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MENTAL HEALTH STATUS AND MENTAL HEALTHCARE SEEKING BEHAVIORS AMONG RESIDENTS OF GAZA WHO WERE EXPOSED TO CONFLICT

PUBLIC HEALTH MASTER THESIS

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ISTANBUL, 2023

TEZ ONAYI FORMU

Kurum : Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü

Program : Halk Sağlığı Yüksek Lisans Programı

Tez Başlığı : Mental health status and mental healthcare seeking behaviors among residents of Gaza who were exposed to conflict

Tez Sahibi : Ghada Shoman

Sınav Tarihi : 27.07.2023

Bu çalışma jurimiz tarafından kapsam ve kalite yönünden Yüksek Lisans Tezi olarak kabul edilmiştir.

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ONAY

Bu tez Yeditepe Üniversitesi Lisansüstü Eğitim-Öğretim ve Sınav Yönetmeliğinin ilgili maddeleri uyarınca yukarıdaki jüri tarafından uygun görülmüş ve Enstitü Yönetim Kurulu'nun ...../...../..... tarih ve ..... sayılı kararı ile onaylanmıştır.

Prof. Dr. Bayram YILMAZ

Sağlık Bilimleri Enstitüsü Müdürü

DECLARATION

I hereby declare that this thesis is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which has been accepted for the award of any other degree except where due acknowledgment has been made in the text.

Date:07/08/23
Name: Ghada
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ACKNOWLEDGEMENTS

I would like to take this opportunity to express my heartfelt gratitude to everyone who has been instrumental in the completion of this research. The journey of this study has been both challenging and enriching, and I could not have accomplished it without the guidance, support, and encouragement of numerous individuals.

First and foremost, I would like to extend my sincerest thanks to my thesis advisor Dr.Ebru Cayir, whose expertise, understanding, and patience added substantially to my graduate experience. Your insightful feedback and unwavering support were immensely valuable to the depth and quality of this research.

I am immensely grateful to the entire faculty and staff at Yeditepe University for providing me with the resources and environment conducive to research. Special thanks to the members of the review committee for their invaluable insights and recommendations that helped shape this work.

I would also like to acknowledge the generous support from Dr. Hale Arik, who made this research possible. The assistance of my friends in Gaza in data collection and analysis is profoundly appreciated.

My gratitude extends to all the participants of this study. Their willingness to share personal experiences has been the cornerstone of this research. I am indebted to them for their time and trust.

My deepest appreciation goes to my family for their unrelenting support and encouragement throughout my academic journey. To my parents, whose love and guidance are with me in whatever I pursue. They are the ultimate role models. To my husband Anas who unconditionally gave time and effort and ultimate help. To my siblings Ahmed, Suzy, Samar, Sahar, Hala, Mohammed, Heba, thank you for always being there.

I also owe a debt of gratitude to my friends and colleagues who supported me through this process. Their camaraderie, encouragement, and insightful conversations were a constant source of motivation.

Lastly, I appreciate anyone who have been a part of this research directly or indirectly and whom I might not have mentioned here. Each contribution holds immense value.

May this work contribute positively to Public health and ultimately to the welfare of my country and each country suffers the same.

Ghada Shoman.

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PCL-C	PTSD Check List – Civilian Version
PHQ-9	Patient Healthcare Questionnaire for Depression
PTSD	Post traumatic stress disorder
SPSS	Statistical Package for Social Sciences
WHO	World Health Organization

ABSTRACT

Introduction and aim: The conflict that took place in Gaza between 10-21 May 2021 had a profound impact on the lives of its residents. In conflict-affected regions, mental health is a pressing concern, with depression and Post-Traumatic Stress Disorder (PTSD) being common conditions. This study aim is built to research the rates of depression and PTSD among individuals who were affected by this conflict, explore the utilization of mental health services, and discern the reasons for not seeking these services.

Methods: The study included 555 participants who witnessed the May 2021 conflict in Gaza. The participants' demographics, mental health status, and utilization of mental health services were analyzed. A special focus was given to the influence of factors like gender, age, marital status, and educational level on mental health outcomes. The study used PCLC scale for detecting PTSD, also PHQ9 for detecting depression.

Results: The majority of the participants were females (85.9%), with most falling in the 20-30 age bracket (69.2%). The findings indicate that depression and PTSD are highly prevalent among the population, with the percent of 76.9% indicating moderate to severe symptoms of PTSD. In addition, data reveals that a considerable proportion of participants (43.6%) reported experiencing moderate symptoms to severe depression symptoms. A significant relationship between witnessing multiple conflicts and the severity of these conditions was clearly obtained. Multiple descriptive factors affected these ratios, like age, gender, marital status and employment status. Females exhibited higher rates of PTSD in comparison to males. Single participants exhibited higher levels of PTSD and depression compared to their married counterparts. Further, individuals with higher education levels had higher rates of depression. Utilization of mental health services was limited, with various factors inhibiting access.

Conclusion: The results underscore the significance of mental health concerns among residents in conflict-affected areas like Gaza. A need for targeted interventions and accessible mental health services to address the psychological well-being of these individuals is obvious, with specific attention to the demographic factors that influence mental health outcomes.

Keywords: Gaza Strip, Conflict, Mental Health, Depression, PTSD, Mental Health Services, Access to Healthcare.

ÖZET

Giriş ve Amaç: 10-21 Mayıs 2021 tarihleri arasında Gazze'de yaşanan çatışma, bölge sakinlerinin hayatlarını derinden etkiledi. Çatışma etkilenen bölgelerde, depresyon ve Travma Sonrası Stres Bozukluğu (TSSB) gibi durumlarla birlikte, mental sağlık önemli bir sorun haline gelir. Bu çalışmanın amacı, bu çatışmadan etkilenen bireyler arasında depresyon ve TSSB oranlarını araştırmak, mental sağlık hizmetlerinin kullanımını incelemek ve bu hizmetleri aramama sebeplerini belirlemektir.

Yöntemler: Çalışma, Mayıs 2021 Gazze çatışmasına tanıklık eden 555 katılımcıyı içermektedir. Katılımcıların demografik özellikleri, mental sağlık durumları ve mental sağlık hizmetlerinin kullanımı analiz edildi. Cinsiyet, yaş, medeni durum ve eğitim düzeyi gibi faktörlerin mental sağlık sonuçları üzerindeki etkisine özel bir önem verildi. TSSB'yi tespit etmek için PCLC ölçeği ve depresyonu tespit etmek için PHQ9 kullanıldı.

Sonuçlar: Katılımcıların çoğunluğu kadın (%85.9) olup, çoğunlukla 20-30 yaş aralığında (%69.2) bulunuyordu. Bulgular, depresyon ve TSSB'nin popülasyon arasında yüksek prevalans gösterdiğini, %76.9'unun orta ila şiddetli TSSB belirtileri gösterdiğini belirtiyor. Ayrıca, veriler, katılımcıların önemli bir kısmının (%43.6) orta ila şiddetli depresyon belirtileri yaşadığını ortaya koyuyor. Çok sayıda çatışmaya tanıklık etmek ile bu durumların şiddeti arasında belirgin bir ilişki elde edildi. Yaş, cinsiyet, medeni durum ve istihdam durumu gibi çeşitli tanımlayıcı faktörler bu oranları etkiledi. Kadınlar, erkeklerle karşılaştırıldığında TSSB oranlarında daha yüksek oranlar sergiledi. Bekar katılımcılar, evli olanlara kıyasla daha yüksek seviyede TSSB ve depresyon sergiledi. Ayrıca, daha yüksek eğitim seviyesine sahip bireylerin depresyon oranları daha yüksekti. Mental sağlık hizmetlerinin kullanımı sınırlıydı ve erişimi engelleyen çeşitli faktörler vardı.

Sonuç: Sonuçlar, Gazze gibi çatışma etkilenen bölgelerdeki sakinler arasında mental sağlık konularının önemini vurgulamaktadır. Bu bireylerin psikolojik sağlığını ele almak için hedeflenen müdahalelere ve erişilebilir mental sağlık hizmetlerine ihtiyaç açıktır, burada demografik faktörlerin mental sağlık sonuçları üzerindeki etkisine özel

dikkat gösterilmelidir.

Anahtar Kelimeler: Gazze Şeridi, Çatışma, Mental Sağlık, Depresyon, TSSB, Mental Sağlık Hizmetleri, Sağlık Hizmetlerine Erişim.

1. INTRODUCTION AND PURPOSE

1.1. Introduction

Maintaining a stable mental health state and managing mental health issues are not only important for community behavior and thought patterns, but they also boost productivity, improve self-image, and develop a sense of inner peace. In contrast, the absence of good mental health can have adverse effects on physical health, economic well-being, social relationships, and can increase violence and criminality.[1]

Mental health is also paramount within the broader context of health. Studies indicate that 14% of global diseases are attributed to neuropsychiatric disorders, which arise from the chronic and debilitating nature of mental illnesses such as depression, as well as other issues like substance abuse and psychosis.[2] Life stressors such as living in conflict zones or being exposed to violence can exacerbate these figures by leading to PTSD, anxiety disorders, and depression, particularly among populations in low-income countries.

Numerous studies have examined the mental health status in conflict zones, shedding light on the mental disorders caused by such stressors. Some of these studies suggest that one in five people living in conflict areas suffers from a mental disorder, ranging from mild depression or anxiety to severe psychosis. Additionally, one in ten people is living with a moderate or severe mental disorder.[3]

In terms of PTSD rates, a study conducted in the context of the Kashmir conflict reported that among 693 students, 23.7% of the sample exhibited extremely high traumatic reactions, 33.3% were exposed to high levels of PTSD, and 33.5% displayed moderate traumatic reactions. Astonishingly, the overall prevalence of PTSD in the sample was 100%.[4]

Given these startling statistics regarding PTSD and mental health issues following conflicts or aggressions, it is evident that the provision of appropriate mental health care is vital. This can be achieved through mental health organizations conducting screenings and offering suitable services to the population, or by individuals seeking help on their own. In this research, we aim to measure the recognition of the need for psychological support and the prevalence of health-seeking behavior among individuals who have been

exposed to multiple conflicts in the Gaza Strip, with a focus on the aftermath of the 2021 conflict. This is based on previous studies that showed a correlation between the interest in seeking help and acknowledging the existence of a problem. [5]

1.2. Aim of the Study

This study aims to gather critical data concerning the population of the Gaza Strip that was affected by the conflict in May 2021. The focus is on determining the prevalence of depression and PTSD among this population, examining the utilization of mental health services, and identifying the reasons for not seeking these services. Understanding health-seeking behaviors is crucial in the context of maintaining mental health.

2. GENERAL INFORMATION

Despite the plethora of research highlighting the importance of mental health and its impact on individuals and communities, there remains a conspicuous lack of awareness and understanding regarding the gravity of mental health issues. For decades, the public has recognized the importance of monitoring one's physical health, taking preventive measures, and seeking treatments. However, mental health literacy has not received the same attention.

Studies affirm that there is a significant gap in the public's knowledge concerning the prevention of mental health issues. Moreover, there is a dearth of understanding regarding how and when mental health issues arise, and what strategies are available for treatment. These studies also observed a lack of self-help techniques and skills to assist others facing mild mental health issues.[6]

Simultaneously, many individuals prefer self-help approaches to address their mental health issues rather than seeking medical intervention. This preference can vary due to cross-cultural differences in mental health literacy, as well as factors such as age, gender, and education.[7] Such an attitude impedes the adoption of new evidence-based mental health strategies and deprives individuals who are in dire need of support from receiving appropriate care.[8]

Maintaining positive mental health is indispensable as it has a direct impact on community development. Numerous millennium goals are intrinsically linked to improved community mental health. For instance, achieving gender equality, empowering women, and reducing child mortality are some of the pivotal goals that can be advanced through better mental health. To pursue these goals effectively, it is imperative that the health system be developed to integrate mental health awareness comprehensively.[2]

Educating young people and their caregivers could facilitate the early diagnosis of mental health issues [9], particularly in communities that are grappling with challenging living conditions.

Conflict or political violence represents a harrowing situation that has severe effects on communities. It can be characterized as a destructive force involving violent actions with devastating consequences on various levels within a community. These acts

can be committed either by the state, particularly in cases involving corrupt regimes, or by individuals and groups opposing the state. Regardless of its origins, it is well-documented that such violence induces turmoil, despair, widespread distress, and helplessness. Many of these violent actions are unpredictable to the average person, which exacerbates feelings of vulnerability and creates an environment of insecurity and threat. The more immediate and grave consequences include loss of lives, injuries, and destruction of property. Furthermore, the prevailing anxiety and vulnerability strain communal relationships, potentially polarizing individuals with differing political views and fostering suspicion and hostility.[10]

When a population, predominantly devoid of mental health issues, is exposed to conflict and subsequently exhibits a diverse range of psychiatric symptoms, it presents a significant challenge to psychiatrists and mental healthcare providers within the affected community. It is imperative for individuals to recognize that exposure to conflict can precipitate severe psychological health issues. PTSD, depression, stress, substance abuse, difficulties in anger management, fear, acute stress disorder, and psychological arousal are among the many issues that can proliferate, necessitating vigilant monitoring, especially among vulnerable groups such as women, children, individuals with disabilities, orphans, and the elderly.[11] Research indicates that women are disproportionately affected compared to men, though the extent of exposure and the availability of emotional support are influential factors.[12]

The World Health Organization (WHO) reveals that the proportion of individuals afflicted with mental disorders in conflict-affected regions is substantially higher than previously estimated. Between one in five individuals in these areas experience some form of mental disorder, ranging from mild depression or anxiety to psychosis. Additionally, one in ten individuals live with a moderate to severe mental disorder. This often results in diminished societal and personal functioning, indicating that in some instances, care and treatment are not merely a means to enhance the quality of life but are crucial for survival.

The United Nations reports that due to conflicts, 132 million people across 42 countries globally require humanitarian assistance. Furthermore, conflicts and political violence have forcibly displaced 69 million people worldwide, the highest figure since World War II.[3]

In a study that evaluated mental health issues in four low-income countries affected by conflict, a broad spectrum of PTSD rates was observed. For instance, Algeria had a PTSD rate of 37.4%, Cambodia 28.4%, Ethiopia 15.8%, and Gaza 17.8%. The variation is attributed to diverse risk factors influencing each region, which should be focused on, in subsequent research.[13]

Another study focusing on the conflict in Kashmir involved 693 students and aimed to measure the prevalence of trauma exposure. The results indicated that a third of the participants experienced high levels of trauma exposure, 23.7% reported extremely high levels, and over a third reported moderate exposure. The study found a 100% trauma rate in both males and females.[4]

In Northern Ireland, a study spanning 20 years sought to assess the enduring effects of multiple traumas. The study found that individuals continued to experience trauma long after the events, often vividly recalling the details of the incidents. Moreover, individuals who openly communicated with family and friends appeared to cope better, attributed to the support they received, as opposed to those who did not share their experiences or had no one to confide in.[14]

Gaza Strip is the region of the total land of occupied Palestine. The Gaza Strip has been under siege for almost 16 years. According to the United Nations, a blockade or siege is considered a form of war when one party obstructs the entry into and out of a specific part of enemy land, usually a coastal area. International law regulates sieges and warns neutral states within its application. During the last 16 years of siege, Gaza has witnessed 4 major Israeli attacks in 2008, 2012, 2014, and 2021. These attacks have caused thousands of deaths, casualties, and disabilities, leading to a chronic humanitarian crisis in many sectors, such as poor access to health care, food insecurity, electricity and petrol issues, environmental pollution, and expanded poverty. The Gaza Strip is fully besieged and separated from its neighboring countries by walls, fences, and the sea. Israel has imposed restrictions on Palestinian vessels, limiting their sailing to no over two marine miles from the west of Gaza. Drones constantly monitor the airspace, and strategic locations and residential areas are regularly destroyed due to their perceived threat to Israeli security. [15]

For a long time, Gaza has faced a near-complete blockade that severely affects life quality in the area. The youth in Gaza are in particular vulnerable to the negative effects

of the ongoing economic downturn, unstable circumstances, and health and food insecurities. These challenging conditions are exacerbated by the persistent struggle between Israel and Palestine, which causes extensive destruction and loss of lives. Living under siege has significant and direct harmful consequences, leading to high levels of mental distress, such as anxiety, depression, acute stress, and other mental issues. Living under siege also reduces the capacity to cope with stress and decreases access to society support, which raises the risk of developing psychological distress.[16]

The impact of conflict on students located in the Gaza Strip is profound. In a research of 367 participants, it was found that the majority of the students got affected by acute price skyrocket because of the blockade, which compromised their studies. The cut-off of electricity and shortage of petrol also affected many, as did the inability of their families to pay university fees due to lack of money. Risk of self-harm among university students living in Gaza was linked to poor social support, mental distress such as depression, trauma, chronic stress, and despair. Male students displayed higher despair scores than females. This lack of hope may be a gender-specific factor that needs consideration in future research.

