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MASTERS'S THESIS

Abdullah Charaf EDDİN



T.C.

ANKARA YILDIRIM BEYAZIT UNIVERSITY
PUBLIC HEALTH INSTITUTE

**POSTPARTUM DEPRESSION AND ASSOCIATED FACTORS
IN NORTH WEST SYRIA**

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HEALTH POLICY AND GLOBAL HEALTH

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Ankara, 2024

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ANKARA YILDIRIM BEYAZIT UNIVERSITY

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Postpartum Depression and Associated Factors in North West Syria

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Master's Thesis

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I certify that this thesis meets all the requirements for a master's degree.

PLAGIARISM

I declare here that everything in this thesis is my unique work. I have explicitly referenced in accordance with Ankara Yildirim Beyazit University guidelines, academic rules, and ethical conduct, and I accept full legal responsibility for the academic procedure of my thesis.
(21.10.2024)



Abdullah Mahmoud Charaf EDDIN

DECLARATION

I declare that this thesis is my original, unpublished work; it has never been presented for the same reason before, and since every other information from other people's work contained in my thesis is fully acknowledged, it does not violate anyone's copyright or breach any property rights.

(21/10/2024)



Abdullah Mahmoud Charaf EDDIN



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ABSTRACT

Master's Thesis

POSTPARTUM DEPRESSION AND ASSOCIATED FACTORS IN NORTH WEST SYRIA

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Background: This paper focuses on postpartum depression (PPD): major depression disorder that impacts women across the world, especially war affected nations. Where there is conflict, displacement, and socio-economic stress, such as in North-West Syria, PPD is still relatively unknown and studied insufficiently. **Objectives:** The main objectives are to measure PPD prevalence and identify contributing factors, including unintended pregnancies, socio-economic status, and displacement. **Methods:** A cross sectional study was conducted in Idlib city and Atmeh displacement camps. Screening for PPD was done using the Edinburgh Postnatal Depression Scale (EPDS) while socio-demographic data was obtained from 397 postpartum women. Hazard analysis was also conducted to determine the odds ratio for PPD using bivariate and multivariate logistic regression analyses. **Results:** A total of 397 participants were surveyed, with 79.8% residing in Atmeh and 91.7% identified as IDPs. The findings revealed a high prevalence of PPD at 59.7%, with significant associations identified between PPD and various demographic and socioeconomic factors. Notably, women aged 26–35 exhibited the highest prevalence of PPD (67.4%; $p = 0.004$), and those experiencing economic hardship (66.2%; $p < 0.001$) were at greater risk. Additionally, unintended pregnancies were strongly correlated with PPD, with 70.8% of affected women reporting depression ($p = 0.001$). A lack of social support during pregnancy was the most significant predictor, with an odds ratio of 8.924 ($p < 0.001$), indicating a nearly nine fold increase in the likelihood of PPD. These results highlight the critical role of social support, economic stability, and reproductive planning in influencing maternal mental health, underscoring the need for targeted interventions to support this vulnerable population. **Conclusions** The study underscores the urgent need for targeted interventions to address postpartum depression in North-West Syria, particularly among internally displaced women. Enhancing social support, addressing economic hardships, and providing mental health resources are essential for improving maternal well-being in this vulnerable population.

December 2024, 65 pages

Keywords: Postpartum Depression, Syria, Conflict, Displacement, Mental Health, Unintended Pregnancy, Maternal Health

ÖZET

Yüksek Lisans Tezi

KUZEY BATI SURIYE'DE DOĞUM SONRASI DEPRESYON VE İLİŞKİLİ FAKTÖRLER

Abdullah Mahmoud Charaf EDDIN

Ankara Yıldırım Beyazıt Üniversitesi

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Arka Plan: Bu makale doğum sonrası depresyona (PPD) odaklanmaktadır: özellikle savaştan etkilenen ülkelerde olmak üzere dünya genelindeki kadınları etkileyen majör depresyon bozukluğu. Kuzeybatı Suriye gibi çatışma, yerinden edilme ve sosyoekonomik stresin olduğu yerlerde, PPD hala nispeten bilinmemektedir ve yeterince incelenmemiştir. **Amaçlar:** Ana amaçlar PPD yaygınlığını ölçmek ve istenmeyen gebelikler, sosyoekonomik durum ve yerinden edilme gibi katkıda bulunan faktörleri belirlemektir. **Yöntemler:** İdlib şehri ve Atmeh yerinden edilme kamplarında kesitsel bir çalışma yürütülmüştür. PPD taraması Edinburgh Doğum Sonrası Depresyon Ölçeği (EPDS) kullanılarak yapılırken sosyo-demografik veriler 397 doğum sonrası kadından elde edilmiştir. Ayrıca, iki değişkenli ve çok değişkenli lojistik regresyon analizleri kullanılarak PPD için olasılık oranını belirlemek için tehlike analizi yapılmıştır. **Sonuçlar:** Toplam 397 katılımcı ankete katılmış, %79,8'i Atmeh'te ikamet etmiş ve %91,7'si IDP olarak tanımlanmıştır. Bulgular, PPD'nin %59,7 oranında yüksek bir yaygınlığını ortaya koydu ve PPD ile çeşitli demografik ve sosyoekonomik faktörler arasında önemli ilişkiler belirlendi. Özellikle, 26-35 yaş aralığındaki kadınlar en yüksek PPD yaygınlığını sergiledi (%67,4; $p = 0,004$) ve ekonomik sıkıntı yaşayanlar (%66,2; $p < 0,001$) daha büyük risk altındaydı. Ek olarak, istenmeyen gebelikler PPD ile güçlü bir şekilde ilişkiliydi ve etkilenen kadınların %70,8'i depresyon bildirmişti ($p = 0,001$). Gebelik sırasında sosyal destek eksikliği, 8,924'lük bir olasılık oranıyla ($p < 0,001$) en önemli öngörücüydü ve bu, PPD olasılığında neredeyse dokuz kat artış olduğunu gösteriyordu. Bu sonuçlar, sosyal desteğin, ekonomik istikrarın ve üreme planlamasının anne ruh sağlığını etkilemedeki kritik rolünü vurgulayarak, bu savunmasız nüfusu desteklemek için hedefli müdahalelere olan ihtiyacın altını çiziyor. **Sonuçlar:** Çalışma, Kuzey-Batı Suriye'de, özellikle de ülke içinde yerinden edilmiş kadınlar arasında doğum sonrası depresyonu ele almak için hedefli müdahalelere acil ihtiyaç olduğunu vurgulamaktadır. Sosyal desteği artırmak, ekonomik zorlukları ele almak ve ruh sağlığı kaynakları sağlamak, bu savunmasız nüfusta anne refahını iyileştirmek için elzemdir.

Aralık 2024, 65 sayfa

Anahtar Kelimeler: Doğum Sonrası Depresyon, Suriye, Çatışma, Yerinden Edilme, Ruh Sağlığı, İstenmeyen Gebelik, Anne Sağlığı

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LIST OF ABBREVIATIONS

HCWs	: Health Care Workers
HTS	: Hayat Tahrir Al-Sham
IDP	: Internal Displacement People
L&M ICs	: Low and Middle Income Counties
MHPSS	: Mental Health Psychological Support
NWS	: North West Syria
PPD	: Post Partum Depression
PPDD	: Postpartum Depressive Disorder
SDF	: Syrian Democratic Forces
SES	: Social Economic Status
TBAF	: Turkish-backed Armed Forces,

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1. INTRODUCTION

1.1. Background

This paper defines Postpartum depression (PPD) as a severe mental health issue that affects women from all parts of the world after child birth, with consequences within and around the mother, the baby and the entire family. The condition can hinder a mother's functionality, attachment to the child and lead to chronic adverse outcomes of health amongst women as well as their newborns. Ironically, even with the high global burden and severity of PPD, it lacks adequate attention in terms of diagnosis and treatment especially in conflict affected regions of North-West Syria. Such issues have become compounded in these areas by the conflict which has worsened mental health disorders such as depression due to socio-economic Challenges, Displacement and trauma(1).

This study will seek to establish the rate and determinants of PPD among women in North-West Syria where social crisis has significantly compromised access to basic health and mental health care. There is need to conduct this study mainly because of the absence of local data as well as the peculiar socio-political environment that is dominant in this part of the region. We hope that understanding why PPD is so common in this context and what factors may be contributing to it could help to design effective interventions that could help women and their families in those environments.

According to WHO postpartum depression can be described as a non psychotic depressive episode which occurs in the first year after childbirth. While none of the women in this study reported thoughts about killing themselves, the extremely low rate of such thinking suggests that some of these women may have experienced postpartum depression with psychosis, a serious condition that requires immediate medical intervention and differs from the more common type of depressive symptoms commonly referred to as the "baby blues," which do not go on beyond 2 weeks of having a baby. Postpartum Psychosis occurs in about 13% of new mothers for U.S with variations being experienced depending on socio-cultural and economic status of the affected (Postpartum Psychosis: A...) (2).

Since 2011, Syria and especially the north-western area has been struggling with civil war that left millions of people displaced, many infrastructures destroyed and severely underdeveloped healthcare systems. This conflict has therefore affected the psychological wellbeing of citizens especially women, who suffer from loss of their loved ones, homes, forced evictions, and child care under difficult environments. However, in North-West Syria there is a lack of evidence on the prevalence of PPD with known demographic characteristics including, unintended pregnancy, low socio-economic status and lacking social support for postnatal depression (3)

Studies performed in other nearby areas and on Syrian refugees revealed that the rates of PPD can be up to 50% and even higher in case with displaced women (Part I- Postpartum Depression). Despite the need for understanding sexual and reproductive health and rights in conflict-affected populations, there is no published research on PPD in North-West Syria specifically. This paper considers filling this gap because identifying the current prevalence of PPD and any factors that may be statistically related to it would help healthcare providers and policymakers in the country better meet the mental health care needs of women in the vulnerable population in question. (3)

According to WHO, it is the most common mental disorder; about 5% of adults suffer from it. It is the first reason for disability globally and it affects women more than men. It can be mild, moderate or severe according to duration and symptoms.

Depression usually represents as pleasure loss, decreasing in mood and absence of the motivation in activities.

Other mental symptoms like feeling sad, concentration difficulties, empty, low self-estimating, guilty, low energy, hopelessness and thought about suicide.

Indeed, there are many physical symptoms like fatigue, pain, disrupted sleep, weakness and appetite change or weight gain. (4)

There are certain types unique to woman:

Premenstrual Dysphoric Disorder

It occurs in the period before menstruation and has two types

One is common, and the symptoms are often mild like moodiness and irritability and the other is a less common and severe with disabling symptoms such as, suicidal thoughts, depressed mood anger bloating appetite changes sadness, irritability joint or muscle pain and breast tenderness (5)

Postnatal Depression

1. It is defined by WHO as “non-psychotic depressive episode that begins or extends into the first year postpartum (6)
2. While American Psychiatric Association defines PostPartum Depression as a major depressive episode “with peripartum onset” and elaborates, “if onset of mood symptoms occurs during pregnancy or in the 4 weeks following delivery.”(7)
3. It is different from “baby blues” condition, which is normal and called by this term to describe what mother feel like sadness, worry, and exhausting after delivery for 2 weeks, while Postpartum depression last longer than 15 days. (5)
4. Prevalence is about 13% worldwide and It has multifactorial etiology (6)
5. Untreated PPD can have a negative effect on infant development, mother-child relationship, and increase risk of depressive or anxiety symptoms in children later in life. (8)

Perimenopause Depression

1. Perimenopause is a normal phase in a woman’s life but it is a challenge for some women because of cessation ovarian hormones so that may cause symptoms like mood change, sleeping difficulties, pyritic flashes and sometimes depression. (5)

1.2. Problem Statement

The plight of people suffering from mental health issues in Syria remains a sorely neglected issue given the more than ten years of the conflict. While postpartum depression is a recognized mental health disorder affecting women globally, there is no documented literature available about the condition in NorthWestSyria. Therefore, it might be expected

that many women suffering from PPD in this region will continue to receive no treatment, with detrimental impacts on their mental health, on their children, as well as familial quality of life.

In this regard, dearth of screening tools, as well as mental health care increases the challenge at hand. Though physical health has been addressed by humanitarian organizations and new borns have been given the most importance, this aspect of mental health of the new mothers has not been considered. The absence of reliable prevalence data on PPD in North-West Syria presents a major challenge to addressing this public health issue. Without this data, it is difficult for healthcare providers to design and implement effective interventions to support women suffering from PPD (3).

Thus, this study seeks to address the following problem: What is the prevalence of postpartum depression among women in North-West Syria, and what factors are associated with its development in this conflict-affected population?

1.3. Justification of the Study

Thus, it is appropriate to stress that there are several rationale for this study is both needful and relevant. First, the mental health of women in conflict-affected areas including North-West Syria is a vital but essentially research-lacking branch of public health. In fact, postpartum depression is not only detrimental to the mother who is suffering from it, but can also wreak havoc on the child who is likely to suffer effects in emotional and cognitive areas. Through determining its prevalence and established risk factors in this study, it will thus offer important knowledge that can inform future health interventions in similar conflict affected region.

Second, the results of this research will be beneficial for decision makers and other humanitarian actors operating in Syria. Learning more about how common PPD is and what puts women at risk for developing it will help advance the strategies for designing mental health services that could involve screening, initiation, and fostering new mommas. Given the scarcity of access to healthcare in North-West Syria, mental health interventions need to focus on the most pressing issues.

