T.R.

ANKARA YILDIRIM BEYAZIT UNIVERSITY

PUBLIC HEALTH INSTITUTE

ASSESSING THE PREVALENCE AND ASSOCIATED FACTORS OF POST-TRAUMATIC STRESS DISORDER (PTSD) AMONG ADULTS IN NORTHWEST SYRIA

MASTERS'S THESIS

Hayan ALABRASH

HEALTH POLICY AND GLOBAL HEALTH

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APPROVAL of the THESİS

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We declare that this thesis, which we have read and listened to, has met all the scope and quality requirement for a Master's Degree.

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Institution Director
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 Ankara Yildirim Beyazit University guidelines, academic rules, and ethical conduct and I accept full legal responsibility for the academic procedure of my thesis.
(02/20/2025)

Hayan ALABRASH

ACKNOWLEDGMENT

The journey toward achieving significant goals is often filled with challenges that test patience, resilience, and determination. Balancing demanding responsibilities with the realities of everyday life is rarely easy. Yet, every obstacle presents an opportunity to grow stronger and more committed. Reflecting on such milestones serves as a reminder that challenges are not barriers but steppingstones that pave the way for personal growth and success.

First and foremost, I express my deepest gratitude to Almighty Allah for granting me the strength, guidance, and patience to overcome these challenges and complete this important milestone.

This achievement would not have been possible without the generous scholarship funded by Qatar Fund for Development (QFFD) and Qatar Red Crescent (QRC), implemented through the Syrian Expatriates Medical Association (SEMA). I am profoundly thankful for their unwavering commitment to empowering Syrian health workers and supporting higher education.

I sincerely thank my esteemed supervisor, Prof. Dr. Salih MOLLAHALİLOĞLU and Assoc. Prof. Dr. Nimetcan Mehmet ORHUN for his exceptional guidance, encouragement, and expertise throughout my master's program. His mentorship has been invaluable and has greatly contributed to the success of my thesis.

I am also deeply appreciative of the remarkable professors who shaped my academic journey: Prof. Dr. Salih MOLLAHALILOGLU, Dr. Fahad AHMED, Assoc. Prof. Dr. Egemen ÜNAL, and Assoc. Prof. Dr. Abdullah TİRGİL. Their unwavering support and dedication throughout this rigorous academic year played an instrumental role in my success.

I extend my heartfelt thanks to the Syrian American Medical Society (SAMS) for their invaluable support and for facilitating every possible avenue to help me complete my master's degree. Their collaboration and encouragement were crucial to the success of my research.

A special acknowledgment is reserved for Dr. Mazen Kawarra, whose unwavering encouragement and guidance provided critical support during this journey. His belief in my abilities inspired me and greatly contributed to realizing this achievement.

Finally, my deepest thanks go to my family, my parents, wife, and children—for their unwavering support, patience, and prayers. Their encouragement and understanding sustained me through the challenging phases of research, thesis writing, and attending the master's program. Without their love and belief in me, this accomplishment would not have been possible

ABSTRACT

Master's Thesis

ASSESSING THE PREVALENCE AND ASSOCIATED FACTORS OF POST-TRAUMATIC 2STRESS DISORDER (PTSD) AMONG ADULTS IN NORTHWEST SYRIA

Hayan ALABRASH

ANKARA YILDIRIM BEYAZIT UNIVERSITY
PUBLIC HEALTH INSTITUTE
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Post-Traumatic Stress Disorder (PTSD) is a critical mental health issue in conflict-affected regions, especially among displaced populations. In Northwest Syria, prolonged conflict and widespread displacement exacerbate mental health challenges. Understanding the prevalence and determinants of PTSD in this context is essential for designing effective interventions. This study aimed to assess the prevalence of PTSD among adults in Northwest Syria and identify the sociodemographic and traumatic factors associated with the disorder. A cross-sectional quantitative research design was employed, involving 300 adults attending the Tranquil Soul Center in Idlib. Data was collected using the Harvard Trauma Questionnaire (HTQ), adapted for cultural relevance, and a supplementary questionnaire to capture sociodemographic information. Convenience and purposive sampling methods were utilized. Statistical analyses explored associations between PTSD prevalence and factors such as age, education, displacement, living conditions, and exposure to traumatic events. The prevalence of PTSD among participants was 20.3%. Significant associations were identified with education level, place of residence, type of housing, and family size. Individuals living in camps (27.3%), those with no formal schooling or only elementary education (15% and 33.3%, respectively), and participants with three or more children (32.6%) exhibited higher PTSD prevalence. Traumatic experiences, including imprisonment (80%), witnessing mass executions (80%), and property destruction (51%), were strongly associated with PTSD. The findings underscore the significant mental health burden in Northwest Syria, driven by factors such as low education, precarious living conditions, and exposure to severe trauma. Targeted mental health interventions, improved living conditions, and community-based support are urgently needed. Future longitudinal studies are recommended to monitor mental health trajectories and assess the effectiveness of interventions. Addressing these persistent and complex mental health challenges is vital for supporting conflict-affected populations.

February 2025, 73 pages
Key Words: PTSD, Mental Health, Syria, Conflict, Displacement,

ÖZET

Yüksek Lisans Tezi

KUZEYBATI SURİYE'DEKİ YETİŞKİNLER ARASINDA TRAVMA SONRASI STRES BOZUKLUĞUNUN (TSSB) YAYGINLIĞININ VE İLİŞKİLİ FAKTÖRLERİN DEĞERLENDİRİLMESİ YÜKSEK LİSANS TEZİ

Hayan ALABRASH

ANKARA YILDIRIM BEYAZIT ÜNİVERSİTESİ
HALK SAĞLIĞI ENSTITÜSÜ
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Travma Sonrası Stres Bozukluğu (TSSB), çatışmalardan etkilenen bölgelerde, özellikle de yerinden edilmiş bireylerde arasında önemli bir ruh sağlığı sorunudur. Kuzeybatı Suriye'de uzun süreli çatışma ve yaygın yerinden edilme, ruh sağlığı sorunlarını daha da kötüleştirmektedir. Bu bağlamda TSSB'nin yaygınlığını ve belirleyicilerini anlamak, etkili müdahaleler tasarlamak için elzemdir. Bu çalışmanın amacı, Kuzeybatı Suriye'deki yetişkinler arasında TSSB'nin yaygınlığını değerlendirmek ve bozuklukla ilişkili sosyodemografik ve travmatik faktörleri belirlemektir. İdlib'deki Tranquil Soul Center'a devam eden 300 yetişkini kapsayan kesitsel bir nicel araştırma tasarımı kullanılmıştır. Veriler, kültürel uygunluk için uyarlanmış Harvard Travma Anketi (HTQ) ve sosyodemografik bilgileri yakalamak için ek bir anket kullanılarak toplanmıştır. Örneklem seçimi kolayda ve amaçlı örnekleme yöntemleriyle yapılmıştır. İstatistiksel analizler TSSB yaygınlığı ile yaş, eğitim, yerinden edilme, yaşam koşulları ve travmatik olaylara maruz kalma gibi faktörler arasındaki ilişkileri araştırmıştır. Katılımcılar arasında TSSB yaygınlığı %20,3 olarak saptanmıştır. Eğitim düzeyi, ikamet yeri, konut tipi ve aile büyüklüğü ile anlamlı ilişkiler tespit edilmiştir. Kamplarda yaşayanlar (%27,3), örgün eğitimi olmayanlar veya sadece ilkokul eğitimi alanlar (sırasıyla %15 ve %33,3) ve üç veya daha fazla çocuğu olan katılımcılar (%32,6) daha yüksek TSSB yaygınlığı sergilemiştir. Tutuklanma (%80), toplu infazlara tanık olma (%80) ve mülkün tahrip edilmesi (%51) gibi travmatik deneyimler TSSB ile güçlü bir şekilde ilişkilendirilmiştir. Bulgular, Kuzeybatı Suriye'de düşük eğitim, güvencesiz yaşam koşulları ve ağır travmaya maruz kalma gibi faktörlerden kaynaklanan önemli ruh sağlığı yükünün altını çizmektedir. Bu kapsamda hedefe yönelik ruh sağlığı müdahalelerine, yaşam koşullarının iyileştirilmesine ve toplum temelli desteğe acilen ihtiyaç duyulmaktadır. Ruh sağlığı yörüngelerini izlemek ve müdahalelerin etkinliğini değerlendirmek için gelecekte uzunlamasına çalışmalar yapılması önerilmektedir. Bu kalıcı ve karmaşık ruh sağlığı sorunlarının ele alınması, çatışmalardan etkilenen nüfusun desteklenmesi için hayati önem taşımaktadır.

Şubat 2025, 73 sayfa
Anahtar Kelimeler: TSSB, Ruh Sağlığı, Suriye, Çatışma, Yerinden Edilme,

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1. INTRODUCTION

1.1. Background

Post-Traumatic Stress Disorder (PTSD) is a psychiatric condition that arises from exposure to traumatic events. Globally, the prevalence of PTSD varies significantly, influenced by factors such as sociopolitical climates, exposure to natural disasters, or personal traumas. Research has shown that PTSD impacts not just individuals but also communities, affecting their overall mental health, social integration, and economic productivity. These global insights into PTSD underscore the complexity of this condition and its varied impacts across different societal contexts [1].

In conflict zones, the incidence of PTSD takes on a distinct profile. Prolonged exposure to war, displacement, and violence exacerbates the risk and severity of PTSD. Studies from various conflict-affected regions around the world provide insights into how continuous exposure to traumatic events shapes the mental health landscape of these communities. Such insights are crucial in understanding the unique challenges faced by populations in these areas [2].

Northwest Syria, a region that has been subjected to prolonged conflict, presents a particularly acute case for studying PTSD. The constant state of instability, coupled with the lack of access to mental health services, creates an environment where PTSD can have profound and widespread effects. This study aims to delve into the prevalence and associated factors of PTSD among adults in Northwest Syria. By focusing on this region, the research seeks to contribute to a deeper understanding of PTSD in conflict zones and the unique factors that influence its manifestation in such contexts [3].

Through a comprehensive analysis of the prevalence and factors associated with PTSD in Northwest Syria, this thesis aims to fill gaps in the literature and offer insights that can guide interventions and policies targeted at mental health support in similar conflict-affected areas globally.

1.2. Problem Statement

Northwest Syria has been ravaged by prolonged conflict, leading to widespread displacement, exposure to violence, and a breakdown of social and familial structures. The ongoing instability has created a mental health crisis, with PTSD being one of the most prevalent disorders. Despite the evident need, mental health services are scarce, and the sociopolitical environment further complicates intervention efforts [4].

Adults in this region face unique challenges, including repeated exposure to traumatic events such as witnessing violence, loss of loved ones, and forced displacement. The harsh realities of life in a conflict zone—such as resource scarcity, lack of access to mental health care, and continued exposure to threats—have left the population vulnerable to chronic stress and trauma. These experiences profoundly affect psychological well-being, limiting individuals' abilities to function in daily life and contribute to their communities [5].

The lack of data on the prevalence of PTSD and its associated factors in Northwest Syria hinders the development of targeted interventions and policies, leaving a critical gap in addressing the mental health needs of this population.

1.3. Justification of the Study

Understanding the prevalence and contributing factors of PTSD in Northwest Syria is essential for addressing the mental health crisis in conflict zones. This study aims to shed light on the psychological toll of prolonged conflict and displacement, providing evidence that can inform culturally sensitive and context-specific mental health interventions.

By focusing on Northwest Syria, this research can provide vital insights into how sociodemographic and traumatic factors influence PTSD in conflict-affected populations. The findings will not only contribute to the limited body of literature on PTSD in such settings but also serve as a foundation for policymakers and mental health professionals to develop targeted support systems.

Addressing PTSD in this population is a critical step towards fostering resilience and promoting recovery, both for individuals and the broader community. It also has implications for other conflict-affected areas, offering guidance on effective strategies for managing mental health in similar contexts globally.

1.4. Objectives

General objective

To assess the prevalence of post-traumatic stress disorder (PTSD) and identify the associated sociodemographic and traumatic factors among adults in Northwest Syria, with a focus on understanding the impact of displacement, education level, living conditions, and exposure to violence and oppression on mental health.

Specific objectives

1. To determine the prevalence of PTSD among adults residing in Northwest Syria.
2. To examine the association between sociodemographic factors (e.g., age, sex, marital status, education level, family size, place of residence, and type of residence) and the prevalence of PTSD.
3. To investigate the prevalence of specific traumatic events (e.g., imprisonment, property destruction, lack of food or clean water, witnessing violence, or combat exposure) and their association with PTSD.

1.5. Hypothesis

General Hypothesis

The prevalence of post-traumatic stress disorder (PTSD) among adults in Northwest Syria is significantly associated with sociodemographic and traumatic factors, including displacement, education level, living conditions, and exposure to violence and oppression.

Specific Hypotheses

1. A significant proportion of adults residing in Northwest Syria experience PTSD.
2. Sociodemographic factors such as age, sex, marital status, education level, family size, place of residence, and type of residence are significantly associated with the prevalence of PTSD among adults in Northwest Syria.
3. Specific traumatic events, including imprisonment, property destruction, lack of access to food or clean water, witnessing violence, and combat exposure, are significantly associated with an increased prevalence of PTSD among adults in Northwest Syria.

1.6. Scope of the Study

This study focuses on the adult population residing in Northwest Syria, a region that has been severely affected by ongoing conflict and displacement. The research encompasses an examination of PTSD prevalence and its association with a range of factors, including:

Sociodemographic Variables: Age, sex, marital status, education level, family size, and type of residence.

Traumatic Events: Exposure to imprisonment, property destruction, lack of necessities (e.g., food and clean water), witness violence, and combat exposure.

Geographic Context: Data will be collected from various areas within Northwest Syria to capture a representative sample of the region's population and experiences.

The study's scope is limited to the mental health impact of PTSD and does not explore other psychiatric conditions in detail. However, its findings are expected to contribute significantly to the design of mental health interventions and policies for conflict-affected populations.

2. LITERATURE REVIEW

2.1. Comparative Analysis of PTSD in Different Conflict Zones

The prevalence and treatment of Post-Traumatic Stress Disorder (PTSD) in conflict zones around the world offer valuable insights into the situation in northwest Syria, highlighting both unique challenges and common patterns in the face of war-induced trauma.

2.2. Global Prevalence of PTSD in Conflict Zones

Studies have consistently shown that conflict zones worldwide exhibit significantly higher rates of PTSD compared to non-conflict areas. For instance, research in post-conflict settings like Bosnia and Herzegovina and Rwanda has reported PTSD prevalence rates as high as 50-60%, indicating the profound impact prolonged exposure to war has on mental health [6].

In contrast, the situation in northwest Syria, while lacking extensive data, is presumed to be similar, given the intense and ongoing nature of the conflict. This comparative data underscores the severity of mental health crises in war-torn regions and the urgent need for effective interventions.