The rise in unemployment and poor real-life chances might have aided to sabotaging the common cultural functions of male students. Across a sample of 600 students located in Gaza, 60% scored their life condition as poor or very poor and related directly to the blockade. [15]

A study explored the relationship between depression, anxiety, hopelessness, lack of social support, and resilience with suicidal behavior among students in Gaza. The living conditions and ongoing hardship in Gaza have severely affected students' mental health, leading to an increase in anxiety and depression. Lack of hope and mental distress have emerged as the main factors contributing to suicidal thoughts and behaviors. Traumatic stress, hopelessness, and lack of social support have led to an increased risk of suicide among students. Social support plays a significant role in reducing suicidal ideation, particularly in collectivistic societies like Gaza. However, personal resilience did not contribute significantly to differentiating between the suicide-risk and no-risk groups. The study suggests that future ethnographic and qualitative research can make a valuable contribution to understanding the complexity of the phenomenon in an Islamic and collectivistic society. [17]

Medical care is also a problem for Gazans, with a large percentage of respondents not receiving proper medical attention due to city emergencies. The stressors caused depressive signs and attitudes, and stress in over 10% of the interviewed individuals which included both males and females residing in Gaza. Females showed physical, obsessive-compulsive, and fear signs over males, whilst the individuals who scored higher on elements linked to the influence of the blockade showed more trauma symptoms, depression, and psychosis. The life quality of Palestinians, in terms of physical, mental, also surroundings aspects, seemed to be across the worst of all populations around the globe.

Furthermore, people who participated from Gaza suburbs, also displacement camps seemed to be more influenced by the blockade than people located in civil regions, mostly in relation to the financial situation and diminishing resources. whilst, individuals showing stronger faith with more social connections seemed to be more flexible. These findings demonstrate a critical role of the siege in influencing mental distress, hopelessness, and resilience among participants in Gaza.

Gazans have been living under conflicts for many years, and as studies show, living under prolonged isolation and burden can decrease an individual's resilience and ability to cope with ongoing trauma. This can lead to high levels of anxiety, depression, and acute stress. Females located in Gaza identified themselves to be participants in fighting against the Israeli occupation, also have displayed a higher level of resiliency. On the other hand, due to the financial and social inconvenience, men may often believe of themselves as under-equipped to match cultural stressors for society and family admission, leading to higher suicide risk 15

The long-standing conflict between Israelis and Palestinians over land and the right to self-determination has lasted for more than three generations, serving as a tragic example of how military violence, animosity, and revenge can accumulate. Since 1967, Palestinian territories, including Gaza, have been under Israeli military occupation, causing significant harm to the lives of people residing there. To address these issues, the Gaza Community Mental Health Program (GCMHP) was established in 1990 as an effort to empower individuals and transform their pain into positive action. It is challenging to help prevent psychopathology and promote resilience in the Gaza Strip.[18]

Although most people who experience traumatic events eventually recover from

them, individuals with post-traumatic stress disorder (PTSD) can experience severe depression and anxiety for months or even years following the event. Due to ongoing exposure to political violence, displacement, and limited access to resources, Palestinians are at a higher risk of developing anxiety disorders and PTSD. A review of twenty-four studies conducted in Palestine found that anxiety disorders and PTSD are prevalent among the population, affecting children, adolescents, women, and those with physical diseases. These conditions are associated with low quality of life and disability. Palestinians face several challenges in accessing mental health care, including inconsistent availability of medications, lack of interdisciplinary teamwork, insufficient specialists, a fragmented mental health system, and the ongoing occupation.[19]

In a study conducted on 237 children aged from 9 years old to 13 years old resident in Gaza, who have been chosen randomly among 112 schools and were asked to complete the revised version of children's manifest anxiety questionnaire, study results obtained that children showed greater scores of significant stress issues with a percentage of (21.5%). Teachers also reported greater scores of psychological issues in children with a percentage of (43.4%), which required medical evaluation. The study found that stress issues, in particular self-insecurities, in positive correlation with age and were significantly greater across females. The greatest predictor of general psychological problems was low socioeconomic status, where the head of the family was unemployed or an unskilled worker. Living in inner-city areas or camps, which are common among refugees, was strongly associated with higher anxiety issues. The study also showed that the rate and nature of anxiety disorders in Palestinian children were similar to those found in Western societies. [20]

Another study investigated the possible connection between exposure to war-related stressors and psychological distress in adolescents from Gaza and whether age, gender, and socioeconomic status played a role in this relationship in a sample of 139 adolescents aged from 12 to 17 years. The findings showed that the participants had significantly higher rates of stress, neglect, and depression in comparison to individuals living at regions that have really no experience in conflicts in near times[21]

To live in a conflict-torn region has severe consequences for individuals, families, and societies. Political conflicts inflict injuries not only through physical damage but also by leaving lasting traumatic memories. These damages serve to shape the "social reality,

beliefs, values, knowledge, and social identity" of a community. The psychosocial impact of war on civilians is profound, with loss as the central theme affecting recovery. Palestinians, in particular, have endured a history of losses, including living under long curfews, not having the autonomy to practice politics, feeling isolated from the rest of the world, and ultimately, losing faith in any political resolutions. This history dates back to the Al-Nakbah of 1948, which involved losing of homeland, obligated expulsion, incarceration, and the subsequent demands for the Right of Return of over 5 million Palestinian refugees under many United Nations resolutions.[22]

One study aimed to investigate the prevalence of war-related traumatic events and PTSD among children and adolescents in Gaza following the Israeli attacks in November 2012. Utilizing DSM-V diagnostic criteria, the study found that all participants had experienced at least one traumatic event, with over half exhibiting PTSD symptoms. Exposure to war-related trauma was linked to impairments in cognitive, emotional, social, and academic functioning, as well as somatic symptoms. Boys and older children reported higher exposure levels, and children in villages experienced more trauma in comparison to children in cities or displacement camps. Lower family income and parental education levels correlated with a higher likelihood of developing PTSD.[23]
In 2008, another study demonstrated that children and parents experienced numerous traumatic events, resulting in elevated rates of PTSD and anxiety. Children exposed to trauma had higher PTSD and anxiety scores, whereas parents displayed PTSD intrusion symptoms. Emotional responses from both parents and children were associated with the development of PTSD and anxiety. This study emphasized the need for family-inclusive interventions, which could initially be implemented by non-governmental organizations.[24]

Around the same time, a study revealed that Palestinian adolescents who witnessed conflict on Gaza Strip in 2008-2009 reported an average of 14 traumatic events. males experienced more traumatic events than females, possibly because boys were more likely to be outdoors. Adolescents from lower socioeconomic backgrounds were also at higher risk due to poverty and recurrent conflicts. The study showed a positive correlation between traumatic events and psychosomatic signs. [25]

Researchers have consistently conducted studies to measure the consequences of conflicts in the Gaza Strip. For instance, after the 2012 conflict, a study showed an

average of 13.80 traumatic events among participants, with none feeling safe in their homes. Of the 71 participants who lost family members, most experienced grief reactions, with females reporting higher levels. PTSD was prevalent among 66.6% of the sample. The study underlined the importance of collaboration between international and national organizations to ensure civilians' safety[26]

In a 2012 study, adolescents who reported having a family member killed displayed lower levels of depression and anxiety than those with an injured family member. This discrepancy was attributed to cognitive coping mechanisms endorsed by Islam. However, in the Gaza Strip, having a family member suffering injury led to greater rates of depression along with stress among adolescents. This study accentuates the necessity for mental health assessments and support for adolescents in conflict zones, especially for those who have experienced loss or injury of family members or severe house damage.[27]

Nowadays, to be able to deal with this amount of mental health issues, there should be 2 parties collaborating, one is the mental health care providers, and the other one is who suffers from a mental health issue. To realize you have health issue and ask help is known as health seeking behavior. A study conducted in the south-west Netherlands examining the beliefs about mental health problems and help-seeking behavior among young adults who reported having mental health problems during the past year. The study found that mental health problems are common and impairing among young adults but are often left without solutions. The study used the Illness Perception Questionnaire to assess beliefs about the cause, consequences, timeline, and controllability of self-perceived mental health problems and the Adult Self-Report to assess internalizing and externalizing psychopathology. The results of the study showed that thoughts that psychological issues have negative consequences and that medical treatment helps were associated with an increased likelihood of mental health service use, while beliefs in personal control were associated with a decreased likelihood of mental health service use. The study suggests that raising awareness of young people about psychological issues and possible and efficient psychological treatments could encourage help-seeking behavior.[28]

Another study analyzed data from the U.S. National Comorbidity Survey to explore the relationship between tendency towards mental health help-seeking along with

thoughts about treatment efficiency with later help-seeking behavior and using certain medical options among the general population. The study found that willingness to seek professional help for a serious emotional problem and feeling comfortable talking about personal problems with professionals were significantly associated with future help-seeking and treatment use. Feeling shame if others discovered and thoughts about solutions efficiency were not combined with later help-seeking or medical options utilization.[29]

To sum up a systematic review explores the perceived barriers and facilitators of mental health help-seeking in young people using both qualitative and quantitative research was made. The review included 22 published studies and highlighted that young people often perceive stigma, embarrassment, poor mental health literacy, and a preference for self-reliance as barriers to help-seeking. On the other hand, positive past experiences and social support from others are seen as aids to help-seeking. The study suggests that strategies for improving help-seeking in young people should focus on reducing stigma, improving mental health literacy, and taking into account their preference for self-reliance.[30]

Studies have shown that young people are more likely to seek help from their social connections, such as family, friends, or teachers, rather than professionals. However, it is unclear how active young people are in initiating help-seeking beyond their mates. studies suggest that individuals who tend to hide their problems among friends and family are more likely to seek professional help. Several psychological factors are associated with willingness to seek help, including beliefs and fear related to stigma and therapy, emotional competence, and factors related to control such as disclosure willingness and self-efficacy. The most commonly documented obstacle to help-seeking is the perceived stigma associated with psychological issues and receiving help. The perceived utility, effectiveness, and fear of therapy and professional interventions can also act as barriers. [31]

Adolescents and young adults are at high risk of developing mental health problems, but they often do not seek professional help, particularly young men and those from Indigenous and ethnic minority groups. Seeking help is more likely if they have knowledge about mental health issues and sources of help, feel emotionally competent to express themselves, and have established relationships with potential help providers.

Conversely, those experiencing suicidal thoughts and depressive symptoms, hold negative attitudes towards seeking help, or believe they should manage their mental health problems on their own are less likely to seek help. Young people often seek help from family and friends, with family being more important for younger adolescents and friends and partners becoming more influential later on. School counselors, general practitioners, and youth workers are the most likely professionals to act as gatekeepers to mental health services for young people. Internet-based information and interventions are increasingly being used to engage young people in seeking help.[32]

The focus of this study was to understand why many service members who have mental health problems do not receive treatment. The study surveyed 577 combat veterans who had screened positive for posttraumatic stress disorder, depression, or generalized anxiety disorder three months after returning from Iraq. The results showed that although more than 75% of respondents were aware they suffer a current issue, just 40% were opened to the idea of asking and getting treatment. Interest in getting treatment was higher for those who had recognized their issue and received psychological help in the previous year. The study found that negative attitudes towards mental health care were linked to lower interest in receiving help.[5] another study suggests similar findings. It assures that many military personnel who experience mental health issues do not seek help, with stigma being one of the primary barriers. Despite this, it is unclear how stigma affects the use of psychological services.[33]

National policy makers have identified stigma surrounding mental illness as a major obstacle to seeking mental health assistance. A study involved a random sample of 5,555 university students among 13 different institutions, was one of the first empirical investigations into the connection between help-seeking behavior and perceived public stigma as well as personal stigma. Three key results emerged: (a) perceived public stigma exceeded personal stigma by a significant margin; (b) students who were male, younger, Asian, international, more religious, or from a poor background tended to exhibit higher levels of personal stigma; and (c) personal stigma showed a significant and negative correlation with measures of help seeking (such as utilization of psychotropic medicine, behavioral therapy, and other types of support), while stigma did not demonstrate a significant association with help seeking.[34]

3. MATERIAL AND METHOD

3.1. Type of the Research

This study is a cross-sectional analytical study.

3.2. Research Sample

The research sample was recruited using convenience sampling. The participants for this research consisted of people who lived in Gaza strip during May 2021 conflict, and 1) are 18 years or older, 2) witnessed or were exposed to (e.g., saw or heard airstrikes, got complete or partial damage in their house, left their house during the conflict, lost someone close due to conflict) a conflict in Gaza strip in May 2021, 3) actively use social media platforms including Facebook, Twitter, Instagram, 4) can fluently speak and write in Arabic.

3.3. Duration of the Research

Data were collected online via a survey between 1st _30th September 2022.

3.4. Data Collection Method

Online Questionnaire was utilized for data collection, and was distributed throughout social media platforms Facebook and Instagram, as posts and on some social groups that contains people from various regions of Gaza strip on both platforms. Personal information such as name, address were not collected to insure total confidentiality.