Third, this research shall respond to an existing gap in the literature in regard to maternal health in contexts of conflict. Although there is more attention to PPD in high-income countries and some in L&M ICs, specific data from conflicted areas such as North-West Syria is scarce. In filling this gap, this study shall set the platform for subsequent research and intervention focusing on promoting maternal mental health in conflict affected regions.

1.4. Objectives

General Objective:

This study aimed to estimate the Prevalence of reproductive-aged women in North-West Syria suffering from postpartum depression.

Specific Objectives:

1. To determine the association of intended and unintended pregnancy with postpartum depression.
2. To examine socio-demographic and obstetric risk factors for postpartum depression in North–West Syria.
3. To compare the status of displacement and postpartum depression Section developed among women in this region.

1.5. Hypothesis

1. **Primary Hypothesis:** The prevalence of postpartum depression is higher among women with unintended pregnancies than those with intended pregnancies.
2. **Secondary Hypothesis:** Displaced women in North-West Syria are more likely to experience postpartum depression compared to non-displaced women.
3. **Additional Hypothesis:** Women with lower socio-economic status, limited education, and poor social support are more likely to develop postpartum depression.

2. GENERAL INFORMATION

2.1. Introduction

2.1.1. Context of Syria and Northwest Syria

2.1.1.1. Geographic

Syrian Arab Republic is a country in Western Asia and lies in the east of Mediterranean. It is a unitary republic that consists of 14 governorates (subdivisions), and is bordered by the Mediterranean Sea to the west, Iraq to the east and southeast, Turkey to the north, Jordan to the south, and Palestine and Lebanon to the southwest. Cyprus is located in the west across the Mediterranean Sea (9)

Syria is country of fertile plains, high mountains, and deserts.

2.1.1.2. Demographic

Syria is a home to various ethnic and religious groups, including the majority Syrian Arabs, Kurds, Turkmens, Assyrians, Armenians and Circassians. Religious groups contain Muslims, Christians, Alawites, Druze, and Yazidis (10)

Damascus is the capital and largest city. Arabs are the largest ethnic group in Syria, and Muslims are the largest religious group

2.1.1.3. Syrian Crisis

Since March 2011, Syria has been going through a state of political crisis and instability. More than 600000 have been killed, while over 14 million Syrians have been displaced(11).

There are around 5.5 million Syrian refugees living in Lebanon, Turkey, Iraq, Jordan, and Egypt, the countries that surround Syria. Of these 14 million, 6.8 million were Syrian internally displaced persons (IDPs) (12)

Syria is presently divided mainly into four general regions of influence controlled by hostile forces;

- 1- The Syrian Regime in the central.
- 2- Turkish-backed Armed Forces (TBAF) in Northern Aleppo,
- 3- Hayat Tahrir Al-Sham (HTS) in Idleb province,
- 4- Syrian Democratic Forces (SDF) in North-eastern part of Syria

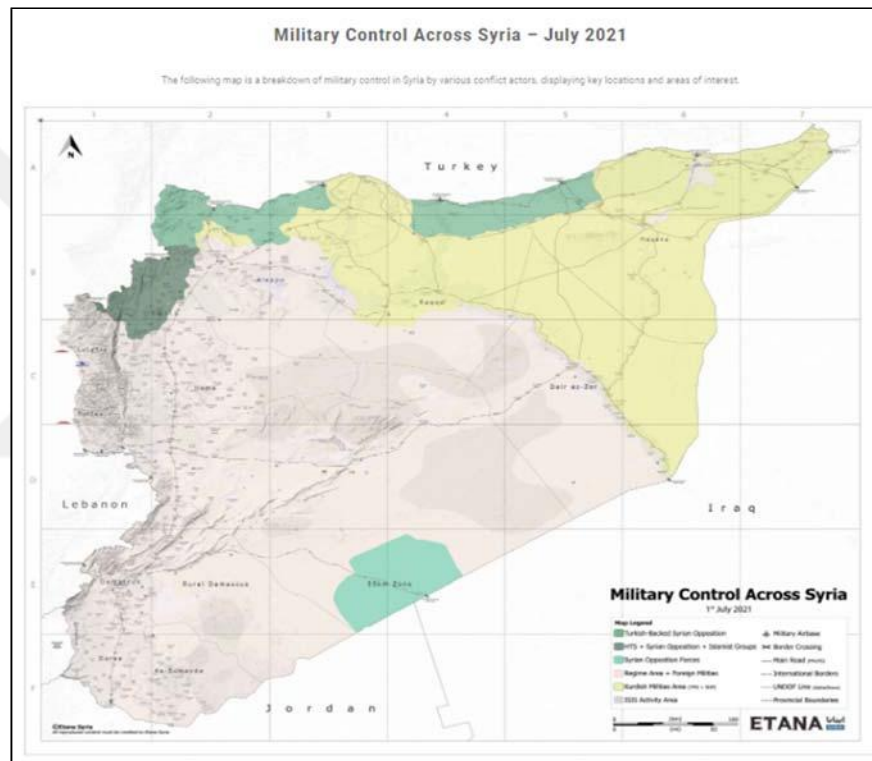


Figure 2.1. Military Control Across Syria - July 2022. Breakdown of military control in Syria by various conflict actors, displaying key locations and areas of interest

The term North-West Syria NWS includes Northern Aleppo and Idleb Province controlled by TBAF and HTS.

Northwest Syria is home to 4.5 million people. Of them, 2.77 million, or 63%, are IDPs and more than 4 million are in urgent need of humanitarian assistances (13)

The economy situation in NWS mainly depends on humanitarian aid, and in spite of the lifesaving intervention of NGOs, there is a big gap of humanitarian needs

2.2. Mental Health in North West Syria

2.2.1. The Tangible Conception of Mental Health care Provision in Northwest Syria

North west Syria has been one of the most affected regions within in Syria through the war and access to health care especially to mental health has been severely affected through the war. War and civil unrest has also negatively impacted the mental health of the population and current and post conflict survivors rate high on trauma, anxiety, depression and post traumatic stress disorder (PTSD) (14)

This study shows that there is a severe mental health crisis in this area, compounded by a lack of resources, resources and infrastructure, and stigmatized access to healthcare. This will focus on discussing the current situation; the provision of mental health services in northwestern Syria, issues affecting health care workers and the people in the community, and finally the need to do something in this area.

2.2.2. Challenges of Managing Mental Health in NWS

Still the war in Syria which started in 2011 continues to unleash one of all modern humanitarian catastrophes. As of this writing, there are millions of forcibly displaced Syrians, who live in camps or areas of ongoing conflict, which does not allow them to access primary health care services, including mental health care. It is even worse in northwestern Syria where the fighting, displacements, and destructions create fertile ground for mental health problems.

Bou-Orm and his co-authors explain that the ongoing conflict increases psychological and emotional demands on civilians as well as health-care workers in the studied area. Cumulative traumatic exposure is a common problem for many individuals, and may include the death of a family member, violence, or forced eviction from a home. Altogether these disasters have contributed towards a consecutive prevalence of other mental health conditions such as depression, anxiety, PTSD, and other related trauma disorders (15)

In addition, the war has altered the social and/or family settings and forced people to become isolated without the social capital that is available to them during stressful situations.

This is the context wherein individuals actually require mental health care more than ever, and there is an almost complete absence of the resources for providing the same.

The role and challenges of mental health services system, and the care of patients during and after the crisis. Before the war, the mental health system in northwestern Syria could be described as unstable at best and has only deteriorated since then. According to Shoib, Syrian mental health sector can be characterized as very weak and underdeveloped with very few hospitals and facilities that can meet current and emerging need in the area of psychological and psychiatric services. Such factors as collapse of health structures, refugee displacement of health care personnel and lack of qualified mental health workers has also added to the problem(16)

The challenge is that mental health service provision in northwestern Syria is defined by a myriad of rationalities, which enable few individuals to get the help they need.

The most significant known issue is a lack of mental health care providers. Most qualified gen after physicians, psychiatrists and psychologists have either emigrated or become refugees, and this has left the country with scarce health facilities. The majority of the remaining professionals are pressed by numerous cases and do not have the necessary equipment to make a full range of work.

Second, the culture of mental health in Syria is still a taboo, a marked disadvantage which prevents the targeted group from seeking help. Mental health disorders are largely neglected or taboo, thereby, people will not go for treatment for their mental health issues for fear of being ostracized. This cultural taboo is further helped by low levels of health literacy about mental health treatment options, and low levels of trust in health care facilities given the attacks on them during the conflict.

Yet another is the problem of underdevelopment of mental health services and fragmentation of the funding for such services. Of all the money which is provided by international community in order to help Syrian people, most part makes direct impact on providing necessities like food, clothes, and shelter, as well as on health issues; mental health, in particular, is not viewed as a primary concern. Therefore, mental health services receive little funding and can take a long time to respond to clients, provide insufficient treatment, and / or have restricted access to necessary medicines.

2.2.3. Delivery of MHPSS Services

However, there have been attempts in ensuring that MHPSS intervention is offered to the HCWs and the communities in northwestern Syria. To complete the assessment, Bou-Orm engaged in a mixed-methods study to understand more about adequacy of MHPSS services available to the affected population to ensure sufficient services were provided and the provision-success of the given interventions. They pointed out several important interventions that still have been accomplished with regards to the mental health crisis in northwestern Syria (15)

Perhaps one of the biggest concepts is the incorporation of mental health in the packages delivered through primary care facilities. Due to the lack of sufficient numbers of mental health workers, the primary care physicians have been encouraged to conduct simple mental health information including, conducting depression and anxiety assessments, providing the initial counseling, and offering a guidance to the appropriate specialized mental health professional when necessary. This integration helps patients gain access to mental health services since it's cheaper than developing specialized care within other formal establishments.

Furthermore, local and international NGOs and the international aid agencies have served an important function of delivering mental health and psychosocial supports. They have set different mental health services for community that provides counseling, support, and trauma-sensitive care for people with the impacts of conflict. They have also had training sessions where they have a prepared local health workers with skills required in handling mental health conditions within the community.

Another very creative strategy has been brought in telehealth and online psychotherapy, especially as a way of reach out people in the remote or in resource constrained areas that are infested with conflicts. Since patients cannot easily get traditional in-person care because of the conflict and resulting displacement, telemedicine is proving its worth in addressing people's mental health needs. One of the major advantages is that patient can get counseling and psychological support through various electronic devices, which meet the needs of growing number of people with various mental health disorders and the shortage of specialists in the given region.

2.2.4. How Are Health Workers Coping: Mental Health Support

Healthcare workers are not only ordinance givers enjoy mental health services in northwestern Syria but also receivers, they are under considerably high mental stress due to working in conflict area. The current demanding working conditions, experiences of traumatic events, and insufficient hard resources put existing and new psychological disorders among the healthcare workers. Several health workers have said that they experience burnout, compassion fatigue or secondary trauma which had affected their delivery of care.

Lastly, in Bou-Orm mental health care support to the healthcare personnel in the war zones is underscored. According to their research demographic survey, healthcare human resources in northwestern Syria called for psychosocial support services because of the terrible stress that they pushed through in their work. There has been a manoeuvre to respond to these requirements through various approaches such as support group services, counseling as well as stress and sectional activities education (15)

Caring for the healthcare workers is not only important because they need support for mental health but also because the supply of such services will be needed in the foreseeable future. If health care workers are mentally and emotionally healthy then they are in a good position to take care of their patients and offer the support needed to the victims of the conflict. Enhancing the support for mental health, therefore, is a multiplication of positive impact as it contribute in enhancing the quality of services delivered to the public.

2.2.5. Request for an Action and the Need for Long Term Solutions

The high levels of serious mental disorders in the north western Syrian population are a major humanitarian emergency that needs the attention and intervention of both local and international communities. The authors of Shoib and Hassan (2022) emphasize the importance of the intersectoral multisectoral approach for strengthening the mental health of patients in the South Asia region. This response should contain the provisions for the increase in the financing of mental healthcare, training of local mental health staff, and the creation of culturally appropriate intervention plans for the population (16)

However, this approach raises questions about recovery from disaster: what is needed is sustainable strategies that are broader than just providing rescue aid. This means mental health has to be brought within a medical model that has to involve developing the local health care human resources. This includes development of human resource through training of mental health personnel, as well as increasing availability of medications and treatments and combating mental health related prejudices within Syrians.

2.3. Literature Review

PPD is a clinical condition that is experienced by some women after childbirth often within the first year of motherhood. It is subcategory of mood disorder and it carries serious implications for both the mother and child. Postpartum depression is different from the “baby blues” which are mild mood swings which start immediately after delivery and subsides after 2 weeks. PPD can begin any time during the first year after childbirth, though it typically emerges within the first few weeks to three months postpartum (17)

It is a commonly experienced disorder in the postnatal period that occurs in newly delivered women within the first weeks or months of delivery. Worldwide, PPD is estimated to occur in 13% mothers with higher prevalence in LMICs(18) especially in situations of conflict such as in Syria. Literature review of PPD is presented in this section, identifying the frequency of PPD, risk factors contributing to PPD, and implications for Middle Eastern mothers in war and other comparable countries. The discussion incorporates the previous literature of Syrian refugee women as well as other women in the region in order to understand PPD transactionally.

Many systematic reviews of studies on postnatal mental problems in women have been published internationally and in specific countries as well as in Asia and Africa.