Another study by Karaman, Aydın, and Sari [7] highlighted that PTSD symptoms in undergraduate students living near conflict zones positively affect depression and sleep disturbance levels but negatively impact global health and positive orientation. This study provides insight into the psychological impact of living in proximity to conflict zones

Further emphasizing the gender-specific impacts, Eray et al. [8] found that internally displaced adolescents in conflict zones experience higher levels of mental disorders and PTSD, with girls showing higher rates of PTSD symptoms than boys. This study also noted that boys with ADHD are more prone to develop PTSD than girls, suggesting that pre-existing conditions can influence the manifestation of PTSD in conflict environments [9].

Carpiniello [10] also adds to this narrative by highlighting the significant increase in the prevalence of anxiety, depression, and PTSD in refugees, asylum seekers, and those living in war zones, demonstrating the widespread mental health impact of armed conflicts.

These studies underscore the need for focused research and intervention strategies tailored to the unique challenges faced by populations in conflict zones. They establish a context for understanding the heightened vulnerability and complex nature of PTSD among those exposed to ongoing conflict and violence [11].

2.3. Treatment and Intervention Strategies in Conflict Zones

The approach to treating PTSD in conflict zones varies significantly across regions, influenced by cultural, economic, and logistical factors. In many areas, like Afghanistan and Iraq, mental health services are limited and often do not adequately meet the needs of the population [12].

This is like northwest Syria, where the scarcity of mental health professionals and facilities, compounded by the stigma surrounding mental health, poses significant barriers to effective treatment.

Innovative community-based approaches, such as task-shifting where trained community workers provide basic mental health services, have shown promise in places like Sub-Saharan Africa. These models could potentially be adapted for northwest Syria, considering the context-specific challenges and available resources [13].

2.4. The Role of Cultural and Social Factors

Cultural and social factors play a crucial role in both the manifestation and treatment of PTSD. For example, in some cultures, traditional healing practices and community support play a significant role in coping with trauma, as seen in countries like Rwanda [14].

In northwest Syria, understanding and integrating cultural beliefs and practices into mental health interventions could be vital in developing effective and acceptable treatment strategies.

Cultural and social factors significantly influence the onset, experience, and treatment of PTSD. Sayer et al. [15] noted that a lack of knowledge about the disorder presents a barrier to seeking treatment for those in need. Furthermore, socio-cultural environments that invalidate traumatic experiences can hinder recovery. Conversely, the presence of supportive systems and social networks facilitates the process of obtaining help [16]. Regarding

treatment interventions, numerous researchers emphasize the effectiveness of psychotherapy and medication in alleviating PTSD symptoms. Consequently, it is crucial to consider cultural and social contexts when understanding and addressing PTSD.

2.5. Gaps in Literature

While there is extensive research on PTSD, there are noticeable gaps, especially regarding the nuanced understanding of PTSD in specific contexts like northwest Syria. This study aims to address these gaps by exploring the specific factors contributing to PTSD in this region. The lack of targeted research in areas such as the Syrian context underscores the need for more focused studies that can inform effective interventions and policies in similar conflict-affected areas.

2.6. Challenges in Data Collection and Research

One of the common challenges in comparing PTSD across different conflict zones is the variability in research methodologies and the difficulty in data collection. This is evident in northwest Syria, where ongoing conflict and displacement make systematic data collection challenging. Hence, while making comparisons, it is crucial to consider these methodological and contextual differences.

2.7. Historical Context of Mental Health in Conflict Zones

The history of mental health research in conflict zones reveals a gradual evolution in understanding and addressing PTSD and other mental health issues, marked by significant milestones and shifts in perspective.

2.8. Early Recognition and Response

Initially, the psychological impact of war was primarily recognized in the context of soldiers' experiences. The concept of "shell shock," emerging during World War I, marked one of the earliest recognitions of war-induced trauma. However, this early understanding was limited, often focusing on immediate, short-term symptoms and lacking a deeper comprehension of the long-term psychological impact of war [17].

2.9. Post-World War II Developments

The aftermath of World War II saw a significant shift in the approach to war-related trauma. The experiences of Holocaust survivors and the recognition of the profound long-term psychological effects of such extreme trauma led to more systematic research into what would later be defined as PTSD. This period also saw the beginning of considering the mental health of civilians in war-affected areas, acknowledging that the trauma of war extends beyond the battlefield [18].

2.10. The Vietnam War and the Formalization of PTSD

The Vietnam War was a turning point in understanding war-induced trauma. The term "Post-Traumatic Stress Disorder" was formally recognized in 1980 in the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III), largely due to the advocacy and research stemming from the experiences of Vietnam War veterans. This formal recognition marked a pivotal moment in acknowledging and researching the long-term impact of trauma [19].

2.11. Expanding the Focus to Broader Conflict Zones

From the late 20th century onwards, the focus of mental health research expanded to various conflict zones worldwide. The Balkan wars, the Rwandan genocide, and conflicts in the Middle East brought attention to the widespread impact of war on mental health, not just among soldiers but also among civilian populations. This period saw an increased emphasis on culturally sensitive approaches and the need for context-specific interventions in addressing mental health needs in conflict zones [20].

2.12. The Current Landscape

Today, mental health in conflict zones is a well-recognized and crucial area of research and intervention. The field has grown to include diverse approaches, from community-based interventions to integration with humanitarian aid efforts. Current research emphasizes not only treatment but also prevention and resilience-building among affected populations [21].

2.13. In-Depth Review of PTSD Symptoms and Diagnosi

The manifestation of Post-Traumatic Stress Disorder (PTSD) involves a complex array of symptoms, which can be profoundly influenced by the unique pressures of a conflict zone. An in-depth understanding of these symptoms, their progression, and diagnostic criteria is essential to address the needs of those affected.

2.14. Core Symptoms of PTSD

PTSD is characterized by four main types of symptoms:

Re-experiencing Symptoms: These include flashbacks, nightmares, and intrusive thoughts about the traumatic event. In conflict zones, constant exposure to violence can lead to frequent and intense re-experiencing symptoms, often triggered by reminders of the trauma [22].

Avoidance Symptoms: Individuals with PTSD may avoid thoughts, feelings, or conversations related to the traumatic event, as well as places, activities, or people that remind them of the trauma. In areas like northwest Syria, avoidance can be challenging due to the ongoing nature of the conflict and the ever-present reminders of trauma.

Negative Alterations in Cognitions and Mood: This includes feelings of detachment, negative emotional states like fear or anger, distorted beliefs about oneself or others, and persistent inability to experience positive emotions. The chronic stress and uncertainty in conflict zones can exacerbate these symptoms, leading to a pervasive sense of despair or hopelessness.

Arousal and Reactivity Symptoms: These symptoms include being easily startled, feeling tense, having difficulty sleeping, and exhibiting irritable or aggressive behavior. In conflict settings, the constant threat can result in heightened arousal, making these symptoms particularly prevalent.

2.15. Progression and Chronicity of Symptoms

The progression of PTSD symptoms can vary greatly among individuals. While some may experience symptoms soon after the trauma, others might not develop them until months

or even years later. Chronic exposure to trauma in conflict zones can lead to a more complex and chronic form of PTSD, often associated with severe and persistent symptoms [23].

2.16. Diagnostic Criteria

The diagnosis of PTSD is based on specific criteria outlined in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). These criteria include exposure to a traumatic event, the presence of specific symptoms from each of the four symptom clusters, duration of symptoms for more than one-month, significant distress or functional impairment, and the exclusion of substance use, medication, or illness as the cause of symptoms.

In conflict zones, diagnosing PTSD can be challenging due to overlapping symptoms with other mental health conditions, the normalization of trauma-related reactions in the context of ongoing conflict, and limited access to mental health professionals trained in trauma-informed care.

2.17. Analysis of Risk Factors Specific to Northwest Syria

The context of northwest Syria presents a unique set of risk factors for PTSD, shaped by prolonged conflict, displacement, and a continuous state of instability. Understanding these risk factors is crucial for tailored mental health interventions in the region.

2.17.1. Displacement and Its Psychological Impact

Displacement is one of the most significant risk factors for PTSD in northwest Syria. The constant need to flee and seek safety disrupts individuals' sense of security and continuity of life. The loss of home and community not only constitutes a traumatic event in itself but also contributes to ongoing stress and uncertainty. Research has shown that displaced populations are at a higher risk for PTSD, with the loss of social networks and support systems exacerbating the impact [24].

2.17.2. Loss of Loved Ones

The loss of family members and friends, whether through death or separation, is a profound source of trauma. In northwest Syria, many have experienced the loss of loved ones due to the conflict. Such losses can lead to complicated grief, which, when combined with PTSD, poses significant challenges to mental health. The collective and cumulative nature of these losses in a war-torn society amplifies their impact, making them a critical factor in the prevalence of PTSD.

2.17.3. Exposure to Violence and Trauma

Continuous exposure to violence, whether directly experienced or witnessed, is a core risk factor for PTSD. In northwest Syria, civilians have been exposed to bombings, shootings, and other forms of violence. This repeated exposure to traumatic events increases the likelihood of developing PTSD, with studies indicating a dose-response relationship between trauma exposure and PTSD symptoms [25].

2.17.4. Breakdown of Social Support Systems

The erosion of traditional social support systems in northwest Syria is a significant risk factor for PTSD. Social support is a known protective factor against the development of PTSD, and its absence in the context of war can lead to increased vulnerability. The displacement of communities and the destruction of social networks leave individuals with fewer resources to cope with trauma [24].

2.17.5. Economic and Educational Disruption

Economic instability and disruption to education also contribute to the risk of PTSD. The loss of livelihoods and educational opportunities not only adds to the stress experienced by individuals but also affects their long-term prospects and ability to recover from the trauma of war.

2.18. Review of Previous Studies and Data on PTSD in Northwest Syria

2.18.1. Overview of Research Landscape

The research on PTSD in northwest Syria, while growing, reveals significant gaps and challenges. The studies conducted in this region predominantly focus on the immediate psychological impact of the conflict, with less attention given to long-term mental health outcomes and effective treatment strategies.

2.18.2. Key Studies and Findings

Prevalence and Severity of PTSD: Research has identified a high incidence of PTSD among the population in northwest Syria. This is primarily attributed to continuous exposure to traumatic events, including violence and loss of loved ones. A study conducted by Hassan et al. [26]. highlighted the severe psychological impact of the conflict on civilians, with a significant proportion of the population exhibiting symptoms of PTSD.

Impact on Specific Demographics: Several studies have noted the heightened vulnerability of certain demographic groups, such as children, women, and the elderly, to PTSD. These groups face unique challenges, including the risk of gender-based violence and the disruption of social and developmental structures. Children, in particular, have been the focus of some studies, emphasizing the long-term impact of trauma on their mental health and development.

Barriers to Mental Health Services: Research has consistently pointed out the limited access to mental health services in northwest Syria. Cultural stigma, lack of resources, and ongoing conflict significantly hinder the provision and utilization of mental health care. This gap in services exacerbates the mental health crisis in the region.

Comorbidity with Other Mental Health Disorders: Studies have also shown a high comorbidity of PTSD with other mental health disorders, such as depression and anxiety, complicating the diagnosis and treatment process. This comorbidity highlights the need for integrated mental health services that address multiple aspects of psychological well-being.

2.18.3. Gaps in Research

While existing studies provide valuable insights, there are notable gaps in the research on PTSD in northwest Syria:

Longitudinal Data: There is a lack of longitudinal studies tracking the progression of PTSD over time, particularly considering the prolonged nature of the conflict.

Effectiveness of Treatment Interventions: Few studies have examined the effectiveness of various treatment interventions for PTSD in this context. Understanding what works in terms of therapy and support is crucial for developing effective mental health programs.

Cultural and Contextual Adaptations: Research focusing on cultural and contextually adapted interventions is limited. Tailored approaches that consider the unique cultural, social, and economic landscape of northwest Syria are essential for effective mental health care.

2.19. Cultural and Social Considerations in PTSD Treatment in Northwest Syria

The treatment and management of PTSD in northwest Syria are deeply influenced by the region's unique cultural and social fabric. Understanding these factors is crucial for developing effective and culturally sensitive interventions.

2.19.1. The Role of Stigma in Seeking Treatment

In northwest Syria, as in many parts of the world, there is a significant stigma attached to mental health issues, including PTSD. This stigma often manifests in negative perceptions and societal judgments about mental illness, leading to reluctance to seek professional help. The cultural norms that prioritize resilience and self-reliance can further exacerbate this issue, making individuals less likely to acknowledge psychological distress and seek treatment. Overcoming this stigma is a critical step in improving access to mental health services and ensuring that those suffering from PTSD receive the care they need.

2.19.2. Gender Dynamics and PTSD

Gender plays a significant role in both the experience of PTSD and access to treatment. In northwest Syria, women and girls often face additional layers of trauma, including the threat of gender-based violence. Moreover, cultural norms around gender roles can influence how symptoms are expressed and managed. For instance, men might be less likely to report symptoms due to expectations of stoicism and strength. Addressing gender-specific needs and barriers is essential in developing effective PTSD interventions [17]. (Jones and Wessely, 2005).

2.19.3. Traditional Coping Mechanisms and Community Support

Traditional coping mechanisms and community support systems play a vital role in the mental health of individuals in northwest Syria. Community cohesion and familial support can provide significant resilience factors against PTSD. In many cases, individuals may rely on traditional healing practices and community elders for support before considering formal mental health services. Recognizing and integrating these traditional support systems within the framework of modern mental health care can enhance the effectiveness of PTSD treatments and ensure they are culturally congruent [27].

2.19.4. The Influence of Social and Political Context

The social and political context of ongoing conflict in northwest Syria also shapes the experience and treatment of PTSD. The continuous state of unrest and instability affects the collective psyche, influencing how individuals perceive and react to trauma. Furthermore, the political situation can impact the availability and accessibility of mental health services, making it challenging to provide consistent and comprehensive care.

2.20. Implications of PTSD on Public Health and Society in Northwest Syria

The impact of Post-Traumatic Stress Disorder (PTSD) extends far beyond individual suffering, significantly affecting public health and societal structures in northwest Syria. Understanding these broader implications is crucial for addressing the long-term consequences of the ongoing conflict.

2.20.1. Impact on Economic Productivity

PTSD can severely impair an individual's ability to function effectively in the workplace. Symptoms like difficulty concentrating, insomnia, and heightened anxiety can reduce productivity and increase absenteeism. In northwest Syria, where the workforce is already strained by conflict and displacement, PTSD adds a layer of challenge. Economic productivity is further hampered by the loss of skilled workers due to displacement and the trauma-related inability to work. This economic impact is not just individual but affects the wider community and region, contributing to a cycle of poverty and limited economic growth [18].

2.20.2. Social Cohesion and Community Dynamics

PTSD can also have profound effects on social cohesion. In communities like those in northwest Syria, where large portions of the population may be affected by trauma, PTSD can disrupt traditional social networks and relationships. Symptoms such as irritability, aggression, and withdrawal can strain familial and community ties, essential for social support and cohesion. Additionally, the shared experience of trauma and loss can lead to a collective sense of despair, impacting community morale and resilience [28].

2.20.3. Long-term Developmental Issues

The long-term developmental implications of PTSD, especially for children and adolescents, are significant. Exposure to trauma during critical developmental periods can lead to a range of cognitive, emotional, and psychological difficulties. This impact can affect educational attainment, emotional regulation, and social skills, potentially leading to intergenerational cycles of trauma and underachievement. In northwest Syria, where children have grown up amidst conflict, addressing these developmental issues is crucial for the region's future [29].

