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Health Education, Breastfeeding and Postpartum Depression

Irit LAKS-KRON [1,*]
Daniela COJOCARU [2]

[1] Department of Sociology and Social Work, Alexandru Ioan Cuza University of Iași, iritlk5@gmail.com, ORCID: 0009-0001-3683-3317
[2] Department of Sociology and Social Work, Alexandru Ioan Cuza University of Iași, dananacu@gmail.com, ORCID: 0000-0001-8738-7428

**corresponding author*

Abstract: *During the period of postpartum happiness, 10-15% of mothers in the world face a mental difficulty, postpartum depression (PPD). The literature shows an association between breastfeeding and PPD. Preventing breastfeeding is connected to an increase in the tendency to PPD, and on the other hand PPD is found to be more severe among mothers who wanted to breastfeed and failed. What is the connection between breastfeeding and PPD? What is the effect of health education on breastfeeding among postpartum women? Does breastfeeding protect or aggravate? Currently, there are no studies that clearly confirm this relationship.*

The World Health Organization, 2023 emphasizes the importance of policies to promote breastfeeding. Breastfeeding has health and emotional benefits that affect society, the economy, the environment and the mental health of the public. Studies show that breastfeeding is associated with sociocultural affiliation, religious, cultural, social support, self-efficacy, and PPD. Factors influencing maternal behaviors.

I am a public health nurse and lactation consultant. The article is a theoretical component of a doctoral thesis aimed at early identification of mothers in risk groups for unhealthy behaviors, providing a response to improve the quality of life and public health and saving future expenses for the health care system.

In the article I will present literature, opinions that exist today on the subject and examine the meeting between breastfeeding and PPD. I will focus on the consequences of health education on the health of the mother and the baby in the world and in Israel.

Keywords: *breastfeeding; postpartum depression; self-efficacy; social support; sector belonging; health education.*

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Introduction

Pregnancy, childbirth and breastfeeding are human life events all over the world. These are events of happiness and emotional well-being, but for some mothers it is a period of difficulty in their mental health. In the world, breastfeeding education has become a central focus in health promotion, since breastfeeding provides many benefits - not only for babies but also for mothers, since it can affect the tendency to PPD (Figueiredo et al., 2021; Toledo, 2022), promoting breastfeeding through comprehensive education, support and encouragement is essential.

The physical, nutritional and emotional benefits of breastfeeding are well established; it protects babies from diseases and infections, is essential for growth and development, strengthens the bond between mother and baby (Beck, 2020) and protects the mother from diseases (Pérez-Escamilla et al, 2023).

Breastfeeding is a natural continuation of the pregnancy and birth process, which allows the baby a good start in life. Breast milk is the biological way to feed babies. Worldwide there are public health initiatives that promote breastfeeding as the optimal method for feeding babies, emphasizing only breastfeeding in the first six months of life. Breastfeeding is accessible, available and cost-effective (WHO, 2023).

Despite the recommendation of professional sources, only 44% of babies in the world will breastfeed exclusively for six months according to the World Health Organization report, 2021. Recognizing this gap, many countries are working to improve breastfeeding rates through health education that reaches diverse communities.

The period after birth is characterized by learning and adapting to the role of mother. The mother is required to acquire actions she did not perform in the past in order to properly care for the babies and feel satisfaction in parenting (Nyashanu et al., 2020). Maternal stress and depression are related to maternal self-efficacy and well-being.

Mothers who have a positive feeling and adapt themselves to their parental role create good parenting that contributes to the social-emotional progress of their children (Léniz-Maturana et al., 2020).

Maternal security and satisfaction affect mothers. Bandura (1977) defines this as personal ability, which is people's sense of their ability to behave in a certain way successfully. The self-efficacy of the parents is related to the child's development (Albanese et al., 2019). Bandura describes four fundamental factors that create or improve self-

efficacy: control (previous) experiences (replacing social models to imitate), experiences, verbal persuasion (social encouragement), physiological and emotional states (well-being). The self-efficacy of mothers affects their efforts for cognitive and behavioral change. Positive emotional states help to increase the feeling of self-efficacy, and negative emotional states cause a decrease in the feeling of self-efficacy (Leahy-Warren et al., 2011).

Breastfeeding mothers are affected physically and mentally. Depression can be an expression of the mother's mental stress. The diagnosis of PPD is established if the depressive symptoms appear in the first four weeks after birth and last for at least two weeks (Aggarwal, 2023). The functioning and well-being of mothers and their babies are damaged by the effects of PPD symptoms

A situation that may prevent a safe bond between mothers and their babies. In the long term there is a fear of damage to the children's cognition, behavior and social-emotional development (Gastaldon et al., 2022).