On the other hand, in the Middle East and the Arab countries, researches about postnatal depression are sparse and have numerous methodological flaws. For example, Hague et al conducted a literature review of studies in the Middle East and Arab countries and found that the prevalence of PPD among the women ranged from 10 percent to 51.8 percent (19)

That wide variance in prevalence could be contributed to constraints in methodologies and discrepancies in study designing. Therefore it is very difficult to compare PPD prevalence between studies in different regions or even in the same region (19)

Constraints in methodology may be a plausible explanation for the prevalence variations. For instance, the prevalence of PPD in Egypt is quite high at 51.8 percent, following that, 43% in the West Bank-Palestine and 41% in Iran.

There are different designs in studies; some of them are cross sectional the other are prospective like in Oman and Tunisia. There are two published studies about PPD prevalence among Syrian women, one of them carried in 2017 on Syrian refugee women in Jordan and the result was about 50% (20)

The other study was in Damascus-Syria and conducted in 2017. It revealed that prevalence of PPD was 28.2% among screened women (19)

Stress, hard life events, childcare difficulties, and anxiety during pregnancy are all linked to the development of PPD. In addition, a history of a past episode of Postpartum Depression, marital strife, lack of partner support and other factors may be considered.

A hot Cochrane review revealed that psychosocial support, which has been provided by trained health staff (comprehensive psychological supervision, including postnatal home visits and telephone communicating), reduced the probability to develop PPD among women (19)

In the Middle Eastern countries, the extent of postnatal depression is as follows: In a study by Mohammad et al. (2018) concentrating on Syrian refugee Women in Jordan, the researchers dropped that 50% of the women had PPD like symptoms. Such an alarming rate underlines the fact that refugee population face significant barriers such as displacement and limited healthcare access due to trauma (Proposal-Postpartum Dep...). Using EPDS to detect the presence and severity of depressive symptoms the study established that women who had loss of dear ones, poor housing and trauma were more likely to develop PPD (20). The result of this study underlines the importance of directing different educational campaigns to help refugees in improving their mental health, especially women who are in a postpartum period or are pregnant (20).

There are many factors that can make a woman more likely to get postpartum depression, including The identified risk factors include social and economic status, past obstetrics history, psychological stress, and culture in the development of PPD. The literature provided always identifies a number of factors contributing to the risk of PPD, especially in conflict countries.

1. Socio-economic status (SES)

Lower SES is one of the best predictors of developing PPD. It was identified that low income, low education, and poor living standard Hawaiian women have a higher likelihood of being depressed after delivery. Alsayed et al. (2021) identified low SES as a major risk factor with PPD among women; this study was conducted with women in Jeddah, Saudi Arabia. The authors pointed out that financial stress worsens the experience of motherhood, especially for women lacking healthcare and social resources(Proposal-Postpartum Dep...) (20,21).

2. Displacement and Conflict

Loss of a place of living is considered as an addressee of mental health, including PPD. Female refugees are conceptionally more stressed than males because in addition to conflict they lose homes, families and friends. All these factors play an important role in deveopment of PPD. Mohammad et al. (2018) highlighted that Syrian refugee women living in Jordan were at particularly high risk for PPD due to their traumatic experiences during the Syrian civil war and subsequent displacement. The study found that 50% of Syrian refugee women reported symptoms of PPD, underscoring the unique vulnerability of displaced populations (Proposal-Postpartum Dep...)(20).

3. Obstetric history

Existing studies have pointed out that failure in preventing pregnancies, complications during child birth and history of psychiatric disorders are key factors that may cause PPD. Another multinational cross-sectional study was completed by Amer et al., where the purpose was to identify cultural factors predicting PPD among women in different cultures of Middle Eastern women. The study worked out necessary that women who intended pregnancy were more likely to develop PPD. Also, women who had depressions or anxiety during pregnancy were more vulnerable to postpartum depression This is in concordance

with synthesis of literature from around the world, which posit that there is significant association between past mental health disorders and development of PPD (22)

4. Social Support

Another established PPD risk factor is most definitely a lack of social support. Whereas in the extended family and communal childcare cultures, lack of support increases stress levels for new moms. Wildali et al. (2024) established a study in the West Bank and discovered that women without family or spousal support were at higher risk of PPD. This finding was most timely today especially in the regions where there is war and women are uprooted from their homes and families thus separated from their husband and children(23).

5. Biological Factors

There are numerous biological factors that have been associated with use of postpartum depression. Among the best understood social causes of postpartum depression are hormonal fluctuations that take place after delivery. Estrogen and progesterone, two hormones, increases tremendously during this period of pregnancy.

but these hormones are produced in large quantities only during labor and immediately after the delivery they decrease enormously. Some researchers believe that this precipitate drop in hormone levels can in some ways cause mood swings in some women thus making them prime targets for depression (24). Furthermore, changes in thyroid hormones that also vary during and after pregnancy have also been linked with depressive symptoms in postpartum period.

6. Psychological Factors

Further, factors such as a previous history of depression or anxiety, and specific personality profile that puts a woman more at risk of developing mood disorder form be part and parcel of psychological risk factors for PPD. When other factors are equal, women with a history of major depressive disorder or other mood disorders are much more likely to get PPD. According to the literature as many as half of women, who had ever been diagnosed with depression, may develop PTSD after childbirth(17). Like with other postpartum psychiatric disorders, PPD is more likely to occur among women with a history of anxiety disorders, obsessive-compulsive disorder, or PTSD.

7. Unintended pregnancy

Unintended pregnancy (UP) is a major public health concern crossing the entire spectrum of the female population. It describes pregnancies that were either intended at some other time or not desired at the time of conception. Mistimed pregnancies refer to situations when a woman gets pregnant earlier than planned while unwanted pregnancies refer to instances when a woman is pregnant at all. Both types of unintended pregnancies can pose severe social, economic and psychological impacts to woman, families, and states respectively. A number of negative effects have been established to be linked with unintended pregnancy – lower prenatal care, probability of abortion, and worse maternal and child health (25).

2.3.1. Relationship Between Unintended Pregnancy and PPD

A number of research has been carried out on the relationship between unintended pregnancy and postpartum depression. It has emerged that unintended pregnancy is a major risk factor for PPD. Abbasi et al. (2013) assessed the relationship between the risk of having up to one or more unintended pregnancy and postpartum depression among the first-time mothers in the United States. Women who described their pregnancy as unintended were identified as being at higher risk of developing PPD than women who planned their pregnancies. This the authors pointed out as plausibly leading to the probability of developing at least some depressive symptoms given that the pregnancy was unplanned, plus the physical and emotional challenges of early motherhood (26).

Similarly, Brito et al (2015) conducted the study in Brazil that also aligned with the present study for a significant relationship between unintended pregnancy and post partum depression. Therefore, the researchers investigated data from a group of women who delivered in public hospitals and discovered that women with unwanted pregnancies had higher PPD rates than those with intended pregnancies. It disclosed how relational support mediates the effects of unintended pregnancy on mental health and observed that women without relational support had further increased susceptibility to PPD (27).

In the study conducted on Iranian women, Iranfar et al. (2005:63) similarly concluded that unintended pregnancy was a predictor of postpartum depression in women in Iran. Based on those findings, the researchers said that cultural beliefs about marriage and child bearing

may play a part in raising chances of PPD among women with unwanted pregnancies. This happens especially so where childbearing is culturally permissible and even expected of women, pregnant women who did not plan for it will feel the extra pressure and judgement exacerbating feelings of depression and anxiety (28)

In another study, conducted in 2021 more about women in Bangladesh pregnancy intention and postpartum depression were compared. This research work identified that women with unwanted pregnancy as compared to those with planned pregnancy established depressive symptoms within the first six months after delivery. Family planning services were identified by the authors as having potential for lowering the chances of unintended births and therefore PPD (29)

Systematic Reviews/ Meta-Analyses (Including Qiu et al., 2020, and Abajobir et al., 2016). There are two systematic reviews that present the causes and the consequences of unintended pregnancy related to postpartum depression, namely meta-analysis which combine the results of multiple published studies and provide a clearer understanding (30)

Qiu and other authors investigated in a meta-analysis of cohort and case-control studies the correlation between unintended pregnancy and postpartum depression as well. The source of the meta-analysis was 21 papers with an accrual samples of more than 0.5 million women. In a study completed by the authors, researchers discovered a positive correlation between unintended pregnancy and PPD risk; particular, women who conceived unintentionally are 63% more likely to develop PPD compared to those who have planned pregnancies. The authors stated that the extent of the relationship was somehow higher in LMIC in particular among women of childbearing age. The study also identified sources of socio-economic and cultural factors that lead to unintended pregnancies that could worsen the PPD risk. (30)

Another similar study was conducted by Abajobir et al. (2016) with the systematic review and Meta-analysis to look the relationship between the Unintended Pregnancy and Perinatal Depression that includes both the prenatal and postpartum depression. It is shown in the meta-analysis suggesting 11 articles involving more than 15,000 patients. The authors reported that, compared with intended pregnancy, unintended pregnancy increased perinatal depression by 1.4-fold. The study also revealed that women, who have unwanted pregnancy, differ with those who have mistimed pregnancy in emotional status, and who were at the

highest risk for developing depression. The authors suggested that the emotional distress associated with unwanted pregnancies (31).

2.3.2. Study: War, Conflict and Postpartum Depression

There are special considerations when it comes to postpartum depression in conflict affected areas. Where women find themselves, they also endure multiple losses and traumas including forced displacement, violence, and loss of source of income. Despite that, it was established that these factors are not only risks for PPD but also challenge diagnosis and subsequent treatment for PPD due to lack of necessary health facilities (20).

Literature reviews conducted on women from conflict countries like Syria and Palestine have affirmed high prevalence of PPD than those conducted on women from more stable countries. For example, a systematic review by Ayoub and colleagues in 2020 addressed the PPD rates in Arab nations. and found that conflict-affected regions, including Syria, reported the highest rates of PPD (Proposal-Postpartum Dep...). The authors highlighted that war-related trauma, displacement, and loss of family members were significant contributors to the elevated prevalence of PPD in these regions. Moreover, the stigma surrounding mental health in Arab cultures often prevents women from seeking help, exacerbating the problem (18).

Mohammad et al (2018) made similar observations in their study of Syria refugee women living in Jordan. The authors pointed about the fact that the conditions in refugee camp are also poor, other than displacement which is the major cause of PPD. Most of the women interviewed were housed in cramped conditions, which provide poor to no access to basic and essential needs such as health care, water and food. These conditions do not only impact the health of the individual's physical body, but they also worsen cases of mental health disorders such as PPD. The study underlined the importance of the adequate and complete package of mental health care intervention for people, who are refugees, including the procedure of the PPD and psychosocial help (20).

2.3.3. Culture and Postpartum Depression

Culturally, women's experiences of PPD are regarded as having a significant impact. In Middle Eastern countries, especially, women have always been subjected to restricted

roles, dire expectations regarding this phase of their lives as mothers, which worsens this feeling, particularly to mothers, who developed PPD. Women, especially from Ethiopia, who, in one way or another, are forced to meet society's set standards of motherhood are likely to have depressive symptoms (Abebe et al., 2019). Like this study, the same influential factors might be expected in Arab cultures in which much is made of the role of motherhood as the purpose of women (32).

Accordingly, Ayoub et al. (2020) studied cultural perceptions of PPD in the Arab area and concluded that many women were inexcusable to be reluctant to acknowledge it because of and concerns about how they themselves would be viewed as weak and incompetent mothers (Proposal-Postpartum Dep...). Author points out that there is still a massive shame associated with mental health issues, for this reason, many women never seeking help even when they have very bad symptoms. In the same work, the authors pointed out that it is very important to have these cultures in mind when trying to address PPD in the Arab world, and discourage the stigma often associated with mental health problems (18).

2.3.4. Special Educational Need Interventions and Recommendations

According to the literature, responding to PPD in war-affected countries like Syrian Arab Republic involves offering mental health assessment, and counseling and eliminating the stigma regarding mental health. As according this research, it should be pointed out that many authors have focused on the need to provide mental health as a sub specialty of medicine and nursing through appropriate existing healthcare systems. For instance, Wildali et al. (2024) proposed that primary healthcare centers in the West Bank need to make annual PPD screening a routine service among the maternal services available (Proposal-Postpartum Dep...). Similarly, the work of Mohammad et al. (2018) maintained that to enhance levels of mental health among new mothers living in refugee camps, screening actions for PPD and counseling should be conducted (20) (23).

Besides healthcare quaternary prevention, there is a lack of accessible programs, which would assist new women in receiving social and emotional support. Thus, according to Ayoub et al. (2020), women could alleviate feelings of loneliness through constructing community support networks and obtain various necessities to deal with motherhood challenges effectively (Proposal-Postpartum Dep...). This is perhaps even more crucial in

conflict circumstances where families are displaced and traditional models of structure diminished (18).

2.3.5. Conclusion

The body of work on postpartum depression in the ME, especially in war-stricken countries including Syria, emphasizes the gap of mental health care for postpartum women. The prevalence of PPD is considerably increased in these zones because of socio-economic, cultural and conflict factors. Displaced women, women with trauma history, and women who have lost social support are at a high risk of developing PPD. This problem has to be solved by taking actions on several levels, primary acute mental health assessment and promotion of psychosocial well-being, and elimination of mental health negative perception. Further studies must be carried out concerning different specific experiences of the problem of women affected by conflicts and searching for the ways of preventing PPD on the adverse effects on maternal and new-born children's health.

