلسطين.

2024

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الملخص

المقدمة: تتضمن فترة ما بعد الولادة تغييرات كبيرة للأمهات وأُسرهن، وقد تؤثر جودة الأداء العائلي على احتمالية تعرض الأم للاكتئاب. ومع ان البيئة العائلية، وفقاً لنظرية الأداء الوظيفي الأسري لأولسون، تعد عاملاً في الاكتئاب ما بعد الولادة، فإن الدراسات التي تناولت تطبيق هذه النظرية على الأمهات المصابات باكتئاب ما بعد الولادة قليلة.

الأهداف: تبحث هذه الدراسة العلاقة بين تماسك الأسرة، وقابلية التكيف، ومخاطر الاكتئاب ما بعد الولادة بين النساء الفلسطينيات، بالإضافة الى تحديد المؤشرات التي تتنبأ باكتئاب ما بعد الولادة، وتماسك الأسرة وتكيّفيتها.

المنهجية: أُجريت دراسة مقطعية على 570 أماً لديهن أطفال أصحاء تتراوح أعمارهم بين أسبوعين و12 شهراً، ويراجعن عيادات الرعاية الصحية الأولية في الضفة الغربية من ايلول 2023 الى كانون الاول 2023. أكملت المشتركات مقياس إدنبرة للاكتئاب ما بعد الولادة (EPDS) ومقياس تقييم تكيّفية وتماسك الأسرة (FACES). وتم تحليل النتائج بإستخدام الحزمة الإحصائية للعلوم الاجتماعية (SPSS)، حيث استُخدم الانحدار الخطي ومعامل سبيرمان للارتباط لتقييم العلاقة بين تماسك الأسرة والتكيّفية وأعراض الاكتئاب ما بعد الولادة.

النتائج: غالبية الامهات المشاركات في الدراسة (58.9%) تتراوح أعمارهن بين 18 و27 عاماً و(64.9%) منهن ربات منازل. أظهرت نتائج مقياس إدنبرة أن (88.1%) من الأمهات معرضات لخطر الاكتئاب ما بعد الولادة، مع تفاوت شدة الأعراض من عدم وجود أعراض (11.9%) إلى أعراض شديدة (32.2%). كما واظهرت الدراسة ان هنالك تباين في تماسك الأسرة بين المشتركات، حيث كانت (32.28%) من الأسر تتسم بالتماسك المرتبط، و(25.79%) تتسم بالتماسك المنفصل، و(32.81%) تتسم بالتفكك الاسري، و(9.12%) تتسم بالتشابك والتداخل الاسري. اما بالنسبة للقدرة على التكيف، أظهرت (54.73%) من الأسر اظهرت النسق الفوضوي ،(33.51%) أظهرت النسق المرن ،(8.95%) أظهرت النسق المهيكل والمنظم (مرونة محدودة)، و(2.81٪) اظهرت النسق الجامد.

بينما أظهر الانحدار اللوجستي أن الأسر المتداخلة والمفصولة معرضة بشكل أكبر لأعراض الاكتئاب ما بعد الولادة مقارنة بالأسر المترابطة، في حين أن الأسر غير المتصلة كانت محمية. لم يكن هناك ارتباط بين مستويات التكيّفية وأعراض الاكتئاب ما بعد الولادة، ولكن جميع المستويات أظهرت حماية أكبر ضد الاكتئاب مقارنة بالأسر المرنة.

الخلاصة: تسلط الدراسة الضوء على الانتشار المرتفع لاكتئاب ما بعد الولادة بين الأمهات الفلسطينيات متأثراً بالضغوطات النفسية وتماسك الأسرة، فزيادة تماسك الأسرة مرتبط بانخفاض خطر الاكتئاب، تشمل المحددات الرئيسية للاكتئاب ما بعد الولادة دخل الأسرة، تاريخ الاكتئاب، عدد الولادات، وجود حالات إجهاض سابقة، حالة العمل، الحمل المخطط، طريقة الولادة، وعمر الطفل. اما بالنسبة لمحددات تماسك الأسرة فيستند إلى عمر الأم، التعليم، المنطقة الجغرافية، والدخل، بينما تتأثر القدرة على التكيف بتعليم الأم والجغرافيا.

الكلمات المفتاحية: تماسك الأسرة، قابلية التكيف الأسري، اكتئاب ما بعد الولادة، فلسطين، مقياس تقييم تكيّفية وتماسك الأسرة (FACES)، مقياس إدنبرة للاكتئاب ما بعد الولادة (EPDS) .