PPD is the most common mental disorder associated with childbirth that may affect the psychological, behavioral and developmental development of children, the mother's ability to care for the child, damage the emotional system between them and public health (Franca et al., 2023). Maternal depression is associated with risky parenting. Severe symptoms of PPD may convince the mother to commit suicide or murder her child (Bluett-Duncan et al., 2021).

In the public health system in Israel, women are usually tested for PPD by filling out the Edinburgh PPD Scale (EPDS) questionnaire as part of routine examinations in health clinics by health care providers. The intensity of the surveillance depends on several factors, awareness, cultural sensitivity, availability and the workload in the clinics. Arab and immigrant women may face challenges in accessing or using health services, leading to a potential underdiagnosis of PPD in these groups (Klomek, 2019).

There is a difference between mothers in their ways of coping. Every woman has a culture and beliefs that are influenced by the sector to which she belongs. Social reality is caused by different understandings that are created under the influence of personal and social structures (Kacen & Krumer-Nevo, 2010).

One of the biggest challenges in promoting breastfeeding is ensuring that education and support are accessible to mothers from

diverse cultural, social and economic backgrounds. In many areas, mothers belonging to minority groups face additional obstacles, such as limited access to health care, language barriers, or a lack of culturally appropriate resources. Cultural difference can result in the operation of support inventions and the response of support services (Morling et al., 2015). These obstacles can affect mothers' ability to receive adequate support and may reduce breastfeeding rates in these populations. For these mothers, proper breastfeeding education is essential. Mothers respond to unique social or cultural expectations that influence the choice of nutrition to give their baby. Providing breastfeeding education that respects and incorporates cultural values may improve understanding of the benefits of breastfeeding and create a more supportive environment. For example, in societies where raising children is considered a central role of the extended family, the participation of family members in breastfeeding education can strengthen support networks and encourage breastfeeding practices.

Studies have shown that mothers from minority groups often face a higher risk of PPD due to factors such as limited social support or financial stress (Alfayumi-Zeadna et al., 2022).

Breastfeeding, which naturally stimulates the release of prolactin and oxytocin, can help reduce this risk by fostering positive emotions and strengthening the bond between mother and child, so it is recommended to extend breastfeeding time (Mawson & Xueyuan, 2013). Educating mothers about these benefits not only encourages breastfeeding but also provides them with important mental health support.

Studies have shown that breastfeeding has a mainly positive effect on protecting or reducing symptoms of postpartum depression. A study conducted in Portugal among 334 mothers found that exclusive breastfeeding in the first months after birth has a potential protective effect on postpartum depression among women, therefore emphasizing that in order to improve women's mental health it is important that public health policies work. Promote and improve exclusive breastfeeding. (Figueiredo et al., 2021).

A study in the United States that investigated the association between breastfeeding and the risk of PPD showed, statistically significantly, that women who breastfed and breastfeeding for a longer time, there was a reduced risk of PPD. The findings pointed to breastfeeding as a healthy and cost-effective way that can reduce a woman's potential for PPD and emphasized the importance of promoting

breastfeeding as an advantage for the mother and the baby from a mental point of view and for the baby's quality of life (Toledo, 2022).

On the other hand, a study conducted among 34 Latina women examining early cessation of breastfeeding found that PPD was significantly associated with cessation of breastfeeding (Lara-Cinisomo et al., 2017). A UK study found that the relationship is bidirectional. The study included 109 postpartum mothers who tried to breastfeed, and found that a positive breastfeeding experience can lead to positive well-being, but mothers emphasized that pressure to breastfeed and a sense of difficulty led to negative well-being (Scarborough et al., 2022). Farías Antúnez et al. (2020) found in their study that PPD was 3 months after giving birth, related to the low education of the mother and not to the fact that she is exclusively breastfeeding.

The literature shows that PPD and breastfeeding are important interrelated health factors. Studies have not yet reached a consensus regarding the exact direction and nature of the relationship. The aim of the research in my doctoral thesis is to contribute knowledge on this subject, to examine the direction of the relationship between breastfeeding and the risk of PPD. In this article I will present the facts known to date on the subject.

Further to the insights on the relationship between breastfeeding and broader physical and mental health outcomes of the public. The goals are:

- Evaluating the effectiveness of health education programs in promoting breastfeeding among mothers at risk of experiencing PPD.
- Investigating the role of social support systems in improving mothers' self-efficacy regarding breastfeeding.
- Development of culturally appropriate, accessible educational resources that respond to socio-cultural norms that influence breastfeeding decisions.

Proposing strategies for preventive and interventional health education to treat PPD and breastfeeding support, for the benefit of mother and baby health and contribution to general improvements in public health.