3.5. Variables

3.5.1. Dependent Variables

Table 3.5.1. Dependent Variables

Variable	Definition	Source
PTSD	The PCL (PTSD Checklist) is a newly developed self-assessment tool designed to evaluate post-traumatic stress disorder (PTSD). Comprising 17 items that align with the symptoms outlined in the DSM-III-R, the PCL asks individuals to indicate the degree to which they have been affected by each symptom over the past month, utilizing a 5-point scale ranging from 1 to 5. The severity ratings on the scale mirror those used in the SCL-90-R (Derogates, 1983), ranging from "Not at all" to "Extremely." Two versions of the PCL exist: the PCL-M, tailored for military-related experiences and featuring reexperiencing symptoms specific to that context, and the PCL-C, which incorporates reexperiencing symptoms that are applicable to any type of traumatic event.	**PCL-C** (PTSD Check List – Civilian Version)**Trauma Scale**
Depression	The PHQ-9 is a shortened version of the complete PHQ questionnaire specifically designed to assess depression. To diagnose major depression, it is necessary for an individual to exhibit five or more of the nine depressive symptom criteria, with these symptoms occurring for at least "more than half the days" over a two-week period. Furthermore, one of these symptoms must be either a depressed mood or anhedonia. For other forms of depression, a diagnosis is made if two, three, or four depressive symptoms have been present for at least "more than half the days" over the past two weeks, with depressed mood or anhedonia being one of the required symptoms. One particular symptom criterion, namely "thoughts that you would be better off dead or of hurting yourself in some way," is considered relevant regardless of the time period and counts if it is present at all.	**PHQ-9** (Patient Healthcare Questionnaire for Depression) **depression scale**

3.5.2. Independent Variables

Table 3.5.2. Independent Variables

Variable	Definition	Source
Witnessing 2021 conflict	Witnessing the conflict on Gaza strip between 10-21 May 2021, witnessing like e.g., saw or heard airstrikes, got complete or partial damage in their house, left their house during the conflict, lost someone close due to conflict	**Survey**

3.5.3. Definitions for Descriptive Variables Table

Table 3.5.3. Independent Variables

Category	Variable	Definition	Source
Socio-Demographic Features of Participants	**Gender**	sex of the participants was identified.	**Survey**
	Age	Was defined by the question" How old are you"	**Survey**
	Marital status	Answers were taken in four categories: married. Single. Divorced, widowed.	**Survey**
	Parental status	By answering to the Yes/No question" Do you have children"	**Survey**
	Education level	Answers were taken in five categories: Higher education, university, high school, middle school, elementary school.	**Survey**
	Work status	Answers were taken in four categories: full time, part time, student, unemployed.	**Survey**
	Residency	Answers were taken as living in Gaza strip, or other.	**Survey**
Related to 2021 conflict	**Location during the conflict**	Answers were taken in five categories: Gaza, Rafah. Khan Younus, north of Gaza strip. Middle of Gaza strip.	**Survey**
	Exposure to physical harm	Answers were defined by the question" were you physically harmed during the conflict?	**Survey**
	Others physical harm	Answers were defined by the question" were any of your family members or friends physically harmed during the conflict? In categories: no one. a friend, family member, both.	**Survey**
	Leaving house during conflict	Answers were taken to the question" have you left your house during the conflict?"	**Survey**
	Witnessing previous conflicts	The participant status in witnessing the previous 2008. 2012. 2014 conflicts.	**Survey**
Related to 2022 conflict	**Witnessing 2022 conflict**	Answers were defined by the question" have you witnessed 2022 aggression?"	**Survey**
	Exposure to physical harm	Answers were defined by the question" were you physically harmed during the conflict?	**Survey**
	Others physical harm	Answers were defined by the question" were any of your family members or friends physically harmed during the conflict? In categories: no one. a friend, family member.	**Survey**
	Leaving house during the conflict	Answers were taken to the question" have you left your house during the conflict?"	**Survey**
Health seeking related information	**Feeling the need of support**	By asking the Yes/No question "did you feel you need psychological support after 2021 conflict?	**Survey**
	Seeking help	By asking the yes/no question" did you seek psychological support?"	**Survey**
	Satisfaction of the service	By asking the yes/no question" were you satisfied with the service?"	**Survey**

3.5.4. Statistical Method:

Statistical analysis:

After collecting the data from 555 online form. Qualitative and quantitative nominal and continuous data are to be analyzed. Descriptive statistics will be used including frequency, percentage, and mean ± standard deviation, and content analysis for the qualitative data. The SPSS 25 (Statistical Package for Social Sciences) package program will be used for analysis.

4. RESULTS

4.1. Introduction

Mental health status and mental healthcare seeking behaviors among residents of Gaza who were exposed to conflict is discussed in this chapter. The research applied on a population sample in Gaza strip who witnessed May 2021 conflict, and aims determine the prevalence of depression and PTSD among people who have been affected by conflict in Gaza between the dates of 10-21 May 2021, examine utilization of mental health services among these individuals, identify the reasons for not seeking mental health services. These objectives will be measured through the following questions:

1. What is the prevalence of depression and PTSD among people who have been exposed to the May 2021 conflict in the Gaza strip?
2. What is the rate of accessing to mental health services among people who have been exposed to the May 2021 conflict in the Gaza strip?
3. Among those who sought mental health services after the May 2021 conflict in Gaza strip, what are the levels of satisfaction with the services they received?
4. What is the impact of witnessing multiple conflicts on the prevalence of depression and PTSD in Gaza strip?
5. What are the relationships between demographic factors and experiencing depression and PTSD among those who have been exposed to the May 2021 conflict in the Gaza strip?

This study implemented both quantitative and qualitative methods. Survey questionnaires, which included multiple choice and open-ended questions were distributed to a convenience sample of people who have been exposed to the May 2021 conflict in the Gaza strip. Descriptive analysis were conducted to summarize the characteristics of the quantitative data, as well as Chi-square tests and Logistic Regression tests applied through SPSS to test the relationship of demographic factors on the depression and PTSD status. Moreover, we conducted a content analysis of the responses to the open-ended questions. The questionnaire was distributed through social media platforms targeting people who witnessed the May 2021 conflict in Gaza. The study sample consisted of 555 people who were recruited through convenience sampling. After they indicated their interest in participating the study, participants

received and completed the questionnaire that was created using Google Surveys. No personal information such as name or ID number has been asked in the survey; thus, the confidentiality of each candidate has been maintained.

4.2. The Demographics Factors

The following demographic factors were collected from the participants, living address, gender, age, marital status, number of children, education level, as well as the employment status.

This below figure provides insights into the distribution of respondents based on their location during the 2021 conflict. It indicates that the majority of participants (61%) were in Gaza, while smaller proportions were in Khan Yunus (11%), the North of Gaza strip (13%), and Rafah (16%). It's important to consider these geographic variations as they may have implications for the prevalence of mental health issues and the accessibility of mental health services in different areas.

The majority of participants (85.9%) identified as female, while a smaller

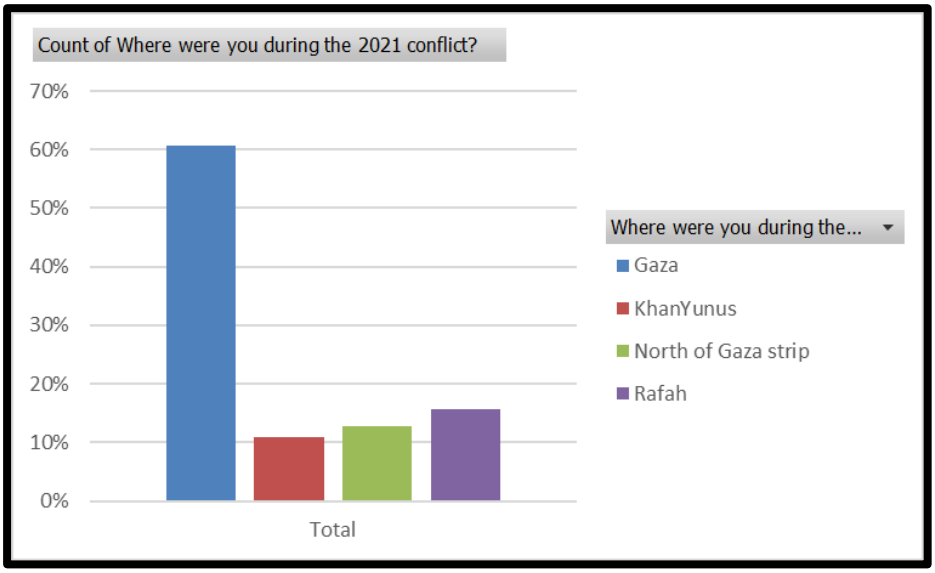

Figure 4.1. Distribution of respondents based on their location during 2021 conflict

proportion (14.1%) identified as male. It's important to consider gender differences in mental health outcomes and help-seeking behaviors, as they can play a role in understanding the overall mental health status of the population and identifying any disparities that may exist.

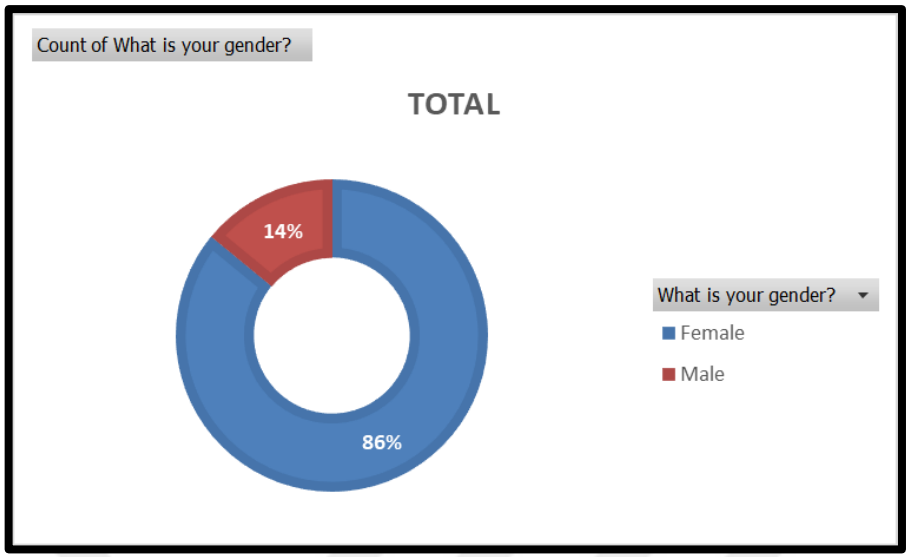

Figure 4.2. Gender Distribution of Participants

The majority of respondents (69.2%) fell within the 20-30 age group, followed by 15-20 (12.1%) and 30-40 (16.4%). There were smaller proportions of participants in the older age categories, with 40-50 representing 1.8%, 50-60 representing 0.2%, and more than 60 representing 0.4%. Analyzing the age distribution can help us understand how different age groups may experience and cope with mental health challenges differently. It can also inform the development of targeted mental health interventions and services based on the specific needs of different age cohorts.

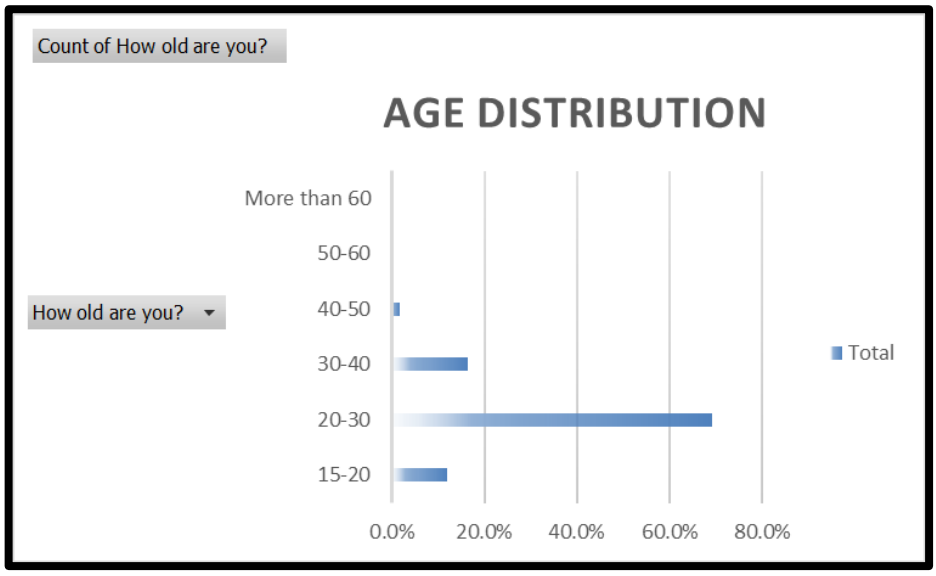

Figure 4.3. Age Distribution of Participants

The majority of respondents (59.1%) identified as single, followed by married individuals (38.9%). There were smaller proportions of divorced participants (1.8%)

and widows (0.2%). Moreover, the majority of participants (70.1%) reported not having children, while a smaller proportion (29.9%) reported having children. The presence or absence of children can have implications for mental health and mental healthcare seeking behaviors. Individuals with children may have different stressors and responsibilities compared to those without children. Understanding these aspects can help tailor mental health interventions and support services to meet the specific needs of individuals.

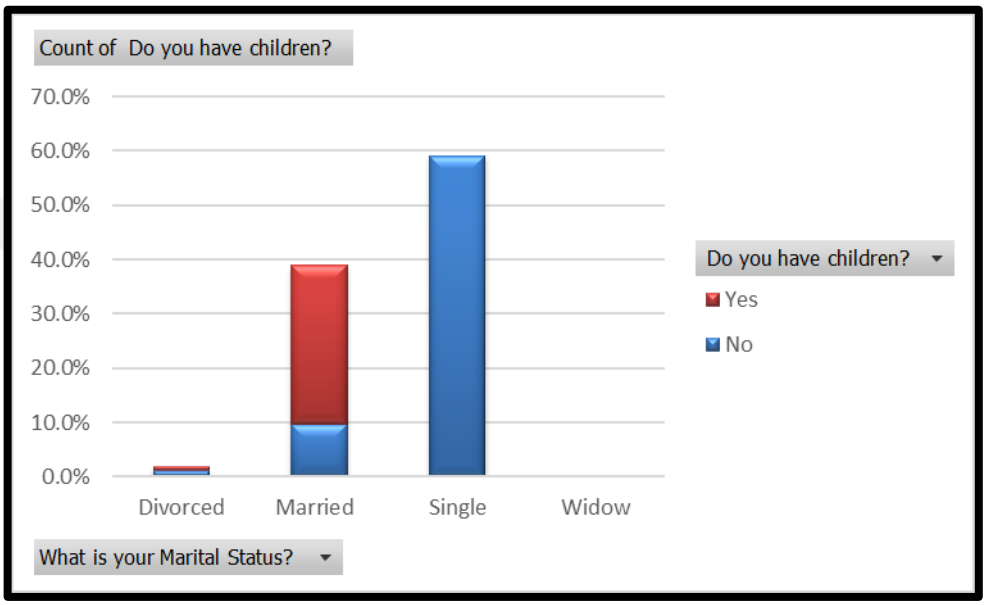

Figure 4.4. Marital Status and Presence of Children for the Participants

78% of the participants with a bachelor's degree, the majority (33.3%) reported being unemployed, followed by those who were working full-time (17.1%), part-time (12.6%), and students (15.0%). Moreover, 9.5% of the participants with a Post Graduate degree, the highest proportion (4.3%) reported working full-time, followed by part-time work (2.7%) and being unemployed (1.8%). Primary school graduates and secondary school graduates had minimal representation in the employment categories, with a majority indicating that they were not working or studying.

Overall, these findings indicate that there is a diverse mix of educational backgrounds and employment statuses among the participants. It is important to consider these factors when assessing psychological outcomes and understanding the accessibility of psychological services for different educational and employment groups.

Table 4.1. Education Level and Employment Status

Count of What is your educational status?	Column Labels				
Row Labels	**Full time**	**Part time work**	**Student**	**Unemployed**	**Grand Total**
Bachelor's degree	17.1%	12.6%	15.0%	33.3%	78.0%
Post Graduate Degree	4.3%	2.7%	0.7%	1.8%	9.5%
Primary school graduate	0.0%	0.2%	0.0%	0.0%	0.2%
Secondary school graduate	0.2%	0.2%	9.2%	2.7%	12.3%
Grand Total	**21.6%**	**15.7%**	**24.9%**	**37.8%**	**100.0%**

4.3. Findings:

Research Question 1: What is the prevalence of depression and PTSD among people who have been exposed to the May 2021 conflict in the Gaza strip?

This analysis focuses on examining the prevalence of depression and post-traumatic stress disorder (PTSD) among the Gaza strip population after the May 2021 conflict. The aim is to shed light on the mental health status of individuals who experienced conflict and provide valuable insights into the psychological impact of such traumatic events. By examining the prevalence rates of depression and PTSD, we can better understand the mental health challenges faced by the Gaza strip population.

To explore the prevalence of depression and PTSD, the researcher used PTSD Checklist – Civilian Version (PCL-C). The PTSD questionnaire consisted of questions related to recurring distressing memories, dreams, and feelings associated with past stressful experiences. It also addressed avoidance behaviors and emotional numbness, along with physical reactions and heightened alertness. The answers were 5 Likert scale with options of not at all (0), to extremely (4). The scores summed for each participant and the level of PTSD determined as the following: 1-17 non symptomatic, 18-44 mild to moderate, 45 and above moderate to severe.

The analysis shows that that a significant proportion (76.9%) of the participants reported experiencing moderate to severe symptoms of PTSD after the May 2021

conflict. It's noteworthy that a smaller portion (23.1%) reported experiencing mild to moderate symptoms.