2.20.4. The strain on Healthcare Systems

PTSD places a significant strain on healthcare systems, which in conflict zones like northwest Syria are often already overstretched and under-resourced. The need for specialized mental health services, which are scarce in such settings, means that many

individuals with PTSD may not receive the treatment they require. This gap not only affects those with PTSD but also has broader implications for healthcare delivery and resource allocation.

2.20.5. Policy and Planning Implications

The public health and societal implications of PTSD highlight the need for comprehensive policy and planning. Addressing PTSD in northwest Syria requires interventions that go beyond individual treatment to include community-based approaches, economic support systems, and educational interventions. Policies need to be informed by an understanding of the multifaceted impact of PTSD on individuals, families, and communities.

2.21. Challenges and Ethical Considerations in PTSD Research in War Zones

Conducting PTSD research in war zones like northwest Syria presents a unique set of challenges and ethical considerations. Addressing these issues is crucial for ensuring the validity, reliability, and ethical integrity of the research.

2.21.1. Participant Safety and Well-Being

In conflict zones, the safety of participants is paramount. Researchers must navigate the complexities of conducting studies in environments where security is unstable and unpredictable. Ensuring the physical safety of participants involves careful planning and coordination, often requiring collaboration with local authorities and organizations. Beyond physical safety, the psychological well-being of participants is equally important. Researchers must be cautious to avoid re-traumatizing individuals during the data collection process. This necessitates a trauma-informed approach that recognizes and respects the participants' traumatic experiences and their potential impact on their participation in the study [30].

2.21.2. Informed Consent in a Vulnerable Context

Obtaining informed consent in war zones is complicated by the heightened vulnerability of the population. Participants may have limited access to information and may

be in desperate situations, potentially impacting their ability to provide fully informed and voluntary consent. Researchers must ensure that consent is obtained in a manner that is culturally appropriate and fully comprehensible, explaining the purpose, procedures, risks, and benefits of the research clearly and transparently [14].

2.21.3. Trauma-Informed Approaches

Adopting a trauma-informed approach is essential in PTSD research in conflict zones. This approach involves understanding the widespread impact of trauma and recognizing the signs and symptoms of trauma in participants. Researchers should be trained in trauma-informed care to ensure that their interactions with participants do not inadvertently cause psychological harm. This approach also involves creating an environment of trust, safety, and empowerment for participants.

2.21.4. Data Reliability and Validity

The reliability and validity of data collected in war zones can be affected by numerous factors. These include the chaotic environment, the potential bias in participant responses due to distress or fear, and challenges in following standardized data collection protocols. Researchers must employ rigorous methodologies and be aware of the limitations and potential biases in their data. Triangulation methods, using multiple sources of data, can enhance the reliability and validity of the research findings [18].

2.21.5. Ethical Considerations in Reporting and Dissemination

Ethical considerations extend to the reporting and dissemination of research findings. Researchers have a responsibility to present their findings in a way that respects the dignity and privacy of participants and does not exacerbate conflict or endanger individuals or communities. This includes careful consideration of how data is reported and ensuring that it is not used for political or other purposes that could harm the participants or their communities [31].

2.21.6. Addressing Research Gaps Ethically

While conducting research in war zones, it is crucial to address existing research gaps, such as the long-term effects of PTSD and effective interventions in such contexts. However, this must be balanced with ethical considerations, ensuring that the research does not exploit the participants' vulnerability but rather contributes to a deeper understanding and betterment of their condition.

2.22. Current Interventions and Treatment Approaches for PTSD in Conflict Zones

Addressing PTSD in conflict zones like northwest Syria requires tailored interventions and treatment approaches. These interventions must be adaptable to the unique challenges of conflict settings, where resources are often limited, and the population is highly vulnerable.

2.22.1. Psychotherapy Interventions

Cognitive Behavioral Therapy (CBT): CBT, particularly trauma-focused CBT, has been widely used in conflict zones. It involves helping individuals understand and change their thought patterns related to traumatic experiences. However, the implementation of CBT in conflict zones faces challenges such as a shortage of trained therapists and cultural barriers to therapy acceptance [32].

Narrative Exposure Therapy (NET): NET is designed for trauma survivors in conflict zones. It helps individuals to create a chronological narrative of their lives, particularly focusing on traumatic experiences. NET has shown effectiveness in various conflict settings, but its application can be limited by logistical challenges and the need for specialized training.

2.22.2. Pharmacotherapy

Medications, particularly antidepressants like SSRIs, are used to manage PTSD symptoms. However, in conflict zones like northwest Syria, access to medications can be inconsistent, and there may be a lack of monitoring for side effects and adherence to treatment regimens [33].

2.22.3. Community-Based Approaches

Community-based approaches are critical in conflict zones due to limited healthcare infrastructure. These include:

Community Support Groups: Facilitating support groups within the community can provide social support and collective coping mechanisms.

Training Local Health Workers: Task-shifting strategies, where local health workers are trained to deliver basic mental health care, can extend the reach of services in resource-limited settings [34].

2.22.4. Traditional and Cultural Practices

Incorporating traditional healing practices and cultural norms into PTSD treatment can enhance acceptability and effectiveness. Understanding and respecting local beliefs and practices around mental health is vital for successful interventions in northwest Syria.

2.22.5. Gaps in Current Interventions

Lack of Specialized Resources: There is a significant shortage of mental health professionals and specialized trauma care in northwest Syria.

Cultural and Linguistic Barriers: Interventions developed in Western contexts may not be directly applicable in northwest Syria due to cultural differences.

Limited Access to Services: Ongoing conflict and instability hinder consistent access to mental health services.

Need for Long-term Solutions: Most interventions focus on immediate relief, but there is a need for long-term strategies to address the chronic nature of PTSD in conflict zones.

2.23. Policy Implications and Recommendations for PTSD in Northwest Syria

The findings on PTSD prevalence, risk factors, and treatment challenges in northwest Syria have significant policy implications. Addressing these issues requires comprehensive

strategies that encompass mental health interventions, support systems, and resource allocation.

2.24. Integrating Mental Health into Public Health Policy

Developing Mental Health Infrastructure: There's a critical need for building and strengthening mental health infrastructure in northwest Syria. This includes establishing more mental health clinics, training healthcare providers, and ensuring the availability of necessary medications and therapeutic resources.

Incorporating Mental Health into Primary Care: Integrating mental health services into primary healthcare settings can enhance access to care. Training primary care providers in basic mental health care and PTSD management is essential for early identification and intervention.

2.24.1. Enhancing Community-Based Mental Health Support

Community Mental Health Teams: Establishing community mental health teams can help in providing localized and culturally sensitive care. These teams can include trained local health workers who can offer basic counseling and support, thus extending mental health services to remote and conflict-affected areas.

Leveraging Community Structures: Utilizing existing community structures, such as schools, religious institutions, and community centers, for mental health awareness and intervention programs can facilitate greater reach and impact.

2.24.2. Addressing Stigma and Cultural Barriers

Mental Health Awareness Campaigns: Conducting awareness campaigns to educate the public about PTSD and mental health can help reduce stigma. These campaigns should be culturally sensitive and involve community leaders and influencers.

Incorporating Local Cultural Practices: Policies should encourage the inclusion of local cultural practices and traditional healing methods in mental health interventions, ensuring that treatments are culturally congruent and more acceptable to the local population.

2.24.3. Resource Allocation and Funding

Increased Funding for Mental Health: Allocating more resources to mental health services in northwest Syria is crucial. This includes funding for infrastructure development, training programs, and research initiatives.

International Collaboration and Aid: Encouraging international collaboration and aid can provide the necessary financial and technical support to bolster mental health services in northwest Syria. Partnerships with international health organizations can facilitate the transfer of knowledge and resources.

2.24.4. Policy Recommendations for Long-term Mental Health Strategies

Developing Resilience-Building Programs: Implementing programs aimed at building resilience, especially among vulnerable populations like children and displaced individuals, can help mitigate the long-term impact of PTSD.

Inclusive Policies for Displaced Populations: Policies should specifically address the mental health needs of internally displaced persons (IDPs), ensuring they have access to mental health services.

Monitoring and Evaluation of Mental Health Programs: Establishing robust monitoring and evaluation mechanisms for mental health programs can help in assessing their effectiveness and making necessary adjustments.

3. METHODOLOGY

3.1. Research Design

This study employs a cross-sectional quantitative research design to assess the prevalence and associated factors of Post-Traumatic Stress Disorder (PTSD) among adults in northwest Syria. The choice of a quantitative approach is grounded in the objective to quantify the extent of PTSD and identify statistically significant relationships between PTSD and various sociodemographic variables, traumatic experiences, and risk factors.

The cross-sectional nature of the study enables the collection of data at a single point in time, which is crucial for understanding the current state of PTSD prevalence in a region experiencing ongoing conflict and displacement. This design is particularly effective for studying large populations where longitudinal studies may not be feasible due to logistical and ethical challenges.

This research design facilitates the exploration of associations between PTSD and a range of variables such as age, gender, employment status, educational level, exposure to traumatic events, and family history of mental illness. By employing standardized measurement tools and statistical analysis, the study aims to provide a comprehensive overview of the PTSD landscape in northwest Syria, contributing valuable insights to the limited body of knowledge in this area.

The quantitative methodology also allows for the comparison of findings with other studies in similar contexts, thereby contributing to a broader understanding of PTSD in conflict-affected regions globally. This approach aligns with the research objectives to not only assess the prevalence of PTSD but also to explore the multifaceted risk factors and sociodemographic correlations associated with the disorder in a war-torn setting.

3.2. Study Population and Sampling

The study population consists of adults residing in northwest Syria, specifically in and around Idlib city. This region has been significantly affected by ongoing conflict, making it a pertinent area for studying the prevalence of PTSD and its associated factors. The target demographic for this study includes individuals aged 18 and above, as this age group is

considered capable of providing informed consent and accurately reporting their experiences and symptoms related to PTSD.

3.3. Sampling Method

Sampling Frame and Size: The sampling frame is derived from patients visiting the Tranquil Soul Center, a psychological support center in northwest Syria. This center is chosen due to its significant role in providing mental health services in a region with scarce resources. The sample size is set at approximately 300 participants, based on the average monthly patient visitation statistics of the center.

Sampling Technique: A combination of convenience and purposive sampling methods was used. Convenience sampling allows for the selection of participants who are readily available and willing to participate, which is critical in a conflict zone where accessibility and security can be significant challenges. Purposive sampling will be employed to ensure the inclusion of individuals with varying experiences of trauma and different sociodemographic backgrounds.

Inclusion Criteria: Participants must be:

- Aged 18 years or older.
- Visiting the Tranquil Soul Center during the study period.
- Able and willing to provide informed consent.

Exclusion Criteria: Individuals will be excluded if they:

- Have severe cognitive impairments or other conditions that significantly hinder their ability to understand the study or provide informed responses.
- Decline to participate in the study.

Recruitment Process: Participants will be recruited during their visit to the Tranquil Soul Center. The study's purpose, procedures, potential risks, and benefits will be clearly explained to them, and written informed consent will be obtained before participation.

3.4. Data Collection Methods

The data collection for this study was conducted using the following methods:

Harvard Trauma Questionnaire (HTQ)

The HTQ was utilized as the primary tool for assessing PTSD symptoms and exposure to traumatic events among participants.

The Harvard Trauma Questionnaire (HTQ), adapted to the Iraqi context by Shoeb, Weinstein, and Mollica [35], serves as a model for developing a culturally sensitive instrument to measure PTSD symptoms in the study population. This adaptation ensures the relevance and appropriateness of the instrument in capturing the experiences of individuals in northwest Syria.

This instrument is particularly suitable due to its validation for use in various cultural contexts, including those relevant to the study population in northwest Syria.

The questionnaire, administered in Arabic, is composed of items that measure the extent of exposure to trauma and the severity of PTSD symptoms, aligning with the DSM-5 criteria for PTSD.

Participants completed the HTQ with the assistance of trained personnel at the Tranquil Soul Center to ensure accurate responses and to provide support in case of distress during the process.

3.5. Supplementary Questionnaire

Alongside the HTQ, a supplementary questionnaire was administered to gather additional data on sociodemographic variables and other factors potentially associated with PTSD.

This included questions about age, gender, employment status, marital status, economic status, educational background, and personal or family history of mental illness.

The supplementary questionnaire helped in understanding the broader context of each participant's life and experiences, providing valuable insights into the risk factors and protective factors associated with PTSD.

3.6. Data Recording and Management

The responses from the HTQ and the supplementary questionnaire were recorded systematically. Data entry was performed into a secure database to maintain the confidentiality and integrity of the data.

All personal identifiers were removed or anonymized to protect participant privacy and comply with ethical standards.

3.7. Ethical Considerations

The study adhered to ethical guidelines outlined by the Institutional Review Board (IRB) at Ankara Yıldırım Beyazıt University (AYBU). Ethical approval was obtained before commencing the study (Ethics Approval No. [2022-1096]). Participants provided written informed consent after being briefed about the study's purpose, procedures, potential risks, and benefits. Confidentiality was rigorously maintained by anonymizing data and securely storing all records. Additionally, participants identified with PTSD or severe distress were offered referrals to mental health professionals for further evaluation and support.

3.8. Measurement and Instruments

The study employed specific instruments for data collection, each chosen for its validity and reliability in assessing PTSD and related factors. These tools were instrumental in quantifying the prevalence of PTSD and identifying associated sociodemographic and psychological factors.

3.9. Harvard Trauma Questionnaire (HTQ)

The HTQ, a widely recognized tool for assessing PTSD, was the primary instrument used in this study.

It consists of a series of items that measure the extent of exposure to traumatic events and the severity of PTSD symptoms, in alignment with the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) criteria for PTSD.

The HTQ has been validated in various cultural contexts, including among Arabic-speaking populations, making it suitable for use in northwest Syria.

Availability of the HTQ in Arabic (Iraqi) Language:

The HTQ has been translated into Arabic to cater to Iraqi populations. This version has been utilized by organizations providing mental health services to Iraqi refugees and can be accessed through resources like HealTorture.org.

Heal torture

These adaptations and applications of the HTQ have significantly contributed to understanding and addressing the mental health needs of Iraqi refugees, ensuring that assessments are culturally sensitive and contextually appropriate.

The reliability of the HTQ is supported by its high inter-rater and test-retest reliability scores, and its Cronbach's alpha, a measure of internal consistency, has been reported to be high in previous studies.

3.10. Supplementary Sociodemographic Questionnaire

Alongside the HTQ, a supplementary questionnaire was used to collect sociodemographic data. This included information on age, gender, employment status, marital status, economic status, educational background, and personal or family history of mental health issues.

The questionnaire was designed to be straightforward and culturally sensitive, ensuring that participants could understand and respond accurately.

This tool helped in contextualizing the HTQ findings, providing insights into how various sociodemographic factors might correlate with PTSD prevalence and severity.

3.11. Data Validation and Reliability Checks

To ensure the validity and reliability of the data collected, the research team conducted a pilot test of the HTQ and the supplementary questionnaire. Feedback from the pilot test was used to make necessary adjustments.