Identifying mothers at risk in the postpartum period is important for improving the well-being of mothers, babies and families. The importance of understanding the factors associated with breastfeeding and PPD affects prevention, treatment and health promotion. Prevention is better than cure, so it is important to promote strategies of which

breastfeeding counseling can be one of the strategies (Figueiredo et al., 2014). Similar to what is done in Israel with different ethnic groups, it is possible to tap into Europe with regard to the treatment of minority groups. Global breastfeeding education efforts must address the unique needs of mothers including those belonging to a minority group. Mothers may face different challenges but can greatly benefit from the protective effects of health education. By incorporating culturally sensitive approaches and increasing support for diverse communities, health systems can help all postpartum mothers experience the well-documented benefits of breastfeeding for themselves and their children around the world and in Israel and influence and strengthen public health.

Breastfeeding

Breastfeeding is not only essential for the physical health of the child but also serves as a form of educating mothers about physical and mental health. Studies emphasize breastfeeding as essential for the health of the child and mother, reducing costs for families, health institutions and governments. It is the best way to feed babies and support their optimal development, increases IQ, protects against cot death, reduces malnutrition, risk of late obesity, childhood infectious diseases and mortality (Horne, 2019; North et al, 2022; Pérez-Escamilla et al, 2023).

Breastfeeding mothers also experience significant health benefits, a reduction in the incidence of breast and ovarian cancer, cardiovascular disease and type 2 diabetes (Pérez-Escamilla et al., 2023). Importantly, breastfeeding may reduce stress reactions and protect the mothers' mental health. It is associated with weakened stress responses, especially cortisol, a hormone secreted in stressful situations. Breastfeeding and skin-to-skin contact between mothers and babies reduce mothers' cortisol levels and their sense of stress (Kirca & Adibelli, 2021).

In light of its health, immune and emotional benefits, breastfeeding also has a good effect on society and the economy. This broad spectrum of benefits underscores its importance on the agenda of health policymakers. However, the World Health organization (WHO) reported that between 2015 and 2020, only 44% of babies in the world received, in the first six months of their lives, only breastfeeding (WHO, 2023). At one year of age, the highest prevalence of breastfeeding is found in South Asia, and parts of Africa and Latin America. The lowest prevalence is in high-income countries (Victoria et al., 2016).

In accordance with the guidelines of the World Health Organization, the promotion of breastfeeding is a high priority in many countries, including Israel. The Israeli Ministry of Health recommends starting breastfeeding in the first hour after birth, exclusive breastfeeding 6 months after birth and then giving solid food in combination with breastfeeding until at least two years of age, as long as it suits both mother and baby. According to the data of the Ministry of Health in Israel 2022, the percentage of exclusively breastfed babies in recent years is on a downward trend. 35.4% of babies are exclusively breastfed at the age of 3 months. Regarding the sectors, the percentage of exclusively breastfed babies is 6% among the Jews and 15% among the Arabs. Infants at the age of 3 months, exclusively breastfed, are 6% among the Jews and 15% among the Arabs 15.6% (Ministry of Health in Israel, 2022). A situation that highlights the need for stronger educational and support programs.

Understanding and addressing the factors that affect breastfeeding, including its effect on postpartum depression, are important. Fostering an environment that supports breastfeeding as a form of health education can help public mental health and promote healthier communities on a broader scale.

The next section examines the correlation between the mother's environment and breastfeeding.

Breastfeeding and social support

Breastfeeding is deeply influenced by socio-cultural and environmental factors. Breastfeeding health education emphasizes how a supportive environment and awareness of cultural practices can empower mothers and promote successful breastfeeding.

The cultural competence model of Purnell (2002) and the ecological approach of Bronfenbrenner (1979), emphasize the significant role of the environment in shaping health behaviors, including breastfeeding. These frameworks illustrate how people are influenced by different levels of their environment, from global cultural diversity to immediate family interactions. Regarding culture and breastfeeding, Parnell's model emphasizes how cultural beliefs and practices surrounding pregnancy and childbirth influence breastfeeding attitudes, supporting or inhibiting the mother's desire to breastfeed. Educating communities about these effects is essential to creating public health interventions that respect diverse cultural backgrounds and improve breastfeeding rates and maternal mental health (Purnell, 2002).

Moreover, Bronfenbrenner's theory suggests that a nurturing environment increases the mother's confidence (self-efficacy), and positively influences breastfeeding practices. For example, mothers in environments that encourage breastfeeding are more likely to breastfeed, thus creating a circle of support for themselves and others around them (Bronfenbrenner, 1979).