Table 4.2. PTSD Status

PTSD Status	Percentage
Non symptomatic	0.00%
Mild to Moderate	23.1%
Moderate to Severe	76.9%
Grand Total	**100.00%**

On the other hand, the researcher used PHQ-9 Patient Depression Questionnaire to determine the level of questionnaire for the participants, the questions focused on capturing feelings of sadness, loss of interest, sleep disturbances, fatigue, changes in appetite, negative self-perception, difficulties concentrating, and thoughts of self-harm. The answers were 4 Likert scale with options of not at all (0), to nearly every day (3). The scores summed for each participant and the level of depression determined as the following: 1-4 Non to Minimal depression, 5-9 Mild depression, 10-14 Moderate depression, 15-19 Moderately severe depression, 20-27 Severe depression.

The data reveals that a considerable proportion of participants reported experiencing moderate to severe symptoms. The prevalence rates for moderately severe depression (43.6%) and severe depression (41.1%) were quite high, while mild depression (0.4%) had the lowest prevalence among the categories.

Table 4.3. Depression Status

Depression Status	Percentage
None to Mild	0.4%
Moderate	15.0%
Moderately severe	43.6%
Severe	41.1%
Grand Total	**100.00%**

These findings indicate that a significant number of individuals in Gaza strip population experienced symptoms of PTSD and depression following the May 2021 conflict. The high prevalence rates suggest a substantial mental health burden on the population, emphasizing the importance of addressing mental health needs and providing appropriate support and interventions.

The graph below shows that as the severity of depression increases, the percentage of participants with moderate to severe PTSD also increases. This indicates a positive association between depression and PTSD, suggesting that individuals with more severe depression are more likely to have higher levels of PTSD symptoms. 50% of participants with mild depression also have mild to moderate PTSD and 50% of participants with mild depression have moderate to severe PTSD. 18% of participants with moderate depression have mild to moderate PTSD and 81.9% of participants with moderate depression have moderate to severe PTSD. 23.97% of participants with moderately severe depression have mild to moderate PTSD and 76.03% of participants with moderately severe depression have moderate to severe PTSD. 23.68% of participants with severe depression have mild to moderate PTSD and 76.32% of participants with severe depression have moderate to severe PTSD.

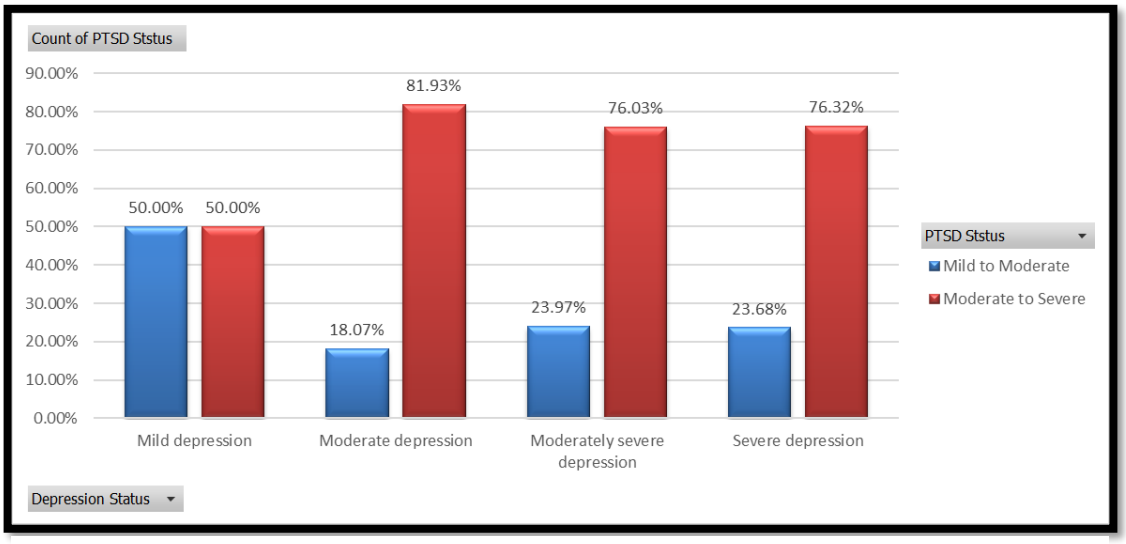

Figure 4.5. PTSD and Depression Crosstabulation

The researcher asked the participants if anyone of the family or friends got physical injury because of the 2021 conflict, the answers shown in the below graph. The results shows that 73.2% of the participants didn't report physical injury because of the 2021 conflict among their family or friend, while 26.8% answered yes. The data reveals that among those who answered "Yes," the distribution of depression levels is as follows: 1.33% reported mild depression, 22.67% reported moderate depression, 46.67% reported moderately severe depression, and 29.33% reported severe depression. On the other hand, among those who responded "No," the distribution of depression levels is as follows: 0.21% reported mild depression, 13.75% reported moderate depression, 43.13% reported moderately severe depression, and 42.92% reported severe depression.

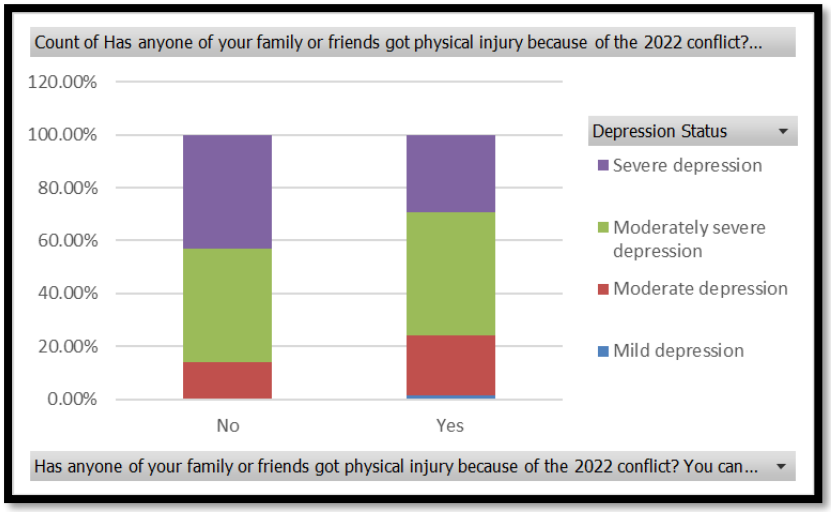

Figure 4.6. Percentage of Facing Physical Injury Across the Depression Levels

Below is the Chi-Square results for the relationship between "Has anyone of your family or friends got physical injury because of the 2021 conflict?" and "Depression status." Since the p-value (0.009) is less than the significance level (0.05), we can conclude that there is a statistically significant association between experiencing physical injury due to the 2021 conflict and the depression status of individuals. This means that these two variables are not independent and that the experience of physical injury may have an influence on an individual's likelihood of having depression.

Table 4.4. Chi-Square for Relationship of Physical Injury and

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	11.516[a]	3	.009
Likelihood Ratio	11.473	3	.009
N of Valid Cases	555		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is .54.

The below results show that the strength of the association is relatively weak, as both Phi and Cramer's V have a value of 0.144. While there is a significant relationship between the two variables, the association is not particularly strong. In summary, the results from both the Chi-Square test and the Symmetric Measures (Phi and Cramer's V) suggest that there is a statistically significant but weak association between

experiencing physical injury due to the 2021 conflict and the depression status of individuals.

Table 4.4. Symmetric Measures (Phi and Cramer's V) for the Relationship of Physical Injury and Depression Status

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.144	.009
	Cramer's V	.144	.009
N of Valid Cases		555	

The researcher asked the participants if they left their house during the conflict because of near bombing, the answers were 74.2% NO and 25.8% Yes. The data shows that among those who answered "Yes," the distribution of depression levels is as follows: 1.61% reported mild depression, 19.35% reported moderate depression, 35.48% reported moderately severe depression, and 43.55% reported severe depression. Conversely, among those who responded "No," the distribution of depression levels is as follows: 0.20% reported mild depression, 14.40% reported moderate depression, 44.62% reported moderately severe depression, and 40.77% reported severe depression. These findings indicate a potential association between leaving one's house due to near bombing during the conflict and varying levels of depression experienced by the participants.

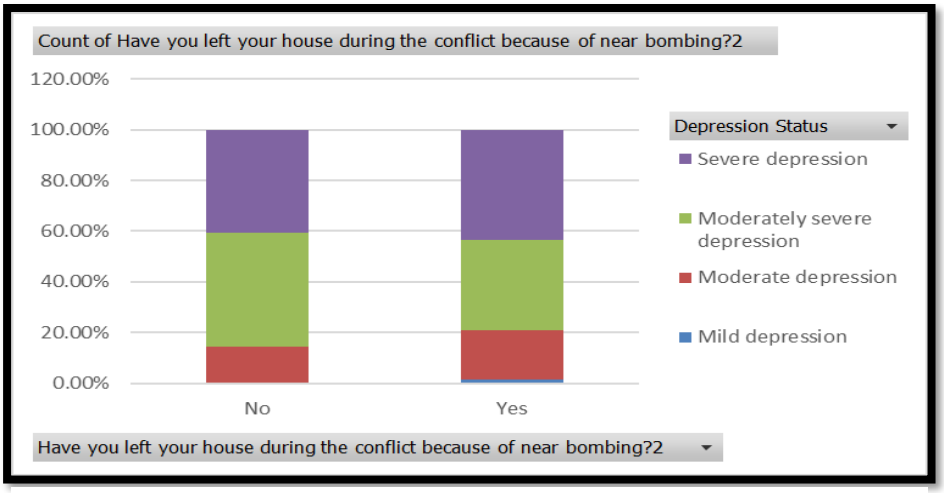

Figure 4.7. Percentage of Leaving the House because of Near Bombing Across the PTSD Levels

Below are the Chi-Square results for the relationship between "Have you left your house during the conflict because of near bombing?" and "Depression status." Since the p-value (0.489) is greater than 0.05, we do not have enough evidence to reject the null hypothesis. The null hypothesis in this case would state that there is no significant association between leaving the house during the conflict because of near bombing and depression status.

04.5. Chi-Square results for the relationship between leaving the house during the conflict because of near bombing and depression status.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.426[a]	3	.489
Likelihood Ratio	2.339	3	.505
N of Valid Cases	555		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is .52.

In simpler terms, based on the data and analysis, we cannot confidently say that there is a significant relationship between these two variables. This means that leaving the house during the conflict due to near bombing does not appear to be significantly associated with the respondents' depression status, at least with the data provided and the chosen significance level. Further research and analysis may be needed to draw more conclusive findings covering more sample size and population representation.

Research Question 2: What is the rate of accessing to mental health services among people who have been exposed to the May 2021 conflict in the Gaza strip?

This analysis aims to examine the level of access to mental health services among the population in the Gaza strip following the May 2021 conflict. The research question seeks to understand whether individuals felt the need for psychological support, whether they attempted to seek such support, and the reasons behind not seeking it.

By exploring the level of access to mental health services, we can gain insights into the availability, utilization, and barriers associated with seeking psychological support after a traumatic event. This information is crucial for identifying gaps in mental health service provision and developing targeted interventions to address the needs of the affected population. The analysis will be based on responses to specific questions related to seeking psychological support, allowing us to assess the prevalence of perceived need and actual utilization of mental health services. Additionally, by examining the reasons provided for not seeking support, we can identify potential barriers and challenges faced by individuals in accessing these services.

Among the participants surveyed, 83.60% indicated that they felt the need for psychological support after the 2021 conflict in the Gaza strip. This suggests a significant proportion of the population recognizing the importance of seeking mental health assistance in the aftermath of a traumatic event. However, it is also worth noting that 16.40% of respondents reported not feeling the need for psychological support.

Among the participants surveyed, 25.6% reported trying to seek psychological support after the 2021 conflict in the Gaza strip. This indicates that a considerable portion of the population actively took steps to access mental health services and address their psychological needs. However, it is concerning to note that the majority of respondents (74.4%) reported not attempting to seek psychological support. This finding suggests potential barriers or challenges faced by individuals in accessing mental health services that will be examined in the next section.

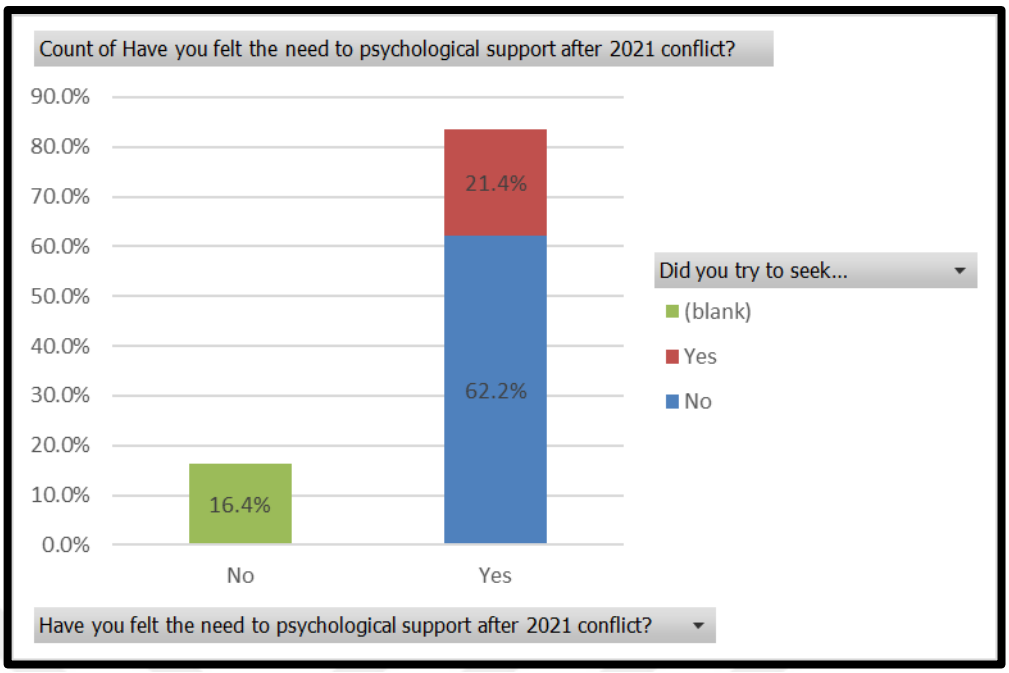

Figure 4.8. Accessibility of Mental Health Services

The above figure shows that only 21.4% (out of the 83.6% who reported the feeling of need for mental health support) tried to seek mental health support. However, the majority of them 62.2% (345 participants) did not seek for the mental health support, these participants were asked about the reasons of not seeking it and the answers are summarized in the below table.

04.6. Content Analysis for the Barriers of Mental Health Services

Barrier	Description	Percentage
1-Lack of Awareness	-Many individuals mentioned that they were not aware of the available mental health support services. -Some expressed a lack of knowledge about mental health issues and the importance of seeking professional help.	20%
2-Stigma and Social Perception	-A significant number of respondents mentioned the fear of being stigmatized or judged by others as a reason for not seeking mental health support. -They expressed concerns about negative perceptions from family, friends, and society, which prevented them from seeking help	30%
3- Cultural and Religious Factors	-Cultural and religious beliefs played a significant role in the decision not to seek mental health support. -Some respondents mentioned that mental health issues were considered a taboo topic in their culture or religion, making it difficult to openly discuss or seek assistance	15%
4-Fear and Denial	-Many individuals admitted feeling afraid or in denial about their mental health problems. -They expressed concerns about the potential consequences of acknowledging their issues, such as being labeled as weak or facing negative outcomes in their personal or professional lives.	10%
5- Lack of Accessibility and Resources	-Several respondents mentioned limited access to mental health services as a barrier. -They cited factors such as financial constraints, lack of transportation, and long waiting times for appointments as reasons for not seeking help.	10%
6- Self-Reliance and Coping Mechanisms	-Some individuals preferred to rely on their own coping mechanisms and believed they could handle their mental health problems without professional intervention. -They mentioned strategies such as talking to friends or family, engaging in hobbies, or using self-help resources as alternative approaches.	10%
7- Lack of trust in mental health professionals	-A few respondents expressed lack of trust in mental health professionals as a reason for not seeking support. - Reservations and doubts about the competence or intentions of mental health professional.	5%

Lack of awareness or knowledge: Many respondents expressed a lack of awareness about mental health services, with 20% stating that they did not seek support due to limited knowledge about available resources. One participant mentioned, *"I didn't even know there were professionals who could help with mental health issues.*" This indicates that a significant portion of the respondents were not familiar with the mental health support options that were available to them.