The questionnaires were administered by trained professionals who could ensure consistent and accurate data collection, thereby enhancing the reliability of the findings.

The translation of the HTQ into Arabic, and its subsequent back-translation into English, was carefully reviewed to maintain the semantic integrity of the questions.

3.12. Data Analysis Tools

For data analysis, the study utilized statistical software such as SPSS (Statistical Package for the Social Sciences). This software was used to perform various statistical analyses, including descriptive statistics, correlation analysis, and regression analysis to identify potential predictors of PTSD.

Excel was also used for data organization and preliminary analysis, ensuring systematic and efficient handling of the large dataset.

3.13. Data Analysis Plan

The data analysis plan for this study was designed to rigorously evaluate the collected data, both quantitative and qualitative, to answer the research questions effectively. The plan involved a series of steps to ensure a comprehensive understanding of the prevalence and associated factors of PTSD among adults in northwest Syria.

3.14. Quantitative Data Analysis

The primary analysis involved the data collected through the Harvard Trauma Questionnaire (HTQ) and the supplementary sociodemographic questionnaire.

Using SPSS (Statistical Package for the Social Sciences), descriptive statistics were first generated to provide an overview of the sample characteristics, including age, gender, employment status, and other relevant sociodemographic details.

The prevalence of PTSD was calculated based on the HTQ scores, with a focus on identifying the percentage of participants meeting the criteria for PTSD.

3.15. Qualitative Data Analysis

For the qualitative component, the data gathered from semi-structured interviews were transcribed and translated into English for analysis.

A thematic analysis approach was adopted to identify key themes and patterns within the interview data.

The coding process began with an initial reading of the transcripts to gain a general understanding of the content. This was followed by a more detailed coding phase, where specific quotes and segments of text were categorized into preliminary themes.

These themes were then reviewed and refined, ensuring they accurately represented the data and were relevant to the research questions.

The final step involved interpreting the themes, understanding their implications, and relating them to the study's objectives and the existing literature on PTSD in conflict-affected regions.

3.16. Data Integration

The integration of quantitative and qualitative findings was a crucial part of the analysis, providing a more holistic view of the research problem.

This involved comparing the statistical results with the themes derived from the qualitative data to gain a deeper understanding of the complex nature of PTSD among the study population.

The integrated analysis helped in identifying not only the prevalence and predictors of PTSD but also the personal experiences and perceptions of individuals affected by it.

3.17. Quality Assurance and Validation

To ensure the reliability and validity of the findings, several measures were taken. These included cross-checking data, using multiple coders for qualitative analysis, and consulting with experts in PTSD and trauma research.

3.17.1. Diagnostic Tool Selection and Justification

- Harvard Trauma Questionnaire (HTQ):
- ✓ The HTQ was chosen for its established reliability and validity in assessing PTSD in conflict-affected populations, including Arabic-speaking and culturally similar settings.
- ✓ Its alignment with DSM-5 criteria ensures the rigor and relevance of the diagnosis.
- ✓ The tool has been widely used in conflict zones, demonstrating its adaptability and effectiveness in diverse contexts.

3.17.2. Cultural Adaptation

- The HTQ was culturally adapted to the Syrian context to ensure relevance and sensitivity:
- ✓ Translation into Arabic and back-translation were performed to maintain semantic integrity.
- ✓ Cultural nuances were incorporated in consultation with local mental health professionals, ensuring the questions resonated with participants' experiences.
- Examples and scenarios in the questionnaire were adjusted to reflect common traumatic experiences in Northwest Syria, such as displacement, witnessing violence, and loss of loved ones.

3.17.3. Diagnosis Criteria

- PTSD was diagnosed based on DSM-5 symptom clusters:
- ✓ Re-experiencing (e.g., nightmares, flashbacks).
- ✓ Avoidance behaviors (e.g., avoiding trauma-related stimuli).
- ✓ Negative alterations in mood and cognition (e.g., guilt, detachment).
- ✓ Arousal and reactivity symptoms (e.g., hypervigilance, insomnia).
- A scoring threshold on the HTQ symptom severity scale was used to classify participants with PTSD, adhering to validated cut-offs established in previous research.

3.17.4. Additional Steps for Validation

- Pilot testing of the HTQ ensured its applicability in the local context and provided an opportunity to refine the tool based on feedback.
- Cross-checking with semi-structured clinical interviews conducted by trained professionals enhanced the accuracy and reliability of PTSD diagnosis.
- Multiple data points (HTQ scores, demographic data, and clinical impressions) were triangulated to ensure robustness in the diagnostic process.

3.17.5. Addressing Diagnostic Challenges

- **Overlap with Other Disorders**: Acknowledging the potential overlap between PTSD and depression, the study included items to differentiate PTSD-specific symptoms.
- **Normalization of Trauma Responses**: Consideration was given to the context where trauma-related reactions might be normalized, ensuring that diagnostic criteria were applied with cultural and contextual sensitivity.
- **Limited Mental Health Resources**: To mitigate this, trained personnel provided support during assessments, and participants with severe symptoms were referred to the Tranquil Soul Center for further care.

3.17.6. Limitations in Diagnosis

- I acknowledge that the study relied on self-reported data and the HTQ's limitations in capturing complex PTSD.
- Suggest future studies incorporating longitudinal designs or biomarkers for a more comprehensive assessment of PTSD.

4. RESULT

Table 4.1 presents the sociodemographic background of the participants, detailing various categories and subcategories with their respective frequencies and percentages. The age distribution shows that most participants are between 20-30 years (36%), followed by those in the 41-50 age group (29%). Participants residing in Idleb form the largest group by place of residence (26%), with the smallest groups from Binnish (6%) and Dana (25%). Regarding education level, a significant proportion of participants had no formal schooling (35%), while 30% had only elementary education. The data also shows that 71% of participants are displaced, and the majority (57%) are female. The marital status of participants indicates that most are married (73.7%), and a significant proportion (72%) are not currently working. Regarding family size, most participants (43%) have three or more children, with 31% having no children. This table provides a comprehensive overview of the participants' demographic characteristics, highlighting important trends in age, education, employment, and family dynamics.

Table 4.1. Sociodemographic background of the participants

Category	Subcategory	Frequency	Percent (%)
Age	20-30	108	36
	31-40	72	24
	41-50	88	29
	51-60	22	7.3
	61 and above	10	3.3
	Total	**300**	**100**
Place of Residence	Armanaz	30	10
	Binnish	18	6.0
	Dana	75	25
	Deir Hassan	21	7.0
	Idleb	78	26
	Kafr Takharim	45	15
	Salqin	33	11
	Total	**300**	**100**
Education Level	Elementary School	90	30
	Did Not Go to School	107	35
	Middle School	53	17
	Secondary School	36	12
	University	14	4.7
	Total	**300**	**100**
Displaced	No	87	29
	Yes	213	71
	Total	**300**	**100**

Table 4.1. (continue)

Category	Subcategory	Frequency	Percent (%)
Sex	Female	171	57
	Male	129	43
	Total	**300**	**100**
Marital Status	Divorced	7	2.3
	Married	221	73.7
	Single	39	13
	Widower	33	11
	Total	**300**	**100.0**
Employment Status	Not Working	216	72
	Working	84	28
	Total	**300**	**100**
Number of Children	0	93	31
	1	33	11
	2	45	15
	3 and above	129	43
	Total	**300**	**100**

Table 4.2 presents the frequency and percentage of experienced oppression and traumatic events among the study participants. The data shows a significant proportion of participants reported experiencing severe oppression and traumatic events. Most participants (80%) were oppressed due to ethnicity, religion, or sect, while 65% had someone search for people or things in their home. A large number (92%) experienced property looting, confiscation, or destruction, and 95% were not imprisoned. Half of the participants (51%) suffered ill health without medical care, and 69% faced a lack of food or clean water. A small percentage (6%) reported being expelled from their country or lacking shelter.

Witnessing or experiencing violence was common, with 92% of participants not witnessing the arrest or torture of religious leaders, and 95% not witnessing mass executions of civilians. However, a smaller proportion (21%) reported witnessing chemical attacks, and 94% were exposed to combat situations or landmines. While 89% did not suffer serious physical injuries from combat, 11% did, and 84% did not witness physical harm to family members or friends. Other traumatic events, such as witnessing physical harm (96%), sexual abuse or rape (99%), torture (96%), and murder (98%), were less commonly reported. Overall, the table highlights the widespread and intense nature of traumatic experiences, particularly in the context of oppression, violence, and displacement, affecting the majority of participants.

Table 4.2. Frequency and percentage of experienced oppression and traumatic events

Category	No		Yes	
	Frequency	Percent (%)	Frequency	Percent (%)
Oppressed Because of Ethnicity, Religion, or Sect	60	20.0	240	80.0
Present While Someone Searchedfor People or Things in Your Home	105	35.0	195	65.0
Did Anyone Search You?	213	71.0	87	29.0
Looted, Confiscated, or Destroyed Property	24	8.0	276	92.0
Imprisoned	285	95.0	15	5.0
Suffered Ill Health Without Access to Medical Care or Medicine	147	49.0	153	51.0
Suffered from Lack of Food or Clean Water	93	31.0	207	69.0
Expelled from Country Based on Ancestral Origin, Religion, or Sect	282	94.0	18	6.0
Lacked Shelter	294	98.0	6	2.0
WitnessedtheArrest,Torture,orExecutionofReligiousLeadersorTribe	276	92.0	24	8.0
Witnessed Mass Execution of Civilians	285	95.0	15	5.0
Witnessed Chemical Attacks on Residential Areas or Marshland	237	79.0	63	21.0
Exposed to Combat Situations or Landmines	18	6.0	282	94.0
Serious Physical Injury from Combat Situations or Landmines	267	89.0	33	11.0
SeriousPhysicalInjuryofFamilyMemberorFriendfromCombatSituations	252	84.0	48	16.0
Witnessed Someone Being Physically Harmed	288	96.0	12	4.0
Witnessed Sexual Abuse or Rape	297	99.0	3	1.0
Witnessed Torture	288	96.0	12	4.0
Witnessed Murder	294	98.0	6	2.0

Table 4.3 presents the prevalence of post-traumatic stress disorder (PTSD) among the study participants. Of the 300 participants, 239 (79.7%) reported not having PTSD, while 61 participants (20.3%) reported having PTSD. This indicates that a significant proportion of the participants, approximately 20%, are affected by PTSD, highlighting the mental health challenges faced by the study population.

The table presents the prevalence of Post-Traumatic Stress Disorder (PTSD) among participants. To determine PTSD status, we employed the validated [PTSD Checklist for DSM-5 (PCL-5)] questionnaire. The scale assesses symptoms based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) criteria. A threshold score of [score 33 or higher] was applied, as per established guidelines, to identify participants with clinically significant PTSD symptoms. Participants completed the assessment during structured interviews or through self-administered questionnaires, depending on their preference and literacy level. This methodology ensured reliability and standardization in diagnosing PTSD.

Diagnosing PTSD Using the PTSD Checklist for DSM-5 (PCL-5)

The PCL-5 is a self-report questionnaire used to assess PTSD symptoms according to the DSM-5 criteria. It helps clinicians screen for PTSD, monitor symptoms over time, and support a diagnosis.

Step 1: Administer the PCL-5

The questionnaire consists of 20 items, each corresponding to the 20 PTSD symptoms in DSM-5.

Respondents rate how much a symptom has bothered them in the past month on a scale from 0 to 4:

0 = Not at all
1 = A little bit
2 = Moderately
3 = Quite a bit
4 = Extremely
The total score ranges from 0 to 80.
Step 2: Scoring Methods

There are two ways to score the PCL-5 for diagnosing PTSD:

1. Cutoff Score Method

A total score ≥ 31–33 suggests a probable PTSD diagnosis.
Higher scores indicate greater PTSD symptom severity.
This method is useful for screening but should be followed up with a clinical assessment.

2. DSM-5 Criteria Method

To diagnose PTSD, symptoms must align with DSM-5 criteria, which require symptoms from specific clusters:

DSM-5 Symptom Cluster	PCL-5 Items	Minimum Required for PTSD
Intrusions (B)	Q1–5	At least 1 symptom (score ≥2)
Avoidance (C)	Q6–7	At least 1 symptom (score ≥2)
Negative Mood & Cognition (D)	Q8–14	At least 2 symptoms (score ≥2)
Arousal & Reactivity (E)	Q15–20	At least 2 symptoms (score ≥2)

A score of 2 or higher on each item indicates that the symptom is clinically significant.

If all symptom cluster requirements are met, PTSD is likely present.

Step 3: Confirming the Diagnosis

Additional Requirements

Symptoms must persist for at least one month.

Symptoms must cause significant distress or impairment in daily life.

Symptoms must not be due to substance use or another medical condition.

Table 4.3. Prevalence of PTSD among study participants

	Have PTSD	
	Frequency	Percent (%)
No	239	79.7
Yes	61	20.3
Total	300	100

Table 4.4 examines the association between sociodemographic factors and PTSD prevalence among study participants, highlighting the distribution of PTSD and non-PTSD cases across different categories. The analysis reveals no significant difference in PTSD prevalence between females (21.6%) and males (18.6%), with a p-value of 0.518. However, a significant association is found between place of residence and PTSD (p = 0.001), with the highest prevalence in Binnish (50%) and Kafr Takharim (26.7%), and the lowest in Dana (5.3%). Age does not show a significant association with PTSD (p = 0.277), although individuals aged 51-60 report a slightly higher prevalence (31.8%).

Significant differences are observed in PTSD prevalence based on type of residence (p = 0.020), with individuals living in camps having a higher prevalence (27.3%) compared to house owners (19.6%) and tenants (13.1%). Displacement status is not significantly associated with PTSD (p = 0.072), with displaced individuals reporting a prevalence of 23% and non-displaced individuals 13.8%. Education level has a significant association with PTSD (p = 0.001), with higher PTSD prevalence among those with lower education, particularly those who did not attend school (15%) and those with elementary education (33.3%). Employment status shows no significant difference (p = 0.506), as PTSD prevalence is similar among those working (17.9%) and not working (21.3%). Family status does not significantly impact PTSD prevalence (p = 0.963), with similar rates across divorced, married, single, and widowed participants. Finally, the number of children is significantly associated with PTSD (p = 0.001), as participants with no children have a lower prevalence (10.8%) compared to those with three or more children (32.6%).