In the context of self-efficacy and environmental support, Bandura's self-efficacy theory is essential in understanding the relationship between personal beliefs and environmental support. High self-efficacy, often fostered by positive environmental interactions, can lead to successful breastfeeding. Conversely, negative environments, such as those lacking social support, can reduce self-efficacy and interfere with breastfeeding efforts (Bandura, 1986). Therefore, public health strategies should focus on improving environmental support to improve self-efficacy among new mothers.

Studies indicate that the quality of social support - emotional, practical and structural - is essential to the success of breastfeeding. Increasing support for mothers increases their self-efficacy and the chances of successful breastfeeding (Nurullah, 2012; Barrera et al., 2023). As proven by studies in the United States (Wallenborn et al., 2019) and in Finland and Great Britain (Swanson & Hannula, 2022). Public health initiatives should strive to provide comprehensive support systems that address these dimensions to promote breastfeeding and maternal well-being.

Modern lifestyle factors, such as geographic separation from the extended family, work pressures and social norms, may interfere with breastfeeding, especially in Western contexts where formula feeding is often presented as a primary alternative. (Snyder et al., 2018). Health policy should address these barriers by creating supportive work and community environments for breastfeeding mothers.

In multicultural societies like Israel, on its Jewish population, 73.9% and the diverse Arab population, 21.1% (LMS, 2023), the Jewish majority and the Arab minority live in separate settlements, 40% of the population live in mixed cities. In the Jewish sector, religious and secular are not completely separated, With the exception of ultra-orthodox society, which mostly lives separately from other sectors, including the Arab sector Subgroups, Muslims, Christians and Druze Socio-economically, the situation of Christian Arabs is better than other subgroups (Central Bureau of Statistics, 2019). Public health educators

must consider cultural differences in their approach. Within the Jewish and Arab communities in Israel there is additional diversity, and each subgroup brings unique perspectives on breastfeeding. Respectful and inclusive health education that acknowledges these differences fosters a more supportive environment for all mothers.

Finally, breastfeeding success requires not only individual effort but also systemic support. Governments, health care providers and employers share a responsibility to support breastfeeding through policies, workplace accommodations and community programs. By recognizing the shared role in supporting breastfeeding mothers, public health education aims to empower people and create environments that promote physical and mental well-being for mothers and their children (Rollins et al., 2016). Next to environmental support, the personal aspect expressed in personal ability is important and influential; I will talk about that in the next section.

Breastfeeding and self-efficacy

Breastfeeding serves as a valuable educational process that promotes physical and mental health for both mother and child. According to Albert Bandura's social learning theory (1977), human behavior is influenced by environmental and cognitive factors. The theory explains how people think and what factors influence their behavior. One such important factor is their sense of self-efficacy. The definition of self-efficacy is people's sense of belief in their abilities to organize and perform actions required to reach given achievements (Boateng et al., 2019). The mother's self-confidence, known as breastfeeding self-efficacy, affects breastfeeding.

Self-efficacy affects people's chosen activities, efforts and persistence. Those whose self-efficacy in a task is low are expected to avoid this task, while those who believe in their abilities will show a willingness to take part in the task. Those with a greater sense of self-efficacy will work harder and persevere longer when faced with problems than those who doubt their abilities (Bandura, 1994). Postpartum mothers' perception of their self-efficacy will influence their behaviors in different ways. It is likely that these will affect their motivation to invest efforts in breastfeeding and even their choice whether to breastfeed or not. Mothers who feel capable of their breastfeeding ability are more likely to engage in breastfeeding and maintain it, which benefits both physical and mental health.

Studies from different countries show an effect between exclusive breastfeeding and the duration of breastfeeding and self-efficacy. A study conducted in Sweden among postpartum women examined the intersection between the mothers' self-efficacy in breastfeeding and breastfeeding patterns and found that higher self-efficacy is associated with more exclusive breastfeeding (Oras et al., 2020).

A study in southern Brazil, in which 158 breastfeeding mothers participated, showed that high levels of self-efficacy were identified as a factor in favor of exclusive breastfeeding, while demographic characteristics such as the absence of a partner, mothers' return to work and minimum wage. Income had negative effects on exclusive breastfeeding (Moraes et al., 2021).

A study conducted in Australia examined how the mother's self-confidence and self-efficacy in breastfeeding affect the duration of breastfeeding. The findings showed that self-efficacy in breastfeeding significantly predicts the duration of breastfeeding. Self-efficacy may increase mothers' confidence in breastfeeding, and to persist even when difficulties arise (Flores-Quijano et al., 2008).