3. MATERIAL AND METHOD

3.1. Study Design

This research uses a cross-sectional descriptive study design to determine the proportion of Postpartum Depressive Disorder (PPDD) levels and their drivers in NWS. These studies were conducted using a cross-sectional design because the goal of the research is clearly to establish the current status of postpartum depression and it becomes possible to gather information from the relevant population at one time which is beneficial for this vulnerable female group living in a conflict-affected area. The study data will be sourced from the recently postpartum women attending primary healthcare centers (PHCs) in the selected sub-districts. The study will use structured Interview and standard screening tools to assess the prevalence of postpartum depression and relationship between postpartum depression and demographic/ obstetric/ and social factors.

3.2. Study Location

The research was conducted in Idlib district, located in North West Syria, specifically within two sub-districts: Idlib City and Harem-Atmeh Camps. We have chosen the study area as Idlib district to intervene the internally displaced pregnant women due to high density of IDP population and scarce access to adequate health care services that as a result, may lead to poor mental health among the postpartum women. The study sites are five PHCs; three in the Atmeh Camps and two within Idlib City. The PHCs offer maternal and child health care services which makes it easy to locate postpartum women during their routine visits for post-natal and or infant care.

3.3. Study Population

The study population includes women who are within three weeks to eight weeks of postpartum period at the time of the survey. Women who will qualify for the study will be approached from the selected PHCs during their postnatal period or when they are attending clinic for their newborn. This period was selected since it will take some time to develop postpartum depression and the challenges related to mental health will still be early to tackle.

3.4. Sample Size Determination

The calculations of the sample size for the current study followed standard cross-sectional studies sample size estimation equation based on population proportion with estimated margin of errors.

Based on a confidence level of 95% and a margin of error of 5%, the sample size calculation was performed using the following assumptions:

From a similar study done in Syria, prevalence of P was reported at 28.2% in the recent postpartum period in Damascus.(19)

Standard Normal Deviate = $Z_i = 1.645$ (these correspond to a 95 percent level of confidence).

By applying these parameters, the minimum sample size needed for the study was calculated at 310 participants. This makes it easier for the study to have enough sample sizes to provide legitimate statistical significance of differences and relations.

3.5. Sampling Techniques

Random sampling technique was used to choose the participants from both the PHCs in Idlib city and Atmeh camps. The random nature of the sampling avoided any kind of sample bias where any postpartum woman visiting the PHC during the study period has an equal likelihood of being selected in the study as the other and hence the results of the study can be generalized.

The process involved: Recruitment of the Target population from the registers of the maternal and child health services at the PHC's.

Sample technique that involved using computer generated random numbers to select women from the list of eligible postpartum women.

The participants who have consented to participate would be asked self-administered semi-structured questionnaires completed through face-to-face interviews with the participants by CHWs.

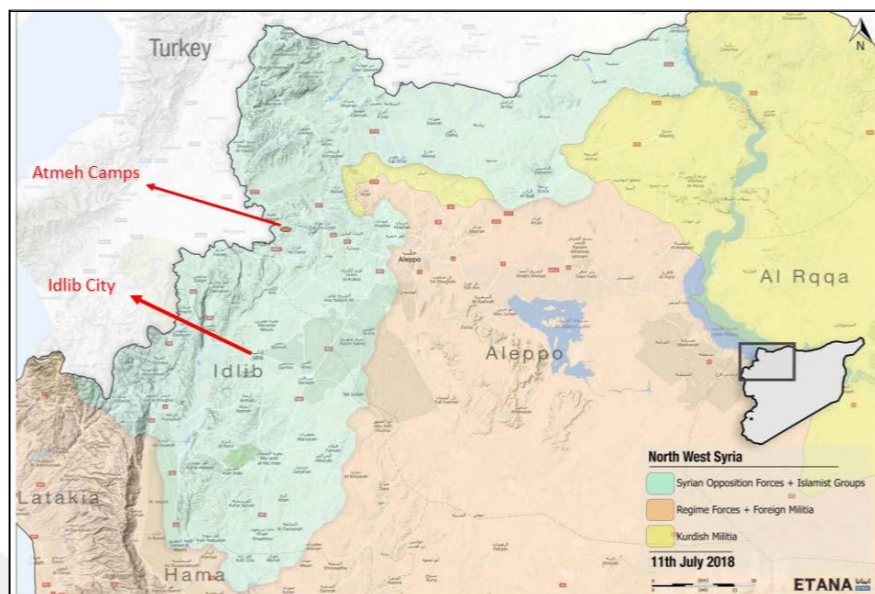


Figure 3.1. Map of Research Locations

3.6. Data Collection Methodology

The study employed face-to-face interviews by trained community health workers during data collection. The CHWs used the Edinburgh postnatal depression scale (EPDS) valid in Arabic for the target population(33). The EPDS is a common screening tool of postpartum depression which contains ten questions that interrogate depressive symptoms across the last week. Every question has four response options with referring to difficulty rate marked from 0 to 3, and the total summary score is from 0 to 30. A score of ≤ 12 shall be used to select high risk women for postpartum depression. Along with the EPDS, results of a sociodemographic questionnaire as age, marital status, number of children, education level and economic status will be collected.

To ensure high-quality data collection:

- **Training:** The participants CHWs were trained on the study protocol, interviewing techniques and the use of KOBO Android application for data collection in actual tablets.
- **Privacy and Consent:** Face-to-face interviews were conducted in private rooms at the selected PHCs and accompany by written informed consent from the participants.

- Data Collection Tool: KOBO was used as the platform for data collection, and data entry is well protected and efficient as well.

3.7. Data Collection Period

The data collection phase was for two months Jan and Feb 2023 where the CHWs continued to make frequent visits to the selected PHCs. The study shall ensure that data collection is completed within this period to reduce variability of utilization of health services and postpartum health among the respondents.

3.8. Study Variables

The study will examine both independent and dependent variables:

- Independent variables are: age of the mother, whether the family was an IDP at the time of the interview, number of children, gender of new born, mother's education level, economic status ,social support during pregnancy and if the pregnancy was planned or not.
- Dependent variable: The major dependent variable is the PPD score based on the EPDS.

3.9. Data Analysis Plan

Data was exported to the statistical package, use SPSS version 26 for analysis of the data. The following analysis techniques were used:

- Frequency distributions and percentages were used to present the demographic and obstetric data of the participants.
- In bivariate analysis correlations between postpartum depression and other independent variables were examined.
- By using multivariate regression analysis, it was, therefore, easier to control for confounding factors and determine other factors that influence PPD.
- The results are reported in tabular form and graphs and tests used will include Chi-square, t-tests, and p-values to establish the degree of correlation.

3.10. Inclusion Criteria

PPD prevalence among NWS women is the focus of the research. In an attempt to ensure that the research collects only data that is germane to the objectives of the study, certain parameters of sampling have been laid down. These criteria explain that participants have to be chosen as representative of the postpartum population and would be able to give appropriate information.

Postpartum Status: Only women who are within 3-8 weeks after delivery will be considered for the study. Such period was chosen with reference to the fact that PPDM may develop several weeks after childbirth, not at the moment of delivery. It also ensures women have adequate time in which they can transition to motherhood while at the same time being timely enough to capture postnatal psychological morbidity period.

Willingness to Participate: In this study, the target population will be only those women who avail themselves for a study of such nature. Informed consent will also be sought orally from each of these women prior to data collection. Only respondents willing to take the interview and solve the questionnaire will be included in the study.

Health Status: For its conduct, the study selects women who, according to the survey criteria, are in reasonably good health after childbirth, to exclude interference of complications that could complicate the postpartum, and hence complicate results' interpretation.

Parity and Obstetric History: Parity is assumed to hold a negative association with PPD and women with different numbers of children will be included to examine the level of children a woman can have before she is at high-risk of developing PPD. Having both women who give birth for the first time (primiparous) and the those who have given birth before, (multiparous) will help in an evaluation for PPD within various maternal circumstances.

Sociodemographic Diversity: All the women of different ages from all the economic classes and of different educational level will be involved in the study. This diversity will mean that a more accurate sample will be obtained for analysis and the affecting various factors that may lead to the development of PPD in NWS will be studied.

3.11. Exclusion Criteria

Thus, exclusion criteria have been not only defined but also are quite rigorous according to the requirements of a qualitative study free from bias and providing valid results. The exclusion criteria are relevant to be applied in order to eliminate individuals who can significantly bias the results as the result of some external factors not connected with postpartum depression.

- Complications During or After Childbirth: But women who for some reason underwent surgical operations in the process of childbirth, including cesarean section and, for example, needing an extended stay in the hospital, as well as women who were given emergency interventions during or after childbirth, will not be included. Such complications can bring factors that may affect physical well-being, but have an independent effect on mental health.
- Newborn Health Issues: In this study, women with newborns who have birth defects that may need extensive neonatal care, or have died will not be allowed to participate. These women are likely to feel a different kind of pressure.

Pre-existing Mental Health Conditions: It has also been determined that participation will not be permitted from women who have had a clinical diagnosis of severe mental ill-health such as schizophrenia, bipolar affective disorder, or severe anxiety. This serves to confirm that the depressive symptoms being examined are responsive only to postpartum onset and not the worsening of previous states.

- Declined Participation: Women, who are unable to or refuse to give an informed consent, will not be considered for the study. People who are unwilling or who cannot participate in the data collection exercise will not be made to do so through coercion.

3.12. The Developers Opted to Pre-Test

The primary data collection tool was a semi-structured questionnaire composed of two main parts: A sociodemographic part and the version of the Edinburgh Post Natal Depression Scale (EPDS). EPDS a common and widely validated screening tool which is exclusive to postpartum depression. The present measure consists of ten items that implicates depressive symptoms such as low mood, anhedonia, worry, tension, helplessness and hopelessness.

Every question contains the choices, and the scores vary from zero to three. The maximum total of the scores may reach 30; the above-indicated threshold to consider as postnatal depression is 12.

Since EPDS is considered one of the most reliable screening tools and it can be completed in 3 minutes. It contains 10 questions and has 88% sensitivity where the specificity is 70% (34)

Besides, the sociodemographic details regarding the mother's age, education, number of children, marital status, socio economic status and intendedness of pregnancy will also be obtained from the sociodemographic section of the questionnaire. These variables will enable an understanding of potentially related factors with postpartum depression.

3.13. Pre-Testing

The questionnaire was pre-tested before the actual data collection exercise commences to ensure that the questions were clear, dependable and culturally accredited to the subjects in NWS. In order to pre-test data collection tools used in the study, a small sample of postpartum women from the PHCs similar to the chosen study sites but not the sites themselves were interviewed. In the case of any confusion or complexity that a participant might experience while answering the pre-test questionnaire, the formulated questionnaire could be adjusted. This process helps to refine the data collection instrument and ensures that the questions accurately capture the intended information.

3.14. Statistical Analysis

The collected data were analyzed by employing SPSS version 26 as a statistical software specifically developed for social scientific research. The data analysis involved several steps:

- 1- Data Cleaning: First, the basic cleaning of the dataset was conducted to identify and solve possible problems with missing or incorrect data. If there were any mistakes in translation, they would be corrected with the help of the survey results.
- 2- Descriptive Statistics: The first step of analysis was to perform exploratory analysis so as to get descriptive statistics of the study population's demographic profile.

Descriptive statistics in the form of simple arithmetic mean, median, mode, frequency, and percentage distribution were used in expression of selected demographic characteristics such as age, education level, and PPD scores.

3- Bivariate Analysis: At this particular stage, we examined whether postpartum depression is related to one or many independent variables main ones being marital status, income level and if the pregnancy was planned or not. Regression analysis and ANOVA tests will be also used to establish whether or not these factors are significantly related to PPD.

4- Multivariate Regression Analysis: Since there are likely to be some confounding factors that affect postpartum depression, multivariate logistic regression was conducted in order to determine independent predictors. This paper will therefore aim at identifying which of the predictors are most risky, holding the others constant, for the development of PPD. They will therefore be reported as odds ratios (ORs) accompanied by their corresponding 95% confidence intervals.

5- P-value Interpretation: The $p < 0.05$ was used to test the significance of the differences of the means of the variables measured between the two groups. This implies that if any relationship observed gets a p-value below 0.05 this will be considered to have reached a significant level.

3.15. Ethical Considerations

Before commencing the study, approval was obtained from the health science ethical committee at Ankara Yildirim Beyazit University (approval Code: 2022-996). Permissions were also secured from the managers of health facilities where community health workers would conduct interviews with women and administer the prepared questionnaire.

In addition, consent from the participants was gathered, and an introductory question was included in the questionnaire to confirm their willingness to take part in the study. Participants were informed about the study's purpose and rationale. To protect their identity and privacy, all data collected was coded, ensuring that respondents remained anonymous and unharmed. They were assured of the confidentiality of their information and that they could withdraw from the questionnaire at any time. Interviewers were tasked with safeguarding the dignity and well-being of each participant and addressing any potential risks during the study.

4. RESULTS

4.1. Statistical Analysis

Table 4.1 shows the basic demographic characteristics of the study participants. The majority of participants were from Atmeh (79.8%), with 91.7% being internally displaced persons (IDPs). The maternal age of participants predominantly ranged between 18 and 35 years, with 46.1% in the 18–25 age group and 43.3% in the 26–35 age group. Over half of the participants had three or fewer children (52.1%), and their educational attainment was mostly at the high school level (64.7%).