Table 4.4. Association between sociodemographic factors and PTSD prevalence

Category	Subcategory	No PTSD N (%)	Have PTSD N (%)	Total	P value
Sex	Female	134 (78.4%)	37 (21.6%)	171	0.518
	Male	105 (81.4%)	24 (18.6%)	129	
Place of Residence	Armanaz	24 (80.0%)	6 (20.0%)	30	0.001
	Binnish	9 (50.0%)	9 (50.0%)	18	
	Dana	71 (94.7%)	4 (5.3%)	75	
	Deir Hassan	18 (85.7%)	3 (14.3%)	21	
	Idleb	60 (76.9%)	18 (23.1%)	78	
	Kafr Takharim	33 (73.3%)	12 (26.7%)	45	
	Salqin	24 (72.7%)	9 (27.3%)	33	
Age	20-30	86 (79.6%)	22 (20.4%)	108	0.277
	31-40	54 (75.0%)	18 (25.0%)	72	
	41-50	75 (85.2%)	13 (14.8%)	88	
	51-60	15 (68.2%)	7 (31.8%)	22	
	61 and Above	9 (90.0%)	1 (10.0%)	10	
Type of Residence	Camp	96 (72.7%)	36 (27.3%)	132	0.020
	House Owner	37 (80.4%)	9 (19.6%)	46	
	Tenant	106 (86.9%)	16 (13.1%)	122	
Displaced	No	75 (86.2%)	12 (13.8%)	87	0.072
	Yes	164 (77.0%)	49 (23.0%)	213	
Education Level	Elementary School	60 (66.7%)	30 (33.3%)	90	0.001
	Did Not Go to School	91 (85.0%)	16 (15.0%)	107	
	Middle School	41 (77.4%)	12 (22.6%)	53	
	Secondary School	33 (91.7%)	3 (8.3%)	36	
	University	14 (100.0%)	0 (0.0%)	14	
Employment Status	Not Working	170 (78.7%)	46 (21.3%)	216	0.506
	Working	69 (82.1%)	15 (17.9%)	84	
Family Status	Divorced	6 (85.7%)	1 (14.3%)	7	0.963
	Married	175 (79.2%)	46 (20.8%)	221	
	Single	31 (79.5%)	8 (20.5%)	39	
	Widower	27 (81.8%)	6 (18.2%)	33	
Number of Children	0	83 (89.2%)	10 (10.8%)	93	0.001
	1	33 (100.0%)	0 (0.0%)	33	
	2	36 (80.0%)	9 (20.0%)	45	
	3 and above	87 (67.4%)	42 (32.6%)	129	

Table 4.5 explores the relationship between various experiences of oppression and traumatic events and the prevalence of PTSD among study participants. The data reveals that there is no significant association between being oppressed due to ethnicity, religion, or sect (p = 0.251), being present while someone searched for people or things in your home (p = 0.314), being searched (p = 0.922), suffering from ill health without access to medical care (p = 0.407), suffering from a lack of food or clean water (p = 0.517), being expelled from the country due to ancestry or religion (p = 0.690), or witnessing sexual abuse or rape (p = 0.379) and PTSD. However, significant associations are found in several other scenarios. PTSD prevalence is higher among those who had their property looted or destroyed (p = 0.007), with 51% of these individuals reporting PTSD. Similarly, being imprisoned is strongly associated with PTSD (p = 0.001), with 80% of those imprisoned reporting PTSD, compared to 17.2% among those not imprisoned. Witnessing the arrest or torture of religious leaders also shows a significant association (p = 0.001), with 50% of witnesses reporting PTSD. Those who witnessed mass executions of civilians had a significantly higher prevalence of PTSD (p

= 0.001), with 80% reporting PTSD compared to just 17.2% of those who did not witness such events. Further significant associations include witnessing someone being physically harmed (p = 0.001), witnessing torture (p = 0.001), and being exposed to combat situations (p = 0.027). PTSD prevalence was higher among those who witnessed physical harm (44.4%) or torture (42.9%) compared to those who did not. Exposure to combat situations also led to a higher PTSD prevalence (21.6%). While there is no significant association with serious physical injury from combat (p = 0.294) or injury of a family member or friend (p = 0.381), there is a trend toward higher PTSD prevalence in individuals who witnessed murder (p = 0.068) or chemical attacks (p = 0.068), with PTSD rates of 50% and 28.6%, respectively.

Table 4.5. Association between experienced oppression and traumatic events

Scenario		Not Have PTSD	Have PTSD	Total	P value
Oppressed Because of Ethnicity, Religion, or Sect:	No	51	9	60	0,251
	Yes	188	52	240	
Present While Someone Searched for People or Things in Your Home:	No	87	18	105	0,314
	Yes	152	43	195	
Did Anyone Search You?	No	170	43	213	0,922
	Yes	69	18	87	
Looted, Confiscated, or Destroyed Property	No	14	10	24	0,007
	Yes	225	51	276	
Imprisoned	No	236	49	285	0,001
	Yes	3	12	15	
Suffered Ill Health Without Access to Medical Care or Medicine	No	120	27	147	0,407
	Yes	119	34	153	
Suffered from Lack of Food or Clean Water	No	72	21	93	0,517
	Yes	167	40	207	
Expelled from Country Based on Ancestral Origin, Religion, or Sect	No	224	58	282	0,690
	Yes	15	3	18	
Lacked Shelter	No	236	58	294	0,06
	Yes	3	3	6	
Witnessed Arrest/Torture of Religious Leaders	No	227	49	276	0,001
	Yes	12	12	24	
Witnessed Mass Execution of Civilians	No	236	49	285	0,001
	Yes	3	12	15	
Witnessed Chemical Attacks on Residential Areas	No	194	43	237	0,068
	Yes	45	18	63	
Exposed to Combat Situations	No	18	0	18	0,027
	Yes	221	61	282	
Serious Physical Injury from Combat	No	215	52	267	0,294
	Yes	24	9	33	
Serious Physical Injury of Family/Friend	No	203	49	252	0,381
	Yes	36	12	48	
Witnessed Someone Being Physically Harmed	No	236	52	288	0,001
	Yes	3	9	12	
Witnessed Sexual Abuse or Rape	No	236	61	297	0,379
	Yes	3	0	3	
Witnessed Torture	No	236	52	288	0,001
	Yes	3	9	12	
Witnessed Murder	No	236	58	294	0,068
	Yes	3	3	6	

5. DISCUSSION

This section interprets the findings on the prevalence of PTSD and associated factors among adults in Northwest Syria, contextualizing them within the broader literature. It highlights key sociodemographic and traumatic factors influencing PTSD, explores underlying mechanisms, and suggests implications for public health interventions.

5.1. Key Findings and Comparison with Literature

This study found that 20.3% of participants experienced PTSD, with significant associations observed between specific sociodemographic factors and PTSD prevalence. Education level emerged as a critical factor, as participants with no formal schooling (15%) or only elementary education (33.3%) exhibited higher PTSD prevalence compared to those with secondary (8.3%) or university education (0%). These findings align with studies conducted in Sudan and Afghanistan, which similarly documented that individuals with lower education levels face greater mental health vulnerabilities due to limited coping mechanisms and access to resources (Sudan Study, Afghanistan Study). Geographic location also significantly influenced PTSD prevalence; regions like Binnish (50%) and Kafr Takharim (26.7%) reported higher rates, reflecting localized conflict intensity and limited access to mental health services. Comparable findings have been observed in Iraq and Palestine, where geographic disparities strongly impacted PTSD prevalence due to variations in conflict exposure and community resources (Iraq Study, Palestine Study) [34,36,37]. Additionally, type of residence significantly affected PTSD prevalence, with individuals in camps (27.3%) experiencing higher rates compared to house owners (19.6%) and tenants (13.1%), emphasizing the psychological stress associated with unstable living conditions. This finding aligns with refugee studies conducted in Sudan and Palestine, highlighting the compounded stressors of displacement [38].

Traumatic events showed a strong correlation with PTSD. Participants who had been imprisoned (80%) and those who witnessed mass executions (80%) reported the highest PTSD prevalence, followed by property destruction (51%). These findings resonate with research from Rwanda and Bosnia, where imprisonment and exposure to extreme violence were among the strongest predictors of PTSD (Rwanda Study, Bosnia Study) [38-40].

Combat exposure (21.6%) and witnessing torture (42.9%) were also significantly associated with PTSD, consistent with studies in Afghanistan and Bosnia that emphasize the psychological toll of direct violence (Afghanistan Study, Bosnia Study). These findings underscore the profound impact of trauma on mental health and the urgent need for trauma-specific interventions.

5.2. Mechanisms Underlying the Association

Several mechanisms can explain the associations between PTSD and sociodemographic or traumatic factors. Displacement disrupts social networks and support systems, increasing chronic stress and vulnerability to PTSD. Traumatic events such as imprisonment or witnessing violence can cause neurobiological changes, including heightened amygdala activity and impaired regulation by the prefrontal cortex, contributing to persistent psychological distress. Socioeconomic vulnerabilities, such as low education levels and precarious living conditions, further exacerbate mental health challenges by limiting access to coping strategies and support services. These mechanisms emphasize the multifaceted nature of PTSD in conflict-affected populations (Goday Study, Afghanistan Study). [38, 41,42].

5.3. Implications for Public Health

The study's findings point to the urgent need for targeted mental health interventions in conflict-affected regions like Northwest Syria. Community-based support programs should prioritize regions with the highest PTSD prevalence, such as Binnish and Kafr Takharim, providing trauma-informed care and mental health services. Educational initiatives focused on improving literacy and vocational skills could reduce mental health vulnerabilities associated with low education levels, a strategy supported by research in similar contexts (Sudan Study, Palestine Study) [34,36,37]. Additionally, improving living conditions in camps through better infrastructure and access to basic services can significantly alleviate stressors linked to displacement. Policymakers and humanitarian organizations must integrate these strategies into broader interventions, ensuring culturally sensitive and accessible care for affected populations (Iraq Study). [37,41,43,44].

5.4. Differential Exposure to Trauma

The nature of trauma exposure in the context of northwest Syria's conflict varies significantly between genders, influenced largely by societal roles and expectations. Males, constituting 43% of our study's participants, might be more exposed to direct conflict-related traumas, including participation in or witnessing combat and other forms of violence. These experiences align with the traditional societal expectations of men being protectors or active participants in conflict scenarios.

Conversely, the types of trauma experienced by women, who made up 57% of our study's participants, often involve indirect exposure such as the loss of family members, displacement, and the threat of sexual violence. These experiences are deeply traumatic and may be compounded by the societal expectation for women to maintain familial stability amid chaos, further increasing their risk of developing PTSD.

The differential nature of trauma exposure between genders in northwest Syria underscores the need for gender-sensitive approaches in addressing PTSD. It is imperative to consider not just the prevalence of PTSD among men and women but also the qualitative differences in their trauma experiences. Understanding these nuances is crucial for developing effective mental health interventions that are tailored to the specific needs and experiences of both men and women in this conflict-affected region.

5.5. Economic Status and PTSD

Economic Status as a Determinant of PTSD Vulnerability

The relationship between economic status and Post-Traumatic Stress Disorder (PTSD) is a critical aspect of understanding mental health in conflict-affected areas like northwest Syria. In our study of 300 individuals, a significant proportion, 75.4%, were not working, while only 24.6% were employed. This high rate of unemployment is reflective of the broader economic disruptions caused by the ongoing conflict, which in turn plays a pivotal role in influencing mental health outcomes, including the risk of PTSD.

Unemployment and Its Psychological Impact

Unemployment, which is prevalent among three-quarters of our study participants, is not merely a financial hardship; it is a source of chronic stress, contributing to feelings of helplessness, a lack of purpose, and social isolation. These factors are known contributors to the development and exacerbation of PTSD symptoms. The stress of economic instability can be particularly overwhelming in a war-torn society where basic needs are often unmet, and opportunities for stable employment are scarce.

The psychological impact of unemployment is compounded by the loss of identity and self-esteem, often associated with job roles. In the context of northwest Syria, where traditional sources of livelihood have been disrupted, the inability to provide for oneself and one's family can lead to increased feelings of worthlessness and despair, thereby elevating the risk of PTSD.

Employment and PTSD: The Dual-Edged Sword

On the other hand, 24.6% of individuals who are employed may face their unique challenges. Employment in a conflict zone can entail working in high-stress environments, often with inadequate support and resources. While employment provides financial stability, it may also expose individuals to additional stressors and traumatic experiences, especially if the work is directly related to conflict or in insecure environments. Thus, the nature of employment and the conditions of the workplace are crucial factors in determining its impact on mental health.

Economic Status Intersecting with Other Factors

The influence of economic status on PTSD is not isolated; it intersects with other sociodemographic factors such as gender, age, and marital status. For instance, the burden of unemployment may be experienced differently by men and women, given the societal expectations and roles in northwest Syria. Similarly, economic hardships can have varying impacts across different age groups and marital statuses, influencing the overall mental health and well-being of individuals.

5.6. Impact of Educational Level

The educational attainment of individuals in conflict zones like northwest Syria plays a crucial role in shaping their mental health outcomes, including the risk and experience of Post-Traumatic Stress Disorder (PTSD). In our study encompassing 300 participants, the distribution of educational levels presents a telling picture: 39.7% did not attend school, 27.6% completed elementary school, 20.7% finished middle school, 8.6% went to secondary school, and only 3.4% attained university education. This distribution highlights a prevalent lack of higher education, which can have significant implications for PTSD prevalence and coping mechanisms.

Limited Education and Increased Vulnerability

The largest group, those who did not attend school (39.7%), face a distinct set of challenges. Lack of formal education can limit individuals' understanding of their mental health, reduce their ability to access or seek help and hinder their capacity to employ coping strategies effectively. This group may also lack the necessary awareness to recognize PTSD symptoms, leading to underdiagnosis and undertreatment. The absence of education as a resource compounds the stressors typical of a conflict-affected environment, thereby increasing vulnerability to PTSD.

Educational Level and Coping Resources

For those with some level of formal education (elementary to secondary school, comprising 56.9% of the participants), the ability to access information, understand the nature of their trauma, and seek appropriate help may be somewhat improved. However, the limited extent of their education still poses constraints. They might have basic literacy and numeracy skills but lack in-depth knowledge or critical thinking skills that higher education might provide, which are crucial in processing traumatic experiences and seeking effective coping mechanisms.

Higher Education and PTSD Resilience

A small percentage (3.4%) of individuals with a university education in northwest Syria are likely to have a better understanding of mental health and access to resources, potentially enabling them to manage PTSD symptoms more effectively. Higher education often provides individuals with a greater sense of control, critical thinking skills, and a better

understanding of health-related information, all of which can contribute to resilience in the face of trauma.

The Role of Education in Trauma Processing

Educational attainment influences how individuals process and respond to trauma. Those with higher education levels may have better cognitive tools to contextualize their experiences, employ problem-solving skills, and seek and utilize social support effectively. Conversely, lower levels of education might limit these capacities, exacerbating the impact of trauma and hindering recovery.

5.7. Marital Status and PTSD Prevalence

The prevalence of Post-Traumatic Stress Disorder (PTSD) in conflict-affected areas like northwest Syria is intricately linked to various sociodemographic factors, including marital status. In our study, the distribution of marital status was as follows: 75% married, 12.7% single, 11% widowers, and 1.3% divorced. This distribution provides a framework for understanding how different marital statuses might influence the experience and prevalence of PTSD in this region.

Married Individuals: Stability vs. Additional Stressors

Married individuals, who constitute most of our sample, might experience both protective and aggravating factors concerning PTSD. On one hand, marriage can offer emotional support, a sense of stability, and shared responsibilities, which are significant protective factors against PTSD. On the other hand, the stress of protecting and providing for a family in a conflict zone, coupled with shared trauma experiences, can intensify the risk of developing PTSD. The responsibility of managing not only one's trauma but also that of a spouse and children can be overwhelming, potentially exacerbating PTSD symptoms.