160 Jewish women in central Israel participated in a study that examined factors predicting intentions to breastfeed and duration of breastfeeding and found that intentions to breastfeed, self-efficacy and support for breastfeeding predicted actual duration of breastfeeding (Miran & Benyamini, 2010).

There are ways in which mothers influence their daughters' breastfeeding habits. Providing support, encouragement and advice affects the breastfeeding habits of girls and the relationship with their babies (Hove et al., 1999) A study that examined the effects of women's body image and identity found that the development of women's body image and identity were significantly influenced by mother-daughter relationships (Maor, 2012). Four sources of information can strengthen maternal self-efficacy to breastfeed. The first, performance achievements, for example breastfeeding experience in the past. The second, experiences from a model, for example watching other breastfeeding women such as sisters, friends, famous personalities. The third, verbal persuasion, for example encouragement from significant others such as friends, family or a lactation consultant. Encouraging breastfeeding leads to a greater sense of self-satisfaction. Fourth, physiological reactions, mental stress that causes physiological changes and feelings of discomfort, for example fatigue, stress and anxiety,

reduce the perception of self-efficacy. Feelings of calmness contribute to creating a high sense of self-efficacy. This is influenced by mothers' postpartum personality, beliefs, expectations, self-image and their environment (Bandura, 1986; Dennis, 2007).

Addressing the issue of self-sufficiency in breastfeeding is not only a matter of individual well-being but a significant concern for public health. Improving self-efficacy among postpartum mothers can lead to better breastfeeding outcomes, which are associated with health benefits for the mother and baby in the short and long term. By focusing on breastfeeding as an educational journey that improves the self-efficacy and mental health of mothers, society can support mothers during this critical period. Programs that aim to strengthen breastfeeding support systems and offer educational resources will not only improve mothers' self-efficacy but also promote healthier communities. Now I will expand on postpartum depression and its relationship with the mental health of the public.

Postpartum depression

Postpartum depression (PPD) is a public health problem that affects not only mothers but also children and families. Research into PPD and related conditions such as baby blues and postpartum psychosis began in the 1950s and significantly increased awareness of women's mental health during childbirth. This period is characterized by mixed emotions, combining joy with vulnerability to physical and mental stress (Dennis et al., 2004; Besser et al., 2008).

The American Psychiatric Association has a Diagnostic and Statistical Manual of Mental Disorders (DSM-5) which classifies PPD as a mood disorder that manifests within four weeks after birth. Symptoms of PPD are: severe sadness, reduced pleasure, decreased energy and suicidal thoughts. These symptoms must begin within 4 weeks of birth, last at least 2 weeks, and interfere with daily functioning to receive a diagnosis. In severe cases, PPD can lead to maternal suicide and infanticide, emphasizing the need for early detection and intervention (Wisner et al., 2006; American Psychiatric Association, 2013).

The Edinburgh Postpartum Depression Scale (EPDS) is used as a screening tool to identify the risk of early PPD. This self-report questionnaire was developed in 1987 by Cox in England, consists of 10 questions and has been translated into Hebrew and Arabic for use in

Israel and many other languages, which facilitates its application in diverse populations.

PPD has harmful effects not only on mothers but also on their babies

because the phenomenon affects the ability to perform important parenting roles such as breastfeeding, sleeping and meeting the needs of the babies. Evidence suggests that PPD can have long-term consequences, with episodes of maternal depression potentially leading to recurrent depression and persistent maternal depression contributing to behavioral, cognitive, emotional and interpersonal difficulties in children later in life. (Branquinho et al., 2021; Beck, 2020).

PPD affects a significant number of women worldwide. In the United States, studies indicate that 13-19% of women experience PPD symptoms (O'Hara & McCabe, 2013). In Western countries the incidence is between 10-15% (Faisal-Cury et al., 2013), in the Middle East the incidence is 26% (Shorey et al., 2018). The reasons for these differences are not entirely clear, but cultural factors and socioeconomic conditions play a significant role. In Israel, a 2019 study found that 10% of women suffer from PPD, with a notable gap between Jewish women (7%) and Arab women (21%). The higher prevalence among Arab women is attributed to cultural, socioeconomic and educational factors (Shwartz et al., 2019).

Given the serious consequences of PPD, it is essential to address it as a public health concern. This involves raising awareness, promoting early detection through tools such as EPDS, and ensuring adequate social support systems for mothers after childbirth while taking into account the cultural, psychological and social dimensions. Healthcare providers can better support postpartum women and their families, ultimately fostering healthier communities.

Postpartum depression and social support

PPD is a significant public mental health problem affecting postpartum mothers worldwide. This condition may have the ability to profoundly affect the well-being of mothers, babies and families. Understanding the social perspectives and cultural differences in the incidence and experience of PPD is essential for developing effective public health strategies. This part will deal with the influence of social support, cultural norms and sectoral affiliation on PPD, especially focusing on Jewish and Arab women in Israel.