Economic hardship was prominent, with 73.8% reporting that their income was less than their expenses. Most women were not employed outside the home (82.4%), and 36.3% experienced unintended pregnancies. Regarding social support, 65% received social support during pregnancy. Importantly, the prevalence of postpartum depression (PPD) was 59.7%, indicating a high burden of PPD among this population.

Table 4.1. Basic information and demographic characteristics of the study participants (N=397)

Variables		Frequency	Percent
Location	Atmeh	317	79.8
	Idlib City	80	20.2
Maternal Age	between 18 and 25	183	46.1
	Between 26 and 35	172	43.3
	between 36 and 45	42	10.6
Residency Type	IDP	364	91.7
	Hoste	33	8.3
Number Of children	<=3	207	52.1
	4 or 5	139	35.0
	>=6	51	12.8
Education Level	preparative	107	27.0
	high school	257	64.7
	University	33	8.3
Economic Level	Income is less than Expenses	293	73.8
	Income equals Expenses	86	21.7
	Income is higher than expenses	18	4.5
Work Out of Home	No	327	82.4
	Yes	70	17.6
Child Gender	Female	235	59.2
	Male	162	40.8
Unintended Pregnancy	Yes	144	36.3
	No	253	63.7
Receiving Social Support during Pregnancy	No	139	35.0
	Yes	258	65.0
Postpartum depression (PPD)	No	160	40.3
	Yes	237	59.7

Table 4.2 explores the association between various demographic and socioeconomic factors and postpartum depression (PPD) among the study participants. Significant associations were observed between PPD and several variables. Maternal age had a notable impact, with women aged 26–35 years experiencing a significantly higher prevalence of PPD (67.4%) compared to younger women aged 18–25 ($p = 0.004$). Economic status also played a significant role; participants whose income was less than their expenses were significantly more likely to experience PPD (66.2%; $p < 0.001$). Unintended pregnancy and lack of social support during pregnancy were strongly associated with PPD, with 70.8% of women experiencing unintended pregnancy and 87.8% of those lacking social support suffering from PPD ($p = 0.001$ and $p < 0.001$, respectively). These findings suggest that economic hardship, unintended pregnancy, and lack of social support are key factors contributing to the high prevalence of PPD in this population.

Table 4.2. The association between study variables and PPD

Variables		PPD (No)	PPD (Yes)	P-value
Location	Atmeh	127 (40.1%)	190 (59.9%)	0.472
	Idlib City	33 (41.3%)	47 (58.8%)	
Maternal Age	between 18 and 25	90 (49.2%)	93 (50.8%)	0.004**
	Between 26 and 35	56 (32.6%)	116 (67.4%)	
	between 36 and 45	14 (33.3%)	28 (66.7%)	
Residency Type	IDP	147 (40.4%)	217 (59.6%)	0.534
	Hoste	13 (39.4%)	20 (60.6%)	
Number Of children	≤ 3	92 (44.4%)	115 (55.6%)	0.213
	4 or 5	50 (36.0%)	89 (64.0%)	
	≥ 6	18 (35.3%)	33 (64.7%)	
Education Level	Preparative	44 (41.1%)	63 (58.9%)	0.561
	High school	100 (38.9%)	157 (61.1%)	
	University	16 (48.5%)	17 (51.5%)	
Economic Level	Less than Expenses	99 (33.8%)	194 (66.2%)	<0.001**
	Equals Expenses	53 (61.6%)	33 (38.4%)	
	Higher than expenses	8 (44.4%)	10 (55.6%)	
Work Out of Home	No	139 (42.5%)	188 (57.5%)	0.053
	Yes	21 (30.0%)	49 (70.0%)	
Child Gender	Female	89 (37.9%)	146 (62.1%)	0.735
	Male	71 (43.8%)	91 (56.2%)	
Unintended Pregnancy	Yes	42 (29.2%)	102 (70.8%)	0.001**
	No	118 (46.6%)	135 (53.4%)	
Receiving Social Support during Pregnancy	No	17 (12.2%)	122 (87.8%)	<0.001**
	Yes	143 (55.4%)	115 (44.6%)	

Values represent numbers (percentages). The P-value is calculated by a Pearson Chi-square test. ** Significant at < 0.01 .

Table 4.3 shows the results of a univariate logistic regression analysis examining factors associated with postpartum depression (PPD). The result revealed that women aged 26–35 were significantly more likely to experience PPD compared to those aged 18–25 (OR

= 2.005, 95% CI = 1.30–3.08, $p = 0.002$). Economic hardship was another critical factor, with participants reporting lower income than expenses being at significantly higher risk for PPD (OR = 1.568, 95% CI = 1.30–4.10, $p < 0.001$). Unintended pregnancy also increased the odds of PPD by more than twofold (OR = 2.123, 95% CI = 1.37–3.28, $p = 0.001$). The most striking association was with the lack of social support during pregnancy, which dramatically increased the likelihood of PPD (OR = 8.924, 95% CI = 5.08–15.7, $p < 0.001$). These results emphasize the significant impact of maternal age, economic conditions, unintended pregnancy, and social support on the risk of PPD.

Table 4.3. Logistic Regression Analysis of Factors Associated with Postpartum Depression

Variables	Reference category	OR (95% C.I.)	P-value
Location	Atmeh		
Idlib City		0.952 (0.578-1.57)	0.847
Maternal Age	between 18 and 25		
Between 26 and 35		2.005 (1.30-3.08)	0.002**
between 36 and 45		1.935 (0.957-3.91)	0.066
Residency Type	Hoste		
IDP		0.960 (0.463-1.99)	0.912
Number of Children	<=3		
4 or 5		1.424 (0.915-2.21)	0.117
>=6		1.467 (0.776-2.77)	0.238
Education Level	preparative		
High school		1.097 (0.693-1.74)	0.694
University		0.742 (0.339-1.62)	0.456
Economic Level	Higher than expenses		
Less than Expenses		1.568 (1.30-4.10)	<0.001**
Equals Expenses		0.498 (0.178-1.39)	0.183
Work Out of Home	No		
Yes		1.725 (0.989-3.01)	0.055
Child Gender	Male		
Female		1.280 (0.852-1.92)	0.235
Unintended Pregnancy	No		
Yes		2.123 (1.37-3.28)	0.001**
Receiving Social Support during Pregnancy	Yes		
No		8.924 (5.08-15.7)	<0.001**

The dependent variable is Postpartum depression (PPD). OR is the odd ratio of variables. C.I. is the confidence interval. The P-value is calculated by a univariate logistic regression analysis. ** Significant at < 0.01 .

Moreover, Figure 4.1 displays the odds ratios (OR) for factors associated with postpartum depression (PPD), ranked in ascending order. Lack of social support during pregnancy emerges as the most significant factor, with the highest odds ratio, indicating a nearly ninefold increase in the likelihood of PPD. Unintended pregnancy and economic hardship also display strong associations, with significant increases in the odds of PPD. In contrast, variables such as maternal age and working outside the home show more moderate

associations. This ranking highlights the relative importance of each factor, emphasizing the need to prioritize interventions addressing social support and economic conditions to effectively mitigate PPD risk.

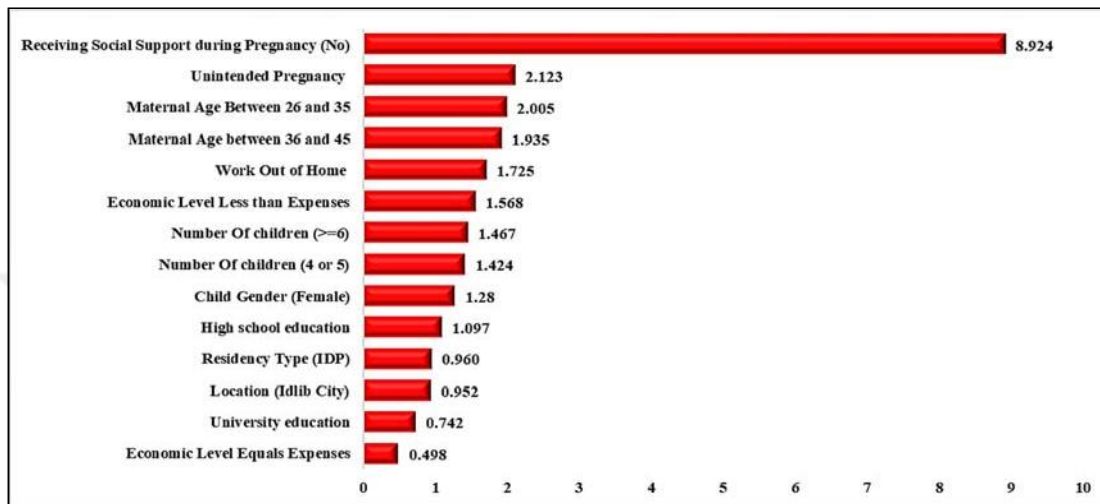


Figure 4.1. Ascending ranking of Odds Ratios for factors associated with PPD

4.2. Study hypothesis

4.2.1. Primary Hypothesis: The prevalence of postpartum depression is Higher Among Women With Unintended Pregnancies Than Those With Intended Pregnancies

The results of this study strongly support the primary hypothesis. The prevalence of postpartum depression (PPD) among women who reported unintended pregnancies was significantly higher than among those with intended pregnancies. Specifically, 70.8% of women with unintended pregnancies experienced PPD, compared to 53.4% of women with intended pregnancies. This difference was statistically significant, with a p-value of 0.001 in the chi-square analysis. Moreover, the logistic regression analysis indicated that unintended pregnancy increases the odds of developing PPD by more than twofold (OR = 2.123, 95% CI = 1.37–3.28, $p = 0.001$).

Table 4.4. The association between study variables and PPD

Variables	PPD (No)	PPD (Yes)	P-value
Unintended Pregnancy	42 (29.2%)	102 (70.8%)	0.001**
No	118 (46.6%)	135 (53.4%)	

Table 4.5. Logistic Regression Analysis of Factors Associated with Postpartum Depression

Variables	Reference category	OR (95% C.I.)	P-value
Unintended Pregnancy	No		
Yes		2.123 (1.37-3.28)	0.001**

4.2.2. Secondary Hypothesis: Displaced Women in North-West Syria are More Likely to Experience Postpartum Depression Compared to Non-Displaced Women

The results did not provide conclusive support for the secondary hypothesis. While the majority of participants in the study were internally displaced persons (IDPs) (91.7%), the difference in PPD prevalence between displaced and non-displaced women was not statistically significant. Among IDPs, 59.6% experienced PPD, compared to 60.6% of non-displaced women ($p = 0.534$). The logistic regression analysis similarly indicated no meaningful difference in the odds of developing PPD between displaced and non-displaced women (OR = 0.960, 95% CI = 0.463–1.99, $p = 0.912$).

Table 4.6. Basic information and demographic characteristics of the study participants (N=397)

Variables	Frequency	Percent
Residency Type		
IDP	364	91.7%
Hoste	33	8.3%

Table 4.7. The association between study variables and PPD

Variables	PPD (No)	PPD (Yes)	P-value
Residency Type			
IDP	147 (40.4%)	217 (59.6%)	0.534
Hoste	13 (39.4%)	20 (60.6%)	

Table 4.8. Logistic Regression Analysis of Factors Associated with Postpartum Depression

Variables	Reference category	OR (95% C.I.)	P-value
Residency Type	Hoste		
IDP		0.960 (0.463-1.99)	0.912

4.2.3. Additional Hypothesis: Women With Lower Socio-Economic Status, Limited Education, and Poor Social Support are More Likely to Develop Postpartum Depression

The findings of this study provide strong evidence in favor of the additional hypothesis. Several socio-economic and psychosocial factors were significantly associated with PPD.

First, for socio-economic status, the results clearly show that women with lower socio-economic status (defined by having an income lower than expenses) had a significantly higher risk of PPD (66.2%) compared to those whose income matched their expenses (38.4%) or exceeded their expenses (55.6%). This association was statistically significant ($p < 0.001$), and the logistic regression analysis confirmed that lower economic status significantly increased the odds of PPD (OR = 1.568, 95% CI = 1.30–4.10, $p < 0.001$).

Second, education level did not show a significant association with PPD in this study. Women with a high school education had a PPD prevalence of 61.1%, and those with a university education had a slightly lower prevalence of 51.5%. However, the association between education level and PPD was not statistically significant ($p = 0.561$), suggesting that education may not play as important a role as other socio-economic factors in determining PPD risk.

Third, for social support, the lack of social support was one of the strongest predictors of PPD. Women who did not receive social support during pregnancy had an extremely high prevalence of PPD (87.8%), compared to 44.6% among those who received support. This difference was highly significant ($p < 0.001$), and the odds ratio from the logistic regression (OR = 8.924, 95% CI = 5.08–15.7, $p < 0.001$) indicates that lack of social support during pregnancy increased the odds of PPD nearly nine fold.