Single Individuals: Isolation and Lack of Support

The 12.7% of single participants might face unique challenges. The absence of a partner can mean a lack of immediate emotional support and shared coping mechanisms, which are often found in marital relationships. Singles may also experience a sense of

isolation and may lack a close confidante to share their traumatic experiences and feelings, factors that can contribute to an increased risk of PTSD.

Widowers: Grief Compounded by Trauma

Widowers, making up 11% of the participants, are likely to face compounded trauma. The loss of a spouse is not only a source of profound grief but also a significant traumatic event that can trigger or exacerbate PTSD. In addition to coping with the trauma associated with the conflict in northwest Syria, widowers must navigate the emotional turmoil of bereavement, which can be an isolating experience and a potent risk factor for PTSD.

Divorced Individuals: Trauma and Relationship Breakdown

The small percentage (1.3%) of divorced individuals in the study might experience PTSD in the context of both the conflict and the personal trauma of a relationship breakdown. Divorce, particularly in a conflict setting, can be a highly stressful and destabilizing experience, often leading to social stigma, economic hardship, and psychological distress, all of which can elevate the risk of PTSD.

5.8. Displaced Status and PTSD Risk

In conflict-affected regions like northwest Syria, displacement is a critical factor that profoundly impacts mental health, particularly the risk of Post-Traumatic Stress Disorder (PTSD). Our study indicates that a significant majority, 80.3%, are displaced individuals, while 19.7% are non-displaced. This stark disparity highlights the widespread nature of displacement in the region and its potential implications for PTSD prevalence.

The Psychological Impact of Displacement

Displacement, experienced by 80.3% of our study's participants, entails more than just physical relocation. It often involves the loss of home, community, and a sense of belonging, all of which are integral to an individual's identity and emotional stability. The experience of being uprooted, often abruptly and under traumatic circumstances, can lead to a profound sense of loss, grief, and insecurity. These experiences are potent risk factors for the development of PTSD, as the traumatic nature of displacement can trigger intense and persistent psychological distress.

Displaced individuals frequently face uncertainty about their future, potential safety concerns in new environments, and the challenge of adapting to unfamiliar settings. The cumulative stress of these experiences can exacerbate the risk of developing PTSD, as the ongoing nature of these stressors can overwhelm an individual's coping mechanisms.

Non-Displaced Individuals and PTSD

For the 19.7% who are non-displaced, the experience of the conflict and its associated traumas occurs within a familiar context. While they are not subjected to the trauma of displacement, they still face the general adversities of living in a conflict zone. However, their relative stability in terms of residence might offer some protective factors against PTSD, such as a consistent social support network, familiarity with their environment, and a sense of continuity.

Intersectionality with Other Sociodemographic Factors

The impact of displacement on PTSD risk must also be considered in conjunction with other sociodemographic factors such as age, gender, economic status, and marital status. For instance, displaced women or children may have different vulnerabilities compared to their male or adult counterparts. Similarly, the intersection of displacement with economic hardship can further compound the risk of PTSD.

5.9. Social Support and Coping Mechanisms

Availability of Social Support

In the context of northwest Syria, the availability of social support plays a crucial role in coping with the psychological aftermath of conflict. Given the prolonged conflict spanning over 12 years, traditional social support structures might have been disrupted or transformed.

Impact of Conflict on Social Structures

The protracted conflict in northwest Syria has had profound and multifaceted impacts on traditional social structures, notably family units and community networks, which are integral to the fabric of social support systems. The relentless nature of the conflict, which lasted over a decade, has led to widespread disruption of these essential societal pillars,

significantly influencing the availability and nature of social support for individuals affected by the trauma of war.

Disintegration of Family Units

The sustained conflict has often resulted in the fragmentation of family units, a fundamental source of support and stability in Syrian society. Many individuals have faced the loss of family members due to violence or enforced disappearances, leaving indelible marks of grief and trauma. Additionally, the necessity for some family members to engage in conflict, either as combatants or forced recruits, has further strained familial bonds and structures.

Disruption of Community Networks

Community networks, historically a cornerstone of social cohesion and mutual support in Syrian culture, have been severely disrupted. The continuous cycle of violence, displacement, and resettlement has fragmented communities, leading to the loss of traditional neighborhood support systems. This disruption is not merely physical but also psychological, as the shared experiences of loss, distrust, and uncertainty erode the sense of community solidarity and belonging.

Impact on Social Support Availability

The upheaval of these social structures has directly impacted the availability of social support. In a society where communal and family support has traditionally played pivotal roles in coping with life's challenges, their erosion means that individuals facing trauma and stress often find themselves isolated or lacking previously accessible support networks. This isolation can exacerbate the symptoms of PTSD and hinder the process of psychological healing and resilience.

Cultural Dimensions of Social Support

Moreover, the conflict has influenced the cultural dimensions of social support in northwest Syria. In a context where social support is often mediated through cultural practices and collective gatherings, the disruption of these practices due to the conflict impedes the conventional methods of community-based support and shared healing.

5.10. Role of Mental Health Centers in Conflict-Affected Northwest Syria

The scarcity of mental health centers in northwest Syria is a significant issue that can be attributed to a confluence of factors stemming from over a decade of conflict. This shortage has critical implications for the provision of mental health services in the region, particularly for individuals suffering from PTSD and related mental health disorders.

Destruction of Infrastructure

One of the primary reasons for the dearth of mental health centers is the widespread destruction of infrastructure, a direct consequence of the prolonged conflict. The relentless bombardment and military operations have not only targeted residential areas but also essential public facilities, including healthcare establishments.

Lack of Funding

International aid and government funding, which are crucial for establishing and maintaining healthcare facilities, have often been diverted to address more immediate survival needs such as food, shelter, and physical healthcare. This diversion has left mental health care underfunded and understaffed, impacting on the ability to provide adequate services to those in need.

Challenges in Establishment and Maintenance

Ongoing conflict and instability in the region pose considerable challenges to the establishment and maintenance of new mental health facilities. The unpredictable security situation, coupled with logistical challenges and the constant threat of violence, makes it difficult to construct and sustain such centers. Moreover, the uncertain political and security climate can deter investment and aid directed towards mental health infrastructure.

Shortage of Trained Mental Health Professionals

Another critical factor contributing to the scarcity of mental health centers is the potential shortage of trained mental health professionals. The conflict has led to a massive displacement of skilled workers, including psychiatrists, psychologists, and other mental health workers. Many professionals have either fled the country or have been lost in the conflict, resulting in a significant gap in expertise and experience necessary for effective

mental health care. This shortage is exacerbated by the difficulty in training and recruiting new professionals within the current context of northwest Syria.

5.11. Relationship Between Social Support and PTSD Severity

In the milieu of northwest Syria, where the population has been enduring prolonged conflict, the relationship between social support and the severity of Post-Traumatic Stress Disorder (PTSD) becomes a crucial aspect for understanding and addressing mental health needs.

Significance of Social Support in PTSD

Social support plays a pivotal role in influencing the severity of PTSD symptoms. It acts as a buffer against the stressors associated with trauma and can significantly aid in the recovery process. Support from family, friends, and the community can provide emotional comfort, practical assistance, and a sense of belonging and security, all of which are vital for individuals coping with PTSD.

Correlation Between Social Support and PTSD Severity

Studies and observations in conflict zones have often shown that a strong network of social support is inversely related to the severity of PTSD symptoms. Individuals with robust support systems tend to exhibit lower levels of PTSD severity compared to those who lack such support. This correlation highlights the therapeutic value of social connections and the need to integrate social support mechanisms into mental health interventions.

Challenges in a Conflict Zone

However, the context of a conflict zone poses unique challenges to maintaining or accessing social support, which can have significant implications for the mental health of affected individuals.

- Displacement and Fragmentation: Due to the conflict, many individuals and families in northwest Syria have experienced displacement, leading to the fragmentation of traditional family units and community networks. This displacement often results in the loss of familiar support systems and forces

individuals to navigate new and unfamiliar environments, exacerbating feelings of isolation and vulnerability.

- Loss of Community Members: The conflict has led to the loss of many community members, either through death or separation. Such losses not only mean the direct loss of support but also contribute to a collective sense of grief and trauma within the community, impacting on its overall capacity to provide support.
- Instability and Uncertainty: The constant state of instability and uncertainty that characterizes life in a conflict zone can strain existing social support networks. The ongoing stress and trauma can affect individuals' ability to provide support to others, while at the same time increasing their own need for support.
- Cultural and Social Barriers: Cultural norms and societal expectations in the region can also influence the availability and seeking of social support. The stigma associated with mental health issues, gender roles, and the prioritization of immediate survival needs can all play a role in limiting access to and the effectiveness of social support.

This discussion contextualizes the study's findings within existing literature, providing actionable insights into the determinants of PTSD and emphasizing the importance of targeted interventions to address the mental health crisis in conflict zones.

5.12. Limitations

1. Cross-Sectional Design

- The cross-sectional nature limits the ability to establish causality between PTSD and the identified sociodemographic or traumatic factors. Longitudinal studies would provide a better understanding of temporal relationships and the progression of PTSD.

2. Sampling Method

- The use of convenience and purposive sampling may introduce selection bias, as participants are drawn from those seeking services at a psychological support center. This could limit the generalizability of findings to the broader population.

3. Geographic Limitation

- The study focuses on northwest Syria, particularly around Idlib, which may not fully represent the experiences of individuals in other conflict-affected regions.

4. Potential Recall Bias

- Participants' self-reported experiences of trauma and PTSD symptoms may be subject to recall bias, especially in cases of severe or prolonged distress.

5. Limited Exploration of Protective Factors

- While risk factors are extensively analyzed, the study does not delve deeply into potential protective factors or resilience mechanisms that might mitigate PTSD.

6. Underrepresentation of Certain Traumas:

- Certain severe traumatic events, such as torture or sexual abuse, have low reported frequencies, which may result in underrepresentation and limited statistical analysis of these factors.

7. Exclusion of Severely Impaired Individuals

- Excluding individuals with severe cognitive impairments or other significant conditions might lead to an underestimation of the overall PTSD burden in the population.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1. Conclusion

This study provides a comprehensive overview of the sociodemographic profile, exposure to oppression and traumatic events, and the prevalence and determinants of post-traumatic stress disorder (PTSD) among participants. The findings highlight significant trends and associations, offering crucial insights into the mental health challenges faced by the study population.

The analysis revealed notable patterns in the participants' backgrounds. Most were aged between 20 and 30 years, with a majority residing in Idleb and other regions severely affected by displacement and conflict. Education levels were low, with 35% of participants having no formal schooling and 30% having only elementary education. The study population predominantly consisted of displaced individuals (71%), with a high proportion of females (57%) and married participants (73.7%). The majority were unemployed (72%), and 43% had three or more children. These findings suggest that the participants are largely from vulnerable and disadvantaged demographic groups, characterized by limited access to education and economic opportunities, compounded by the pressures of displacement and family responsibilities.

The study underscores the pervasive and intense nature of traumatic experiences within this population. A significant majority (80%) reported oppression due to ethnicity, religion, or sect, while 92% had their property looted or destroyed, and 51% suffered ill health without medical care. Furthermore, 69% faced a lack of food or clean water, and 94% were exposed to combat situations or landmines. Despite this, only 6% were expelled from their country or lacked shelter. Witnessing or experiencing violence was common, including mass executions, arrests of religious leaders, and chemical attacks, though direct exposure to acts such as torture, sexual abuse, or murder was less frequently reported. These findings illustrate the widespread and multifaceted nature of the adversities endured by participants.

The study found that 20.3% of participants were affected by PTSD, indicating a substantial mental health burden. While the majority (79.7%) did not report PTSD, those who did concentrate on specific demographic and experiential subgroups, which provides essential clues for targeted interventions.

Several sociodemographic factors showed significant associations with PTSD. For example, PTSD prevalence was higher among participants from Binnish (50%) and Kafr Takharim (26.7%), suggesting that geographic and community-level factors may influence mental health outcomes. Education level was also significant, with individuals who had no formal schooling or only elementary education showing higher PTSD prevalence compared to those with secondary or university education. Family dynamics played a role, as participants with three or more children experienced a PTSD prevalence of 32.6%, compared to 10.8% among those with no children.

Notably, the type of residence was a significant factor; individuals living in camps reported higher PTSD prevalence (27.3%) compared to house owners (19.6%) and tenants (13.1%). This highlights the precarious conditions in camps as a potential risk factor for mental health issues. Employment status and sex did not show significant differences in PTSD prevalence, indicating that other factors, such as education, family size, and housing conditions, may play a more direct role.

Specific traumatic experiences were also strongly linked to PTSD. Participants who were imprisoned (80%), witnessed mass executions (80%), or experienced property destruction (51%) had significantly higher PTSD prevalence. Witnessing torture, physical harm, or combat situations were also strongly associated with PTSD, emphasizing the profound psychological impact of these events.

These findings highlight the urgent need for targeted mental health interventions, particularly for individuals who have experienced severe trauma or belong to vulnerable demographic groups. Policymakers and humanitarian organizations should prioritize access to mental health care, especially in high-risk areas such as camps and regions with ongoing conflict. Educational programs and community-based interventions may help mitigate some of the risk factors identified, such as low education levels and large family sizes.

Future research should focus on longitudinal studies to track the mental health trajectories of affected populations and evaluate the effectiveness of psychosocial support programs. Efforts to address the root causes of displacement and trauma, along with enhancing resilience and coping mechanisms, will be crucial for improving long-term outcomes.

6.2. Recommendations

The findings of this study provide compelling evidence for developing targeted strategies and policies to address the mental health challenges faced by displaced and conflict-affected populations. Based on comprehensive analysis, the following recommendations are proposed:

1. Mental Health Interventions and Policy Development

- Targeted Mental Health Support: Develop and implement mental health programs specifically tailored for high-risk groups, including individuals living in camps, those with low educational attainment, and large families.
- Community-Based Interventions: Initiate community-driven mental health outreach programs, particularly in regions like Binnish and Kafr Takharim, where PTSD prevalence is notably high.
- Trauma-Informed Care: Establish trauma-informed care centers in regions heavily affected by conflict to provide accessible and culturally sensitive mental health services.
- Integrated Policy Framework: Formulate policies that integrate mental health support with broader humanitarian efforts, ensuring mental health is prioritized alongside basic needs such as food, water, and shelter.

2. Educational and Economic Empowerment

- Education Programs: Develop educational initiatives to improve literacy and vocational skills, particularly for women and displaced individuals. These programs can mitigate the long-term impacts of trauma by enhancing resilience and providing economic opportunities.
- Economic Empowerment: Design policies that support income-generating activities for displaced individuals, focusing on empowering unemployed populations to rebuild their lives.

3. Housing and Living Conditions

- Improvement of Living Conditions in Camps: Enhance infrastructure in camps to reduce the mental health risks associated with precarious living conditions. This includes ensuring access to clean water, food, and secure shelter.

- Sustainable Housing Solutions: Promote sustainable and permanent housing solutions for displaced individuals to foster stability and a sense of security.

4. Future Research Directions

- Longitudinal Studies: Conduct long-term studies to understand the mental health trajectories of displaced populations and evaluate the effectiveness of interventions.
- Community-Level Factors: Explore the influence of geographic and community-level factors on mental health outcomes to develop context-specific interventions.
- Coping Mechanisms and Resilience: Investigate the coping mechanisms and resilience factors among affected populations to identify strategies for bolstering psychological well-being.
- Intersectional Analysis: Conduct research that examines the intersection of sociodemographic factors (e.g., gender, marital status, and education) and their influence on PTSD to refine intervention strategies.