Social support is a crucial protective factor against PPD. Studies have shown that adequate social support improves self-efficacy and reduces the risk of PPD.

A study investigating the impact of aspects of social support and community network participation on postpartum women's mental health found a negative correlation between high social support and PPD (Gu, 2020).

Social support plays a vital role in reducing the risk of PPD. In cultures with strong postpartum support systems, the incidence of PPD is generally lower. For example, in traditional societies such as China, where women usually receive support from family members for an extended period after childbirth, PPD rates are relatively low (Deng et al., 2014). Even in Arab societies, 40 days after giving birth, women usually receive social support from their extended families. Support that can help relieve stress (Daoud & Shoham-Verdi, 2015).

However, the impact of this support is not uniformly positive. Although intended to help new mothers, the involvement of extended family members in Arab cultures can sometimes be perceived as intrusive and stressful, which may contribute to PPD (Gith, 2018). This highlights the complexity of social support dynamics and their implications for maternal mental health.

A study by McLeish (2021) in England, found that support from health professionals by providing information and emotional support alongside clinical care may help reduce the incidence and severity of PPD symptoms.

Disparities in access to medical care and support also affect PPD. A study by Howell et al. (2005) showed that Hispanic and African American women had less access to health care providers. A difference that could explain why there were more reports of depressive symptoms among Hispanic and African American mothers otherwise from white mothers.

These disparities highlight the need for targeted public health strategies to provide equitable support and resources to all mothers. Treatment for PPD includes better screening, increased access to mental health care, and improved social support networks.

Belonging to the sector significantly affects the experience and prevalence of PPD. Studies show that ethnic minority mothers are more susceptible to PPD than their counterparts in the majority population (Mukherjee et al., 2018; Shwartz et al., 2019). Even in Israel, the

incidence of PPD is higher among the Arab population, which is an ethnic minority.

In ultra-Orthodox Jewish communities, the cultural imperative to "be fertile and reproduce" can lead to high birth rates and associated stressors, exacerbating the risk of PPD (Prins-Englesman & Cwikel, 2023). In addition, social stigma and lack of awareness of mental health services often discourage ultra-Orthodox women from seeking professional help, while relying on informal and religious support networks (Bina, 2008; Glasser et al., 2016).

Arab women in Israel face similar challenges, with modern Arab women experiencing more severe PPD symptoms compared to their traditional peers. This can be attributed to the pressures related to the balance between modern and traditional roles and the physical proximity of extended family members, which can be both a support and a source of stress (Gith, 2018).

Treating PPD as a public mental health problem requires a multifaceted approach. Public health strategies should consider cultural sensitivities and the unique needs of different ethnic and social groups. Increasing awareness of PPD, reducing social stigma and providing accessible mental health services are essential steps.

Programs tailored to specific communities, such as providing culturally competent mental health and support services, can help reduce the impact of PPD. For example, interventions in ultra-Orthodox Jewish and Arab communities should leverage existing social support networks while addressing the potential stressors associated with these supports.

Postpartum depression is a complex public mental health issue that is influenced by cultural norms, social support systems, and sectoral affiliation. Understanding these factors is important for developing effective public health action plans to support postpartum mothers and their families. Public health initiatives that will deal with the challenges of Jewish and Arab mothers in Israel can improve the mental health of mothers and the well-being of families.

Self-Efficacy and postpartum depression

Giving birth is an extraordinary experience that brings joy and happiness. However, it brings significant changes that may be difficult and affect the well-being of mothers, children and families. PPD is a serious mood disorder that affects mothers after childbirth, the signs are feelings of great sadness, exhaustion and anxiety. The disorder may

impair the mother's functioning and even increase the risk of suicide after childbirth (Beck, 2020).

PPD inventions are a significant public health concern. Undiagnosed and untreated PPD may lead to negative results, a change in the mother's physical and mental health including damage to the relationship between the mother and child, long-term developmental and emotional problems in children and damage to the family (Qin et al., 2022)

Self-efficacy, the person's belief that he can succeed in certain situations or performing actions, affects parenting.

Bandura (1977) emphasized that parental self-efficacy is essential for effective parenting. Studies by Abuchaim et al. (2016) and Law et al. (2019) show a clear effect between low self-efficacy and a higher prevalence of PPD. This reduced maternal functioning further correlates with lower perceptions of self-efficacy

A study by Haslam et al. (2006) suggests that parental support can alleviate depressive symptoms by increasing the mother's self-efficacy. Zheng et al., 2024 found in a study conducted in China that increasing social support focused on the mother has the ability to improve parental self-efficacy and reduce the likelihood of postpartum depression.