Table 4.9. The association between study variables and PPD

Variables		PPD (No)	PPD (Yes)	P-value
Education Level	Preparative	44 (41.1%)	63 (58.9%)	0.561
	High school	100 (38.9%)	157 (61.1%)	
	University	16 (48.5%)	17 (51.5%)	
Economic Level	Less than Expenses	99 (33.8%)	194 (66.2%)	<0.001**
	Equals Expenses	53 (61.6%)	33 (38.4%)	
	Higher than expenses	8 (44.4%)	10 (55.6%)	
Receiving Social Support during Pregnancy	No	17 (12.2%)	122 (87.8%)	<0.001**
	Yes	143 (55.4%)	115 (44.6%)	

Table 4.10. Logistic Regression Analysis of Factors Associated with Postpartum Depression

Variables	Reference category	OR (95% C.I.)	P-value
Education Level	preparative		
High school		1.097 (0.693-1.74)	0.694
University		0.742 (0.339-1.62)	0.456
Economic Level	Higher than expenses		
Less than Expenses		1.568 (1.30-4.10)	<0.001**
Equals Expenses		0.498 (0.178-1.39)	0.183
Receiving Social Support during Pregnancy	Yes		
No		8.924 (5.08-15.7)	<0.001**

5. DISCUSSION

5.1. Overview of Key Findings

This work set out to assess the level of PPD among women in (NW) Syria especially in the light of ongoing war, displacement and poverty. The findings also show that women in this region experience PPD at a much higher rate than the global average, and that unintended pregnancy, socio-economic status and displacement are strongly related.

5.2. Prevalence

This study revealed the prevalence of PPD among women in the period of 3 weeks to 3 months after delivery is 59.7% in North West Syria. This result is very high comparing with WHO statistics, which is about 13%, and it is higher than other studies in the neighbourhood countries. There was a similar study in Syria which was conducted in Damascus in 2018 revealed that prevalence was about 29% (19)

This increasing of high prevalence could be justified for many reasons:

1- Most of the responders about (91%) were IDPs and living in camps. This percentage revealed the real demographical situation in North West Syria where more than 90% of people are IDPs and this situation with all accompanies (poverty, Sadness, Fear, blurit of future) affect negatively the mental status of women.

And we obviously note in Table 4.2 that there is significant correlation between ppd&untinended pregnancy and the residence in camps

2- lack of mental health services regrading accessibility and availability

5.3. Associated Factors

From the logistic regression and after controlling for potential confounders there is strong evidence against the null hypothesis of no association between PPD and unintended pregnancy. Also from logistic regression there is a strong evidence that lower SES and higher education and maternal age are risk factors for PPD in the study population.

In the present study, pooled analysis for poor economic condition showed that women with poor economic status are at 1.57 times more likely to develop PPD than women with better economic status 95% CI 1.07–1.89.

This finding supports the other previous studies that noted compromised financial wellbeing as a risk factor to postnatal depression by further illustrating how these conditions affect maternal mental health(35).

Our study also showed that a low level of PPD is highly linked with social support. This is in concord with literature, as point out by Mills et al., (1995), women with low social support are at increased risk of PPD. Raising a child can be stressful, especially when there is no emotional, psychological and practical family, friends or community support which leads to the onset of depressive symptoms during the postpartum period (36).

5.3.1. High Incidence of PPD in Areas of War

The prevalence rate of PPD highlighted in North-West Syria especially among IDPs confirm other studies conducted in different conflict affected countries. Some research confirms that women from war zones have poorer mental health and more depression than other women, especially antepartum and postpartum(20). The current study established that 59.7% of the sample population had PPD as highlighted by the studies of Syrian refugees and displaced women in Jordan in which up to 50% of women presenting PPD. In contrast, data from the present study gives further suggestions that the rate of PPD-progression is even higher among displaced women, which indicates that if women and families are under protracted conflict situations that make displacement inevitable, these are additional factors that put them at higher risk of PPD.

5.3.2. Consequences of Unintended Pregnancy

One of the important conclusions of the present research is a strong relationship between unplanned pregnancies and PPD. Unwanted pregnancy was found to be associated with three times higher risk of developing PPD than wanted pregnancy. Overall, this result aligns with previous studies in which did conclude that unintended pregnancy is one of the causes of postpartum depression. For example, in a study by Amer et al., (2024) revealed that women with unintended pregnancies were easily at higher risks of developing

depressive symptoms after delivery (22). The unintended pregnancy in North West Syria is likely to add stress, and financial burden to women who lose their right to access family planning commodities and health care facilities at a younger age raising their vulnerability to develop PPD.

5.3.3. Socio-Economic Factors

The socio-economic status of the women surveyed formed another dimension that came out strongly in the prediction of PPD. Ladies with low SE, who had low income than expenditure, reported higher cases of PPD. This also supports other studies conducted on other conflict-ridden regions indicating that economic insecurity actually worsens the burden of motherhood. The economic status in North-West Syria is fragile, because of the war many families are struggling to survive, and they depend on the food aid. Table 4.3 also clearly illustrates that women with lower income reported higher levels of PPD than the other women in the study, which corroborates findings of similar studies conducted in other LMICs.

5.3.4. Displacement and Their Function in Mental Health

It is necessary to speak about the significance of displacement in the facilitation of PPD. Displacement involves the loss of homes, separation from family and friends, poor living conditions which are worsened by poor or no access to health care. Many researchs like Ayoub et al. (2020) that analyzed displacement as a more important determinant of mental health problems (18)

In the contrary, in this study there is no significant statically difference between IDps and Host women regarding postpartum depression.

5.3.5. Cultural Considerations

Social cultural systems of the Middle Eastern region influence women who have PPD in their daily lives. This is because Arab cultures view any person having mental health problems as socially inferior or even insane, and these are Strong Cultural beliefs that restrict women. This study concluded that cultural expectations of mothers, exacerbation by conflict and forced displacement, are key factors to PPD. In a study by Ayoub et al. (2020) the results

were similar; women in Arab cultures did not report mental health issues for fear of being deemed unfit for motherhood (18)

5.4. Health Care Access and Mental Health Services

Availability of health care and especially mental health is an important determinant for managing and treating of PPD. Nevertheless, the findings of this study reveal the massive unmet need for mental health services for women in North-West Syria. About 35 percent said that they had limited access to mental health services, which is an essential obstacle to the clients receiving adequate care for PPD. This is aligned with the deficit of additional healthcare that has been found in other areas of conflict such as under-staffed and overstretched healthcare frameworks that hindered women (23)

5.5. Education and Employment

Other factors mentioned as preventive towards PPD were education, and employment. Consistent with previous literature, women who received more education and those in a more stable job status reported lower PPD scores. It may be for this reason that they seem to have better resources whether in terms of finances or the information they get that empowers them to handle the pressures that come with childbirth and being mothers. Nevertheless, evidence shows that the available protective factors for preventing PPD are not easily accessible in North-West Syria: most women in the study population are unemployed and have low education levels.

6. STRENGTH AND LIMITATION

6.1. Strength

Another advantageous feature of this study is that the selected topic of postpartum depression in a conflict-endemic area remains unalloyed in prior research. In doing so, the study also responds to a gap in the literature and contributes important knowledge about MHI in crisis contexts specifically for NWS. Besides, the demography data obtained from the validated screening tools (EPDS) making results reliable and comparable the reliability and comparability of the results with studies conducted in other regions.

The study also gains from diversity in the population being sampled both women in urban area and women in camp settings, displaced and resident women. It is because of this diversity that it is possible to unravel the various aspects of the contributing factors to PPD in such a delicate sociopolitical setting. Moreover, no bias was experienced in sample selection through the use of the random sampling technique, while the cross-sectional research design provides a preview of postpartum mental health in the region.

6.2. Limitation

As many works, this study has several notable limitations:

- First, the cross-sectional research design is used whereby the data collected is collected in one point in time which cannot inform a relationship between the risk factors and postpartum depression. It would be efficient to use longitudinal study designs to monitor alterations in mental health status more appropriately.
- Second, the measure used in the current study the EPDS is a self-reporting tool and may be affected by social desirable response bias whereby women may downplay the depressed symptoms due to stigma or cultural issues. However, some limitations exist; particularly, enrolment was restricted to mothers with no complications during childbirth or newborn babies with critical conditions, therefore the results may not reflect true situation for all women experiencing difficulties in the postpartum period.
- Finally, the study sample only includes attendees of PHCs, thus may not capture women who do not seek PHC, therefore, the true prevalence of PPD in the general population might be overemphasized.

7. CONCLUSION

It is worth to notice that, PPD is a severe public health problem for women of childbearing age worldwide, however, it becomes a much bigger problem in countries affected by conflicts such as North-West Syria. The purpose of this research was to establish the extent of PPD among women and the socio-demographic, economic, and obstetric characteristics of this region that foster high prevalence in this population. The study sought to address a gap of knowledge on PPD in a conflict affected area and offers useful information on mental status of postpartum women in this region.

The data showed that North-West Syria's PPD rates are dramatically higher than global rates: the combination of conflict, displacement, and poverty are deeply intertwined. Out of the women the rate of PPD was estimated to be 63.39 percent, which is remarkably above the rate prevalent in stable or developed nations to highlight the dreadful price in terms of psychological trauma that conflict incurs. No healthcare access, unwanted pregnancies, financial strain, and housing loss delineated themselves to as causes that may lead to the development of PPD.

Further, it was established that women who experience unintended pregnancies are likely to develop depressive symptoms to a higher level than PPD- era women who do not. Such pregnancies are usually compelled by lack of access to family planning services and>DataAccess List and intensified by socio-economic volatility. This prolongs the already amplified mental health conditions of women after childbirth especially those who have been displaced. The same evaluation also ascertained that socio-economic status, particularly low-income women, to be significantly associated with high PPD rates because such women live in-entirety and stress and cannot afford professional help.

In addition, displacement, which was another invasive factor that came out in the research, was seen to amplify the consequences of other host factors. Syrian conflict displaced women who are dwelling in overcrowded under-resourced refugee camps trained psychologically.

Lack of stability in place to live and loss of family and social support increases their chances of developing PPD. The findings in this respect tally with other works in concerning

the displaced populations and as such affirm that the refugee population experiences more severe mental health problems.

The social isolation and culture in Arab society concerned to mental health and this issue specially in Syria were identified as another obstacle in treating PPD. Most women do not get help for fear of being seen as frail or of not being able to meet their roles as mothers. This cultural perception aggravates the loneliness of such women postpartum and puts a barrier to treatment of mental health problems.

Last, there is a severe shortage of mental health care in north-west Syria. Healthcare is one of the largest casualties of the ongoing conflict in the region, and mental health is seldom a priority. Therefore, a large number of women fail to access the required treatment for PPD within the first weeks after birth, and their condition is worsening. Over time, those who should be benefitting from screening and treatment for depression are left to suffer the consequences since PPD affects not only the mother but also the children as well.

Therefore, PPD is a current concern for postpartum women in North-West Syria, especially women who are displaced or have unwanted pregnancies and impoverished social and economic statuses. This shows there is a mental health crisis affecting women in conflict zones, and thus addressing this issue requires that the approaches be holistic in capturing the person and systems realities. The authors recommend that the findings of this study should hopefully act as an eye opener for healthcare providers, policy makers and international humanitarian organizations on the need to accord a high priority to intervention for mental health of this vulnerable population.

Lastly, based on this current research, there is need to enhance postpartum specific interventions in North-West Syria due to high rates of PD. The study stress that need to enhance the availability of counseling, family planning and reproductive health information, social-economic challenges and eradicating prejudice of mental health issues. These recommendations can be implemented by health care professionals and policymakers as well as humanitarian organizations that focus on physical and mental health in this conflict-affected area to enhance the quality of women's lives and the lives of their families.

8. RECOMMENDATIONS

8.1. Screening

Through their guidelines, the ACOG posited that it is important to screen for pregnant and postpartum women with depression because of the dangers associated with undiagnosed perinatal depression and other mood disorders in the mother, the infant and the family members (37). It also supports primary care physicians (PCP) and other healthcare providers in the peripartum period to screen women for postpartum depression at least once with indications for early detection to save more lives of both the mother and the child.

Many studies show that the scale EPDS is twice as effective as a physician's interview in order to screen PPD (38)

Specific focus should be made on the vulnerable population of women of color and women of lower economic status since they are at high risks of experiencing perinatal depression. Regrettably, this means there is very little known about the implementation of successful interventions that will address the needs of these people. This has led to a great influence affecting results in the diagnosis and treatment of PPD with minority women and lower SES being the most vulnerable thus worsening health inequalities.(36)

By offering a screening for pregnant and postpartum patients, primary care clinicians can notably increase the detection and diagnosis of mood and anxiety disorders. Studies performed in the United States indicate that screening programs lead to improved outcomes for mothers experiencing depression, making it a vital practice in perinatal care(30)

8.2. Physical Activity

The outcomes of the current systematic review and meta-analysis indicated that women in the physical activity during pregnancy subgroup had small to moderate improvements in postpartum depressive symptoms (39). This indicates that exercise could be beneficial in decreasing the occurrence, severity or symptoms of PPD, giving a non-drug intervention in enhancing maternal well-being after birth.

Furthermore, meta-analyses, other reviews, and recent randomized controlled trials underline some positive effects of exercise intervention in treating and preventing depression

for the general population (40). This supports the argument that exercise intervention in prenatal and postpartum should be incorporated for women at risk or experience PPD.

In terms of management, there is some evidence that aerobic exercise can lead to a small reduction in PPD symptoms, supporting its role in postpartum care(41).

Additionally, infant behavioral sleep interventions, which result in more maternal sleep, have been found to improve maternal mood, offering another strategy for managing PPD(42)

8.3. Improving Mass Mental Health Services

The regulation of postpartum depression one of the most compelling to be met in this study; the absence in access to any mental health services for women who suffer from PPD. Thus, improving access to mental health care it must be made a broad component of the healthcare system of developed countries with specific emphasis on maternal care services. This can be achieved by:

Introducing Routine Screening for PPD: Thus, it is important that screening for PPD should be incorporated in to all services and accessible to all settings of postnatal care. A detailed checklist marked for use in PHCs would be to train the healthcare providers regarding the use of EPDS for determining the women who are at the brink of getting affected with PPD. By having the symptoms identified at an early stage, intervention will be done early enough to contain depressive aspects.

Capacity Building for Healthcare Workers: Due to the challenges of low human resource particularly in conflict prone areas, lay skills of the existing midwives and community health workers should be enhanced in identification of PPD and grassroots level mental healthcare. The health survey should encourage the enhancement of educational programmes that will provide preparatory knowledge to healthcare service givers as a means of providing first aid to mental health patients, outlining to whom and when to refer these patients to other hospitals, and reducing the rate at which people with mental health issues are discriminated against.

Expanding Access to Mental Health Services in Displacement Camps: Mental health services need to become available to women living in displacement camps, PPD rates for

whom are higher. Community mental health services should be taken to people in their homes and jobs as it is in the mobile clinics where patients can be diagnosed, treated, and if need be referred to other specialist depending on the severity of their condition.

8.4. Family Planning and Reproductive Health Education

Study reveals that unintended pregnancy is a strong factor in the development of PPD. In response to this issue, efforts must be made to increasing utilization of family planning and reproductive health services, given the frequent shortage of these services in conflict-affected regions. Key steps include:

- Increasing Access to Contraceptive Services: This is a revealing thought provoking statement of concern that there is need to ensure that options for family planning are accessed easily by families in the urban and rural areas especially in the camps for the displaced populations. this can be done both by collaborating with local health care facilities, nonprofit international organizations and NGOs active in the area.

- Conducting Reproductive Health Education Campaigns: There is need to sensitize the community on the need to adopt family planning and the effects of unwanted pregnancies to maternal psychological wellbeing. These campaigns should be culturally appropriate and communicated such that women of all literacy levels can understand.

8.5. Poverty, Literacy, Migration and Unemployment

Thus, risk factors include low socio-economic status of the mother and lack of social support. This study; therefore, emphasizes the need for an engagement with the more encompassing socio-economic factors that affect women in North-West Syria, if a solution to maternal mental health is to be adequately provided. Recommendations include:

- Providing Economic Support to Vulnerable Families: There is a need to present Additional humanitarian entrants for TC should provide cash relief for affected families especially those who are pregnancy cases or newly delivered women. It could be effected through cash delivery or food hampers, together with or instead of livelihood support programs aimed at helping families alter their status and lift the burden that leads to PPD.

- Supporting Women's Employment and Livelihoods: Education and work experience programmes which empower women enable dollars to be provided to them hence ending up removing the pressure resulting to PPD that women face. Such programs could address skills training, enterprise promotion, or micro finance with displaced women at focal since they have lost their source of income due to conflict.

8.6. Battling the Stereotypes: Strategies for Lessening the Prejudice of Mental Health

Socio-cultural factors such as shame and self-contamination associated with mental disorders still remain a major factor with women especially in developing countries making them fail to seek help in communicates PPD. To this end, there must be efforts to undertake programmes that eradicate this prejudice within the community in order that women with the illness get the support that they need. Recommendations include:

Community Awareness Campaigns: Mental health promotion campaigns should include information about the nature of the PPD symptoms, and the necessity in receiving appropriate medical treatment. These campaigns should shift cultural perception that class mental health problems as a disability or inability to be a good mother. Religious and community leaders could influence the campaigns, making they efficient in changing people's attitude.

Peer Support Programs: Antecedents of community support, Referral services from safe motherhood: Peer support programs can help women share stories, information, tips, and experiences about fighting PPD. Such programs could be implemented by the trained lay leaders or community health workers and must therefore be offered alongside other maternal health initiatives.

8.7. Improving Research and Data Gathering

Despite the increasing attention paid to the topic of PPD in conflict settings, this paper has revealed research deficiencies in contexts such as North-West Syria. Hence, there is need for more research and data to be conducted to fill these gaps and actually give a clear picture of the problem. Recommendations include:

Conducting Longitudinal Studies: More longitudinal research is required in order to determine the secondary effects of conflict as well as forced displacement and socio-economic influence on PPD. These studies should follow women longitudinally to compare change in mental health in the postpartum and beyond and to determine the effectiveness of different approaches.

Expanding Research to Other Conflict-Affected Regions: Further, more research should be undertaken in other conflicted areas to establish the similarity of the results and possible risk indicators of PPD. This would enable for constructing better and local solutions tailored for particular settings that will help address the complex issues.

8.8. Central Ideas and Suggestions for Policy Making

Implications for healthcare providers and policymakers in Syria are significant based on findings of the current study. First, there is the well-documented need for more mental health programs for postpartum women most especially women who are refugees or from low income background. PPD screening should therefore conveniently form part of the postnatal routine clinical antenatal care assessment and there should be an effort made to demystify mental health complications in the region.

Second, some solutions towards improper use of contraception could be useful in decreasing PPD incidences among women. That may involve extending the availability of family planning services and information, for example, in the refugee camps where unwanted pregnancies are more common.

Last of all, there is a call on a provision of a socioeconomic umbrella that would cater for women in conflict areas. Financial support, job offers and educational schemes can also alleviate the socio-economic factors which lead to PPD.

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10. APPENDIXES

Appendix 1: Consent Form

CONSENT FORM

PLEASE ALLOW ENOUGH TIME TO READ THIS DOCUMENT CAREFULLY

You are invited to participate in the **research** study '**Postpartum Depression and Associated Factors in North West Syria**' by Abdullah Charaf Eddin. You have to know how and why this research will be conducted. For this reason, it is very important to read and understand this form. If you do not understand things that are not obvious to you, or if you want more information, please do ask for further clarification.

Participation in this study is entirely **voluntary**. You **do not have to participate** in this study and if you participate, you have the right to **discontinue** at any time. **Your positive response to the study will be interpreted as you consent to participate in the study.** Do not feel oppressed or manipulated by anyone while answering the questions in the **forms** provided to you. The information obtained from these forms will be used purely for research purposes.

1. Information About the Research Study:

a. Purpose of the Study:

The study aim:

- 1- To assess the prevalence of postpartum depression among reproductive women in NWS
- 2- To explore the associated factors.

b. Content of the Study:

An interview will be conducted by community health worker using semi structured questionnaire to assess Postpartum Depression status and socioeconomic factors related to PPD.

c. Type of Research: Thesis Study

d. Estimated Time for the Study: Two Months

e. Expected Number of Participants / Volunteers to the study: 310

f. Location (s) of the Research: **Idleb Syria**

2. Consent to Participate in the Study:

I fully understand the scope and purpose of the study and the volunteer responsibilities by reading the information above that should be given to the participants before participating/volunteering in the study. **Written and oral explanations about the study were made by the researcher named below, I had the opportunity to ask questions and discuss and got satisfactory answers. The potential risks and benefits of the study have been explained to me verbally as well.** I understand that I have the right to discontinue the study at any time without mentioning any reasons and that I will not encounter any negativity when I leave this study.

I agree to participate in the aforementioned study voluntarily under the conditions explained to me, without any pressure or force.

Appendix 2: AYBU Ethical Approval



ANKARA YILDIRIM BEYAZIT UNIVERSITY (AYBU) HEALTH SCIENCE ETHICS COMMITTEE RESEARCH PROJECT APPROVAL FORM



THE TITLE OF THE RESEARCH PROJECT					
PostPartum Depression and Associated Factors					
In North West Syria					
RESEARCHER/S*					
	Title	Name-Surname	Position	Phone	e-mail
1**	Student	Abdullah Charaf Eddin	Aybu, public health institute, department of health policy and global health	05375282083	Abdullah.charaf89@gmail.com
2	Assistant Professor,	Dr. Nimetcan Mehmet	Aybu, faculty of medicine, public health department	0 546 566 50 65	nametjan@gmail.com
3					
4					
The researcher's affiliation with AYBU***: Student : Abdullah Charaf Eddin *The academic advisor's signature is not required for the research studies under the supervision of an advisor. ** The name of the person who applies directly to the ethics committee should be listed first. *** In this section, at least one of the researcher/s must be clearly related to AYBU. The AYBU Health Science Ethics Committee reviews only the applications of employees or students in our university.					
THE RESEARCH PERIOD					
Start Date*: <u>1</u> / <u>9</u> / <u>2022</u>			End Date: <u>31</u> / <u>11</u> / <u>2022</u>		
* In this section, the start and the end of the data collection process should be given. The date of data collection can not begin before the approval of the Ethics Committee. Therefore, it is recommended to apply at least 1 month before the start of the project.					
THE TYPE OF RESEARCH					
☐	Academic Staff Research				
☐	Doctoral Thesis				
☒	Master's Thesis				
☐	Other _____ (Please specify)				
RESEARCH SUPPORT / GRANT					
☒	No	☒			
	Yes				
		University			
		TUBITAK			
		International			

Appendix 3: Health Facilities Approval

Green Idlib Health Center Idlib-Syria

Medical Manager

Dr.Bassam Al Yasouf

Dr.Bassm.alyasouf123@gmail.com

Subject: Letter of approval for sharing patient's records and conducting a questionnaire in reproductive health clinics.

Dear respected colleagues in Ankara Yildirim Beyazit University.

On behalf of Green Idlib Health center in Idleb, this letter is to inform you of our approval in regard to the request for data sharing for the purpose of research by Dr.Abdullah Charaf Eddin.

Southren Atmeh Health Center will share the patient's records excluding the personal identification information of the patients according to the Turkish personal data protection protocol as well as our data protection protocol to support the purpose of this study.

We are looking forward to more cooperation with your respectful university to increase the capacity building of health workers in Syria.

Your sincerely,

Dr.Bassam Alyasouf

June 27, 2022



Appendix 4: Lities Approval

Southren Atmeh Health Center Idlib-Syria

Medical Manager

Dr.Assaf Assaf

Assaf.assaf89@gmail.com

Subject: Letter of approval for sharing patient's records and conducting a questionnaire in Reproductive health clinics.

Dear respected colleagues in Ankara Yildirim Beyazit University.

On behalf of Southren Atmeh Health center in Idlib, this letter is to inform you of our approval in regard to the request for data sharing for the purpose of research by Dr.Abdullah Charaf Eddin.

Southren Atmeh Health Center will share the patient's records excluding the personal identification information of the patients according to the Turkish personal data protection protocol as well as our data protection protocol to support the purpose of this study.

We are looking forward to more cooperation with your respectful university to increase the capacity building of health workers in Syria.

Your sincerely,

Dr.Assaf Assaf

June 26, 2022



Appendix 5: Edinburgh Postnatal Depression Scale-English

Edinburgh Postnatal Depression Scale (EPDS)

Patient Label

Mother's OB or Doctor's Name:

Doctor's Phone #:

Since you are either pregnant or have recently had a baby, we want to know how you feel. Please place a **CHECK MARK (✓)** on the blank by the answer that comes closest to how you have felt **IN THE PAST 7 DAYS**—not just how you feel today. Complete all 10 items and find your score by adding each number that appears in parentheses (#) by your checked answer. This is a screening test; not a medical diagnosis. If something doesn't seem right, call your health care provider regardless of your score.

Below is an example already completed.

I have felt happy:
 Yes, all of the time _____ (0)
 Yes, most of the time ☒ (1)
 No, not very often _____ (2)
 No, not at all _____ (3)

This would mean: "I have felt happy most of the time" in the past week. Please complete the other questions in the same way.

1. I have been able to laugh and see the funny side of things:
 As much as I always could _____ (0)
 Not quite so much now _____ (1)
 Definitely not so much now _____ (2)
 Not at all _____ (3)
2. I have looked forward with enjoyment to things:
 As much as I ever did _____ (0)
 Rather less than I used to _____ (1)
 Definitely less than I used to _____ (2)
 Hardly at all _____ (3)
3. I have blamed myself unnecessarily when things went wrong:
 Yes, most of the time _____ (3)
 Yes, some of the time _____ (2)
 Not very often _____ (1)
 No, never _____ (0)
4. I have been anxious or worried for no good reason:
 No, not at all _____ (0)
 Hardly ever _____ (1)
 Yes, sometimes _____ (2)
 Yes, very often _____ (3)
5. I have felt scared or panicky for no good reason:
 Yes, quite a lot _____ (3)
 Yes, sometimes _____ (2)
 No, not much _____ (1)
 No, not at all _____ (0)
6. Things have been getting to me:
 Yes, most of the time I haven't been able to cope at all _____ (3)
 Yes, sometimes I haven't been coping as well as usual _____ (2)
 No, most of the time I have coped quite well _____ (1)
 No, I have been coping as well as ever _____ (0)

7. I have been so unhappy that I have had difficulty sleeping:
 Yes, most of the time _____ (3)
 Yes, sometimes _____ (2)
 No, not very often _____ (1)
 No, not at all _____ (0)
8. I have felt sad or miserable:
 Yes, most of the time _____ (3)
 Yes, quite often _____ (2)
 Not very often _____ (1)
 No, not at all _____ (0)
9. I have been so unhappy that I have been crying:
 Yes, most of the time _____ (3)
 Yes, quite often _____ (2)
 Only occasionally _____ (1)
 No, never _____ (0)
10. The thought of harming myself has occurred to me:
 Yes, quite often _____ (3)
 Sometimes _____ (2)
 Hardly ever _____ (1)
 Never _____ (0)

TOTAL YOUR SCORE HERE ►

Thank you for completing this survey. Your doctor will score this survey and discuss the results with you.