5. International Collaboration and Advocacy

- Global Partnerships: Encourage collaboration between governments, non-governmental organizations, and international agencies to address the mental health needs of displaced populations.
- Advocacy: Advocate for global recognition of the mental health crises in conflict zones, ensuring adequate funding and resources for psychosocial support programs.

6. Prevention and Resilience-Building

- Conflict Resolution and Peacebuilding: Support initiatives aimed at addressing the root causes of conflict and displacement, thereby preventing further trauma.
- Strengthening Social Support Systems: Enhance community networks and support systems to improve collective resilience and foster recovery among affected individuals.

By implementing these recommendations, stakeholders can take a significant step toward alleviating the mental health burden among vulnerable populations and creating sustainable pathways to recovery and well-being.

6.3. Strengths of the Study

6.3.1. Strengths

1. Comprehensive Data Collection

- The use of validated tools like the Harvard Trauma Questionnaire (HTQ) ensure that PTSD symptoms and exposure to traumatic events are measured reliably and in alignment with DSM-5 criteria.
- A supplementary questionnaire provides additional context by capturing detailed sociodemographic variables, enriching the analysis of associated risk factors.

2. Culturally Relevant Instrumentation:

- Adapting the HTQ to the cultural and linguistic context of northwest Syria enhances the study's relevance and ensures accurate data representation for the population studied.

3. Targeted Population

- The focus on adults in a conflict-affected region with high displacement rates offers valuable insights into the mental health impact of conflict and trauma.

4. Significant Sample Size

- The inclusion of 300 participants provides robust data for statistical analysis and the identification of significant associations between PTSD and sociodemographic or traumatic factors.

5. Exploration of Sociodemographic and Traumatic Factors

- The study effectively highlights critical risk factors, such as education level, type of residence, and exposure to specific traumatic events, providing actionable insights for intervention planning.

6. Ethical Considerations

- Stringent ethical protocols, including informed consent and support for distressed participants, ensure the study respects participant welfare and privacy.

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8. APPENDICES

Appendix 1. Harvard Trauma Questionnaire (HTQ)

CONSENT FORM

PLEASE ALLOW ENOUGH TIME TO READ THIS DOCUMENT CAREFULLY

You are invited to participate in the research study 'Prevalence and associated factors of post-traumatic stress disorder) PTSD) among adults visiting the mental facility in Idlib

by **Hayan Alabrash** 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 your 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: give an idea about mental disorders, especially post-traumatic stress disorder, and determine the risk factor that enhances the rate to develop that disease in adults visiting a psychological center
   b. Content of the Study: The study will be cross-sectional of 400 cases that visit the psychological center and it will continue for 4 month
   c. Type of Research: () Scientific Research Study (√) Thesis Study
   d. Estimated Time for the Study: 4 months
   e. Expected Number of Participants / Volunteers to the study: 400 cases
   f. Location (s) of the Research: **Syria – Idleb – Aldana- tranquil soul psychological center**
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.

Participant's (with your own handwriting)
Name:
Surname:
Signature:
P.S.: *This form is arranged in two copies. One of these copies is given to the volunteer by signature, and the other is kept by the researcher.*

Demographics:

Name:
Sex: male famle
Age:
- *20-30*
- *30-40*
- *40-50*
- *50-60*
- *60-70*

Place of residence :
Type of residence :
Displaced:
- Owner house
- rent house
- camp

resident*:*
- Owner house
- rent house

education level:
- Never went to school
- Elementary
- Primary
- High school
- University

employment status:
- working
- not working

family status:
- not married
- married
- divorced
- *Widower*

Number of children:
- *1*
- *2*
- *Above 3*

Harvard Trauma scale

Instruction

إستبيان هارفارد لإصابات و أعراض الشدة

We would like to ask you about your past history and present symptoms. This information will be used to help us provide you with better medical care. However, you may find some questions upsetting. If so, please feel free not to answer. This will certainly not affect your treatment. Your responses will be kept confidential.

ارشادات :

نود أن نسألك عن معاناتك السابقة والأعراض التي تشكو منها حالياً . كما أن هذه المعلومات تساعدنا على تزويدك بعناية طبية أفضل .

قد نجد بعض هذه الأسئلة مزعجاً أو محرجا. فعند ذلك لك مطلق الحرية في عدم الإجابة. واطمئن إن هذا لن يؤثر في برنامج عالجك. كما أن إجابتك على هذه الأسئلة سوف تحفظ في سرية تامة.

PART 1: TRAUMA EVENTS

الجزء الأول : الحوادث المؤلمة:

Please indicate whether you have experienced any of the following events (check "YES" or "NO" for each column).

نرجو ان تذكر ان كنت قد تعرضت ألي من الحوادث التالية . ضع عالمة)√(في العمود المناسب تحت)نعم(أو)ال(.

ال no	yes نعم		
		هل تعرضت لإضطهاد بسبب دينك ، عالقك أو مذهبك *Oppressed because of ethnicity, religion, or sect*	1
		هل تم تفتيش دارك بحضورك بحثا عن أشخاص أو أشياء *Present while someone searched for people or things in your home.*	2
		Do you scerched by ant one ? ل فتشت أنت	3
		هل تم نهب ممتلكاتك الشخصية أو مصادرتها أو تدميرها *Property looted, confiscated, or destroyed*	4
		هل فرض عليك ترك مدينتك أو السكن في منطقة أخرى تقل فيها الخدمات *Forced to leave your hometown and settle in a different part of the country with minimal services*	5
		Imprisoned هل سجنت	6
		هل عانيت من عدم إمكانية الحصول على الرعاية الطبية او الدواء خالل مرضك *Suffered ill health without access to medical care or medicine*	7
		هل عانيت من عدم وجود الطعام أو الماء الصافي *Suffered from lack of food or clean water*	8
		Forced to flee your country هل أضطررت على الهرب من وطنك	9
		هل فرضت عليك الهجرة من وطنك بناء على أصل أجدادك ، دينك أو مذهبك *Expelled from country based on ancestral origin, religion, or sect*	10
		Lacked shelter هل لديك مأوى	11
ال no	yes نعم		
		ل شاهدت أنتهاك حرمة أو تدمير العتبات المقدسة أو المراكز التعليمية الخاصة بدينك أو مذهبك *Witnessed the desecration or destruction of religious shrines or places of religious instruction*	12
		هل شاهدت إعتقال أو تعذيب أو إعدام شخصيات مهمة من عشيرتك ، دينك أو طائفتك *Witnessed the arrest,* *torture, or execution of religious leaders or important members of tribe*	13
		Witnessed mass execution of civilians ل شاهدت إعداما جماعيا للمدنيين	14
		هل شاهدت قصف أو إحراق أو تدمير الأماكن السكنية أو األهوار *Witnessed shelling, burning, or razing* *of residential areas or* *marshlands*	15
		هل شاهدت هجمات كيميائية على المناطق السكنية أو األهوار *Witnessed chemical attacks on residential areas or marshlands*	16

		هل تعرضت لميدان الحرب)إنفجارارت، قصف مدفعي،رمي ألسلحة(أو أللغام *Exposed to combat situation (explosions, artillery fire, shelling) or landmine.*	17
		هل أصبت إصابات جسمية خطيرة بسبب التعرض لميدان الحرب أو أللغام *Serious physical injury from combat situation or landmine*	18
		Used as a human shield ل أستخدمت كدرع بشري	19
		هل أصيب أحد أفراد عائلتك أو أصدقائك إصابة جسمية خطيرة بسبب التعرض لجو الحرب أو أللغام *Serious physical injury of family member or friend from combat situation or landmine*	20
		Witnessed rotting corpses ل شاهدت جثثا متعفنة	21
		هل أجبرت على البقاء في الدار بسبب الفوضى والعنف في الخارج *Confined to home because of chaos and violence outside*	22
		هل شاهدت شخصا ما يتعرض لألذى الجسمي) الضرب ، الطعن، الخ(*Witnessed someone being physically harmed (beating, knifing, etc.)*	23
		هل شاهدت عملية ألساءة الجنسية أو إالغتصاب *Witnessed sexual abuse or rape*	24
		Witnessed torture ل شاهدت حالة تعذيب	25
		Witnessed murder ل شاهدت حالة قتل	26
		هل أجبرت على إالخبار عن شخص آخر مما عرضه لخطر إالصابة أو الموت *Forced to inform on someone placing them at risk of injury or death*	27
		هل أجبرت على تدمير متلكات شخص آخر *Forced to destroy someone's property*	28
		هل أجبرت على إلحاق ألذى الجسمي)الضرب ، الطعن ، الخ(بشخص ما *Forced to physically harm someone (beating, knifing, etc.)*	29
		هل قتل أحد أفراد عائلتك) طفلك ، زوجتك، الخ.(أو مات نتيجة العنف *Murder or violent death of family member (child, spouse, etc.)*	30
ال No	yes نعم		
		Murder or violent death of friend ل قتل صديقك أو مات نتيجة العنف	31
		هل أجبرت على دفع قيمة الطلقة المستخدمة لقتل أحد أفراد عائلتك) طفلك ، زوجك , . الخ(*Forced to pay for bullet used to kill family member (child, spouse, etc.)*	32
		هل أستلمت جثة أحد أفراد عائلتك)طفلك ، زوجك ، الخ(ومنعت من البكاء أو إقامة مراسيم الدفن عليه *Received the body of a family member (child, spouse, etc.) and prohibited from mourning them and performing burial rites*	33
		هل إختفى أحد أفراد عائلتك) طفلك ، زوجك, الخ(*Disappearance of a family member (child, spouse, etc.)*	34
		Disappearance of a friend هل إختفى صديقك	35
		هل أختطف أحد أفراد عائلتك) طفلك ، زوجك ، الخ(أو أخذ كرهينة *Family member (child, spouse, etc.) kidnapped or taken as a hostage*	36
		Friend kidnapped or taken as a hostage ل إختطف صديقك أو أخذ كرهينة	37
		هل بلغ أحد عنك مما عرضك وعائلتك لخطر إالصابة أو الموت *Someone informed on you placing you and your family at risk of injury or death.*	38
		هل تعرضت لألذى الجسمي) الضرب ، الطعن ، الخ(*Physically harmed (beaten, knifed, etc.)*	39
		Kidnapped or taken as a hostage ل أختطفت أو أخذت كرهينة	40
		هل تعرضت لإلساءة الجنسية أو أغتصبت *Sexually abused or raped (i.e., forced sexual activity)*	41
		تم تعذيبك)بمعني أثناء وجودك في ألسر تعرضت إلى المعاناة النفسية أو الجسدية بشكل متعمد أو منتظم(*Tortured (i.e., while in captivity you received deliberate and systematic infliction of physical and/or mental suffering)*	42
		نرجو أن تحدد أي مواقف أخرى مخيفة أو شعرت عندها بأن حياتك معرضة للخطر *was very frightening or in* *which you felt your life was in danger: Please specify any other situation that*	43

PART II: PERSONAL DESCRIPTION

الجزء الثاني: الوصف الشخصي:

Please indicate what you consider to be the most hurtful or terrifying events you have experienced. Please specify where and when these events occurred.

الرجاء أن تذكر الحوادث التي تعرضت لها والتي تعتبرها انت مصدر أشد األلم والرعب. ثم الرجاء تحديد مكان وزمان هذه الحوادث

Under your current living situation (i.e. refugee camp, country of resettlement, returned from exile, etc.) what is the worst event that has happened to you, if different from above. Please specify where and when these events occurred.

تحت ظروف معيشتك الحالية) مثا ″ل: مخي′م اللاجئين بلد إعادة التوطين, العودة من المنفى,
.... الخ(ما هي أسوأ حادثة تعرضت لها, إن كانت هذه تختلف ع ′مَا ذكرته أعلاه. الرجاء تحديد مكان وزمان هذه الحادث

PART III: HEAD INJURY

إصابات الرأس

If you answer "YES" to the following trauma events, please indicate if you lost consciousness and for how long.

في حالة األجابة ب"نعم" أرجو أن تذكر إن كنت قد فقدت الوعي و ألي فترة من الزمن.

إذا كان الجواب"نعم"، فألية مدة؟ *If yes, for how long?*		هل فقدت الوعي؟ *of Loss Consciousness?*		هل تعرضت للحادث؟ *Experienced?*			
دقائق *Minutes*	ساعات *Hours*	ال *No*	نعم *Yes*	ال *No*	نعم *Yes*		
						الضرب على الرأس *Beatings to the head*	1
						محاولة خنق *Suffocation or strangulation*	2
						على وشك الغرق *Near drowning*	3
						إصابة في الرأس نتيجة انفجار على قرب منك *Injury to the head from nearby explosion*	4
						إصابات أخرى في الرأس)شظايا، طلق ناري، طعن، حرَق، ... إلخ(*Other types of injury to the head (e.g., shrapnel, bullet wound, stabbing, burns, etc.)*	5
						تجويع *Starvation*	6
إذا كان جوابك "نعم" على بند 6، فما هو وزنك الطبيعي: ____ وزنك بعد التجويع: ____ *If yes to item 6, what was your Normal weight:________Starvation weight:_________*							6 أ
إذا كان جوابك "نعم" على بند 6، فهل كنت على وشك الموت نتيجة التجويع؟ نعم: ____ ال: ____ *If yes to item 6, were you near death due to starvation? Yes: No:________*							6 ب

PART IV: TRAUMA SYMPTOMS

الجزء الرابع: أعراض الشدة

The following are symptoms that people sometimes have after experiencing hurtful or terrifying events in their lives. Please read each one carefully and decide how much the symptoms bothered you <u>in the past week</u>.

إن االأعراض التالية هي أعراض يشعر بها أحياناً االأشخاص الذين تعرضوا لحوادث مؤلمة أو مفزعة في حياتهم.

الرجاء قراءة كل بند بدقة، و تحديد مدى معاناتك من هذه الأعراض <u>خلال الأسبوع المنصرم</u>.