Stigma and fear of judgment: Approximately 30% of the respondents cited stigma and fear of judgment as barriers to seeking mental health support." One individual shared, "*I was afraid of being labeled as weak or crazy if I sought help. Society tends to view mental health issues negatively*." This suggests that the fear of social stigma and judgment prevented a considerable number of respondents from seeking the support they needed.

Cultural and religious factors: Cultural and religious factors were identified by 15% of the respondents as hindrances to seeking mental health support." One participant explained, "*In my culture, mental health problems are often seen as a sign of weakness or a lack of faith. I didn't want to go against my religious beliefs*." This suggests that cultural and religious beliefs played a role in dissuading a portion of the respondents from seeking professional help

Denial or minimization of the problem: Approximately 10% of the respondents displayed denial or minimization of the problem as a reason for not seeking mental health support." One respondent mentioned, "*I didn't think my issues were serious enough to seek professional help. I believed they would go away on their own*." This indicates that a small percentage of the respondents downplayed the significance of their mental health issues, leading them to not seek the necessary support.

Financial constraints: Around 10% of the respondents mentioned financial constraints as a reason for not seeking mental health support." One participant explained, *"I couldn't afford therapy sessions or medication. It was simply too expensive*." This suggests that a portion of the respondents faced financial difficulties that hindered their ability to access professional mental health services.

Self-reliance and resilience : About 10% of the respondents mentioned a belief in self-reliance and resilience as reasons for not seeking mental health support." One

respondent stated, "*I thought I could handle it on my own. Seeking help would mean I couldn't manage my problems myself*." This indicates that a portion of the respondents preferred to rely on their own abilities and viewed seeking help as a sign of weakness.

Lack of trust in mental health professionals: "Approximately 5% of the respondents expressed a lack of trust in mental health professionals as a reason for not seeking support." One individual stated, "*I've heard stories of therapists who don't really care or who push medications unnecessarily. I didn't want to risk getting a bad experience*." This indicates that a small percentage of the respondents had reservations and doubts about the competence or intentions of mental health professionals.

The findings highlight the importance of addressing barriers to accessing mental health services and promoting awareness about the benefits of seeking support after a traumatic event. By creating a supportive environment and ensuring the availability of adequate resources, individuals who require psychological support can receive the care they need for their well-being and recovery.

Research Questions 3: Among those who sought mental health services after the May 2021 conflict in Gaza strip, what are the levels of satisfaction with the services they received?

The objective of this section is to analyze the level of satisfaction with psychological services across individuals in Gaza Strip following May 2021 conflict. We aim to understand the experiences and perceptions of individuals who have utilized these services during this post-conflict period. Specifically, we will explore their level of satisfaction with the provided mental health services. Additionally, for those who expressed dissatisfaction, we will delve into the reasons behind their negative experiences. By examining these factors, we can gain insights into the effectiveness and quality of mental health services in the aftermath of the conflict and identify areas for improvement.

In order to determine the level of satisfaction with mental health services, participants were asked if they were satisfied with the services provided. The responses were recorded as either "Yes" or "No." from 119 participants who had mental health support.

04.7. Levels of Satisfaction for the Provided Mental Health Services

Row Labels	Were you satisfied with the provided mental health services after the May 2021 conflict in Gaza strip?
No	46.2%
Yes	53.8%
Grand Total	**100.00%**

Based on the survey responses, the analysis reveals that 53.8% (64 participants) reported being satisfied with the mental health services provided in the Gaza Strip following the May 2021 conflict. On the other hand, 46.2% (55 participants) expressed dissatisfaction with the services received. These findings indicate a relatively balanced distribution of satisfaction levels among the respondents.

To gain a deeper understanding of the factors contributing to dissatisfaction, content analysis applied to the responses of those who reported being unsatisfied with the mental health services as the below table.

Table 4.8. Content Analysis for the Reasons of Dissatisfaction of Mental Health Services

Reason	Description	Percentage
1-Unrealistic expectations and lack of adequate support	-Expectations for recovery were higher than the service I received. -Need for social support, lack of communication and specialized guidance for children	20%
2-Lack of qualified professionals and misconceptions	-The service providers were not specialized or professional in psychological support and counseling -There was a lack of acceptance from family members due to their distorted perception of psychological fatigue	17.5%
3- Ineffective methods and limited resources	-The provided services were ineffective compared to the extent of suffering -The service providers were unable to deliver due to their own psychological pressure, as they are also from the Gaza Strip	22.5%
4- Insufficient treatment and unqualified individuals	-Not receiving proper treatment. -The service providers were unqualified.	7.5%
5- Inadequate facilities and lack of attention	-The resources were not sufficient -There was a lack of interest from the institution	7%
6-Lack of privacy and ineffective communication	-The sessions lacked privacy - The therapist seemed to be reciting prepared statements without engaging in further conversation	12%
7-Fear, stress, and lack of focus	-Constantly experienced fear, tension, and headaches -Fear and trauma remained, and unability to overcome the children's crying and fear.	13%

Unrealistic expectations and lack of adequate support: 20% of the respondents expectations for recovery were higher than the service received, one participant said *"My expectations for recovery were higher than the service I received."*. There was a need for social support and guidance for children.

Lack of qualified professionals and misconceptions: 17.5% of the respondents indicated that the service providers were not specialized or professional in psychological support and counseling, one participant said:*" The service providers were not specialized or professional in psychological support and counseling."* There was also lack of acceptance from the family members due to their distorted perception of psychological fatigue.

Ineffective methods and limited resources: 22.5% of the respondents reported that the provided services were ineffective compared to the extent of their suffering, one participant said: *"The provided services were ineffective compared to the extent of our suffering."* Moreover, the service providers were unable to deliver due to their own psychological pressure, as they are also from the Gaza Strip.

Insufficient treatment and unqualified individuals: 7.5% of the respondents indicated not receiving proper treatment and the service providers were unqualified, one participant said: "*I did not receive proper treatment."*

Inadequate facilities and lack of attention: 7% of the respondents indicated that the resources were not sufficient and there was a lack of interest from the institution, one participant said: "*The resources were not sufficient."*

Lack of privacy and ineffective communication: 12% of the respondents reported that the sessions lacked privacy, and the therapist seemed to be reciting prepared statements without engaging in further conversation, one participant said: "*The sessions lacked privacy."*

Fear, stress, and lack of focus: 13% of the respondents indicated constantly experienced fear, tension, and headaches and inability to overcome the children's crying and fear, one participant said: "*I constantly experienced fear, tension, and headaches."*

In conclusion, the analysis of participants' responses regarding the satisfaction level with psychological services after the May 2021 conflict in the Gaza Strip reveals a

mixed sentiment. While 53.78% expressed satisfaction with the services provided, 46.22% reported dissatisfaction. The reasons for dissatisfaction varied, including unrealistic expectations and lack of adequate support, lack of qualified professionals and misconceptions, ineffective methods and limited resources, insufficient treatment and unqualified individuals, inadequate facilities and lack of attention, lack of privacy and ineffective communication, and feelings of fear, stress, and lack of focus. These findings emphasize the need for continuous improvement and addressing the specific concerns raised by individuals to enhance the quality and effectiveness of mental health services in post-conflict settings. Efforts should be directed towards ensuring qualified professionals, comprehensive support systems, and tailored approaches to meet the diverse needs of the affected population.

Research Questions 4: What is the impact of witnessing multiple conflicts on the prevalence of depression and PTSD in Gaza strip?

This section analyzes the impact of witnessing multiple conflicts on the prevalence of depression and post-traumatic stress disorder (PTSD). The Gaza Strip has experienced a series of conflicts, including the Dec 2008 - Jan 2009, Nov 2012, Jul 2014, May 2021, and 2022 conflict, which have had a profound impact on the mental well-being of its residents. This section aims to analyze the data collected through a series of questions related to individuals' experiences during conflicts. The questions include whether individuals left their houses due to near bombings, number of witnessed conflicts, suffered physical injuries themselves or had family and friends affected by the conflict. By examining these factors, we can gain insights into the psychological consequences of witnessing multiple conflicts and the potential prevalence of depression and PTSD among the population in the Gaza Strip.

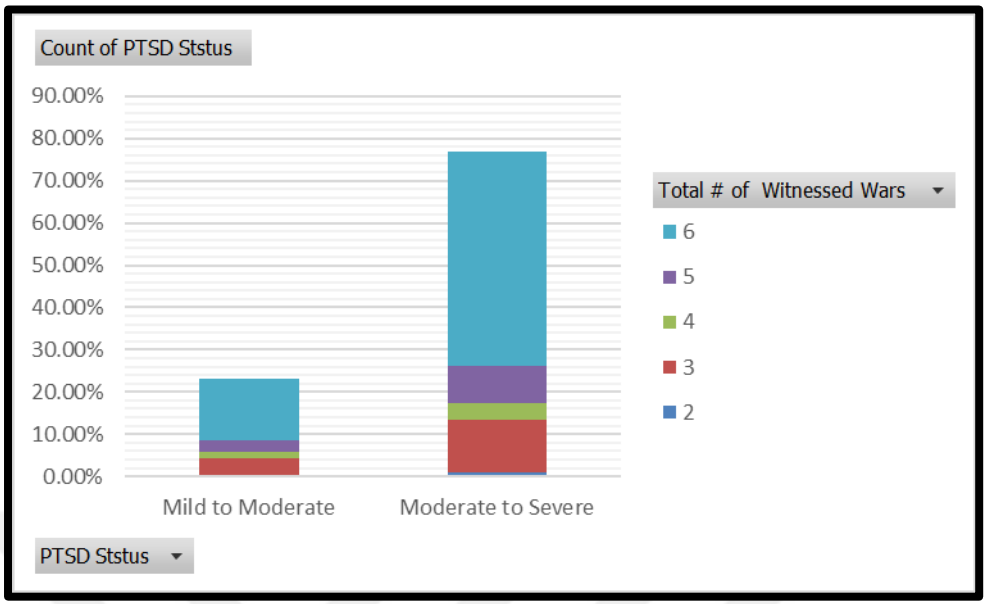

Figure 4.9. The Relation Between Number of Witnessed Wars and PTSD

According to the data, among those who have witnessed two conflicts, 0.00% reported experiencing mild to moderate PTSD, while 1.08% reported experiencing moderate to severe PTSD. As the number of witnessed wars increases, the percentage of individuals experiencing PTSD also increases. For instance, among those who have witnessed six conflicts, 14.59% reported experiencing mild to moderate PTSD, and a significant proportion of 50.81% reported experiencing moderate to severe PTSD. Overall, when considering all respondents, the data reveals that 23.06% experienced mild to moderate PTSD, while a substantial majority of 76.94% experienced moderate to severe PTSD.

These findings suggest a clear relationship between the number of witnessed conflicts and the prevalence and severity of PTSD. As individuals experience a higher number of conflicts, their likelihood of developing PTSD increases, with a higher proportion experiencing moderate to severe symptoms. This underscores the profound impact of repeated exposure to conflict on the mental well-being of individuals in the Gaza Strip.

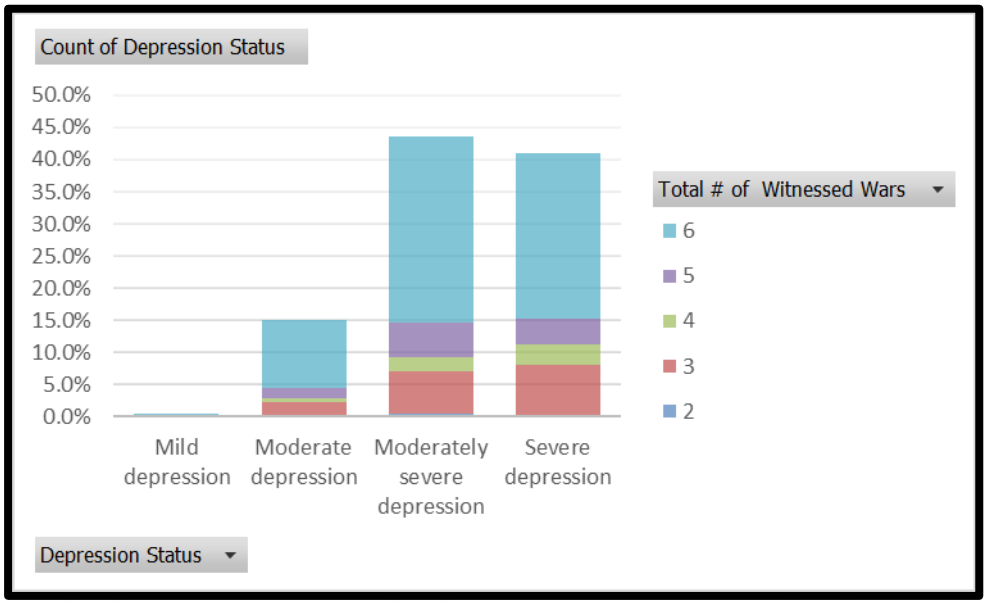

Figure 4.10. The Relation Between Number of Witnessed Conflicts and Depression

According to the data, among those who have witnessed two conflicts, there were no reported cases of mild depression, but 0.2% experienced moderate depression. As the number of witnessed conflicts increases, the percentage of individuals experiencing depression also increases. For example, among those who have witnessed six conflicts, 0.2% reported mild depression, while 10.5% experienced moderate depression, 29.0% experienced moderately severe depression, and a significant proportion of 25.8% experienced severe depression.

When considering all respondents, the data shows that 0.4% experienced mild depression, 15.0% experienced moderate depression, 43.6% experienced moderately severe depression, and 41.1% experienced severe depression.

These findings demonstrate a clear association between number of witnessed conflicts and the prevalence and severity of depression. As individuals witness a higher number of conflicts, the likelihood of experiencing depression increases, with a substantial proportion experiencing moderately severe to severe symptoms. The data highlights the significant impact of multiple conflicts on the mental well-being of individuals in the Gaza Strip, indicating a higher risk of developing depression as the number of witnessed conflicts increases.

Below is the logistic regression model with the independent variable "number of witnessed wars" and the dependent variable “Depression status”. The logistic regression model does not seem to be a strong predictor of depression status based on the variable "Wars." None of the coefficients for the levels of "Wars" or the constant term are statistically significant. The wide confidence intervals for the odds ratios further indicate uncertainty in the estimates. Other factors not included in this model may play a more significant role in determining depression status. The p-values for all number of witnessed wars are mote the 0.05 indicating that the number of witnessed wars at is not statistically significant in predicting depression status." The Cox & Snell R Square and Nagelkerke R Square values being close to zero suggest that the relationship between the number of witnessed wars and the likelihood of having Moderate to Severe Depression is weak. Additionally, the model's accuracy in predicting Depression status is 84.7%, indicating that the model has some ability to discriminate between the two Depression status categories but may not be very strong in doing so.