Verbal consent to contact above mentioned MD witnessed by:

Edinburgh Postnatal Depression Scale (EPDS). Adapted from the British Journal of Psychiatry, June, 1987, vol. 150 by J.L. Cox, J.M. Holden, R. Segovsky.

Appendix 6: Edinburgh Postnatal Depression Scale-Arabic

- Arabic
- [AHS-7005]

For information on the translation of this resource, please contact the Perinatal and Infant Mental Health Service on (02) 9827 8071	Affix ID Label Here		MRN				
	Surname		Given Names				
	Address - Street		Suburb			Postcode	
	Date of Birth		Sex		AMO		
	Hospital Name					Ward	

سیدتی:

بما أنك قد أنجبت طفلاً مؤخراً ، فنود ان نعرف مشاعرك. نرجو أن تضعي خطاً تحت أنسب جواب يعبر عن مشاعرك في الأيام السبعة الماضية، وليس مشاركتك اليوم فحسب. واليك المثال التالي:

لقد شعرت بأنني سعيدة:

— نعم، في كل الأوقات

— نعم، في معظم الأوقات

— كلا، ليس أغلب الأحيان

— كلا، أبداً

هذا يعني: لقد شعرت أنني سعيدة معظم الوقت" خلال الاسبوع الماضي. نرجو أن تكملی الأسئلة الأخرى بنفس الطريقة

FOR OFFICE USE ONLY English version of EDS introduction

As you have recently had a baby we would like to know how you are feeling. Please underline the answer which comes closest to how you have felt **IN THE PAST 7 DAYS**, not just how you feel today. Here is an example, already completed:

I have felt happy:

Yes, all the time

Yes, most of the time

No, not very often

No, not at all

This would mean: "I have felt happy most of the time" during the past week. Please complete the other questions in the same way.

خلال الأيام السبعة الماضية

1. لقد تمكنتُ من الضحك ورؤية الجانب المضحك من الأمور:
 - بالمقدار الذي إستطعته دائماً
 - ليس تماماً بالمقدار نفسه الآن
 - قطعاً ليس بالمقدار نفسه الآن
 - كلا، مطلقاً
2. لقد تطلعتُ الى الأمور بمتعة:
 - بالمقدار نفسه مثل أي وقت مضى
 - نوعاً ما، أقل مما إعتدتُه
 - قطعاً أقل مما إعتدتُه
 - نادراً
3. لقد لمتُ نفسي بدون لزوم عندما سارت الأمور على غير ما يرام:
 - نعم، في معظم الأحيان
 - نعم، في بعض الأحيان
 - ليس أغلب الأحيان
 - كلا، أبداً
4. لقد كنتُ قلقه ومشغولة البال بدون سبب وجيه:
 - كلا، مطلقاً
 - نادراً
 - نعم، في بعض الأحيان
 - نعم، أغلب الأحيان

(الرجاء قلب الصفحة للإجابة على بقية الأسئلة.)

REORDER INFORMATION

POSTNATAL EDINBURGH SCALE-

CR NO.69.

PARK HOUSE - Phone 9827-8011

This form has a reverse side

5. لقد شعرت بالخوف والذعر بدون سبب وجيه:

- نعم، أكثر الأحيان
- نعم، في بعض الأحيان
- كلا، ليس كثيرا
- كلا، مطلقا

6. تراكمت الأعمال علي فلم أستطع القيام بها:

- نعم، في معظم الأحيان لم أستطع القيام بها مطلقا
- نعم، في بعض الأحيان لم أستطع القيام بها كالمعتاد
- كلا، لقد إستطعت القيام بها في بعض الأحيان
- كلا، لقد إستطعت القيام بها كالمعتاد

7. لقد كنت غير سعيدة لدرجة أنه كان لدي صعوبة في النوم:

- نعم، في معظم الأحيان
- نعم، في بعض الأحيان
- ليس أغلب الأحيان
- كلا، مطلقا

8. لقد شعرت بأنني حزينة وبائسة:

- نعم، في معظم الأحيان
- نعم، أغلب الأحيان
- كلا، ليس أغلب الأحيان
- كلا، مطلقا

9. لقد كنت غير سعيدة للغاية لدرجة أنني كنت أبكي:

- نعم، في معظم الأحيان
- نعم، أغلب الأحيان
- فقط من وقت لآخر
- كلا، أبدا

10. لقد خطرت لي فكرة إلحاق الأذى بنفسني:

- نعم، في أحوال كثيرة
- نعم، في بعض الأحيان
- نادرا
- كلا، أبدا

مع الشكر الجزيل.

English version of questions

- | | |
|---|---|
| 1 I have been able to laugh and see the funny side of things:
As much as I always could
Not quite so much now
Definitely not so much now
Not at all | 6 Things have been getting on top of me:
Yes, most of the time I haven't been able to cope at all
Yes, sometimes I haven't been coping as well as usual
No, most of the time I have coped quite well
No, I have been coping as well as ever |
| 2 I have looked forward with enjoyment to things:
As much as I ever did
Rather less than I used to
Definitely less than I used to
Hardly at all | 7 I have been so unhappy that I have had difficulty sleeping:
Yes, most of the time
Yes, sometimes
Not very often
No, not at all |
| 3 I have blamed myself unnecessarily when things went wrong:
Yes, most of the time
Yes, some of the time
Not very often
No, never | 8 I have felt sad or miserable:
Yes, most of the time
Yes, quite often
Not very often
No, not at all |
| 4 I have been worried and anxious for no good reason:
No, not at all
Hardly ever
Yes, sometimes
Yes, very often | 9 I have been so unhappy that I have been crying:
Yes, most of the time
Yes, quite often
Only occasionally
No, never |
| 5 I have felt scared or panicky for no very good reason:
Yes, quite a lot
Yes, sometimes
No, not much
No, not at all | 10 The thought of harming myself has occurred to me:
Yes, quite often
Sometimes
Hardly ever
Never |

Appendix 7: Questionnaire

9/20/24, 8:20 PM

استبيان اكتئاب ما بعد الولادة

استبيان اكتئاب ما بعد الولادة

اسم جامع البيانات؟

مكان جمع البيانات؟

- ☐ أطلية
- ☐ انلب

المعلومات الأساسية

المر بين 18 و 45 سنة

- ☐ نعم
- ☐ لا

هل تعرضت لأي اختلاطات جراحية أثناء الولادة أو بعدها؟

- ☐ نعم
- ☐ لا

هل طفلك عانى من أي مشاكل بعد الولادة (تشوهات أو موت أو قبول في الحضانة)؟

- ☐ نعم
- ☐ لا

متى كانت الولادة؟

- ☐ منذ 3 أسابيع و حتى 3 أشهر
- ☐ غير ذلك

New Question

- ☐ Yes
- ☐ No

استبيان اكتئاب ما بعد الولادة

العمر؟

مقيمة أ نلاحة؟

- ☐ مقيمة
- ☐ نلاحة

<https://kf.kobotoolbox.org/#/forms/e80bbTWVxJrXXk7kHsrQ#/landing>

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لقد تمكنت من الضحك وروية الجانب المضحك من الأمور

- ☐ بالمقدار الذي استطعته ذاتما
- ☐ ليس تماما بالمقدار نفسه الآن
- ☐ قطعاً ليس بالمقدار نفسه الآن
- ☐ كلا , مطلقاً

لقد تطلعت الى الأمور بمسحة

- ☐ بالمقدار نفسه مثل اي وقت مضى
- ☐ نوعاً ما , أقل مما اعتدته
- ☐ قطعاً أقل مما اعتدته
- ☐ نادراً

لقد لمت نفسي بدون لزوم عندما سارت الأمور على غير ما يرام

- ☐ نعم , في معظم الاحيان
- ☐ نعم , في بعض الاحيان
- ☐ ليس اغلب الاحيان
- ☐ كلا , ابداً

لقد كنت قلقة ومشغولة اليال بدون سبب وجيه

- ☐ كلا , مطلقاً
- ☐ نادراً
- ☐ نعم , في بعض الاحيان
- ☐ نعم , اغلب الاحيان

لقد شعرت بالخوف و الذعر بدون سبب وجيه

- ☐ نعم , اكثر الاحيان
- ☐ نعم , في بعض الاحيان
- ☐ كلا , ليس كثيراً
- ☐ كلا , مطلقاً

تراكمت الاعمال علي فلم استطع القيام بها

- ☐ نعم , في معظم الاحيان لم استطع القيام بها مطلقاً
- ☐ نعم , في بعض الاحيان لم استطع القيام بها كالمعتاد
- ☐ كلا , لقد استطعت القيام بها في بعض الاحيان
- ☐ كلا , لقد استطعت القيام بها كالمعتاد

هل كنت غير سعيدة لدرجة أنه كان لدي صعوبة في النوم

- ☐ نعم , في معظم الأحيان
- ☐ نعم , في بعض الأحيان
- ☐ ليس أغلب الأحيان
- ☐ كلا , مطلقا

هل كنت تشعررت بانتي حزينة و بالأسف

- ☐ نعم , في معظم الأحيان
- ☐ نعم , في بعض الأحيان
- ☐ كلا , ليس أغلب الأحيان
- ☐ كلا , مطلقا

هل كنت غير سعيدة للغاية لدرجة أنني كنت أبكي

- ☐ نعم , في معظم الأحيان
- ☐ نعم , أغلب الأحيان
- ☐ فقط من وقت لآخر
- ☐ كلا , أبدا

هل كنت خطرت لي فكرة إلحاق الأذى بنفسني

- ☐ نعم , في احوال كثيرة
- ☐ نعم , في بعض الأحيان
- ☐ نادرا
- ☐ كلا , أبدا

عدد الاي لاد؟

ما هو مستوى تعليمك؟

- ☐ امية
- ☐ ابتدائي
- ☐ اعدادي
- ☐ ثانوي
- ☐ جامعية ولكن لم تتخرج
- ☐ جامعية و متخرجة

ما هو وضعكم الاقتصادي؟

- ☐ الدخل اقل من المصروف
- ☐ الدخل يساوي المصروف
- ☐ الدخل اعلی من المصروف

هل لديك عمل خارج المنزل؟

- ☐ نعم
- ☐ لا

ما هو جنس المولود؟

- ☐ ذكر
- ☐ انثى

هل خططتم لهذا الحمل أو كنت سعيدة عندما علمت باتك حامل؟

- ☐ نعم
- ☐ لا

هل تلقيت دعم اجتماعي أثناء حملك من قبل الزوج أو العائلة؟

- ☐ نعم
- ☐ لا

خلال الايام السبعة الماضية

سينتي: بما انك قد انجبت طفلا مؤخرا , نود ان نعرف مشاعرك . نرجو ان تضعي خطا تحت انسب جواب يعبر عن مشاعرك في الايام السبعة الماضية وليس مشاعرك اليوم فحسب واليك المثال التالي: لقد شعرت باثني سعيدة : 1-نعم , في كل الاوقات 2- نعم , في معظم الاوقات 3-كلا , ليس اغلب الاحيان 4- كلا , ايندا هذا يعني : لقد شعرت انني سعيدة معظم الوقت خلال الاسبوع الماضي نرجو ان تكلمي الاسئلة الاخرى بنفس الطريقة

CURRICULUM VITAE

Abdullah Charaf Eddin

Health & Nutrition

- Public Health Officer and coordinator for over 5 years' experience in health and nutrition projects within INGOs.
- Interesting in Data analysis and health services development.

Personal Information :

Education :

- Bachelor of Medicine - Damascus University (Dec, 2012 Graduate.)
- Pediatric specialist Syrian Board of Medical Specialties (SBOMs) -2022
- Pursuing Master degree in Public Health (MPH) in Ankara Yıldırım Beyazıt University /Turkey

Work Experience :

1) Senior Medical Officer-MRFS

Senior Medical Officer with Medical Relief For Syria

Supervision on medical facilities and projects including:

A- PHCs in Idlib and Aleppo Countyside

B- Hospitals in Idlib and Aleppo Countyside

C- Mobile clinics in Idlib and Aleppo Countyside

D- Ambulnce Network in Idlib

E- Coordination of many of MEAL & Technical teams with IDH

Since 2019-Until Now.

2) Building Capacity Project Coordinator- SRD

Building Capacity Project Coordinator with SYRIA RELIEF AND DEVELOPMENT

3) Field Health Officer in Idleb / World Vision (I.NGO) for one year.

4) Medical Monitoring Officer in Idleb / MSF (INGO)

5) PHC Coordinator in Idleb/ WAHA (I.NGO) for two years.

Skills :

- Management skills
- Reporting
- MS Office Apps
- Communication skills

Languages :

- Arabic (native)
- English (B2)

Training

- 1- Project Management Development
- 2- Infection Prevention & Control
- 3- Training Of Trainer
- 4- Anti-Microbial Rational Use
- 5- Community-Based Management of Acute Malnutrition
- 6- Inpatient Management for Acute Malnutrition
- 7- Integrated Management of Childhood Illness
- 8- Non Communicable Diseases
- 9- Sexual Transmitted Infections
- 10- Early Warning ,Alert and Response Network
- 11- Basic Life Support
- 12- First Psychological Aids
- 13- Gender Based Violence
- 14- Medical Supply chain
- 15- Management and Leadership Skills