بشدة *Extremely*	كثيراً نوعاً ما *Quite a bit*	ال *A little*	ال أبداً *Not at all*		
				هل تعاودك الذكريات والأفكار ل أكثر الحوادث ألماً أو فزعا *Recurrent thoughts or memories of the most hurtful or terrifying events*	1
				هل تشعر و كأنك تعيش الحادثة مرة أخرى *Feeling as though the event is happening again*	2
				هل تأتيك كوابيس)أحالم مخيفة(متكررة *Recurrent nightmares*	3
				هل تشعر باالنفصال أو الإنعزال عن الناس *Feeling detached or withdrawn from people*	4
				هل تجد نفسك غير قادر على اإلحساس بالعواطف *Unable to feel emotions*	5
				هل تجد نفسك سريع الجفلان أو الاستثارة *Feeling jumpy, easily startled*	6
				هل تجد صعوبة في تركيز أفكارك *Difficulty concentrating*	7
				هل تجد صعوبة في النوم *Trouble sleeping*	8
				هل تجد نفسك متوجساً أو على حذر *Feeling on guard*	9
				هل تجد نفسك سريع االنفعال أو تنتابك نوبات من الغضب *Feeling irritable or having outbursts of anger*	10
				هل تتجنب األعمال التي تذكرك بالحادثة المؤلمة *Avoiding activities that remind you of the hurtful event*	11
				ل تجد نفسك غير قادر على تذكر بعض الحوادث التي سببتك أشد األلم *Inability to remember parts of the most hurtful events*	12
				هل تجد نفسك أقل اهتماماً باألعمال اليومية *Less interest in daily activities*	13
				هل تشعر و كأنه ال مستقبل لك *Feeling as if you don't have a future*	14
				هل تتجنب األفكار أو المشاعر المرتبطة بالحوادث المؤلمة *Avoiding thoughts or feelings associated with the hurtful events*	15
				ل تشعر برد فعل جسمي أو عاطفي عند تذكيرك بالحوادثالمؤلمة *Sudden emotional or physical reaction when reminded of the most hurtful events*	16
بش دّة Extremely	كثيراً نوعاً ما Quite a bit	قل ال A little	ال أبدا Not at all		
				ل تشعر بضعف الذاكرةPoor memory	17
				ل تشعر باألنهاك أو التعب الشديدFeeling exhausted	18
				ل تعاني من آلم أو مشاكل جسميةTroubled by bodily pain or physical problems	19
				ل تشعر أن مهاراتك اآلن هي أقل مما كانت سابقاً Feeling that you have less skills than you didbefore	20
				ل تجد صعوبة في االنتباهDifficulty paying attention	21
				ل تجد نفسك غير قادر على اتخاذ أي قرار في حياتك اليومية Feeling unable to make daily plans	22
				ل تجد صعوبة في مواجهة المواقف الجديدةHaving difficulty dealing with new situations	23
				ل تشعر أنك الشخص الوحيد الذي عانى من هذه الحوادث Feeling that you are the only one who suffered these events	24
				ل تشعر أن اآلخرين غير قادرين على فهم ما جرى لك	25

				Feeling that others don't understand wha happened to you	
				ل تشعر بالذنب ألنك نجوت و ما زلت على قيد الحياةFeeling guilty for having survived	26
				ل تلوم نفسك لما حدثBlaming yourself for things that have happened	27
				ل تتساءل لماذا ق دّر هلا لك أن تواجه مثل هذه الحوادث Spending time thinking why God is making you go through such events	28
				ل تشعر بالحاجة إلى االنتقامFeeling a need for revenge	29
				ل تشعر أن اآلخرين عدائيون تجاهكFeeling others are hostile to you	30
				ل تشعر أن الشخص الذي وثقت به قد خانكFeeling that someone you trusted betrayed you	31
				ل تشعر بعدم الثقة باآلخرينFeeling no trust in others	32
				ل تشعر أن ليس هناك من أحد تعتمد عليه إال هلاFeeling that you have no one to rely upon but god	33
				ل فقدت األملHopelessness	34
				ل تشعر أنك عاجز عن مساعدة اآلخرينFeeling powerless to help others	35
				ل تشعر بالعار بسبب الحوادث المؤلمة التي تعرضت لها Feeling ashamed of the hurtful or traumatic events that have happened to you	36
بش دة Extremely	كثيراً نوعاً ما Quite a bit	قل ا A little	ال أبدا Not at all		
				ل تشعر باإلهانة بسبب ما جرى لكFeeling humiliated by your experience	37
				ل تشعر أنك تجلب السوء على نفسك أو عائلتكFeeling that you are a jinx to yourself and your family	38
				ل اكتشفت بنفسك أو أخبرك أحد أنك قمت بعمل ال تستطيع أنتتذكره Finding out or being told by other people that you have done something that you can't remember	39
				ل تشعر أنك انقسمت إلى شخصين، و أن أحدهما يراقب ماآلخر يفعله Feeling as though you are split into two people and one of you is watching what the other is doing	40
				ضايج أنت هل Dayeg'(ruminations, poor concentration, lack of initiative, boredom, sleep problems tiredness, and somatic complaints)	41
				ل قلبك مقبوض(Qalbak maqboud (sensation of the heart being squeezed)	42
				ل أنت عصبي,Asabi(irritability, nervousness, lack of patience and anger outbursts)	43
				ل تشعر بضيق النفس و كأنك على وشك االختناق Nafsak deeyega and makhnouk (feeling of tightness in the chest and a choking sensation)	44
				ل نفسيتك متعبة(Nafseetak ta'bana (tired soul)	45

Scoring Part IV-Trauma Symptoms

A. Sum the number of answered items

B. Assign the following numbers for each answered item

1 = "Not at all"
2 = "A little"
3 = "Quite a bit" 4 = "Extremely"

C. Add up item scores and divide by the total number of the answered items

DSM-IV PTSD SCORE = ITEMS 1-16 / 16

TOTAL SCORE = ITEMS 1-35 / 35

Individuals with scores on DSM-IV and/or total > 2.5 are considered symptomatic for PTSD. See manual for additional information.

PTSD Checklist
(PCL)

In the past month, how much were you bothered by:	Not at all	A little bit	Moderately	Quite a bit	Extremely
1. Repeated, disturbing, and unwanted memories of the stressful experience?	0 ◯	1 ◯	2 ◯	3 ◯	4 ◯
2. Repeated, disturbing dreams of the stressful experience?	0 ◯	1 ◯	2 ◯	3 ◯	4 ◯
3. Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?	0 ◯	1 ◯	2 ◯	3 ◯	4 ◯
4. Feeling very upset when something reminded you of the stressful experience?	0 ◯	1 ◯	2 ◯	3 ◯	4 ◯
5. Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?	0 ◯	1 ◯	2 ◯	3 ◯	4 ◯
6. Avoiding memories, thoughts, or feelings related to the stressful experience?	0 ◯	1 ◯	2 ◯	3 ◯	4 ◯
7. Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?	0 ◯	1 ◯	2 ◯	3 ◯	4 ◯
8. Trouble remembering important parts of the stressful experience?	0 ◯	1 ◯	2 ◯	3 ◯	4 ◯
9. Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?	0 ◯	1 ◯	2 ◯	3 ◯	4 ◯
10. Blaming yourself or someone else for the stressful experience or what happened after it?	0 ◯	1 ◯	2 ◯	3 ◯	4 ◯
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?	0 ◯	1 ◯	2 ◯	3 ◯	4 ◯
12. Loss of interest in activities that you used to enjoy?	0 ◯	1 ◯	2 ◯	3 ◯	4 ◯
13. Feeling distant or cut off from other people?	0 ◯	1 ◯	2 ◯	3 ◯	4 ◯
14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?	0 ◯	1 ◯	2 ◯	3 ◯	4 ◯
15. Irritable behavior, angry outbursts, or acting aggressively?	0 ◯	1 ◯	2 ◯	3 ◯	4 ◯
16. Taking too many risks or doing things that could cause you harm?	0 ◯	1 ◯	2 ◯	3 ◯	4 ◯
17. Being "superalert" or watchful or on guard?	0 ◯	1 ◯	2 ◯	3 ◯	4 ◯
18. Feeling jumpy or easily startled?	0 ◯	1 ◯	2 ◯	3 ◯	4 ◯
19. Having difficulty concentrating?	0 ◯	1 ◯	2 ◯	3 ◯	4 ◯
20. Trouble falling or staying asleep?	0 ◯	1 ◯	2 ◯	3 ◯	4 ◯

Scoring and Interpretation Information (cont.)

20)

- Avoidance (items 6-7 – max score = 8)
- Negative alterations in cognition and mood (items 8-14 – max score = 28)
- Hyper-arousal (items 15-20 – max score = 24)

In addition to a raw score being presented, a “mean score” is also computed, which is the subscale score divided by the number of items. These scores range between 0 to 5, where higher scores represent higher severity. Consistent with the likert scale:

0 = Not at all

1 = A little bit

2 = Moderately

3 = Quite a bit

4 = Extremely

A provisional PTSD diagnosis can be made by treating each item rated as 2="Moderately" or higher as an endorsed symptom, then following the DSM-5 diagnostic rule which requires at least: 1 B item (questions 1-5), 1 C item (questions 6-7), 2 D items (questions 8-14), 2 E items (questions 15-20).

A cut-off raw score is 38 for a provisional diagnosis of PTSD. This cut-off has high sensitivity (.78) and specificity (.98) (Cohen et al., 2015).

If the scale is used to track symptoms over time, a minimum 10 point change represents clinically significant change (as based on the PCL for DSM-IV change scores).

Appendix 2. Ethical Approval Document

ANKARA YILDIRIM BEYAZIT ÜNİVERSİTESİ (AYBÜ)
SOSYAL VE BEŞERİ BİLİMLER ETİK KURULU
PROJE ONAY BELGESİ

Ankara Yıldırım Beyazıt Üniversitesi *Public Health* Fakültesi/Enstitüsü *Health policy and global health* bölümü akademisyenlerinden /) Hayan Alabrash _______ research titled **Prevalence and associated factors of post-traumatic stress disorder among(PTSD) among adults visiting the mental facility in Idlib**

Proje etik açısından uygun bulunmuştur.

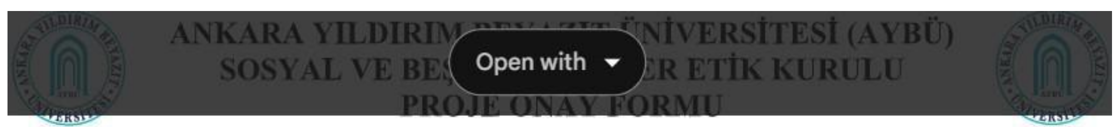
Proje etik açısından geliştirilmesi gerekmektedir.

Proje etik açısından uygun bulunmamıştır.

AYBÜ SOSYAL VE BEŞERİ BİLİMLER ETİK KURULU KARARI (Etik Kurul tarafından doldurulacaktır)	
Araştırma kodu (Yıl – Araştırma sıra no)	2022-1096
Başvuru formunun Etik Kurula ulaştığı tarih	29.09.2022
Etik Kurul Karar toplantı tarihi ve karar no	06.10.2022-15
Yer	Ankara Yıldırım Beyazıt Üniversitesi, Esenboğa Külliyesi
Katılımcılar	Formda imzası bulunan üyelerimiz toplantıya katılmıştır.

KURUL BAŞKANI VE ÜYELER:

Prof. Dr. Hakkı ODABAŞ	Başkan
Doç. Dr. Musa ÖZTÜRK	Üye
Doç. Dr. Ömer ASLAN	Üye
Doç. Dr. Özge GÖKBULUT ÖZDEMİR	Üye
Doç. Dr. Ali POLAT	Üye
Dr. Öğr. Üyesi Nur Betül ATAKUL	Üye
Dr. Öğr. Üyesi Recep YORULMAZ	Üye
Dr. Öğr. Üyesi Semih CEYHAN	Üye
Dr. Öğr. Üyesi Keziban Büşra KAYNAK EKİCİ	Üye
Dr. Öğr. Üyesi Gülay YAZICI	Üye
Öğr. Gör. Dr. İrem Şengül SEFEROĞLU	Üye



ARAŞTIRMANIN BAŞLIĞI

Prevalence and associated factors of post-traumatic stress disorder (PTSD) among adults visiting the mental facility in Idlib

ARAŞTIRMACI/ARAŞTIRMACILAR*

	Unvan	Adı Soyadı	Görev yeri	Telefon	e-posta
1**	Student	Hayan Alabrash	AYUB, public health institute, department of health policy and global health		
2	Assistant Professor Dr.	Fahad Ahmad	AYUB, faculty of medicine, public health department		
3					
4					

Araştırmacının AYBÜ ile ilişkisi*:**______________________________

*Bir danışman gözetiminde gerçekleşen çalışmalarda danışmanın imzası zorunlu değildir.
** Etik kuruluna doğrudan başvuru yapan kişinin ismi ilk sıraya yazılmalıdır.
**Bu kısımda araştırmacının / araştırmacılardan en az birinin AYBÜ ile ilişkisi mutlaka belirtilmelidir. AYBÜ Etik Kurulu yalnızca üniversitemiz bünyesindeki çalışan veya öğrencilerin başvurularını değerlendirmektedir.

ARAŞTIRMA DÖNEMİ

Başlangıç* 01/11 /2022	**Bitiş** 31/02 /2023

*Bu kısımda veri toplama sürecinin başlangıcı ve bitişi verilmelidir. Veri toplama tarihinin başlangıcı Etik Kurulonayının alınmasından önce olamaz. Bu yüzden proje başlamadan en az 1 ay önce başvuru yapılması önerilmektedir.

ARAŞTIRMANIN NİTELİĞİ

☐ Öğretim elemanı araştırması

CURRICULUM VITAE

PERSONAL INFORMATION KENDİ BİLGİLERİNİZİ YAZINIZ

Hayan ALABRASH

Date of birth :
Email :
Phone :
Address :

WORK EXPERIENCE:

EDUCATION

Bachelor Degree in Medicine 2003-2012

Eygpt -Cairo

Office Director – SAMS, Central Region (Homs & Hama)
March 2025 – Present

- Supervising health facilities and medical projects in the region
- Proposing new projects and expanding health partnerships
- Improving service quality and monitoring performance indicators
- Preparing regular analytical reports for senior management

Syria Projects Manager – SAMS, Gaziantep Office
2023 – Present

- Supervising medical programs in northern Syria
- Coordinating with field teams to ensure quality
- Developing project proposals and representing SAMS in health sector meetings

Office Director – SAMS, Idlib
January 2020 – January 2023

- Overseeing SAMS-supported medical facilities
- Organizing field visits and needs assessments
- Building staff capacity and ensuring program sustainability

Director – "Al-Nafs Al-Mutma'inna" Mental Health Center
2017 – 2020

- Diagnosing and assessing psychological disorders
- Supervising psychosocial support teams and treatment plans
- Developing awareness campaigns and managing the center

Office Director – SAMS, Northern Homs
2014 – 2017

- Supervising hospitals and medical points
- Conducting needs assessments and emergency response
- Preparing reports and coordinating with the main office

Medical Supervisor – Member of Homs Medical Bureau
2011 – 2014

- Coordinating field hospitals and medical points
- Securing equipment and supervising medical teams

Surgeon & Emergency Physician – Besieged Homs
2012 – 2014

- Leading medical and administrative operations during the siege
- Performing surgeries in crisis conditions
- Training staff and managing medication and supply distribution

Master in Global health and Health Policy. 2021 – Present
Ankara Yildirim Beyazit University – Ankara - Turkey
(Second year – working on the thesis)

TRAINING

- Disaster Management Course – Syrian Arab Red Crescent, 2011
- Diploma in Hospital Management, 2011
- Diploma in Health Quality – German Council for Training & Consultancy, 2018
- mhGAP Training – WHO's Mental Health Gap Action Programme (conflict and displacement context)
- Istanbul Protocol Training – Documentation of torture cases and survivors, 2019
- Training of Trainers (ToT) – German Council for Training, focused on healthcare and administration
- Updated mhGAP ToT for Supervisors – WHO, 2020

LANGUAGE

- Arabic: Native language
- English: Excellent
- Turkish: A2