Table 4.9. Logistics Regression Analysis for War Witness Impact on Depression Status – Model Summary

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	473.865[a]	.002	.004

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Table 4.10. Logistic Regression Analysis for War Witness Impact on Depression Status - Classification Table

Classification Table[a]

Observed			Predicted Depression_Binary: No Moderate to Sever Depression	Predicted Depression_Binary: Have Moderate to Sever Depression	Percentage Correct
Step 1	Depression_Binary	No Moderate to Sever Depression	0	85	.0
		Have Moderate to Sever Depression	0	470	100.0
	Overall Percentage				84.7

a. The cut value is .500

Table 4.11. Logistic Regression Analysis for War Witness Impact on Depression Status – Variables in Equation

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B) Lower	95% C.I.for EXP(B) Upper
Step 1[a]	Wars			1.229	4	.873			
	Wars(1)	.195	1.136	.030	1	.864	1.215	.131	11.255
	Wars(2)	.659	1.252	.277	1	.599	1.933	.166	22.497
	Wars(3)	.164	1.153	.020	1	.887	1.178	.123	11.290
	Wars(4)	.030	1.105	.001	1	.978	1.031	.118	8.981
	Constant	1.609	1.095	2.159	1	.142	5.000		

a. Variable(s) entered on step 1: Wars.

Research Questions 5: What is the impact of demographic factors on the prevalence of depression and PTSD in Gaza strip?

This section aims to explore the impact of demographic factors on the prevalence of depression and post-traumatic stress disorder (PTSD) in the Gaza Strip. Understanding how demographic characteristics relate to mental health outcomes is crucial for identifying vulnerable populations and developing targeted interventions.

We will examine various demographic factors such as age, gender, education level, marital status, and socioeconomic status. These factors can potentially influence the likelihood of experiencing depression and PTSD in a conflict-affected region like the Gaza Strip. By analyzing the data, we can uncover patterns and associations between these demographic variables and the prevalence of depression and PTSD.

012. Relation of Age & Gender with PTSD Status

PTSD Status	Female	Male	Grand Total
Mild to Moderate	**19.1%**	**4.0%**	**23.1%**
15-20	1.4%	0.4%	1.8%
20-30	14.4%	2.0%	16.4%
30-40	2.9%	1.4%	4.3%
40-50	0.4%	0.2%	0.5%
Moderate to Severe	**66.8%**	**10.1%**	**76.9%**
15-20	9.4%	0.9%	10.3%
20-30	45.4%	7.4%	52.8%
30-40	10.8%	1.3%	12.1%
40-50	0.9%	0.4%	1.3%
50-60	0.2%	0.0%	0.2%
More than 60	0.2%	0.2%	0.4%
Grand Total	**85.9%**	**14.1%**	**100.0%**

Analysis shows that in the category of Mild to Moderate PTSD, females accounted for 19.1% while males accounted for 4.0%. The overall percentage of Mild to Moderate PTSD cases was 23.1%. When examining the age distribution, the highest prevalence of Mild to Moderate PTSD was observed in the age group of 20-30, with females at 14.4% and males at 2.0%. The age group of 15-20 had a lower prevalence, with females at 1.4% and males at 0.4%.

In the category of Moderate to Severe PTSD, females accounted for 66.8% while males accounted for 10.1%. The overall percentage of Moderate to Severe PTSD cases was 76.9%. Looking at the age breakdown, the highest prevalence of Moderate to Severe PTSD was found in the age group of 20-30, with females at 45.4% and males at 7.4%. Other age groups also showed significant percentages, but the prevalence decreased with increasing age.

It is evident that both gender and age have an impact on the prevalence of PTSD in Gaza Strip. Females generally exhibit higher rates of PTSD across all severity levels compared to males. Additionally, the age group of 20-30 appears to have the highest incidence of PTSD.

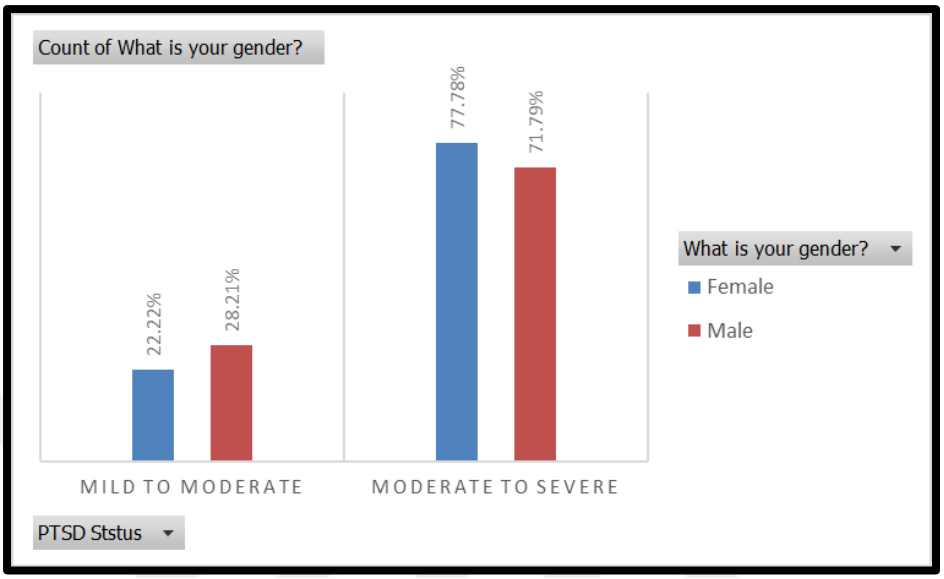

Figure 4.11. The Distribution of Gender Status among the PTSD Levels

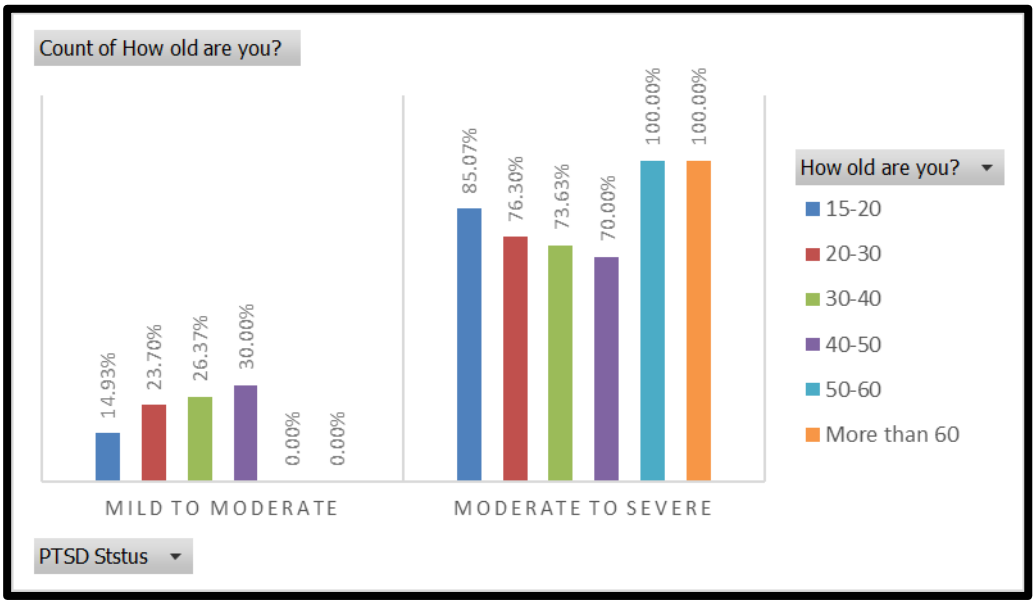

Figure 4.12. The Distribution of Age Status among the PTSD Levels

Among the data 38.9% of the participants were married, the majority of their level of depression was moderately severe depression to severe depression. Moreover, 59.1% of the participants were single, the majority of their level of depression was

moderately severe depression to severe depression. However, 1.8% of participants were divorced, their level of depression was along several levels.

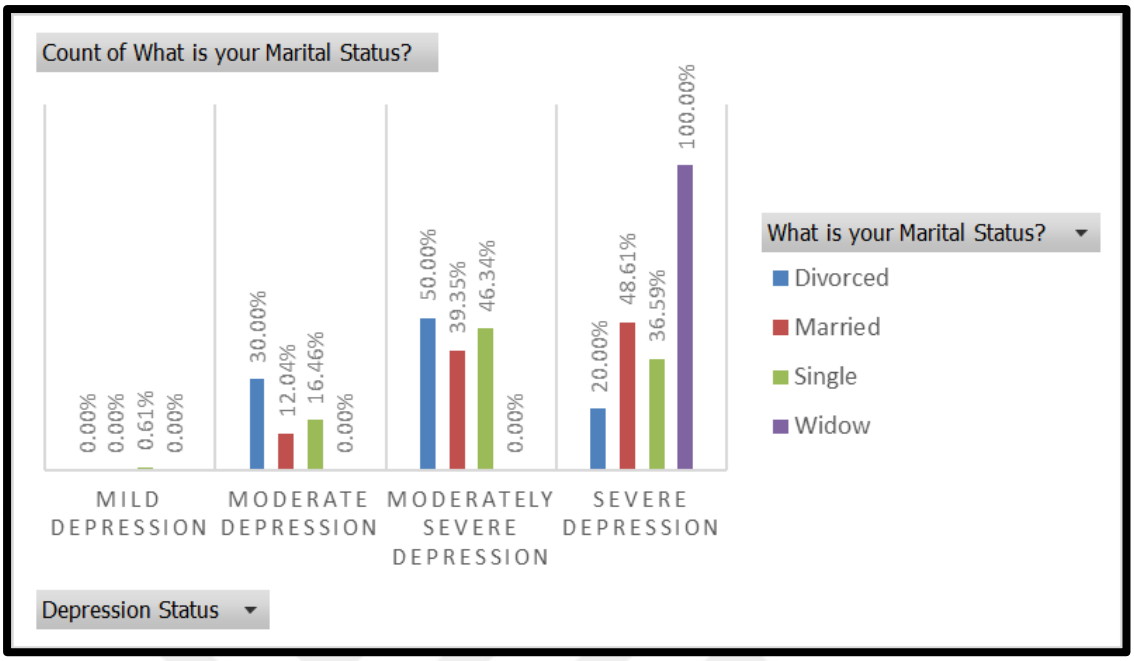

Figure 4.13. Distribution of Marital Status among the Depression Levels

These findings suggest that marital status may influence the prevalence of depression, with higher rates observed among the married and single individuals compared to divorced and widowed individuals. Further analysis and statistical tests can provide a more comprehensive understanding of the relationship between marital status and depression.

04.13. Relation of Marital Status with Depression

Depression Status	Divorced	Married	Single	Widow	Grand Total
Mild depression	0.0%	0.0%	0.4%	0.0%	0.4%
Moderate depression	0.5%	4.7%	9.7%	0.0%	15.0%
Moderately severe depression	0.9%	15.3%	27.4%	0.0%	43.6%
Severe depression	0.4%	18.9%	21.6%	0.2%	41.1%
Grand Total	**1.8%**	**38.9%**	**59.1%**	**0.2%**	**100.0%**

04.14. Relation of Education and Employment Status with Depression

Depression and employment Status	Bachelor's degree	Post Graduate Degree	Primary school graduate	Secondary school graduate	Grand Total
Mild depression	**0.4%**	**0.0%**	**0.0%**	**0.0%**	**0.4%**
Full time work	0.2%	0.0%	0.0%	0.0%	0.2%
Unemployed	0.2%	0.0%	0.0%	0.0%	0.2%
Moderate depression	**11.4%**	**1.3%**	**0.2%**	**2.2%**	**15.0%**
Full time work	2.2%	0.9%	0.0%	0.0%	3.1%
Part time work	1.3%	0.0%	0.2%	0.2%	1.6%
Student	2.7%	0.0%	0.0%	1.4%	4.1%
Unemployed	5.2%	0.4%	0.0%	0.5%	6.1%
Moderately severe depression	**34.2%**	**3.8%**	**0.0%**	**5.6%**	**43.6%**
Full time work	6.3%	1.1%	0.0%	0.0%	7.4%
Part time work	5.2%	1.4%	0.0%	0.0%	6.7%
Student	7.2%	0.2%	0.0%	4.3%	11.7%
Unemployed	15.5%	1.1%	0.0%	1.3%	17.8%
Severe depression	**32.1%**	**4.5%**	**0.0%**	**4.5%**	**41.1%**
Full time work	8.5%	2.3%	0.0%	0.2%	11.0%
Part time work	6.1%	1.3%	0.0%	0.0%	7.4%
Student	5.0%	0.5%	0.0%	3.4%	9.0%
Unemployed	12.4%	0.4%	0.0%	0.9%	13.7%
Grand Total	**78.0%**	**9.5%**	**0.2%**	**12.3%**	**100.0%**

Among those with mild depression, the participants were with bachelor's degree (0.4%) with full time work or unemployed (0.2% each). For moderate depression, the highest percentage was observed among individuals with a bachelor's degree (11.4%), while unemployed accounted for a significant portion as well (6.1%).

In the category of moderately severe depression, the highest percentage was observed among individuals with a bachelor's degree (34.2%), followed by those who were unemployed (17.8%).

Individuals with severe depression showed the highest percentage among those with a bachelor's degree (32.1%), followed by unemployed individuals (13.7%).

Overall, individuals with higher education levels (Bachelor's degree and Post Graduate Degree) tend to have higher rates of depression across all severity levels. Moreover, the unemployed people tended to have higher levels of depression among all levels.

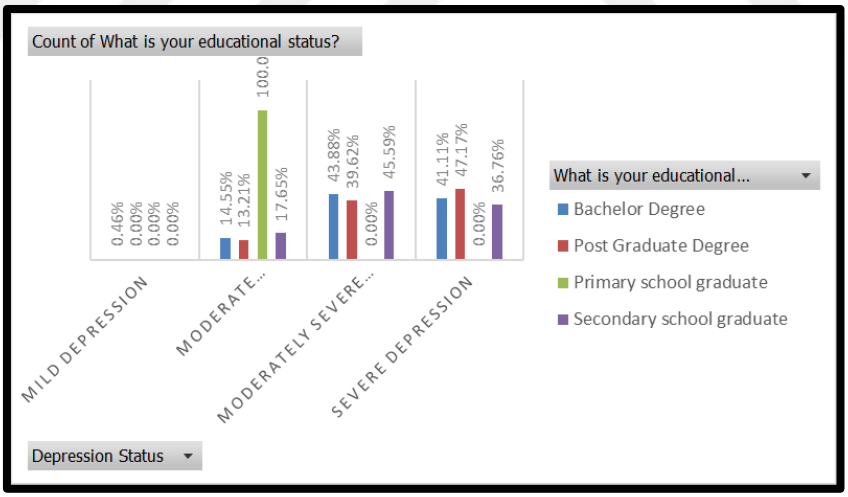

Figure 4.14. The Distribution of Education Status among the Depression Levels

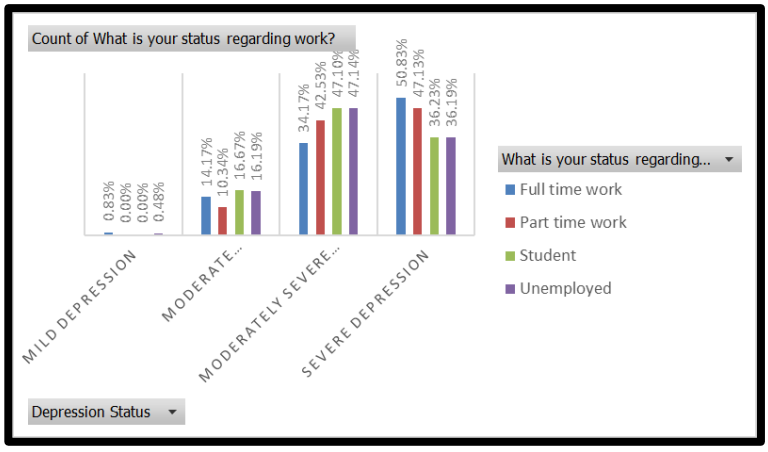

Figure 4.15. The Distribution of Employment Status among the Depression Levels

Below is the Logistic Regression Analysis comparing the depression level as dependent variable, with the demographic factors as independent variables including the age, gender, marital status, having children, educational level, employment status, and the current living location (inside Gaza or outside Gaza)

04.15. Logistic Regression Analysis for Demographic Factor Impact on Depression Status – Model Summary

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	453.601[a]	.038	.066

a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.