Treatment of PPD should include an attempt to improve the mother's self-efficacy, increased access to mental health care and improvement of social support networks can help with this.

The understanding that PPD is an issue that affects the mental health of the public, emphasizes the importance of a systemic policy to support the mental health of the mother after giving birth, and will ultimately benefit families and communities in general.

Breastfeeding and postpartum depression

The relationship between PPD and breastfeeding is complex and multifaceted, influenced by various socio-cultural factors. Addressing this issue from an educational point of view is essential, especially when considering the unique challenges faced by mothers after giving birth in different cultural contexts, such as those in Israel.

In terms of statistical correlations, various studies that have examined the relationship between breastfeeding and PPD, revealing a nuanced picture.

There are studies that have shown a statistical correlation between breastfeeding and helping to reduce PPD symptoms. In a

systematic review and meta-analysis article by Alimi et al, 2022, on the possible relationship between the type and extent of breastfeeding and PPD, it was reported that non-exclusive breastfeeding mothers have an 89% higher chance of having PPD (Adjie, 2024).

A study conducted in Portugal among pregnant and postpartum women found that in mothers with antenatal depression, exclusive breastfeeding had a potential protective effect against PPD (Figueiredo, 2021).

A study in Japan showed that breastfeeding women who maintained eye contact with their babies and talked to them while feeding had a lower risk of postpartum depression (Shimao et al., 2021). A study of Arab women in the United Arab Emirates (Hamdan et al., 2012) found a lower tendency for PPD in breastfeeding mothers. Effect that lasted after birth, 4 months.

A review of articles showed that exclusive breastfeeding and maternal satisfaction with breastfeeding contribute to reducing the severity of PPD and also the risk that PPD will occur.

Research in Croatia among 209 women reported that non-breastfeeding mothers were more depressed and anxious compared to breastfeeding mothers (Mikšić et al., 2020).

The link between breastfeeding and PPD is reinforced by a study by Sandraluz et al. (2017) that showed interaction between breastfeeding cessation, decreased oxytocin levels, and increased PPD among Latina mothers. A study by Flores-Quijano et al. (2008) in Mexico found that breastfeeding insecurity may be present at the same time as a greater tendency to PPD. Brown et al. (2016) found in their study in the United Kingdom that women who thought about breastfeeding but were unable to carry out their plans were at the highest risk of PPD. In a UK study, postpartum women highlighted that pressure to breastfeed and a sense of difficulty resulted in negative well-being (Scarborough, 2022). There are studies that show the opposite, depressed mothers tend to breastfeed less or for shorter periods compared to non-depressed mothers. A Taiwanese study of 333 women found that low breastfeeding rates were significantly associated with higher EPDS scores. (Chiu et al., 2020). Dennis & McQueen (2007) showed that mothers in British Columbia and Canada with high EPDS scores were more likely to stop breastfeeding. A study in Spain found that beyond socio-cultural factors, psychological aspects influence the way of breastfeeding. A relationship was found between maternal stress and depression to cessation of breastfeeding (Gila-Díaz et

al., 2020). Other studies have not found a direct correlation between breastfeeding and PPD. A prospective cohort study in Wisconsin that included 465 women on maternity leave found no such correlation (Chaudron et al., 2001). Similar findings were obtained in a study carried out in southern Brazil in the city of Plattes. The study examined the relationship between exclusive breastfeeding at the age of 3 months and PPD, found no relationship between them but that PPD is due to low education of the mother. Diverse findings and implications in different studies highlight the complexity of the relationship between breastfeeding and PPD. Research findings on the relationship between breastfeeding and PPD have significant implications. The mixed results suggest that educational interventions and breastfeeding support may reduce PPD in fertile mothers. There is a statistical relationship but not causation and this pan should be investigated. In addition, it is essential to recognize the personal and cultural factors that influence both breastfeeding practices and mental health.

In Israel, where the population includes both Jewish and Arab women, the treatment of PPD requires culturally sensitive approaches. Arab mothers, who reportedly have a higher propensity for PPD compared to Jewish mothers (Shwartz et al., 2019). Targeted interventions are needed to provide adequate support in the postpartum period.

Understanding the relationship between breastfeeding and PPD is essential for developing effective public health strategies. By addressing the socio-cultural factors and providing targeted social support, breastfeeding can be improved and this may affect the mental health outcomes of postpartum mothers, and ultimately contribute to better public health in Israel and abroad.