04.16. Logistics Regression Analysis for Demographic factor impact on depression status – Classification table

Classification Table[a,b]

Observed			Predicted Depression_Binary		
			No Moderate to Sever Depression	Have Moderate to Sever Depression	Percentage Correct
Step 0	Depression_Binary	No Moderate to Sever Depression	0	85	.0
		Have Moderate to Sever Depression	0	470	100.0
	Overall Percentage				84.7

a. Constant is included in the model.

b. The cut value is .500

Overall, the logistic regression model suggests that age, gender, marital status, having children, educational level, and current living location do not have a significant impact on depression status (all p-values > 0.05) . However, employment status may have a modest influence, as represented by “Part time” (p-value of 0.049, which is marginally significant) . Nonetheless, the overall Nagelkerke R Square is relatively low, indicating that there are likely other factors not included in the model that play a more significant role in determining depression status.

Table 4.17. Logistic Regression Analysis for Demographic Factor Impact on Depression Status – Variables in Equation

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B) Lower	Upper
Step 1[a]	Age			5.011	5	.415			
	Age(1)	2.333	1.564	2.226	1	.136	10.310	.481	220.986
	Age(2)	2.141	1.486	2.076	1	.150	8.512	.462	156.666
	Age(3)	2.785	1.523	3.344	1	.067	16.204	.819	320.722
	Age(4)	1.815	1.701	1.139	1	.286	6.144	.219	172.351
	Age(5)	21.608	40192.969	.000	1	1.000	2422537483	.000	.
	Gender(1)	.810	.441	3.370	1	.066	2.249	.947	5.342
	Marital			4.313	3	.230			
	Marital(1)	-19.405	40180.007	.000	1	1.000	.000	.000	.
	Marital(2)	-17.859	40180.007	.000	1	1.000	.000	.000	.
	Marital(3)	-18.392	40180.007	.000	1	1.000	.000	.000	.
	Children(1)	.091	.481	.036	1	.850	1.095	.427	2.810
	Educational			.302	3	.960			
	Educational(1)	-24.306	40192.970	.000	1	1.000	.000	.000	.
	Educational(2)	-.167	.634	.070	1	.792	.846	.244	2.930
	Educational(3)	.066	.482	.018	1	.892	1.068	.415	2.747
	Employment			4.610	3	.203			
	Employment(1)	.064	.341	.035	1	.852	1.066	.546	2.082
	Employment(2)	.320	.408	.615	1	.433	1.377	.619	3.062
	Employment(3)	.936	.476	3.867	1	.049	2.551	1.003	6.488
	Living	-.371	.487	.581	1	.446	.690	.266	1.792
	Constant	17.696	40180.007	.000	1	1.000	48439269.05		

a. Variable(s) entered on step 1: Age, Gender, Marital, Children, Educational, Employment, Living.

5. DISCUSSION AND CONCLUSION

5.1. Discussion

This research encompassed 555 individuals who experienced the conflict in Gaza Strip in May 2021. A substantial majority of the participants, amounting to 85.9%, were females, whereas males constituted a smaller segment, at 14.1%. Moreover, a significant portion of the respondents, 69.2%, were in the age bracket of 20-30. In terms of education, 78% of the participants held a bachelor's degree. Of these, a significant percentage, 33.3%, reported being unemployed.

Regarding marital status, the largest group of respondents, 59.1%, were single, while 38.9% were married. When it comes to parenthood, 70.1% of the participants indicated that they didn't have children, compared to 29.9% who had children. The existence or nonexistence of children can influence mental health and the pursuit of mental healthcare. Those with children might face unique pressures and obligations compared to their childless counterparts. Gaining insight into these elements can contribute to the development of mental health programs and support services that address the specific requirements of different individuals.

In general, the data reveals a heterogeneous composition of participants in terms of educational qualifications and employment statuses. These variables are crucial to consider in evaluating mental health outcomes and in comprehending the availability of mental health services to different educational and employment demographics.

One of the main outcomes for this study is to show prevalence of PTSD and depression among Gaza residents. The high prevalence of moderate to severe PTSD symptoms among Gazan residents shown in table 4.2 is actually consistent with previous research highlighting the mental health consequences of exposure to conflict. For example, a study by Thabet AA, Abed Y, Vostanis P found that Palestinian children exposed to military violence exhibited a high rate of PTSD.[35]

In light of the historical context of the Gaza Strip, the present finding of 76.9% prevalence of moderate to severe PTSD symptoms might be a manifestation of the

cumulative psychological impact of prolonged conflict exposure. Also, regarding the 23.1% who reported mild to moderate PTSD symptoms, this could be indicative of certain protective factors. It is critical to analyze what may contribute to the relative resilience among this subset of the population. For instance, social support, coping strategies, or prior exposure to trauma can play a role in the severity of PTSD symptoms.[36]

Comparing these findings with those from other conflict zones might provide further insights into the factors affecting PTSD prevalence and severity among conflict-affected populations. Such comparisons can inform targeted interventions for the promotion of mental health and well-being among Gazan residents. these findings underscore the importance of addressing mental health needs and implementing effective interventions among conflict-affected populations.

The high prevalence rates of moderately severe to severe depression among Gazan residents, as indicated by the data in table 4.3, underscore the significant mental health burden this population faces. These rates are alarmingly high and consistent with previous research that indicates that exposure to conflict and violence can have detrimental effects on mental health, leading to depressive symptoms.[37]

For instance, a study by Karam EG et al., which analyzed populations in post-conflict settings, found that war events were associated with a significant increase in the onset and persistence of depression.[38] This finding suggests that the conflict in May 2021 may have been a major stressor contributing to the heightened rates of depression among Gazan residents.

The markedly low prevalence of mild depression, compared to the much higher rates of moderate to severe depression, may point to the intensity and gravity of the stressors faced by this population. It could also indicate that the continuous nature of the conflict and the associated stressors are more likely to contribute to more severe forms of depression.

In light of these findings, it is imperative for interventions to be developed and implemented to study the psychological needs of the population in Gaza Strip, with a particular focus on those suffering from moderate to severe depression. Interventions

may include mental health screenings, increasing the availability of psychosocial support, and working towards reducing stigma related with seeking psychological care.

Of course, The combined presence of PTSD and depression symptoms, as found in this study, can reflect the complexity and severity of the mental health challenges faced by the Gaza Strip population. This co-occurrence of PTSD and depression post-conflict is in line with existing literature that has documented the interrelation between these two disorders in conflict-affected populations.[39,40]

The high prevalence of both PTSD and depression is indicative of the psychosocial influence of war and conflict, which is often characterized by exposure to traumatic events, loss of loved ones, displacement, and daily stressors. Such conditions are known to contribute to mental health disorders including but not limited to PTSD and depression. [37]

Immediate and long-term psychosocial support and interventions are crucial regarding these findings. Such interventions should ideally be culturally appropriate, accessible, and address the unique needs and challenges faced by the affected population. Collaboration with local communities, NGOs, and international agencies can be essential in developing and implementing mental health programs.

Given the protracted nature of the conflict in Gaza, it is also important to consider sustainable solutions that focus not just on crisis intervention but also on building resilience and promoting mental health and well-being in the long term.

Another fact shown by figure 4.8, a significant portion (62.2%) of the respondents did not seek mental health support despite feeling the need for it, and table 4.7, highlights various barriers to accessing mental health services.

Lack of awareness is one of the barriers; 20% of the respondents were not aware of the available mental health services. This is consistent with prior studies that have highlighted the significance of awareness as a determinant of help-seeking behavior.[30]

Stigma and fear of judgment, which accounted for 30% of the reasons, are well-documented barriers to mental health service utilization.[41] This finding underscores the need for efforts to reduce mental health stigma and create an environment where individuals feel safe to seek help.

Cultural and religious factors (15%) are also critical considerations. Prior studies have highlighted how cultural beliefs can shape perceptions and attitudes towards mental health services.[42] There needs to be culturally sensitive approaches in mental health promotion and service provision.

Denial or minimization of the problem (10%) reflects a need for mental health education that emphasizes the importance of early intervention.

Financial constraints (10%) reflect systemic barriers that limit access to mental health services. Policy-level interventions may be necessary to address affordability. [43]

Self-reliance (10%) and lack of trust in mental health professionals (5%) indicate the need for community engagement and building trust with health services.

This study emphasizes the need to address these barriers through comprehensive strategies including public awareness campaigns, mental health education, cultural sensitivity training, and policy-level interventions. A multipronged approach can facilitate increased access to psychological services, which is essential for the well-being and recovery of individuals affected by traumatic events.

In revision to table 4.8, you can see a divided sentiment regarding satisfaction with mental health services. The fact that nearly half of the respondents were dissatisfied raises concerns about the effectiveness and quality of these services.

The unrealistic expectations of the services indicate a need for transparent communication and setting appropriate expectations. [44] Additionally, the lack of qualified professionals (17.5%) and inadequate facilities (7%) highlight a critical gap in the quality and availability of services. Previous studies have also reported similar challenges in conflict zones, where mental health infrastructure can be particularly vulnerable. [45]

The reported ineffectiveness of methods (22.5%) suggests that interventions may not be adequately addressing the specific needs and complexities of individuals affected by conflict. Tailored, culturally sensitive approaches might be more effective. [46]

Lack of privacy (12%) and fear and stress (13%) are indicative of the need for creating a safe and supportive environment for mental health services. Ensuring

confidentiality and employing trauma-informed care models can address some of these concerns. [47]

These findings emphasize the importance of a multifaceted approach to improving mental health services. This includes capacity building of professionals, enhancing infrastructure, tailoring interventions, and ensuring safe and confidential environments for service provision. Addressing these aspects is critical in ensuring that mental health services effectively cater to the needs of individuals in post-conflict settings and facilitate their recovery and well-being.

The Gaza Strip has experienced a series of conflicts, including the Dec 2008 - Jan 2009, Nov 2012, Jul 2014, May 2021, and 2022 conflict, which have had a profound impact on the mental well-being of its residents. [24,48]

Findings in both 4.9, 4.10 figures, suggest a significant association between the number of witnessed wars and the prevalence and severity of PTSD and depression. As individuals experience a higher number of wars, their likelihood of developing PTSD and depression increases, with a higher proportion experiencing moderate to severe symptoms. This underscores the profound impact of repeated exposure to conflict on the mental well-being of individuals in the Gaza Strip. [24] Repeated exposure to conflicts has been associated with a range of psychological issues, including depression and PTSD, particularly in regions like the Gaza Strip that have experienced prolonged conflict

Understanding how demographic characteristics relate to mental health outcomes is crucial for identifying vulnerable populations and developing targeted interventions. [48]

It is evident that both gender and age have an impact on the prevalence of PTSD in Gaza Strip. Females generally exhibit greater rates of PTSD in comparison to males. [49] As shown in table 4.13. The gender disparity in PTSD prevalence has been documented in several studies, and it's not exclusive to the Gaza Strip. A meta-analysis by Tolin and Foa (2006) reported that females are more likely than males to develop PTSD across various populations and traumatic events. [50] This can be attributed to multiple factors, including hormonal differences, social roles, and different coping strategies.

In the context of the Gaza Strip, a study conducted by Khamis (2013) also found that females reported higher rates of PTSD than males among Palestinian adolescents exposed to war-related trauma. [51] The author suggested that this could be because women and girls might be more exposed to feelings of helplessness during times of conflict, which is a risk factor for PTSD.

Regarding the age group, it is important to understand that young adults in their 20s are going through significant life changes, and exposure to conflict can be particularly detrimental to their mental health, so it's not so strange that 20-30 age group recorded the highest levels of PTSD. A study by Hobfoll et al. (2011) involving Gazan participants reported that youth and young adults had higher levels of PTSD symptoms due to exposure to political violence. [52] The authors posited that younger individuals may lack the coping resources and life experience to manage the stressors associated with conflict.

The findings suggest the need for targeted interventions focusing on young adults and females in conflict-affected regions such as the Gaza Strip. There should be particular attention to psychosocial support and community-based programs that can facilitate coping strategies and enhance resilience.

The conflicts and traumas that are prevalent in the Gaza Strip can have significant impacts on mental health, especially among parents and children. [24] The findings that single individuals show higher levels of PTSD and depression compared to married individuals, but both groups recording high levels of mental issues as shown in table 4.14, are consistent with the existing body of research indicating that marital status can influence mental health outcomes, especially in conflict-affected regions.

A study conducted by Punamäki et al. (2005) in the Gaza Strip found that being married was associated with fewer PTSD symptoms compared to being single or divorced. [53] The researchers suggested that marriage might provide a support system that can help buffer the effects of trauma. Another study conducted in Bosnia and Herzegovina, a post-conflict country, by Morina et al. (2010) found that married individuals exhibited lower rates of depression and PTSD than unmarried individuals. [54] The authors attributed this difference to the emotional support that marriage can provide during times of stress. On the other hand, a study by Schweitzer et al. (2007) among Sudanese refugees found that both single and married individuals had high levels of

PTSD and depression, with singles being more affected. [55] They attributed the high levels in both groups to the chronic and multiple traumas faced by refugees. Furthermore, a study by Al-Modallal et al. (2012) on Palestinian women during the Al-Aqsa Intifada, showed that marital status, among other factors, was associated with levels of depression. [56]

In general, while marriage can sometimes act as a buffer against the mental health impacts of conflict due to the social support it provides, the severity of traumas faced in conflict zones may still result in high rates of PTSD and depression in both married and single individuals. Interventions aimed at addressing mental health in conflict zones should consider marital status as an important factor.

Conflict and trauma can affect individual differently also regarding the education levels and employment status. Understanding the burden of mental disorders in regions like the Eastern Mediterranean, and specifically the Gaza Strip, is critical for public health interventions. [48] Individuals with higher education levels tend to have higher rates of depression aligns with the notion that exposure to conflict can have varying impacts across different socioeconomic strata as shown in table 4.15. In a study conducted by Batniji et al. (2009), it was found that the mental health burden, including depression, is substantial among Palestinian populations affected by conflict, with factors such as education playing a significant role.[57] It can be speculated that those with higher education might have greater awareness of the societal and economic challenges, which could contribute to feelings of helplessness and depression in the context of conflict. Another critical finding is the increased rates of depression among unemployed individuals. This is consistent with a study conducted by Giacaman et al. (2007), which suggested that the deteriorating economic conditions, mainly unemployment, contribute significantly to the psychological distress among the Palestinian population. [58] The chronic nature of conflict in Gaza, along with the blockade, has resulted in limited economic opportunities, which may disproportionately affect mental health among those who are unemployed.

In light of these findings, it is imperative to recognize the multifaceted nature of the factors contributing to depression in conflict-affected regions like the Gaza Strip. Public health interventions should consider the unique challenges faced by different demographic groups, including those with higher education and the unemployed.

Furthermore, investment in mental health services and resources to tackle unemployment can be vital components of a broader strategy to address mental health in the Gaza Strip.

The finding of a significant but weak association between experiencing physical injury in a family member or a friend due to the 2021 conflict on Gaza strip and the individual's depression status shown in tables 4.4, 4.5 resonates with previous research on the indirect impacts of trauma.

According to Figley's theory of "secondary traumatic stress", the close connection to a trauma victim can result in the individual indirectly experiencing trauma, leading to symptoms similar to post-traumatic stress disorder, including depression.[59] Likewise, in a research on the relatives of the World Trade Center attack's victims found increased risk of depression in those who had close ties with the victims.[60]

However, Solomon and Dekel argued that the impact is not necessarily always negative; they found that while some people may develop depression or other mental health issues, others may actually experience "posttraumatic growth", where they find a new appreciation for life or develop new strengths and coping mechanisms as a result of their experiences.[61]

As such, the implications of these findings are two-fold. On one hand, they underline the importance of providing mental health support not only to direct victims but also to their close friends and family members. On the other hand, they suggest that the relationship between indirect trauma and depression is not straightforward and can be influenced by various individual and contextual factors.