Discussion

In the field of health education, postpartum depression (PPD) and breastfeeding are intertwined public health concerns with far-reaching implications for mothers, infants, families, and society. Although breastfeeding is recognized for its mental and physical health benefits, socio-cultural, educational and support systems significantly influence breastfeeding practices, which may affect the mother's mental health after birth. For mothers experiencing PPD, lack of social support, self-efficacy, and understanding of the benefits and challenges of breastfeeding can exacerbate mental health problems, lead to decreased breastfeeding rates,

and increased risk of severe depressive symptoms with detrimental effects on the mothers themselves. their babies, their families and wider society.

Regarding interrelationships, given the complex relationship between breastfeeding and PPD, health education must prioritize culturally sensitive and comprehensive breastfeeding support. This involves equipping health professionals and support networks (eg, families, communities) to better understand and address the challenges faced by mothers, especially those from diverse cultural and social backgrounds.

According to some studies, breastfeeding may reduce the risk of postpartum depression and, in addition, reduce the severity of existing PPD (Figueiredo et al., 2021; Hamdan et al., 2012; Shimao et al., 2021; Alimi et al., 2022; Adjie et al., 2024). There are studies that have shown that the absence or cessation of breastfeeding is associated with an increase in the tendency to PPD (Sandraluz et al., 2017; Mikšić et al., 2020). Feeling insecure about breastfeeding and failure have been observed to be associated with a greater tendency to PPD (Flores-Quijano et al., 2008; Brown et al., 2016).

It has also been found in studies that a tendency to PPD reduces breastfeeding (Dennis & McQueen, 2007; Chiu et al., 2020; Gila-Díaz et al., 2020).

Interesting to note that there is a study that found no connection between breastfeeding and PPD (Farías Antúnez, 2020).

Many studies have tried to clarify the relationship between PPD in breastfeeding, but the direction and nature of this correlation remain unclear, no causal relationship has been found.

Breastfeeding has implications for public health, the promotion of breastfeeding as part of health education is highlighted as a priority by the World Health Organizations (WHO, 2023). The literature shows that breastfeeding education and encouragement can have valuable effects on the physical and mental health of mothers and their infants. In addition, early detection assistance and support for mothers at risk of PPD.

Similar to the sector of the Arab mothers in Israel who are an ethnic minority group, there are various ethnic minority groups in Europe. From the research that will be carried out in Israel, it will be possible to draw conclusions regarding the treatment and assistance to the minority groups in Europe.

The article presents an in-depth examination of the factors that influence breastfeeding and offers insights into how breastfeeding is related to broader physical and mental health outcomes of the public.

As a public health nurse and lactation consultant, I work every day with women who deal with the changes following childbirth, deal with breastfeeding and physical and mental changes. I feel that there could be a solution to a very significant problem. The goals are to harness health education to help reduce and or prevent the development of a medical problem, PPD among postpartum mothers. Beyond donating to the baby, this has social and economic consequences. With the help of educational measures, health education in the promotion of breastfeeding among mothers at risk of PPD, strengthening of social systems regarding breastfeeding, development of educational resources in cultural-social adaptation to promote breastfeeding, it will be possible to provide a solution to a health-social problem. A problem that requires a multidisciplinary approach in health education to foster informed and supportive environments that can alleviate the impact of PPD and improve breastfeeding success.

Conclusions

Postpartum depression (PPD) and breastfeeding are critical issues in maternal health, influenced by a range of cultural, social and educational aspects. Despite the recognized benefits of breastfeeding for both physical and mental health, especially for mothers with PPD, inconsistencies in research findings and lack of clear causality hinder effective interventions. These issues are added to different cultural norms and different levels of social support, which can significantly affect the mother's behavior and the success of breastfeeding among diverse populations in the world, mothers who belong to the entire population and minorities such as Jewish and Arab women in Israel.

To address these challenges: Health education needs to prioritize culturally sensitive and comprehensive educational interventions that not only support breastfeeding, but also actively address the mental health concerns of new mothers. Educational policies and programs must consider the critical role of social support in improving women's self-efficacy and mental health after childbirth. To address the influence of cultural norms on maternal health behaviors related to breastfeeding and mental health. Methodological improvements are needed in PPD research, such as precise definitions, culturally inclusive assessment methods and consideration of risk factors.

The goals of health education interventions are: Developing targeted, culturally aware educational materials to address sociocultural

influences on breastfeeding. Provide training to healthcare providers on culturally competent support methods to improve outcomes for mothers at risk for PPD. Encourage public health research that uses standardized and inclusive criteria to investigate the associations between breastfeeding and PPD in different cultural contexts.

This approach aims to create a supportive and informed health environment, ultimately caring for the health and quality of life of mothers, babies and communities through education.

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