Result reveals in table 4.6 show that there is no significant association between leaving the house due to nearby bombing and an individual's depression status. While this might initially seem counter-intuitive given the potential stress such an event could induce, several interpretations can be offered. One perspective may see the act of leaving the house as a mechanism of resilience-building or coping in a traumatic scenario, which could potentially offset the risk of depression.[62] Alternatively, the absence of a significant association could be due to the timing of the assessment or the nature of the questions asked. Trauma-induced responses can vary over time and are multifaceted, often eluding capture by simplistic measures.

Regarding table 4.12, it’s found that the number of witnessed wars was not a statistically significant predictor for depression status. While this might seem surprising considering the traumatic nature of war, it may be interpreted as an example of psychological resilience in the face of adversity. However, past research on the association between exposure to armed conflict and mental health issues, such as PTSD and depression, have often found significant correlations. For instance, a study in Afghanistan discovered a strong correlation between exposure to war-related traumas and the prevalence of depression and anxiety disorders.[63] This contrast suggests that individual and community coping mechanisms, social support, and other unmeasured factors could be playing crucial roles in Gaza's context.

In table 4.18 logistic regression model, it’s found that demographic factors like age, gender, marital status, educational level, and current living location didn't significantly impact depression status. However, employment status was marginally significant. This finding is partially consistent with a study found that employment status and the ability to provide for oneself and one's family play a crucial role in mental health among adults in Lebanon, another region affected by conflict.[64] Despite this, the lack of significant impact from other demographic factors, like age and gender, contrasts with much of the established literature.[65] This discrepancy might again be due to the specific context of Gaza or due to other unmeasured factors playing a larger role.

In both models, R-square values are low, indicating that other factors not included in the models might significantly impact depression status. These could include individual personality traits, past psychiatric history, level of social support, severity of war exposure, and others. Further research into these areas could provide valuable insights. However, it's essential to note that non-significant results don't mean there isn't any relationship between the variables tested, but it may suggest that the relationship is complex and possibly affected by other unmeasured variables.

5.2. Conclusion

This research was conducted to study mental health status and mental healthcare seeking behavior among Gaza residents after 2021 conflict summarizing these results below

1. From the 555-study participant, 76.9% reported moderate to severe PTSD symptoms, and 43.6% moderate severe depression. 64.6% from participants suffers from both moderate to severe PTSD along with moderately severe and severe depression.

2. There is a statistically significant but weak association between experiencing physical injury in a family member or a friend due to the 2021 conflict on Gaza strip and the depression status of individuals.

3. There is no significant association between leaving the house during the conflict because of near bombing and depression status.

4. 83.6% of participants recorded they felt the need for psychological support after 2021 conflict, and only 25.6% of them actually sought support.

5. There are various reasons for people not to seek mental health support, stigma and social perception to be the most highlighted one with the highest percent.

6. 46.2% of people who sought support recorded dissatisfaction with the services provided.

7. Ineffective methods and limited resources has the highest percent in reasons for dissatisfaction with the mental health services rovided in Gaza.

8. A positive relationship is obtained between the number of conflicts witnessed and the mental health issues.

9. The higher number of conflicts aligns with higher rate of moderate to severe PTSD symptoms.

10. A clear relationship is observed between number of conflicts and prevalence and severity of depression among participants.

11. Females show higher rates of PTSD compared to males.

12. The age group of 20-30 has the highest rates of PTSD.

13. Marital status may influence prevalence of depression.

14. Results suggest that higher education can influence the mental health status, where higher depression rates are observed among higher education level individuals.

15. Unemployment affects mental health status as the results suggest that unemployed participants show higher levels of depression.

16. Using a logistic regression model with "number of witnessed wars" as an independent variable and "Depression status" as a dependent variable, it appears that the correlation between the instances of wars witnessed and depression status is not strong.

17. The logistic regression model indicates that demographic factors such as age, gender, marital status, having children, educational level, and current living location don't substantially impact depression status. Nonetheless, employment status, particularly part-time employment, might have a slight effect.

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7. APPENDIX

7.1. Ethical Form Approval

YEDITEPE UNIVERSITY

No : E.20598925-805.02.03-80
Subject : Non Interventional Clinical Research Ethics Board Decision

To Dr. Öğr. Üyesi Ebru Çayır Burke

Yeditepe University Non-Interventional Clinical Research Ethics Board has reviewed the research proposal placed upon ethical approval for the project as the research title, the researchers, the application number, the ethics board meeting details, and the provided documents have been outlined below. This research proposal has been evaluated by the members of the ethics board and full ethical **APPROVAL** has been granted.

Research Title:	Mental Health Status and Mental Healthcare Seeking Behaviors Among Residents of Gaza Who Were Exposed to Conflict
Researchers:	Ghadaaa Shoman, Dr. Ebru Cayir Burke
Application Number:	202205Y0250

ETHICS BOARD MEETING DETAILS			
Meeting Date:	14 September 2022	**Meeting Place:**	Online (Google Meet)

PROVIDED DOCUMENTS
Wet signed application file, file uploaded to a CD or USB media, and electronic submission
Title of research and the names of the researchers
Letter of application
Application Form
Nature of the Research;
• Type
• Significance and distinctive value
• Aims and objectives
• Method
• Management of the research
• Widespread impact
• Pertinence of the budget and reason (if applicable)
• Timeframe and convenience
• References
Informed consent form (uniquely prepared for the research)
Letter of Undertaking-1 A commitment to undertake the responsibility of obtaining institutions permission from where the data collection will be made
Letter of Undertaking-2 A commitment to read the latest version of the World Medical Association Declaration of Helsinki and all relevant guidelines of the Ministry of Health

True copy by e-signature.
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Profession: Başkan
Phone Number:

Letter of Undertaking-3 A commitment on whether there are previous ethical board applications
Letter of Undertaking-4 A commitment that no action will be taken during the research that is not included in the research budget and that will bring additional burden to the volunteer or the Social Security Institution
Letter of Undertaking-5 A commitment to reading the circular on treatment approaches and scientific research in COVID-19 patients
Letter of Undertaking-6 A commitment to reading the document of Research Application Permissions that is published by Ministry of Education
'Resume Forms' filled separately by all the researchers and signed
Additional documents (Scale permissions used, if any, etc.)

Prof. Dr. Didem ÖZDEMİR ÖZENEN
Chair

Assoc. Prof. Dr. Gökhan ERTAŞ
Deputy Chair

Assoc. Prof. Dr. Elif SUNGURTEKİN EKÇİ
Reporter

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Member

Assoc. Prof. Dr. Binnur OKAN BAKIR
Member

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7.2. Consent Form

INFORMED CONSENT FORM

TITLE of the RESEARCH:

*You are invited to participate in a web-based online survey titled "**Mental Health Status and Mental Healthcare Seeking Behaviors Among Residents of Gaza Who Were Exposed to Conflict"** A Cross-Sectional Online Questionnaire survey. This study is being conducted by Ghada Abdulafattah Ahmed Shoman the Department of Public Health, Yeditepe University School of Medical as a master of public health thesis research. It would take 15-20 minutes to complete.*

You must be a Palestinian who was living in Gaza strip during the last aggression May (10-21) and aged 18 years or older to participate in this study. Participation in this study is voluntary. If you agree to participate in this study, you will complete an online questionnaire. Participation in this study may not benefit you directly but will help us understand the impact of the stress experienced due to violent conflicts on health, examine utilization of mental health services and identify the reasons for seeking mental health services. You may find answering some of the questions upsetting. You may skip any question that you don't feel like answering and may stop completing the questionnaire at any time if you wish to do so.

AIMS of the RESEARCH :

This study aims to:

1) Determine the prevalence of depression, and PTSD among people who have been affected by conflict in Gaza between the dates of 10-21 May 2021,
2) Examine utilization of mental health services among these individuals,
3) Identify the reasons for not seeking mental health services.

The questions focus on your experiences during the aggression, common psychological symptoms that people under stress experience, and personal characteristics such as age, gender, educational level, etc. The number of individuals needed to participate is 384.

RESEARCH ACTIVITIES:

The participants will be completing an online questionnaire. This study does not involve any side effects or challenges to the volunteer, as it is required to answer an online questionnaire without any other responsibilities upon that.

WHAT ARE THE BENEFITS OF PARTICIPATING IN THIS RESEARCH?

Access to and utilization of mental health services when needed is a critical issue even in the most developed and safe parts of the world today. Therefore, it is even more critical for communities living under occupation and/or conflict, like in Gaza, to benefit from such services. There is limited research on the most common mental illnesses and help seeking behaviors in conflict and war zones. Knowledge produced by this research would aid the practitioners and clinicians in planning and delivering effective interventions in Gaza.

Furthermore, increasing our knowledge about the reasons for not seeking services when needed would be useful for program developers, healthcare workers and researchers so that they can integrate this knowledge in future programming and service delivery.

Although this study will not pay off immediately, it does provide a potential better future for the whole generation.

WHAT ARE THE COSTS OF PARTICIPATING IN THIS RESEARCH?

There are no fees for participating in this study, as well as there is no financial profit.

SHOULD I PARTICIPATE IN THIS RESEARCH?

Participating in this research is voluntary, and you are free to leave the research at any time without any kind of penalty.

HOW IS MY PERSONAL INFORMATION GOING TO BE USED?

The information you will share with us if you participate in this study will be kept completely confidential to the full extent of law. Your information will be assigned a code number that is unique to this study. Study findings will be presented only in summary form and your name wouldn't be used in any report. While the investigators will keep your information confidential, there are some risks of data breaches when sending information over the internet that are beyond the control of the investigators.

CONTACTS FOR QUESTIONS AND CONCERNS :

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INFORMED CONSENT TO PARTICIPATE IN THE RESEARCH

I have read the above information and discussed any concerns and asked questions related to the research and the researcher answered all of my questions. I read and understood the information provided on the informed consent form. I understand that the participation is voluntary and I can withdraw from the study anytime I wish to without any penalty. I agree to participate in this study without being forced and with my own free will.

My consent to participate does not overrule any relevant law or regulations. The researcher gave me a copy of this document. I agree not to restrict the use of the study results and accept that the results may be shared in journals, reports and other scientific documents. I was ensured that I will receive appropriate medical care in case of a health problem caused directly or indirectly by this research.

Participant name and surname:	Date and signature:
Phone number:	Address:
Researcher name and Surname:	Date and signature:
Phone number:	Address:

7.3. Online Questionnaire

Q1. What is your gender?	O Female	O Male
Q2. How old are you?	……	
Q3. What is your Marital Status?		
O Married O Single	O Widow O Divorced	
Q4. Do you have children?		
O Yes	O No	
Q5.what is your educational status?		
O Primary school graduate O Secondary school graduate O High School graduate	O University graduate O Post-graduate degree	
Q6. What is your profession?	……..	
Q7. What is your work status?		
O Full time work O Half time work O Unemployed	O Student	
Q8. What is your current job?	……	

Q10. Which of these conflicts have you witnesses in Gaza strip? You can choose more than one.		
O Dec 2008_Jan 2009 O Nov 2012 O Jul 2014		
Q11.Have you witnessed the 2021May conflict on Gaza strip?	O **Yes**	O**No**
Q12.Where were you during the 2021 conflict?		
O Gaza O North of Gaza strip O KhanYunus	O Rafah OMiddle of Gaza strip	
Q13.Where do you live now?		
O Gaza strip	O other …….	
Q14.Have you got physical injury because of the 2021 conflict?		
O Yes	O**No**	
Q15.Has anyone of your family or friends got physical injury because of the 2021 conflict? You can choose more than one option.		
O Yes, a family member O Yes, a friend O No, none.		
Q16.Have you left your house during the conflict because of near bombing?		
O Yes	O No	
Q17.Have you felt the need to psychological support after 2021 conflict?		

O Yes	ONo
Q18.Did you try to seek psychological support after 2021 conflict?	
O Yes	ONo
Q19.If the answer to the previous question was no, can you tell us why not?	
……..	
Q20.If the answer to the previous question was yes, were you satisfied with the service provided?	
O Yes	ONo
Q21.If the answer to the previous question was no, can you tell us why not?	
……..	

Have you witnessed the 2022 conflict on Gaza strip?	O Yes	ONo
Q22.Have you got physical injury because of the 2022 conflict?		
O Yes	ONo	
Q23.Has anyone of your family or friends got physical injury because of the 2022 conflict? You can choose more than one option.		
O Yes, a family member O Yes, a friend O No, none.		
Q24.Have you left your house during the conflict because of near bombing?		
O Yes	ONo	

PTSD SCALE PCLC

Instruction to patient: Here is a list of issues and complaints that people sometimes have because of stressors of life. Please read each carefully, put an "X" in the cell to show how much you have been bothered by that issue in the previous month.

	Not at all	**A little bit**	**Moderately**	**Quite a bit**	**extremely**
1. Repeated, disturbing memories, thoughts, or images of a stressful experience from the past	**1**	**2**	**3**	**4**	**5**
2. Repeated, disturbing dreams of a stressful experience from the past?	**1**	**2**	**3**	**4**	**5**
3. Suddenly acting or feeling as if a stressful experience were happening again (as if you were reliving it)?	**1**	**2**	**3**	**4**	**5**
4. Feeling very upset	**1**	**2**	**3**	**4**	**5**

when something reminded you of a stressful experience from the past?					
5. Having physical reactions (e.g., heart pounding, trouble breathing, or sweating) when something reminded you of a stressful experience from the past?	**1**	**2**	**3**	**4**	**5**
6. Avoid thinking about or talking about a stressful experience from the past or avoid having feelings related to it?	**1**	**2**	**3**	**4**	**5**
7. Avoid activities or situations	**1**	**2**	**3**	**4**	**5**

because they remind you with a stressful event from the past?					
8. Trouble recalling important parts of a stressful event from the past?	**1**	**2**	**3**	**4**	**5**
9. Losing the interest to things that you used to enjoy?	**1**	**2**	**3**	**4**	**5**
10. Feeling distant or far off from other people?	**1**	**2**	**3**	**4**	**5**
11. Feeling emotionally numb or being unable to have love feelings for people close to you	**1**	**2**	**3**	**4**	**5**
12. Feeling that your future will be cut short?	**1**	**2**	**3**	**4**	**5**
13. Trouble falling asleep	**1**	**2**	**3**	**4**	**5**

or staying asleep?					
14. Feeling irritable or having anger outbursts?	**1**	**2**	**3**	**4**	**5**
15. Having difficulty focusing?	**1**	**2**	**3**	**4**	**5**
16. Feeling "super alert" or watchful on guard?	**1**	**2**	**3**	**4**	**5**
17. Being jumpy or easily startled?	**1**	**2**	**3**	**4**	**5**

Depression scale PHQ9

Over the last 2 weeks, how often have you been bothered by the following problems

	Not at all	**Several days**	**More than lf of the days**	**Nearly everyday**
1. Little interest or pleasure in doing things?	**0**	**1**	**2**	**3**
2. Feeling down, depressed, or hopeless	**0**	**1**	**2**	**3**
3. Suffer to falling or staying asleep, or sleeping too much	**0**	**1**	**2**	**3**

4. Feeling tired or having no energy	0	1	2	3
5. Lose appetite or overeating	0	1	2	3
6. Feeling disappointed about yourself or that you are a failure or have let yourself or your family down	0	1	2	3
7. Being unable to concentrate on stuff, like reading the newspaper or watching TV	0	1	2	3
8. Moving or speaking slow that others could have noticed. Or on contrast being so fidgety or restless that you move around a lot more than usual	0	1	2	3
9. Thoughts that its better if you were dead, or you want to hurt yourself	0	1	2	3
10. If you felt any problems, how difficult have these problems made it for you to work, take care of things at house, or contact with other people?	Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult