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MENTAL HEALTH in the West Bank and Gaza



World Bank Group
International Security and Development Center
Zentrum Überleben
Palestinian Central Bureau of Statistics

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PHOTO CREDITS AND CAPTIONS

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The marble lion sculptures at the Manara, the central traffic roundabout and Ramallah's central square.

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Palestinians walking and doing daily routines at street in Bethlehem.

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An Israeli Border Policeman checks a young Palestinian woman's documents as she enters the city from the West Bank.

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An old fisherman pulls fish out of his fishing nets with his family at the port of Gaza City.

Page 14 - Natalia Cieslik / World Bank

Group of children in front of building needing repair.

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Three men sit outside a home in Balata Camp, a Palestinian refugee camp established in the northern West Bank in 1950, adjacent to the city of Nablus. It is the largest refugee camp in the West Bank.

Page 26 - Ahed Izhiman

A Palestinian family walking in Aida refugee camp with inadequate resources such as water and infrastructure in Bethlehem, West Bank.

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Palestinian workers with medical masks carry belongings as they cross the checkpoint on their way to work in Israel. Eyal border crossing.

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ABBREVIATIONS

ACLED	Armed Conflict Location and Event Data
CBITS	Cognitive Behavioral Intervention for Trauma in Schools
DSM	Diagnostic and Statistical Manual of Mental Disorders
IDF	Israeli Defense Forces
IRB	Institutional Review Board
ISDC	International Security and Development Center
ICD	International Classification of Diseases
ITQ	International Trauma Questionnaire
FCS	Food Consumption Score
MD	Major Depression
NEET	Not in Education, Employment or Training
PCBS	Palestinian Central Bureau of Statistics
PTSD	Post-traumatic stress disorder
RAPS I	Rapid Assessment of Palestinians (June/July 2020)
WB&G	The West Bank and Gaza





EXECUTIVE SUMMARY

This report presents findings from the Palestinians' Psychological Conditions Survey (PPCS) in the West Bank and Gaza (WB&G). It is based on a nationally representative sample of 5,876 individuals. The results suggest four key findings from the analysis of mental health, socio-economic conditions, and conflict exposure:

- (i) The prevalence of mental health problems in the WB&G is very high.
- (ii) Many mental health issues vary systematically across areas and socio-demographic characteristics.
- (iii) Poor mental health is closely linked with worse economic outcomes.
- (iv) Poor mental health is strongly associated with exposure to violent conflict and traumatic events.

The main section of the report contains a comprehensive explanation of the methodology.¹ The key mental health indicators measured through the PPCS are:

- ◆ Prevalence of depressive symptoms (using WHO-5 well-being index)
- ◆ Prevalence of post-traumatic stress disorder (PTSD), according to International Trauma Questionnaire (ITQ)

¹ Including the data collection processes, quality assurance protocol, sampling design, and indicator construction.

- 🔥 Risk for general mental health problems, assessed using the 12-Item General Health Questionnaire (GHQ-12)
- 🔥 Aggression, elicited through the 12-item short form of the Buss-Perry Aggression Questionnaire (BPAQ-SF)
- 🔥 Life satisfaction, based on an average of two self-reported scores ranging from 0 to 10 regarding general life satisfaction and health.

The main results are:

PREVALENCE

- 🔥 **More than half of the adult population of the WB&G screen positive for depression.** This is based on their symptom score; 58 percent (SE=2.21) of all individuals age 18 or over exhibit symptom levels above the threshold for depression.
- 🔥 **Symptom-levels of depression differ across areas and are particularly high in Gaza.** 71 percent (SE=2.70) screened positive for depression in Gaza, compared to 50 percent (SE=3.05) in the West Bank.
- 🔥 **This result is concerning, as it is higher than reported in other countries using the same WHO-5 instrument** (Jami & Kemmelmeier, 2021; Lim et al. 2018; Garland et al., 2018; Eser et al., 2019).
- 🔥 **About 7 percent of adults in WB&G screen positive for PTSD based on their symptom score.** This share varies only very slightly between areas, with 6.9 percent (SE=1.24) for Gaza compared to 7.2 percent (SE=1.80) for the West Bank.
- 🔥 **Exhibiting any symptoms of post-traumatic stress (a score greater than one) is more common in Gaza than in the West Bank.**
- 🔥 **Estimates of PTSD among adults in WB&G are the first of its kind from a large, nationally representative survey using a strict diagnostic tool.** The applied ICD-11 criteria for PTSD uses the International Trauma Questionnaire (ITQ). This tool estimates a lower prevalence of PTSD rates among several studies (Shevlin et al, 2018; O'Donnell et al, 2014). Also, the fact that the sample under study is representative of the entire population, rather than a study of individuals in the immediate aftermath of a crisis, might explain the lower PTSD prevalence rate compared to other studies conducted in the Palestinian Territories.
- 🔥 **Adults in Gaza have higher risk of mental health problems and a lower level of life satisfaction, while aggression levels are higher in the West Bank than in Gaza.**

ASSOCIATIONS WITH DEMOGRAPHIC CHARACTERISTICS AND SOCIO-ECONOMIC CONDITIONS

- 🔥 **Depression symptom scores do not vary significantly between men and women or by age group, but men have higher PTSD symptoms.** This could be due to males being more exposed to confrontations and combat occurrences. As a result, males may encounter a distinct set of risk factors that females do not.
- 🔥 **For residents of Gaza, the highest levels of PTSD symptoms are among the youngest age brackets** (between ages 18 and 29) and tend to decrease with increasing age. For residents of the West Bank, symptom levels are significantly higher in older age groups (older than 40) compared to those younger than 30.
- 🔥 **Lower education levels are associated with higher prevalence of depression and PTSD.** One explanation could be because mental health disorders decrease educational attainment. Poor economic outcomes and livelihood opportunities associated with lower education could also, therefore, be related to poor mental health.
- 🔥 **The severity of depression and of PTSD symptoms among adults are strongly associated with worse economic outcomes and well-being.** Depression and PTSD symptom levels among adults are very closely linked with subjective poverty, and depression and PTSD symptom severities negatively correlate with food security. Among economically active adults, depression symptom severity is closely associated with reduced work intensity. A similar trend is observed for PTSD symptom severity, but this is only marginally significant.
- 🔥 **As perceived poverty increases, the average risk for mental health problems and aggression significantly increases, while life satisfaction significantly decreases.**

ASSOCIATION WITH CONFLICT AND TRAUMA EXPOSURE

- 🔥 **Exposure to conflict and trauma is widespread.** At least one in four respondents in WB&G reported having been exposed to conflict-related events during their lifetime, and one in ten reported experiencing a conflict-related trauma in the last three years.
- 🔥 **For inhabitants of Gaza, PTSD symptom severity increases as the number of conflict events experienced increases.** This difference is observed between those who reported having experienced two or more conflict events and those reporting none.
- 🔥 **Certain conflict events are associated with higher levels of psychological distress, a composite additive index that standardizes and combines symptom levels of PTSD, depression, and common mental health problems.** We looked at the entire WB&G and the relationship between psychological distress and type of events that occurred in the immediate proximity of households. Most

striking is the relationship inferred between “strategic developments”— activities of violent groups not recorded as political violence but which may trigger future events or contribute to political dynamics within and across states as classified in the ACLED database —and psychological distress. Levels of distress are statistically comparable between experience of explosions, violence against civilians and strategic developments, and greater than for other types of events. Levels of psychological distress significantly worsened for those experiencing at least one traumatic event (not necessarily conflict-related) compared to those who report experiencing no traumatic events.

- 🔥 **Levels of psychological distress significantly worsened for those experiencing at least one traumatic event (not necessarily conflict-related) compared to those who report experiencing no traumatic events.**
- 🔥 **Mental health indicators are significantly worse for households that report violence against women or children.** While likely underestimated using the current methodology, 5 percent of individual respondents live in a household that reports violence against women, and 13 percent of individual respondents live in a household reporting violence against children. These households have significantly higher levels of symptoms associated with depression and PTSD.

These results indicate the extent of overlapping vulnerabilities. Individuals who have experienced or been exposed to trauma, violence, and conflict are more likely to exhibit mental health problems. Individuals from poorer households, whose economic situation could also be related to conflict exposure, also suffer from worse mental health outcomes.

In the WB&G, interventions to address inhabitants’ mental health challenges on their own, or in combination with more traditional livelihood interventions, hold enormous potential benefits beyond immediate health impacts. This includes supporting and reinforcing economic decision-making and outcomes. Such investments may contribute to social stability and cohesion through both psychological and economic channels.

Our findings suggest that policy-makers and practitioners might want to target specific sub-groups particularly vulnerable to mental health problems due to the conflict. Specifically, interventions should aim to reach young men in Gaza, individuals with lower education levels, and low-income households.

The PPCS database used for this report can inform targeted trials and interventions addressing mental health problems. It can aid in the design of more evidence-based, equitable, and effective policies.

1



INTRODUCTION

The role of mental health for development programming may be underappreciated. Mental health is a key component of human well-being as well as an important determinant and outcome of human behavior. This is particularly true in settings with high degrees of physical insecurity. However, the detailed correlates of mental health, socio-economic development and insecurity at the population level often remain understudied.

This report aims to address this shortcoming for the case of West Bank and Gaza by presenting findings from the Palestinians' Psychological Conditions Survey (PPCS). The survey was conducted by the Palestinian Central Bureau of Statistics (PCBS) between March and April 2022 with technical assistance from the World Bank, International Security and Development Center (ISDC), and Zentrum Überleben. The report focuses on mental health in the West Bank and Gaza (WB&G) based on a representative sample of 5,877 individuals and statistics representative at the national, regional, and rural/urban/camp levels.

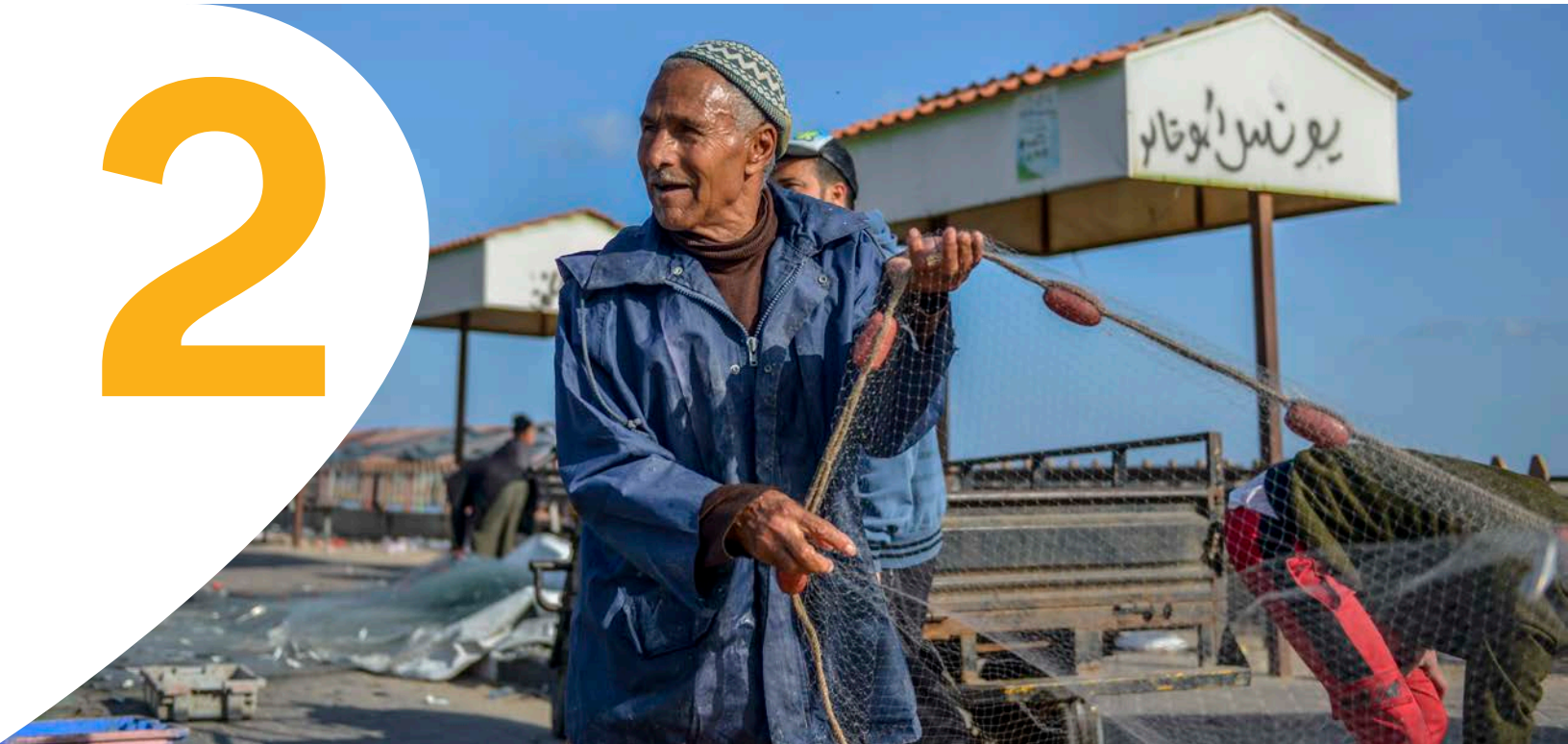
A focal point of this report is the month of May 2021, which was marked by an 11-day conflict crisis in Gaza. Several issues sparked protests by Palestinians including anger over the eviction of Palestinian families from the Sheikh Jarrah neighborhood in Jerusalem and Israeli control over gathering around religious sites during the holy month of Ramadan. Clashes which started in Jerusalem spread to the WB&G, and the Israeli Defense Force responded to rocket launches from Hamas through aerial bombardment. The conflict claimed the lives of 260 Gazans, nine Israelis, and three foreign workers, while injuring many more (World Bank et al., 2021).

Widespread conflict events have severe mental health impacts on the population. The May 2021 hostilities were shorter in duration compared to previous conflicts (2008-2009, and 2014), but the socio-economic implications, especially for residents of Gaza, were consequential and compounded harsh economic conditions caused by COVID-19 and mobility restrictions, according to a Rapid Damage Needs Assessment (RDNA) coauthored by the World Bank Group, European Union, and United Nations (World Bank et al., 2021). The PPCS was designed to measure the mental health repercussions.

The report provides in-depth insights into multiple dimensions of mental health. This includes depression, post-traumatic stress disorder (PTSD), risk to common mental health problems, aggression, and life satisfaction. We disaggregate mental health results by various socio-demographic characteristics and link them with conflict exposure and economic outcomes and well-being, providing correlates of mental health and indicators of socio-economic development as well as insecurity in a single, unified, representative analysis.

The report is structured in six sections, as follows. Section 2 presents a brief conceptual introduction to mental health from a development perspective, drawing on findings in the literature. Section 3 provides background information on the political situation and existing knowledge about psychological well-being in the WB&G. Section 4 describes the survey design of the PPCS. Section 5 presents findings on mental health, including its relationship with economic outcomes and well-being as well as with experience of conflict in the WB&G. Section 6 concludes by discussing lessons learned, policy implications, and ways to extend this work in the future.

2



MENTAL HEALTH

The World Health Organization (WHO) defines mental health as “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community” (WHO, 2001; Stojetz et al. 2022). Poor mental health drastically reduces affected individuals’ well-being and creates a substantive public health burden (Ridley et al., 2020). According to a Global Burden of Disease (GBD) study, mental disorders account for more than 14 percent of years lived with a disability worldwide and prevalence is higher than 10 percent in any study region (James et al., 2018).

Poor mental health has fundamental economic consequences at the micro and macro levels. At the micro-level, mental health strongly affects economic and social outcomes, by influencing economic decision making, reducing productivity, and limiting labor force participation (Hakulinen et al. 2019; Mojtabai et al. 2015, Ruggeri et al. 2021). PTSD and depression in particular have several consequences on human behavior, they impair learning, concentration, and memory (Burriss et al. 2008). Poor mental health decreases social competence and is highly correlated with the probability of not being in education, employment or training (NEET). For instance, Cornaglia et al. (2015) report how PTSD can affect school dropout rates, unemployment, medical expenses, or hours lost due to sick days at work. A considerable number of studies have reported an increased frequency of suicidal behaviors and drug abuse among individuals diagnosed with PTSD (for example, Panagiotti et al. 2012). At the macro level, the societal costs

of these consequences are enormous. For depression, for example, the annual direct and indirect costs have been estimated at around €76bn in Europe and \$31bn in the United States (Stewart et al., 2003, Sobocki et al. 2006).

One of the key causes of poor mental health is the experience of adversity. Negative income and food security shocks increase the risk of suicide (Christian et al. 2019) and, in a US study, the likelihood of experiencing depression or anxiety is typically one and one-half to three times higher among households with yearly income below the lowest income quartile of US\$ 20,000 compared to the richest quartile (above US\$ 70,000) (Sareen et al. 2011). The association between low socio-economic status and poor mental health is confirmed in a meta study analyzing 115 studies in low and middle-income countries (Lund et al. 2010).

Beyond monetary and consumption issues, the deterioration of mental health has been closely linked to exposure to violence and trauma, with especially high rates of mental health issues among individuals in regions affected by violent conflict (Tamayo-Agudelo et al. 2019). For instance, it has been shown that violence often has highly negative impacts on children’s mental health, development, and opportunities in life (Brown et al. 2016). The effect of war trauma on mental health extends far beyond the acute phases of conflict, with a study pointing out that post-conflict stressors are just as crucial in the development of psychopathology as war trauma (Newnham et al. 2015).

Recent research suggests that popular economic interventions can help to mitigate mental health issues, especially in fragile settings. Cash transfer programs have been shown to weaken the causal link between negative income and food security shocks and suicide, suggesting improvements in mental health (Christian et al. 2019). Similarly, employment programs in conflict and post-conflict settings can strengthen economic and social outcomes (Brück et al. 2021) and a key outcome and pathway is the mitigation of mental health problems, such as the reduction of PTSD symptoms (Stevenson et al. 2021).

More evidence suggests that interventions directly targeted at mental health can be effective and hold enormous potential for downstream social and economic benefits (Patel et al. 2017; Christian et al. 2019; Katoaka et al. 2021). For example, evidence from India demonstrates that the Healthy Activity Program (HAP)—a brief psychological treatment for severe depression in primary care—significantly lowered depression symptom severity, increased behavioral activity, and decreased disability and suicidal thoughts or attempts (Patel et al. 2017). In economic terms, it was estimated that the incremental cost per quality-adjusted life-year gained was US\$ 9,333 (in 2015 US\$), with an 87 percent chance of being cost-effective in the study setting. Similarly, cognitive behavioral therapy among populations that experienced trauma and violence has been shown to have strong benefits for multiple dimensions of functioning and well-being. For example, it improved children’s test scores in a US context significantly (Katoaka et al. 2021), and, in combination with cash transfers, significantly decreased crime and violence among youth in Liberia (Blattman et al. 2017). Furthermore, counseling programs have shown to improve psychosocial functioning (as measured by reductions in depression scores, hospital admission, and requests for home visit by GPs) and decrease risks of suicide (De Leo et al. 1995).

3



THE CASE OF THE WEST BANK AND GAZA

3.1 CONTEXT

Inhabitants of the West Bank and Gaza (WB&G) have been in a precarious social, political, and economic situation since the signing of the Oslo accords in 1993. This situation has been compounded recently by the COVID-19 pandemic, the May 2021 conflict, frequent fiscal crises, and rising food prices resulting from the war in Ukraine. A state of constant tension leads to intermittent flare ups, and sometimes to large events negatively affecting the whole population, such as in May 2021. The WB&G faces significant political and territorial hurdles, including its fragmentation and longstanding limits on the movement of people and goods. While the Palestinian Authority (PA) has authority over the West Bank, it has limited authority in Gaza, which has a separate de facto governing authority. Within the West Bank, the PA has administrative and security authority over Area A, limited administrative authority over Area B, while Israel maintains control over Area C, which amounts to at least 61 percent of the land (Niksic et al., 2014). These limitations contribute to reducing the ability to coordinate social and economic development and delaying much needed reforms amid a large fiscal deficit. Despite these challenges, the Palestinian economy had started to recover in 2021, driven by growth in the West Bank as COVID-19 counter-measures eased (World Bank, 2022), although real GDP is yet to reach pre-pandemic levels.

The severe restrictions on access to land, impediments to institutions and the limited mobility of people and goods represent significant challenges to WB&G's economic development (Niksic et al. 2014; UNOCHA, 2017). For people in Gaza, the situation is even more severe, as the overcrowded strip has been subject to border closures limiting the movement of people and goods since 2007. In the West Bank, Palestinians face threats of eviction and harassment, with many housing constructions demolished and building-permits rarely granted (UNOCHA, 2017). At the same time, the number of Israeli settlements in the West Bank and Jerusalem continues to increase. Protests against these conditions often turn violent.

3.2 MENTAL HEALTH

A number of studies that with varying resolutions have attempted to identify the incidence of mental disorders in WB&G before this work:

- ◆ Qualitative analysis conducted in WB&G by Hammad and Tribe (2020) focused on the psychological effects of structural violence, control over resources, and freedom of movement of people. Their results indicate that structural violence and economic oppression had negative effects on people's psychological well-being and quality of life, which resulted in existential, psychological, and social suffering.
- ◆ A study examining a small but nationally representative sample of 1,200 Palestinian adults found high prevalence of PTSD and Major Depression (MD) symptoms (Canetti et al. 2010). The authors note a relationship for men between the number of political violence events experienced and incidence of psychological problems. Moreover, both males and females record greater symptoms of PTSD and MD when more exposed to socio-political stressors, or when they have lost a loved one.
- ◆ According to an El-Khodary and Sarama study of adolescents in Gaza (2018), exposure to violence across a variety of contexts—including political war trauma, violence in the home, neighborhood, and school—predicted higher rates of PTSD, social and emotional difficulties, depression, and general mental health issues compared to those who have not experienced violence. In particular, cumulative exposure to violence may raise the likelihood of acquiring mental health issues such as PTSD, emotional and behavioral issues, and depression symptoms.
- ◆ Using individual-level longitudinal data and geo-localized information on violent conflict-related occurrences, Di Maio and Sciabolazza (2021) recently examined the effects of conflict exposure on physical health in Gaza. The findings indicate that people who reside in areas where there are more instances of armed conflict are more likely to have physical disabilities and chronic illnesses. The likelihood that an individual would experience vision, hearing, or movement issues increases with the amount of conflict exposure. In particular, individuals' likelihood of having a physical impairment compared to the sample average increased by 31 percent when they experienced 100 or more conflict events over the previous 12 months where the total number of events exceeds 1,000 per year in certain areas of Gaza (Di Maio and Sciabolazza, 2021).

3.3 STUDY AIMS

While some estimates for the effects of living in fragile and conflict-affected environment exist for WB&G (World Bank et al., 2021; Niksic et al., 2014), they may be inadequate. To determine resources needed to address the needs of vulnerable populations, it is essential to assess the economy-wide economic and physical impacts of living in a fragile and conflict-exposed environment. Exposure to traumatic events have occurred at such significant levels in WB&G that it could result in much more subtle and long-lasting effects that are hard to uncover and address. There are two dimensions to this challenge:

- (i) Estimating each of the social, economic and mental health impacts is challenging, especially at the representative level, and has not yet been done for WB&G in a comparable and consistent way
- (ii) Understanding how each of these dimensions interact with each other is even more challenging and has been largely overlooked for the case of WB&G.

This report contributes to filling these two evidence gaps. It estimates the mental, psychosocial, and socio-economic conditions of Palestinians in WB&G against a background of physical insecurity and analyzes how these factors may be interrelated.

4



DATA AND METHODS

4.1 THE PALESTINIANS' PSYCHOLOGICAL CONDITIONS SURVEY

The Palestinians' Psychological Conditions Survey (PPCS) survey is a panel survey collected face-to-face by the Palestinian Central Bureau of Statistics (PCBS) between March and April 2022. The survey is a randomly selected subsample of the respondent sample of the first round of the COVID-19 Rapid Assessment Phone Survey (RAPS 1), which was fielded by PCBS between June and August of 2020. The survey itself was a continuation of the last panel wave of the 2018 Socio-Economic and Food Security Survey (SEFSEC). Moreover, for the individual module of the PPCS survey, an attempt was made to reinterview the same adult individual interviewed for the individual module of the SEFSEC 2018 survey. As a result, the sample of the 2022 PPCS survey can be regarded as a new [partial] wave of the SEFSEC panel, which started in 2013.

Panel information extending over such a long period of time is extremely valuable for impact evaluation and causal inference. At the same time, panel surveys can be considered fully representative of their target population only at round 1, whereas their representativeness decays as the panel ages as a consequence of attrition and structural changes in the target population. Specific weighting techniques have been applied to counteract those effects in the case of the PPCS sample in 2022, thereby improving its ability to provide a reliable representation of 2022 West Bank and Gaza. In this respect, it is important to note that both panel ancestors in the lineage of the PPCS sample (namely SEFSEC and RAPS) were considered by PCBS to be representative at national, governorate, and rural/urban/camps levels at the time of the first wave.

4.2 SAMPLE DESIGN

The planned sample size for PPCS was set to 7,057 households, and the 8,709 respondent households of RAPS 1 served as a sampling frame. The selection of PPCS households followed a one-stage cluster sampling design. Specifically, 641 Enumeration Areas (EA) were randomly selected from the 1,824 EAs of RAPS 1 with Probability Proportional to Size (PPS). All the RAPS 1 households contained in the selected EAs were included in the PPCS sample. To meet logistical needs of the data collection, variable X = “number of RAPS 1 respondent households per EA” was used as measure of size (MOS) for the PPS algorithm. This made the inclusion of EAs containing fewer RAPS 1 households less likely, thus avoiding logistical challenges and associated high data collection costs, but also fully preserving the probability sampling nature of the PPCS survey.

The individual questionnaire of the PPCS survey was administered to one selected adult member (aged 18 years or above) of each respondent household. For each respondent PPCS household, interviewers attempted to identify and re-interview the same adult individual who responded to the individual module of SEFSEC 2018. Only if the attempt was unsuccessful, the interviewer used a Kish grid (which accompanied the questionnaire) to randomly select, with equal probability, one adult from among all adult members of the household.

4.3 DATA COLLECTION

Before data collection started, enumerators were trained extensively. Over 10 days, training included a session on concepts and theory, interviewer etiquette, practical training and role play, as well as a pilot. The training had a particular section focused on recognizing signs of distress among participants. The study protocol was approved by An-Najah National University Institutional Review Board (IRB) Committee with all research performed in accordance with relevant guidelines and regulations.

Data collection started on March 7th and ended on May 9th of 2022, with approximately three interviews completed per interviewer per day. PCBS implemented strict quality control procedures to ensure the quality of the data as well as satisfactory effort in tracking households and individuals from the SEFSEC 2018. For example:

- 🔥 Interviewers could not start the questionnaire until they were in the vicinity of the respondent's dwelling, as verified through GPS. This ensured that enumerators were interviewing the right household and not entering false information without consulting the respondent.
- 🔥 Inconsistent responses (since the last interview or within the interview) were flagged and the interviewer was asked to clarify any inconsistencies. For example, if the refugee status recorded in previous rounds was different to the response provided in the interview, the interviewer was asked to double check this answer.
- 🔥 Supervisors conducted random visits and a call-back survey with 5 percent of the interviewed households. The supervisory visits were particularly important during the first few weeks of data collection, as they were able to answer any questions the interviewers might have and suggest improvements to the interviewing technique.

4.4 RESPONSE RATE AND CHARACTERISTICS OF THE RESPONDENTS

Of 7,057 planned households, 917 did not respond, yielding an overall household nonresponse rate of 13 percent.² Of 6,138 adults, only 261 did not respond, yielding an overall nonresponse rate of 4 percent. We adjusted sampling weights for this nonresponse, as described in the next subsection. The re-interview attempt was mostly successful: among PPCS adult respondents, 91 percent had already responded to the individual module of SEFSEC 2018.

2 Of those who did not respond, in 84 percent of cases the household was not found or had moved abroad, in 12 percent of cases the household refused to be interviewed again, and the remaining households only partially completed the interview.

4.5 SAMPLING WEIGHTS CALCULATION

The fundamental objectives of the weights calculation procedure were (i) mitigation of bias risks, and (ii) improvement of estimation efficiency. The main procedural steps taken were:

- 🔥 Step 1: Derive initial weights for PPCS households and roster individuals. This is obtained by multiplying the final household weights of RAPS 1 by the reciprocals of the inclusion probabilities generated by the PPS sampling algorithm.
- 🔥 Step 2: Adjust the weights of PPCS households and roster individuals for household-level nonresponse. Given the origin of the PPCS sample—that is, its provenance from the RAPS and SEFSEC panels—rich information was available on both respondent and non-respondent households to enable a propensity modeling approach to nonresponse adjustment.
- 🔥 Step 3: Calibrate the weights obtained at step 2, using as calibration benchmarks suitable household-level and individual-level aggregates provided by PCBS as a result of a demographic estimation exercise (111 calibration constraints). Note that this step generated integrated household-level and individual-level calibration weights. As a result, calibrated individual weights are constant within each household and are equal to the calibrated weight of the household.
- 🔥 Step 4: Suitably trim the calibration weights obtained at step 3 from unduly large weights that might lead to unstable estimates and inflated standard errors. In particular, we trimmed any calibration weights larger than the maximum nonresponse adjusted weight. Moreover, the trimming adjustment was performed consistently, by simultaneously preserving all the calibration constraints enforced in step 3 and not jeopardizing the individual-household integration property of the weights.
- 🔥 Step 5: Derive initial weights for the sample of adult individuals (one per household) who responded to the individual module of the questionnaire, based on the composition of each respondent household.
- 🔥 Step 6: Calibrate the weights obtained at step 5, using as calibration benchmarks suitable household-level and individual-level aggregates provided by PCBS as a result of a demographic estimation exercise referred to the adult population (95 calibration constraints).

4.6 CONSTRUCTING KEY INDICATORS

Mental health

We study five indicators of mental health: depression, post-traumatic stress disorder, risk for common mental health problems, aggression and life satisfaction. In addition, we build a composite measure of psychological distress, which combines PTSD, depression and risk of mental health problems.

To assess the risk of depression, we used the World Health Organization 5 Well-Being Index (WHO-5), a concise, self-reported indicator of current mental health. First launched in 1998 by WHO, the WHO-5 indicator was originally developed to assess subjective well-being. In recent years however, it has been used as a screening instrument for depression across a wide range of studies in different regions of the world, showing adequate validity for detecting depression and gauging clinical trials (Topp et al. 2015).

The WHO-5 comprises five positively stated statements, which respondents rate in reference to the previous two weeks using the scale: “All of the time” = 5; “Most of the time” = 4; “More than half of the time” = 3; “Less than half of the time” = 2; “Some of the time” = 1; “At no time” = 0. The final score is usually calculated by multiplying by 4 the raw score, which ranges from 0 to 25. A score of ≤ 50 on the WHO-5 is usually applied as a cut-off score for a “screening diagnosis” of depression (Topp et al. 2015). In our analysis, we reversed the scoring (that expresses the level of well-being) to obtain a 0-100 indicator where 100 is the worst possible depression score. Thus, we regarded values greater than 50 out of 100 as indicative for a screening of depression.

To identify symptom-severity of Post-Traumatic Stress Disorder (PTSD) we relied on the International Trauma Questionnaire (ITQ), a self-reported diagnostic measure of PTSD according to the 11th edition of the International Classification of Disease (ICD-11; WHO, 2019). PTSD is defined by six symptoms distributed across three symptoms’ clusters: “re-experiencing in the here and now”, “avoidance of traumatic reminders”, and “sense of threat” after exposure to a traumatic event or series of traumatic events. ITQ items are rated on a 5-point Likert scale ranging from 1 (“not at all”) to 5 (“extremely”). Those who did not experience any traumatic events were recoded to 0. Items with scores greater than 2 indicate the presence of that symptom. Responses from the ITQ were used to create two indicators, one continuous average score of the PTSD items that express the level of symptom severity, and a second binary form (0-1) indicating the presence or absence of symptoms compatible with a diagnosis of PTSD. This binary form indicator is a screening diagnosis of PTSD, which requires the endorsement of one of two symptoms from the symptom clusters of: (i) re-experiencing in the here and now, (ii) avoidance, and (iii) sense of current threat, plus the endorsement of at least one indicator of functional impairment associated with these symptoms. The ITQ diagnostic rule is based on the ICD-11 classification criteria for PTSD. The ICD-11 criteria for PTSD tends to yield lower PTSD prevalence rates compared to the diagnostic classification of the Diagnostic and Statistical Manual of Mental Disorders (DSM), such as the DSM-IV or DSM-5, across several studies (Shevlin et al. 2018, Stammel et al. 2015).

However, long-term exposure to regional political strife and violence causes a wide range of psychological consequences, many of which do not qualify as diagnosable conditions like PTSD or depression, according to a review on the psychological aspects of the Israeli–Palestinian conflict (Ayer et al. 2017). Therefore, we did not limit our analysis of psychological indicators solely in terms of compatibility with a diagnosis but explored the level of severity of symptoms as a proxy more capable of delineating the relationship between mental health, violence, and socioeconomic outcomes.

We assessed the risk for mental health problems using the 12-Item General Health Questionnaire (GHQ-12) (Goldberg & Williams, 1988), consisting of 12 items using a 4-point Likert-type scale from 1 (“better than usual”) to 4 (“much worse than usual”). The score ranges from 1 to 4 with high scores implying a high level of psychological distress. We aggregated items using Anderson’s (2008) inverse covariance matrix to decrease the influence of items that capture similar aspects of psychological distress and give more weight to those that can highlight different facets of it.

We analyzed “Aggression” through the 12-item short form of the Buss-Perry Aggression Questionnaire (BPAQ-SF), a measure that demonstrates comparable factorial validity across genders and good general reliability. Items are scored on a Likert scale and address four factors of aggression: physical aggression, verbal aggression, anger, and hostility. As with the measure of risk for common mental health problems, we aggregated all 12 items using the inverse covariance matrix. The resulting index ranges from 1 to 5 with higher values implying a higher level of aggression.

We measured “Life satisfaction” using two items: one general to life satisfaction (“how satisfied are you with your life at the moment, all things considered?”) and one specific to the health domain (“to what extent are you currently satisfied with your health?”). The possible responses ranged from 1 (completely dissatisfied) to 10 (completely satisfied) and were averaged. While the general item on life satisfaction has been widely used in other surveys, such as the German Socio-Economic Panel (GSOEP) (Goebel et al. 2019) and the World Value Survey (Haerpfer et al. 2020), the health-specific item is an author elaboration.

Lastly, we create a composite measure of psychological distress. The measure is an additive index that standardizes and combines the depression symptoms score (WHO-5), the PTSD symptoms score (ITQ) and the risk for mental health problems score (GHQ-12). The resulting index is a standardized variable with range 0 to 1. We use this composite measure as our primary indicator for testing the links between mental health, economic outcomes, well-being, and conflict exposure.

Economic outcomes and well-being

We study five indicators of economic outcomes and well-being concerning perceived poverty, food security and work intensity.

- 🔥 To assess *perceived poverty*, we use the survey question “in general, do you consider your household: 1) wealthy (very), 2) middle, 3) poor, or 4) very poor?”. From the answer to this question, we build a measure of the self-assessed degree of poverty.
- 🔥 To assess *food security*, we employ the Food Consumption Score (FCS), a dietary diversity indicator with standardized cut-offs used across geographic areas and livelihood groups (Wiesmann et al., 2009). FCS reflects the current state of food security and is ideal for tracking changes over time. Subjects are asked about the frequency of consumption in days over a seven-day recall period. Food items are classified into standard food groups and have a maximum value of seven days per week. The FCS is calculated by multiplying the frequency of consumption of each food group by an assigned weight based on its nutrient content, resulting in an index ranging from 0 to 112.

We identified three food consumption profiles: poor food consumption for values less than 28, borderline food consumption for values between 28 and 42, and acceptable food consumption for values greater than 42. Given the low number of respondents who fall into the poor food consumption category, for the binary FCS variable we combined the two categories of “poor” and “borderline” into one category of “poor or borderline”.

- 🔥 Finally, as a proxy of *work intensity*, we looked at the hours worked in the week prior to the interview among those who said they were currently employed at the time.

Conflict exposure

We study four indicators of personal conflict exposure (Brück et al. 2016), which seek to capture various adverse conditions people experience during an armed conflict: spatial proximity to recorded conflict events, self-reported exposure to adversity, self-reported exposure to traumatic events, and self-reported exposure to domestic violence.

- 🔥 Proxying conflict exposure with *spatial proximity to conflict events*, we also draw on geo-tagged and time-stamped conflict event data from the Armed Conflict Location & Event Data Project (ACLED, 2019). ACLED tracks a range of violent and non-violent actions by political agents, including governments, rebels, militias, identity groups, political parties, external actors, rioters, protesters, and civilians. We merged ACLED geo-located data with Palestinians' Psychological Conditions Survey (PPCS) data using the geographical distance between a recorded event and a household's location. A short radius of 500 meters was used to consider the household exposed to a given event. This provides a conservative estimate, valid across the various types of events examined. For a detailed description of how ACLED data are structured and employed in the analysis, see the Annex.
- 🔥 To measure *personal exposure to adversity in conflict settings* of residents of Gaza during the May 2021 conflict, we draw on a survey module derived from Brück et al. (2019), which consists of 9 binary-answer questions regarding the experience of a conflict-related event (for themselves or a household member). This includes having experienced injuries, the loss of a relative or friend, house damage, and job disruption due to Israeli airstrikes or clashes with Israel security forces. We use the count of events as a proxy of exposure. Subjects scoring greater than 3 are grouped together in the graphical representations to avoid visualizing categories with very few observations.
- 🔥 *Personal experiences of traumatic events* were recorded in the questionnaire using a set of items adapted from BTQ (Schnurr et al. 1999). In the module, respondents are asked if they had experienced each item within a series of ten potentially traumatic events. To account for temporal evolution in the occurrence of these types of events, we asked respondents to specify whether these events occurred in a period prior to 2018 or whether they occurred from 2018 to 2021.
- 🔥 *Personal experiences of domestic violence* were measured by two indirect questions in which household respondents were asked whether a woman or child in the household was subject to physical violence by the hands of another household member. It is worth noting that this is not the most comprehensive measure of domestic violence, which can take many forms and affect more than just the children and women in the household. It is also difficult to collect honest responses on such a sensitive question, particularly if the respondent is the perpetrator themselves. As such, any estimate on the prevalence of domestic violence is likely to be an underestimate. We grouped participants between those who reported no incidents of domestic violence and those who reported at least one incident.

4.7 EMPIRICAL ANALYSES

The results of this report rely on descriptive analyses using weighted data (unless specified) of the PPCS, merged with the location of conflict events (where appropriate). Variation in the concentration of events for different households and in different regions and governorates allows for the description of the relationship between explosions, riots, protest, and violence on the one side, and mental health, food security, and well-being indicators on the other side. In describing the link between violent events and mental health, we took into account candidate mechanisms like the destruction of services, food sources, and capital that affects productivity and destroys possibilities to pursue human development. We adopted the standard 1 percent significance level to test mean differences against the null hypotheses, using the term marginally significant for differences falling between 5 and 1 percent significance. Significance can also be inferred visually through the graphs represented in the report if the bars of confidence intervals do not overlap with the mean under comparison.

BOX 4.1 Correlation and not causation

This study reports correlations and descriptive statistics. This implies that particular caution must be exercised when interpreting the results. In particular, the association between mental health indicators and socio-economic outcomes cannot be interpreted as causal relations, nor as exhibiting a specific direction. For example, the fact that a high depression index is associated with a lower number of hours worked could indicate either that depression reduces participation in the labor market or that those who work fewer hours end up having higher symptoms of depression. There could also be a confounding factor affecting ability to work as well as depression that is not accounted for (for example, experience of conflict).

However, the panel nature of the PPCS allows for capturing some of the fixed individual effects that could be causing endogeneity. Future research analyzing the PPCS will exploit this feature to provide causal evidence on the impact of exposure to conflict and trauma.

5



RESULTS

This section first provides background information on socio-economic statistics, and then presents mental health estimates that are representative for Gaza and the West Bank as a whole as well as separately. The analysis is focused on depression, a key mental illness worldwide, and post-traumatic stress disorder, a key mental disorder in conflict-affected settings. To put the results on these indicators in perspective, we compare findings to available studies, when possible. We then also consider other mental health problems, specifically the composite psychological distress index. In the last part, we present results on conflict exposure, and to explore the link with mental health, we focus on psychological distress.



5.1 SOCIO-ECONOMIC CHARACTERISTICS

Our collected data yielded the following summary statistics. Among the sub-sample of 5,876 individuals who completed the individual questionnaire containing questions about mental health status, the average age of the respondents is 44 years (ranging from 18 to 98 years), 50 percent of whom are men. Around 50 percent of respondents are married, 82 percent have health insurance, and 40 percent have refugee status. Around 50 percent of individuals are currently employed in the labor market while 20 percent are unemployed and searching for an occupation. 40 percent of respondents are employed in the informal sector and 20 percent describe themselves as self-employed. Among those who have a job, the average number of hours worked in the week prior to the interview is 19.3 (SD= 16.47) and 9.8 (SD= 3.31) months worked in the last year. Table 5.1 provides summary statistics of the socio-economic characteristics of the sample.

TABLE 5.1 Characteristics of study respondents. Unweighted

	Mean	St. Dev.	Min	Max	N
Demographics					
Age	43.4	15.3	18	99	5,876
Sex (male)	0.5	0.5	0	1	5,876
Refugee	0.4	0.5	0	1	5,876
Married	0.8	0.4	0	1	5,876
Has health insurance	0.8	0.4	0	1	5,876
Labor statistics					
Is part of labor force	0.5	0.5	0	1	5,876
Unemployed	0.2	0.4	0	1	2,714
Number of hours worked	38.9	0.4	7	50	2,172
Self-employed	0.2	0.4	0	1	2,172
Informal work	0.4	0.5	0	1	1,823
Household characteristics					
Perception of poverty	2.3	0.7	1	4	5,876
Food consumption score	73.5	18.1	0	112	5,876

5.2 MENTAL HEALTH

Prevalence

More than half of the adult population of the WB&G screen positive for depression when applying the cut-off criteria of the WHO-5. As reported in Table 5.2, 58 percent (SE=2.2) of all individuals of age 18 or over exhibit symptom levels above the threshold for depression. Prevalence of depression differs across areas and is particularly high in Gaza. 71 percent (SE=2.7) screen positive for depression in Gaza, compared to 50 percent (SE=3.05) in the West Bank.

TABLE 5.2 Psychological symptoms in WB&G.

Area	Responses	PTSD symptoms [prevalence%]	Depression symptoms [prevalence%]	PTSD symptoms [score]	Depression symptoms (WHO-5) [score]
Gaza	2563	6.9 (1.24)	71.0 (2.70)	1.18 (0.07)	61.8 (1.32)
West Bank	3314	7.2 (1.80)	49.5 (3.05)	0.75 (0.07)	50.5 (1.27)
West Bank & Gaza	5877	7.1 (1.21)	57.7 (2.21)	0.91 (0.05)	54.8 (0.96)

Note: Prevalence of symptoms compatible with PTSD and depression expressed as a percentage of the total, while score is an average of the total population. Standard errors appear below the prevalence or mean score³

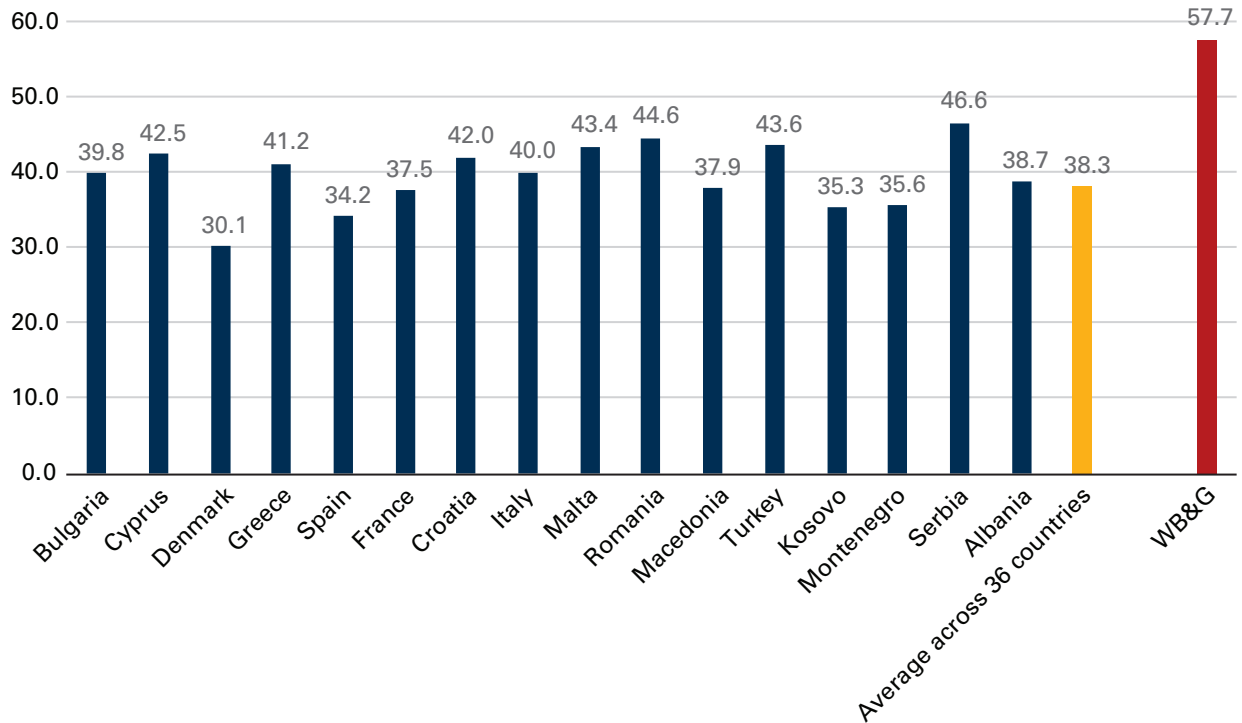
The results obtained in the depression score are comparable with those reported by Veronese et al. (2017) in a study targeting Palestinian professional helpers from the Gaza Strip and West Bank. The mean value of the depression score reported in that study is 41 (SD=22.84) and 49 percent of helpers examined in the study obtained an equivalent depression score of more than 50,⁴ which indicates poor well-being.

The figure recorded in WB&G is worse than any score observed in the 36 countries surveyed at any point in time. A recent study that analyzed depression (via WHO-5) among 36 European countries over an eight-year period (Jami & Kemmelmeier, 2021) allows us to compare our estimates with international results (see Figure 5.1). Even with all the limitations that a comparison with countries of different characteristics can have, it indicates why the value recorded in WB&G is concerning.

3 The estimated standard errors reported throughout this document account for the complex sampling design of the PPCS survey (see Section 4.2) but not the calibrated nature of its weights (see Section 4.5).

4 The value score has been reversed to make it comparable with those computed in the current report.

FIGURE 5.1 Comparison of PPCS depression prevalence

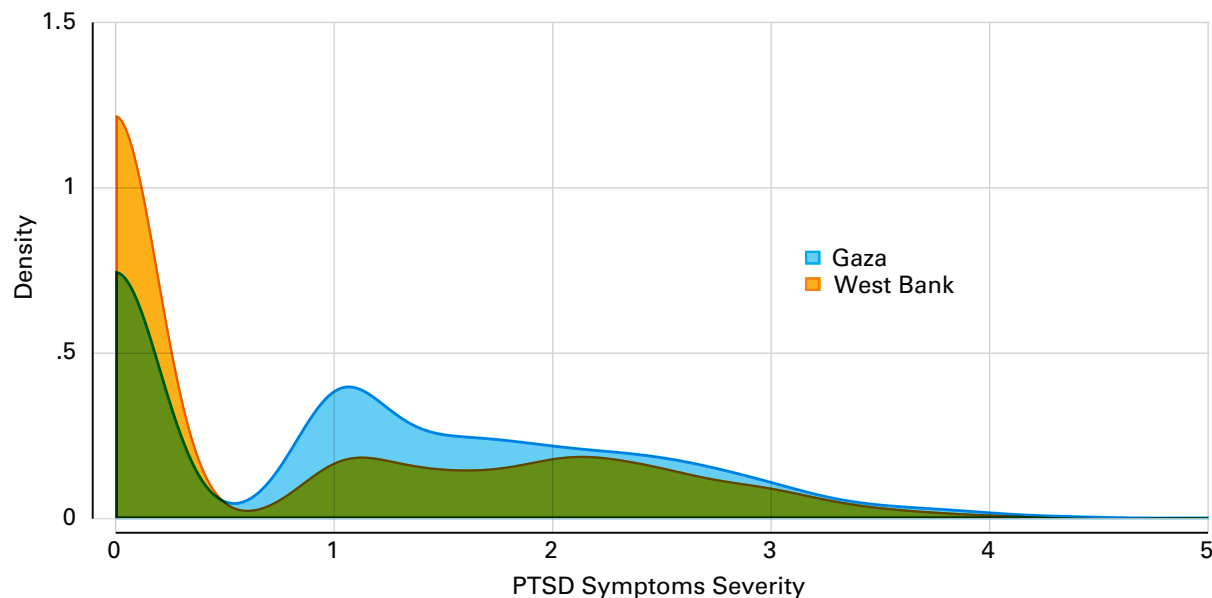


Note: Some countries were selected from the 36 European countries presented in Jami & Kemmelmeier (2021, blue bars) and the average reversed WHO-5 score was computed for available years (yellow bar).

About 7 percent of adults in WB&G fulfilled diagnostic criteria for ICD-11 PTSD according to the ITQ. As shown in Table 5.2, 7 percent (SE=0.86) of Palestinians older than 18 exhibit PTSD symptoms level above the threshold for a probable PTSD diagnosis. This share varies only very slightly between areas, with 6.9 percent (SE=1.24) for Gaza compared to 7.2 percent (SE=1.8) for the West Bank.

Exhibiting any symptoms of post-traumatic stress (that is, a score greater than one) is more common in Gaza than in the West Bank. Figure 5.2 displays the distribution of the underlying PTSD symptom severity scores for both areas. This difference in the distribution is reflected in the average PTSD symptom severity score, which is significantly higher in Gaza than the West Bank (1.2 (SE=.07) versus 0.7 (SE=.07) (Table 5.2). These figures suggest that the two areas do not differ in high symptom levels (above the threshold for a probable clinical diagnosis), but noticeably so for lower symptom levels (above zero).

FIGURE 5.2 Distribution of PTSD symptom severity scores in WB&G.



We might have expected higher PTSD prevalence rates given the high levels of violence experienced in Gaza since 2005. In fact, our estimates of PTSD among adults in WB&G are lower than those reported in previous studies. There are two main methodological aspects that explain these differences.

- First, the PTSD prevalence rates presented in the report are based on the ITQ diagnostic rule which is based on ICD-11 diagnostic criteria for PTSD. In several studies across different regions in the world, the ICD-11 diagnostic criteria for PTSD yielded lower prevalence estimates than the DSM-5 or DSM-IV. This means that, by construction, our estimates are more conservative than those of previous studies in the area, which used the DSM-5 or DSM-IV.
- Second, existing evidence on PTSD prevalence usually comes from specific subgroups of the population, such as those who survived extreme violence or refugees, which are likely structurally different and often more vulnerable than the general population. For instance, in a previous study conducted in Gaza, 121 Palestinian children who lived in the bombardment zone had their PTSD prevalence and risk factors evaluated a 15 symptoms scale derived from DSM-III (Qouta et al. 2003). Mothers and their children shared their experiences with military violence, including when they were the victims of it or saw it happen to others. According to the findings, 54 percent of children had severe PTSD, 34 percent had moderate PTSD, and 11 percent had light PTSD. Another study conducted in WB&G by Canetti et al. (2010), shows a high prevalence of depression symptoms and PTSD, the latter measured using the DSM-IV-TR criteria (PSS-I; Foa, Riggs, Dancu, & Rothbaum, 1993). Men in the West Bank and Gaza had rates of symptoms compatible with PTSD of 25 percent and 23 percent, respectively. The prevalence of PTSD in women was 24 percent in the West Bank and 24 percent in Gaza. Similarly, the prevalence of symptoms suggestive of depression was 30 percent in the West Bank and 28 percent in Gaza, and the prevalence of depression symptoms among women was 29 percent in the West Bank and 29 percent in Gaza.

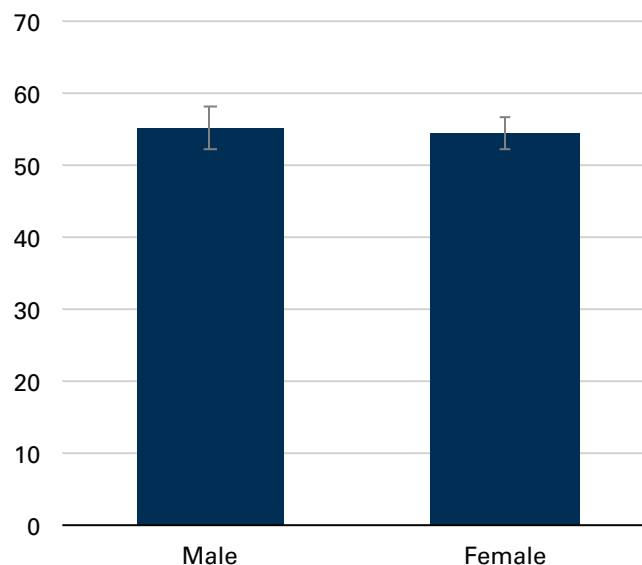
The difference in assessment criterion used to measure symptoms of PTSD and depression does not make our data easily comparable with the study conducted by Canetti et al. (2010). However, it is interesting to see that the associations between mental health problems, exposure to traumatic events, and some demographic characteristics we explore in the next sections are the same as those highlighted in WB&G more than 10 years ago. PTSD was correlated with age group, two or more incidents of political violence (relative to none), greater intrapersonal resource loss, and loss of faith in government among men. Depression was linked with exposure to one, two, or more incidents of political violence (versus none) and greater interpersonal and intrapersonal resource loss.

The role of socio-demographic factors

Socio-demographic characteristics are significantly associated with the extent of depression and PTSD symptoms, but usually in different ways for Gaza and the West Bank, suggesting structural differences between the two areas. Below we inspect the role of gender, age, education, and refugee status in shaping depression and PTSD outcomes. When patterns for a given factor differ across areas, we present results disaggregated by area; when patterns do not differ, we present results for the whole region.

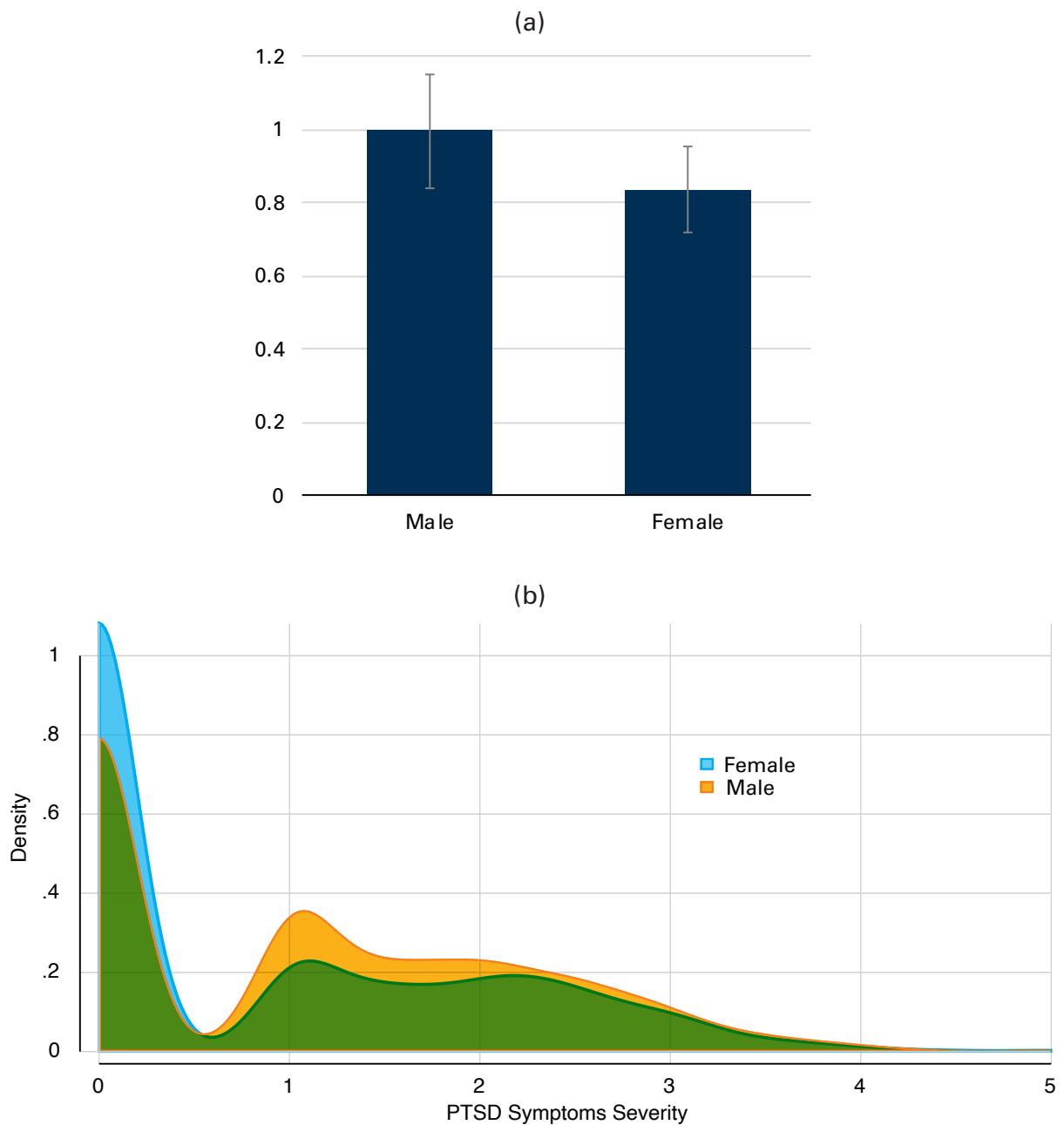
Depression symptom severity scores do not vary significantly between men and women. The mean score for males is 55 (SE=3.78) compared to 54 (SE=2.61) for females (Figure 5.3).

FIGURE 5.3 Depression score (WHO-5) disaggregated by sex



The average man has a significantly higher PTSD symptom level than the average woman. As shown in Figure 5.4 (panel a), the mean score for males is 1 (SE=.10) compared to 0.8 (SE=.06) for females. In panel b, for those exhibiting any symptoms (score greater than 1), the PTSD symptom severity is higher for males.

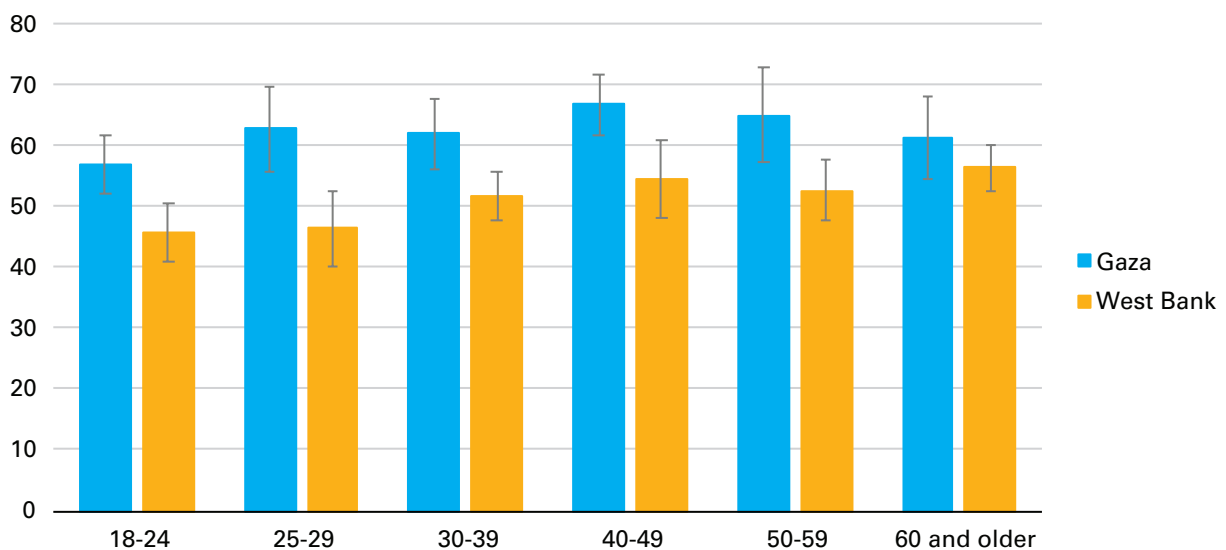
FIGURE 5.4 panel (a) PTSD symptoms severity disaggregated by gender, panel (b) distribution of PTSD symptom severity scores for females and males.



Our result contrasts with broad findings in the literature that women across contexts are often at higher risk of developing PTSD than men (Christiansen & Berke, 2020). A potential explanation is the nature of the conflict, which may see the involvement of males differently as well as their likelihood of experiencing traumatic events. In fact, while a gender gap in the prevalence of PTSD and experienced trauma is recognized, it is less apparent whether this imbalance exists in connection to certain trauma types or specific PTSD symptom clusters (Farhood et al. 2018). These variations are due in part to gender-specific risk factor profiles. In the context of WB&G and other conflict settings, men are more exposed to confrontations and combat than women. As a result, males encounter a distinct set of risk factors that females do not. This is evident from our data on the experience of traumatic events: men are statistically more exposed to traumatic events such as having witnessed war-related casualties, having been beaten, and having been in a situation in which they feared someone would be seriously injured or killed. The difference in having experienced a catastrophic event or the likelihood of having lost a family member or close friend is not statistically distinguishable between men and women, and women report a higher value, though not statistically significant, only for sexual violence.

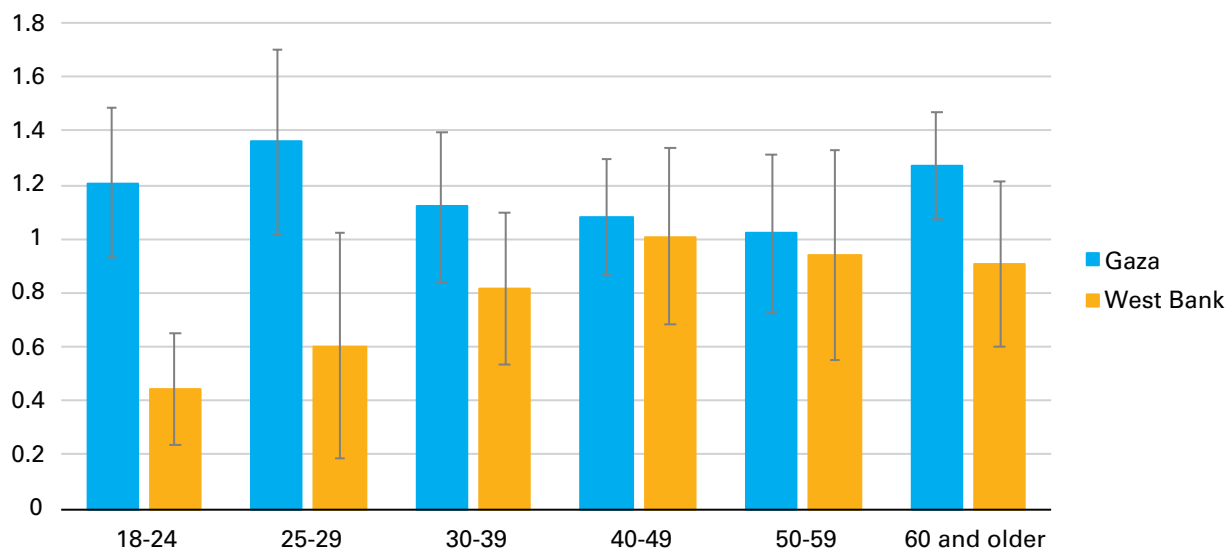
The association of age and PTSD among adults differs across areas, while we observed no link between depression and different age groups. As seen in Figure 5.5, with regards to depression the values fluctuate but differences are not statistically significant, with area of residence remaining the most important discriminating factor.

FIGURE 5.5 Depression score (WHO-5) disaggregated by age group and area



For Gaza residents, the highest levels of PTSD symptoms are present among the youngest age brackets (between ages 18 and 29) and tend to decrease with increasing years of age and levels are significantly higher for the oldest age group (Figure 5.6). For residents of the West Bank, symptom levels are significantly higher in older age groups (older than 40) compared to those younger than 30.

FIGURE 5.6 PTSD symptom severity disaggregated by age group and area



Lower education levels are associated with higher prevalence of depression and PTSD. One explanation could be the negative effect of mental health disorders have on educational attainment. In addition, the poor economic outcomes and livelihood opportunities associated with lower education could also be related to poor mental health. The highest level of education attained (presented in Figure 5.7) shows a common trend among Gaza and the West Bank: the lower the level of education the higher the depression scores tend to be for both areas. This is sometimes statistically significant, as in the case of the difference in the depression score between those who completed elementary school and those who completed a college education in the West Bank. For residents of Gaza completing university education is associated with lower PTSD symptom levels (Figure 5.8). Conversely, for residents of the West Bank the maximum level of education achieved does not seem to capture differences in the level of symptoms reported.

FIGURE 5.7 Depression score (WHO-5) by maximum level of education achieved

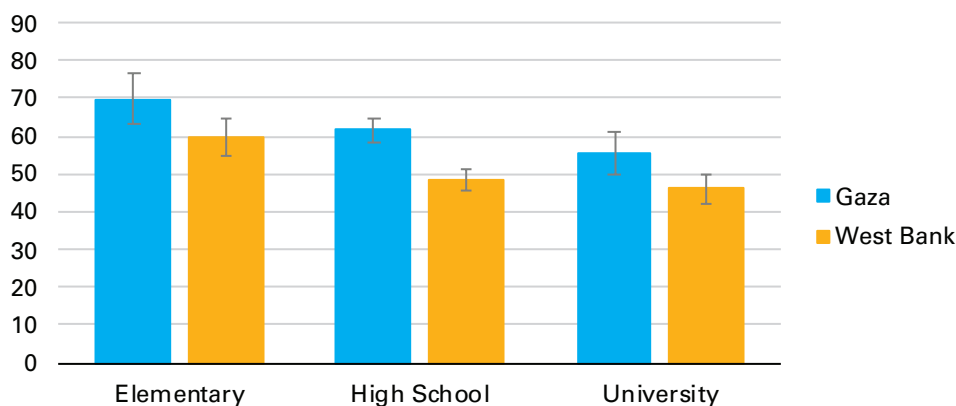
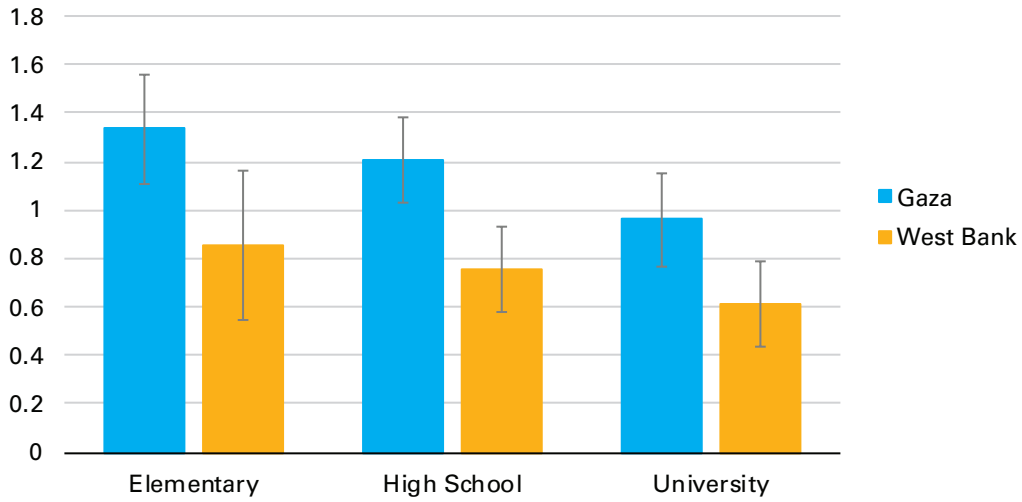


FIGURE 5.8 PTSD symptom severity by maximum level of education achieved



Differences among adults based on refugee status are similarly area-specific. In Gaza, refugees have lower levels of depression symptoms, compared to non-refugees (Figure 5.9). However, this relationship is not significant in the West Bank. Moreover, refugee status is not a significant factor for PTSD symptom severity in either the West Bank or Gaza.

FIGURE 5.9 Depression score (WHO-5) by refugee status

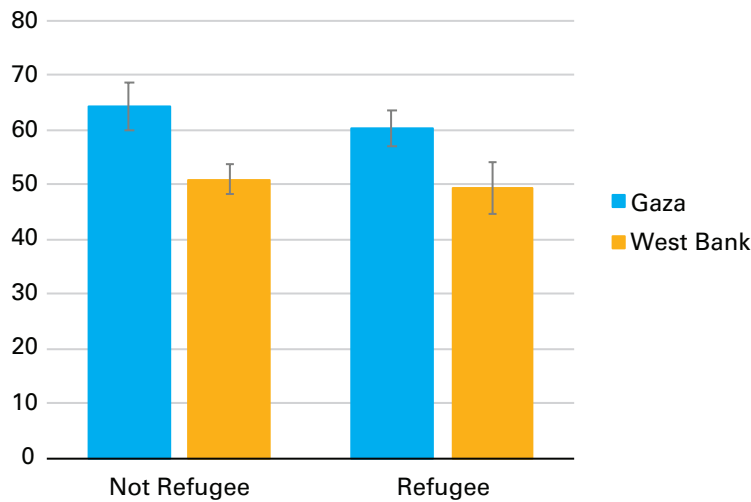
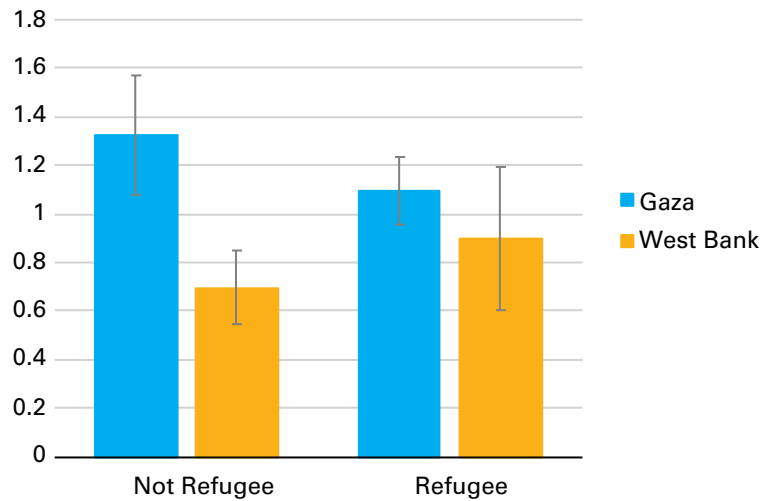


FIGURE 5.10 PTSD symptom severity disaggregated by refugee status



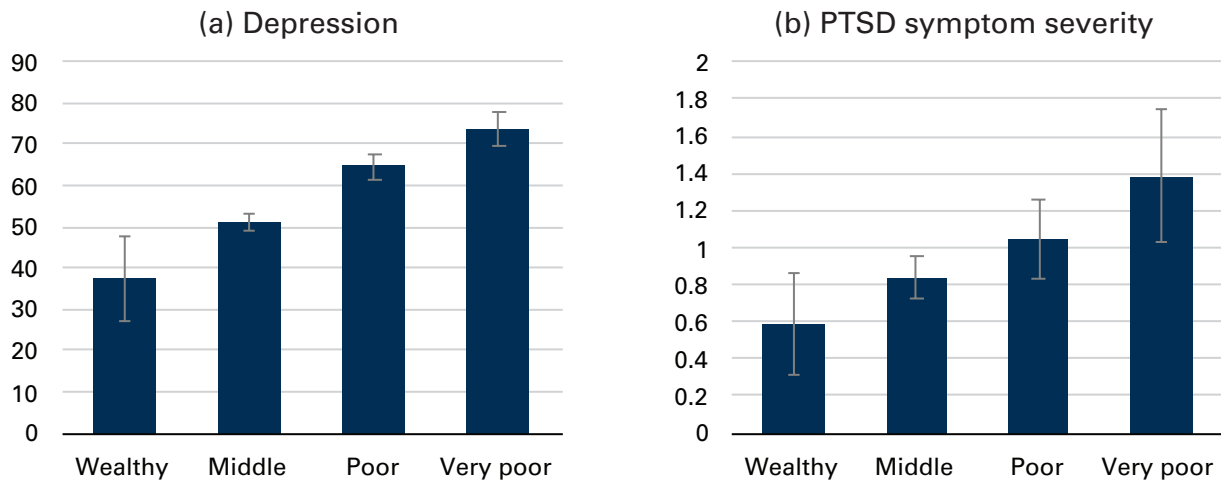
The link between economic outcomes and well-being

The severity of depression and of PTSD symptoms among adults is strongly associated with worse economic outcomes and well-being. Below, we inspect the association of PTSD and depression outcomes with subjective poverty, food insecurity, and work intensity. As the links are universal for both West Bank and Gaza, we focus on these results for both territories combined.

Both depression and PTSD symptoms among adults are very closely linked with subjective poverty. As Figure 5.11 shows, there is a clear association between depression and PTSD symptoms and perceived poverty, resulting in large mental health differences between the poorest and the wealthiest.



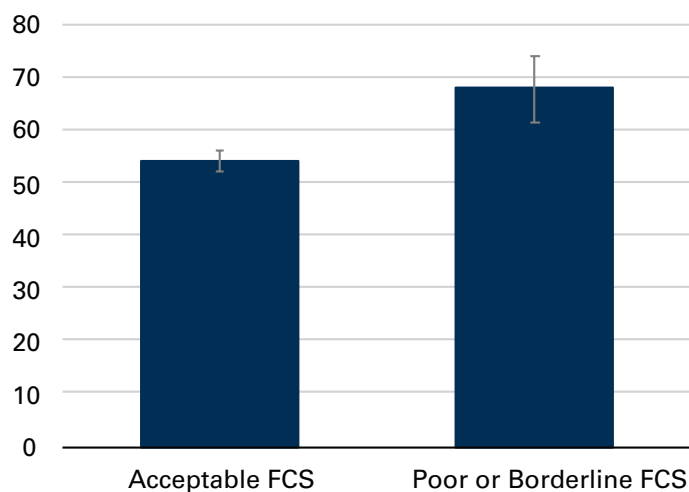
FIGURE 5.11 Mental health outcomes grouped by different levels of perceived poverty



Note: mean scores, based on survey data on depression (WHO-5) and PTSD symptoms. Poverty categories are based on self-assessment by respondents.

Both depression and PTSD symptoms among adults negatively correlate with good levels of food security. Food security was measured using a standardized module, and thus may be a more objective measure of economic well-being than self-reported poverty. We group individuals into two categories, based on their food consumption score (FCS): those with acceptable food consumption versus those with borderline and poor food consumption. As Figure 5.12 shows, the average depression symptom level is significantly higher among those with borderline and poor food consumption levels than among those with acceptable levels.

FIGURE 5.12 Depression symptoms score (WHO-5) grouped by different levels of food security



Among economically active adults, depression is also closely associated with reduced work intensity. Focusing on those who are economically active in any form, we find that depression symptoms highly negatively correlate with the number of hours worked (Figure 5.13). Specifically, we observe that the highest depression scores concentrate among those who worked only between 1 and 14 hours in the last week, and this difference is statistically significant compared to persons who worked 35 or more hours in the last week. A similar trend, though only marginally significant, can be seen in Figure 5.14 where the level of severity of PTSD symptoms decreases as the number of hours worked in the week prior to the interview increases from 1 to 14 hours to 15 to 24 hours.

FIGURE 5.13 Depression symptoms score (WHO-5) grouped by number of hours worked among workers

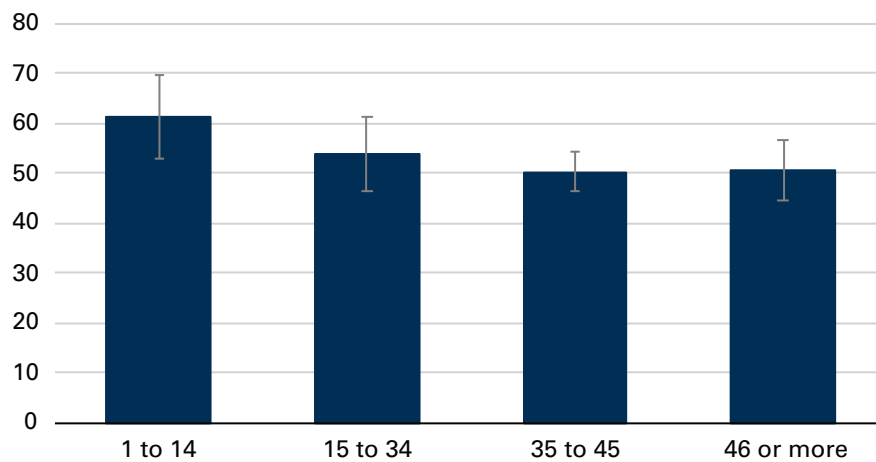
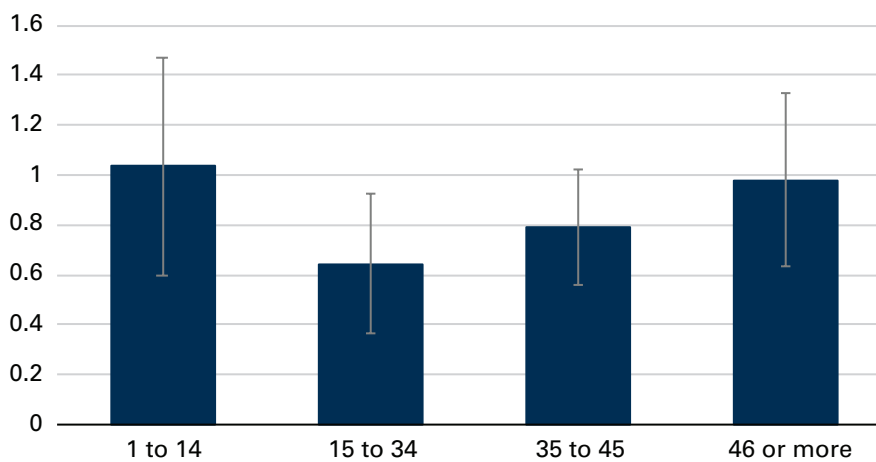


FIGURE 5.14 PTSD symptom severity grouped by number of hours worked among workers



Other mental health measures

Similar to the depression and PTSD indicators, we observe an overall high prevalence of other psychological problems among adults, which vary across Gaza and the West Bank and are closely linked with worse economic well-being. Below we report key results for measures of risk of mental health problems, aggression, and life satisfaction as well as a composite measure of psychological distress, which combines PTSD, depression, and risk of mental health problems outcomes.

Relative to the West Bank, adults in Gaza have higher than average risk of mental health problems (mean=2.0 (SE=.02) versus West Bank mean=1.9 (SE=.02)) and lower level of life satisfaction (mean=6.6 (SE=.12) versus West Bank mean=7.2 (SE=.09)). By contrast, aggression levels are higher in the West Bank than in Gaza (mean=1.9 (SE=.05) versus mean Gaza=1.8 (SE=.04)). Table 5.3 summarizes results for risk of mental health problems, aggression, and life satisfaction.

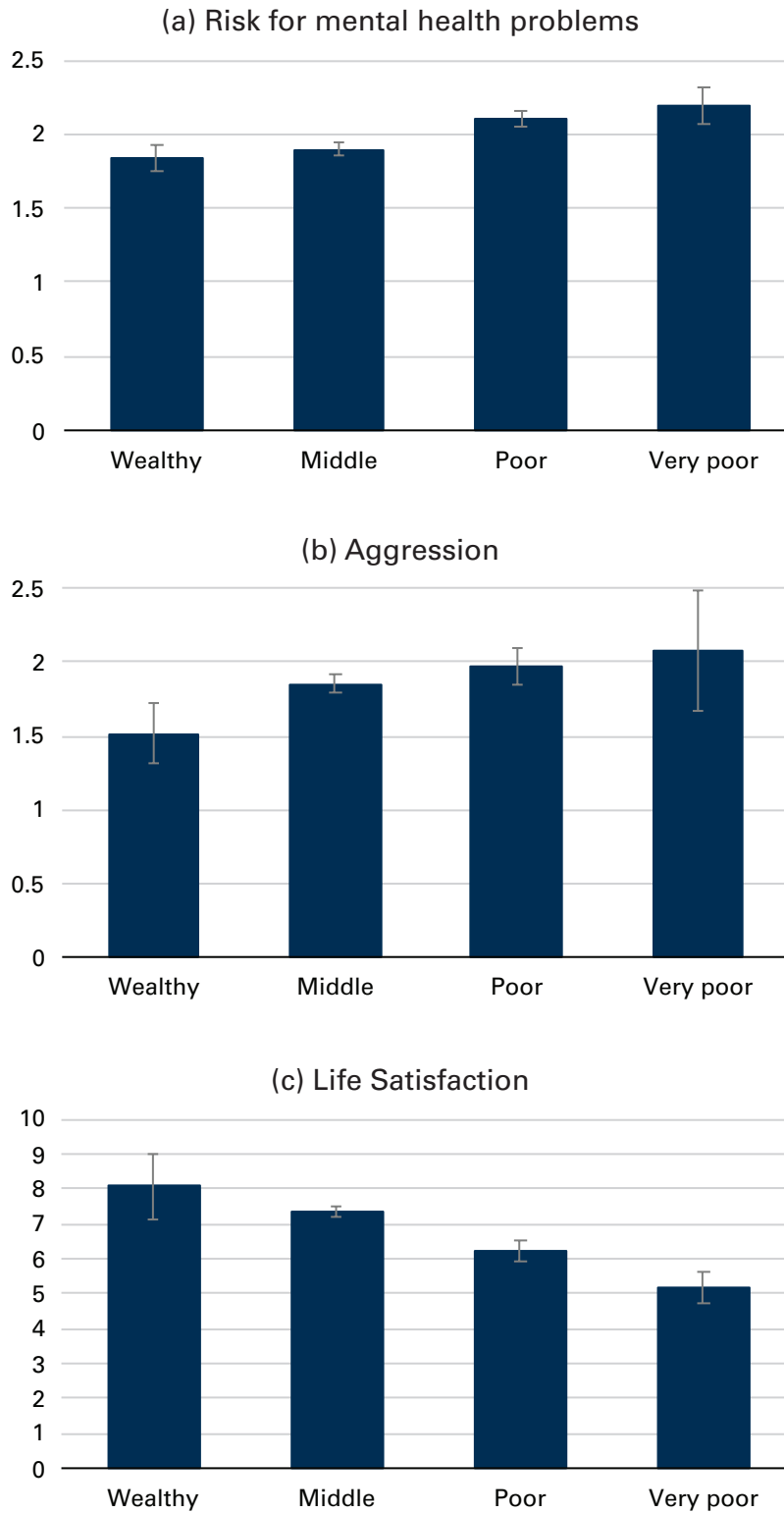
TABLE 5.3 Psychological problems in WB&G

Area	Responses	Risk for mental health problems [score]	Aggression [score]	Life satisfaction [average]
Gaza	2563	2.0 (0.02)	1.8 (0.04)	6.6 (0.12)
West Bank	3313	1.9 (0.02)	1.9 (0.05)	7.2 (0.09)
West Bank & Gaza	5876	2.0 (0.02)	1.9 (0.03)	7.0 (0.07)

Note: Mean scores and standard errors, based on survey data on risk for mental health problems and aggression as well as a self-reported rating of satisfaction

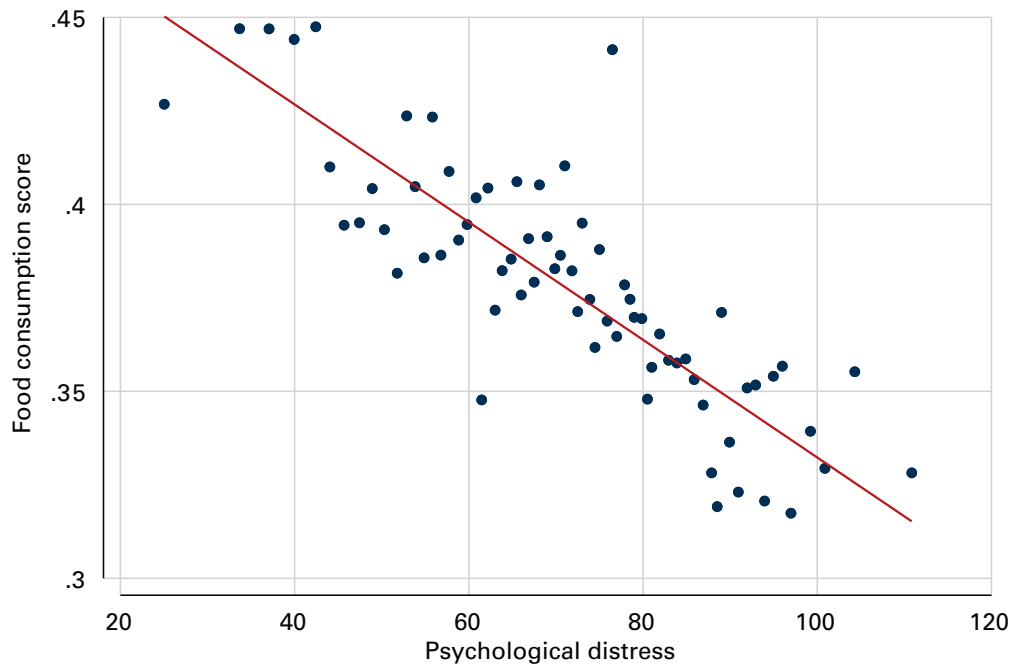
As with PTSD and depression, we find that other psychological problems are closely linked with worse economic outcomes. For example, Figure 5.15 presents evidence for a close link between perceived poverty and the three measures considered. As perceived poverty increases, the risk for mental health problems and aggression significantly increases, while life satisfaction significantly decreases, on average. Figure 5.16 shows the negative association between the composite index of psychological distress (built from the PTSD, depression and risk of mental health problems measures) and food insecurity, proxied by the food consumption score.

FIGURE 5.15 Psychological problems grouped by different levels of perceived poverty



Note: mean scores, based on survey data on depression (WHO-5) and PTSD symptoms. Poverty categories are based on self-assessment by respondents.

FIGURE 5.16 Food consumption score and psychological distress (binned)



Note: This graph plots the average food consumption score and psychological distress for 70 “bins”, which are constructed from 70 equal-sized groups of psychological distress.



5.3 CONFLICT EXPOSURE

Prevalence

Exposure to conflict and trauma is widespread in the WB&G. At least one in four of respondents in WB&G have been exposed to conflict-related events during their lifetime, and one in ten experienced conflict-related trauma in the last three years. About 10 percent of respondents in Gaza reported to have lost an extended family member or a close friend during the conflict in Gaza in May 2021, and the same is true for family members or friends who have suffered a bombing-related injury (Table 5.4). Looking at property damage, an even higher rate of 1 in 4 of respondents report partial damage or destruction of their homes from bombing.

Table 5.4 Personal conflict exposure in Gaza (May 2021)

Conflict exposure in Gaza in May 2021	Count (yes)	Percent (yes)
Extended family member or close friend died	270	10%
Extended family member or close friend was injured	262	10%
Home destroyed or damaged	683	25%

Note: Survey data on selected items from the conflict exposure survey module.

Residents in WB&G have been exposed to a variety of stressful, traumatic events. One in four respondents report having witnessed a war-related death prior to 2018, and 11 percent reported having witnessed it in the last three years. About 13 percent of respondents have lost a family member or friend violently before 2018 and 6 percent over the last three years. Respectively, 6 percent and 4 percent of respondents prior and after 2018 witnessed a situation in which someone was seriously injured or killed, or they witnessed a situation in which they feared someone would be seriously injured or killed. For those who have been in a serious car accident, a serious accident at work, or an accident somewhere else, the figure stands at 9 percent for the period prior to 2018 and 4 percent over the last three years. Finally, 5 of 1,000 respondents prior to 2018 and 2 of 1,000 respondents between 2018 and 2021 report that somebody pressured them into having some type of unwanted sexual contact. Table 5.5 summarizes the complete set of frequencies with which respondents report experiencing different types of potentially traumatic events.

Table 5.5 Personal traumatic events in WB&G (before 2018 - between 2018 and 2021)

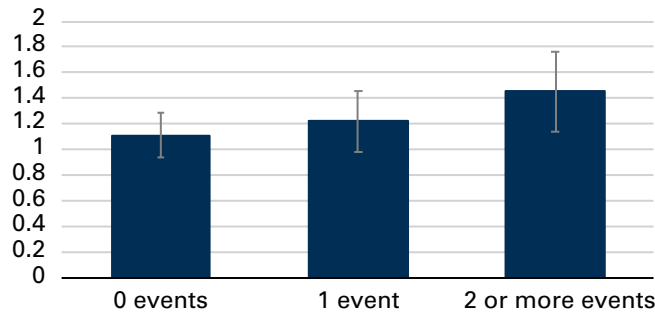
Traumatic event	Number before 2018 (yes)	Percent before 2018 (yes)	Number 2018–2021 (yes)	Percent 2018–2021 (yes)
Have you ever been exposed to or witnessed war-related casualties?	1506	25%	651	11%
Has a close family member or friend died violently, for example, in a serious car crash, mugging, or attack?	770	13%	363	6%
Have you ever witnessed a situation in which someone was seriously injured or killed, or feared someone would be seriously injured or killed?	396	6%	253	4%
Have you ever been in a serious car accident, or a serious accident at work or somewhere else?	525	9%	275	4%
Has anyone ever made or pressured you into having some type of unwanted sexual contact?	28	0.5%	10	0.2%

The link with mental health

Personal exposure to adverse conditions during violent conflict is strongly associated with worse PTSD symptoms. To describe the relationship between mental health outcomes and violence exposure we make use of several sources. For Gaza residents, we first describe the relationship between direct experience of conflict-related events and levels of PTSD symptom severity. Second, using geolocated data from the Armed Conflict Location & Event Data Project (ACLED, 2019), we proxy the type of conflict exposure experienced. Third, using data on self-reported potentially traumatic events, we describe the relationship between number of events experienced and psychological distress.

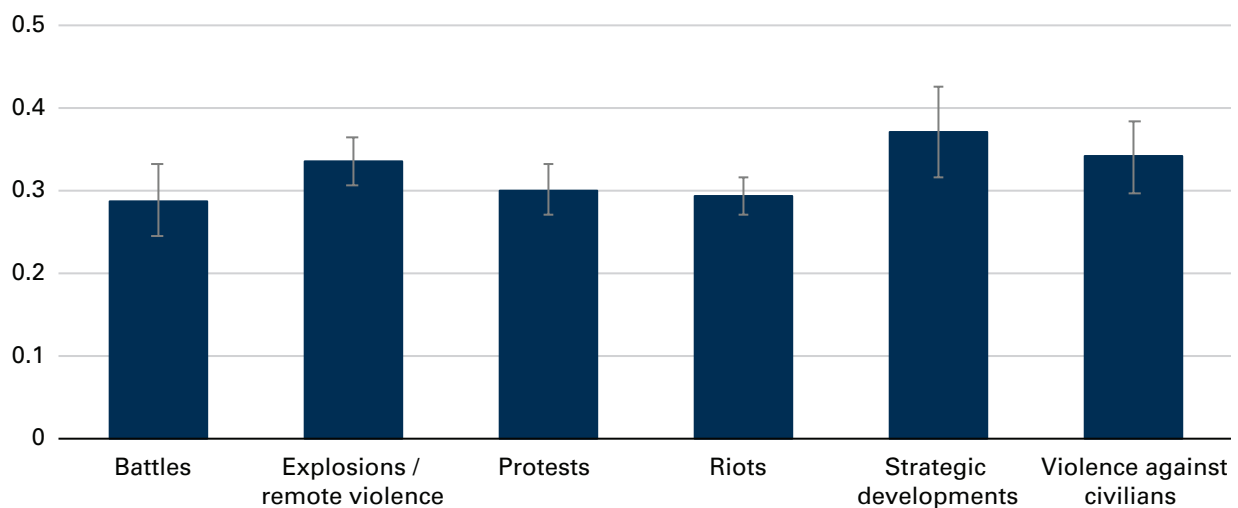
As expected, for the inhabitants of Gaza, levels of PTSD symptoms increases as the number of conflict events experienced increases. In particular, there is a significant difference between those who have not experienced any conflict events and those who have experienced more than 2 events. We do not observe a similar pattern for depression scores (not presented here), indicating that exposure to conflict events is associated with PTSD but not depression in WB&G.

FIGURE 5.17 PTSD symptom severity in Gaza by the number of conflict events experienced



Some events are associated with higher levels of psychological distress (Figure 5.18). We looked at the entire WB&G and the relationship between psychological distress and type of events that occurred in the immediate proximity of households. Most striking is the relationship inferred between “strategic developments”—activities of violent groups not recorded as political violence but which may trigger future events or contribute to political dynamics within and across states—and psychological distress. Levels of distress are statistically comparable between experience of explosions, violence against civilians and strategic developments, and greater than for other types of events. In the WB&G, most instances in this category refer to looting or destruction of property, suggesting that an attack on one’s home can leave great consequences on people’s psychological well-being. Having experienced an explosion within 500 meters of one’s home registers the second highest psychological distress value.

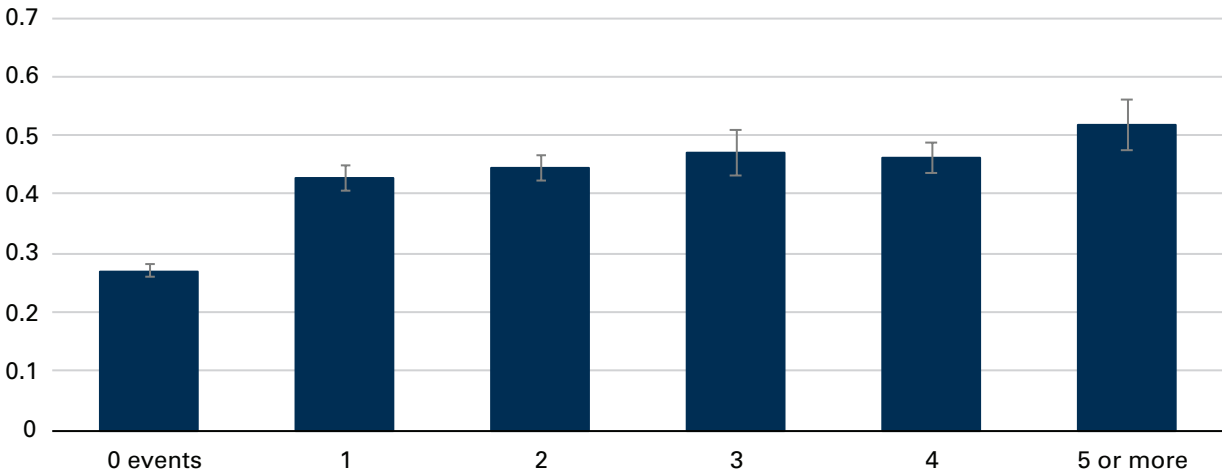
FIGURE 5.18 Psychological distress in WB&G by the type of event experienced (ACLED)⁵



⁵ Please see the appendix for further description of the ACLED event types and the frequency of their occurrence in the WB&G.

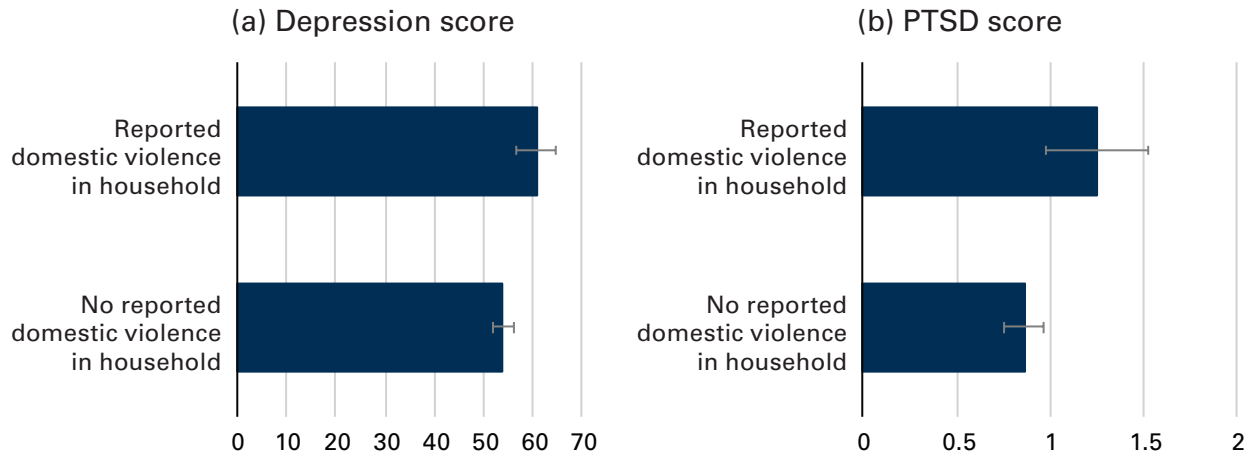
Figure 5.19 describes the relationship between psychological distress and the number of potentially traumatic events experienced by WB&G residents. We observe a **large worsening in the level of psychological distress for those who experienced at least one potentially traumatic event and those who report experiencing no traumatic event.** Levels of psychological distress gradually worsen as the number of potentially traumatic events experienced increases, reaching the highest reported value among those who experienced five or more traumatic events.

FIGURE 5.19 Psychological distress in WB&G by the number of potentially traumatic events experienced



Mental health indicators are significantly worse in the households that report either violence against women or children. Finally, we consider how experience of, or exposure to, domestic violence could be associated with mental health outcomes. We asked household respondents whether a woman or child in the household was subject to physical violence by the hands of another household member. Five percent of individual respondents live in a household reporting violence against women, and 13 percent live in a household reporting violence against children, and 14 percent live in households that report either violence of one of the two types. These are alarmingly high numbers, and likely to be an underestimate. Figure 5.20 shows that the depression score is 61 for individuals living in households reporting any domestic violence and 54 in households that do not report instances of domestic violence. Similarly, the PTSD score is higher for individuals living in households reporting domestic violence (1.2 vs 0.9).

FIGURE 5.20 Depression and PTSD scores by reporting (or not) an episode of domestic violence in the family in the last month



These findings underscore the joint vulnerability of those suffering from poor mental health conditions and from domestic violence. These are not surprising results, as they corroborate other studies (Howard et al. 2010). At the same time, violence against women and children has a wide range of negative physiological, behavioral, and social implications, with some of these effects lasting for generations (Devakumar et al. 2014). One such mechanism is the idea of “violence begets violence”, which states that children who have been victims of violence are more likely to become victims of violence themselves later in life. Devakumar et al. (2021) argue that conflict contributes to marital violence. It is also well acknowledged that child protection and child health are seriously endangered in situations marked by humanitarian catastrophes or violent conflict, where children are subjected to potentially fatal events (Ager et al. 2011; Rubenstein and Stark 2017; Stark and Landis 2016).

6



CONCLUSIONS AND LESSONS

Our results suggest four key findings from the analysis of mental health, socio-economic conditions and conflict exposure:

- (i)** There is high prevalence of mental health problems in the WB&G.
- (ii)** Many mental health issues vary in a systematic way across areas and socio-demographic characteristics.
- (iii)** Poor mental health is closely linked with worse economic outcomes.
- (iv)** Poor mental health is strongly associated with exposure to violent conflict and domestic violence.

Our findings corroborate recent research indicating that poor mental health is highly detrimental for economic decisions and well-being. However, mental health has traditionally been vastly underfunded and not included in cross-sectoral policies across contexts (Jenkins et al. 2011a). This specifically includes a lack of funding for multi-dimensional interventions in fragile situations (Jenkins et al. 2011b), where support for conflict-affected populations has traditionally been focused on economic policies, such as cash transfers. Yet, it is conflict-affected situations where mental health problems are particularly widespread, as our research demonstrates. There is evidence that economic policies, such as cash transfers, can improve psychological well-being, but what is needed next is a combined policy and learning agenda prioritizing interventions (and learning from interventions) that directly target mental health outcomes and livelihoods in fragile and conflict affected settings.

Interventions in the WB&G to address mental health challenges, on their own or in combination with more traditional livelihood interventions, hold enormous potential benefits. These go beyond immediate health impacts and can support and reinforce economic decision-making and outcomes. In fact, such investments may in turn contribute to social stability and cohesion as well, via both psychological and economic channels.

One way to do this is through Cognitive Behavioral Therapy (CBT) interventions to improve economic and mental health outcomes. CBT can improve well-being for a population affected by conflict through two pathways: reducing vulnerability to deteriorating mental health and directly increasing cognitive capacity and socioemotional skills, as a number of studies have shown. Blattman, Jamison, and Sheridan (2017) investigate the impact of therapy in Liberia and find benefits on earnings for ex-combatants. Heller et al. (2017) assessment of the effects of a CBT-type program for youth in high crime schools found improvements on graduation rates. Baranov et al. (2020) investigate the effects of therapy on financial empowerment and investment in children, and Patel et al. (2017) investigate how therapy increases the days an individual works. Barker et al. (2022) investigation of the effectiveness of group-based CBT for 7,227 poor individuals in the general population of rural Ghana found that after a few months following the program, treated individuals demonstrate significant improvements in mental and perceived physical health, cognitive and socioemotional abilities, and subjective economic outcomes.

Furthermore, our findings suggest that policy-makers and practitioners might want to target specific sub-groups. Some sub-groups of the population are particularly vulnerable to mental health problems due to the conflict, such as young men in Gaza, individuals with lower education levels, and low-income households.

Since it seems unlikely that the conflicts in the Middle East will find a quick, peaceful resolution, much can be done to strengthen socioeconomic, human development, and well-being even in the shadow of conflict. Of course, the first priority to address the mental health crisis in WB&G should be to put an end to the conflict that has lasted for multiple generations. But this is unlikely any time soon. Meanwhile, mental health should be viewed as a key element in providing support to Palestinians coping with structural violence and conflict in the WB&G. The data from the Palestinians' Psychological Conditions Survey (PPCS) can be used to inform targeted trials and interventions, particularly using CBT, to reduce the mental health burden for Palestinians.

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APPENDIX

A1 MENTAL HEALTH SURVEY MODULES

TABLE A.1 Traumatic events (adapted BTQ)

The following questions ask about events that may be extraordinarily stressful or disturbing for everyone. Please answer "1=Yes" or "2=No" to report what happened to you.		Panel individuals		Non-panel individual
		Before 2018	From 2018 until now	Has ever happened
BTQ7.1	Have you ever been exposed to or witnessed war-related casualties (for example as a medic or on graves registration duty)?			
BTQ7.2	Have you ever been in a serious car accident, or a serious accident at work or somewhere else?			
BTQ7.3	Have you ever been in a major natural or technological disaster, such as a fire, tornado, hurricane, flood, earthquake, or chemical spill?			
BTQ7.4	Have you ever had a life-threatening illness such as cancer, a heart attack, leukemia, AIDS, multiple sclerosis, etc.?			
BTQ7.5	Before age 18, were you ever physically punished or beaten by a parent, caretaker, or teacher so that: you were very frightened; or you thought you would be injured; or you received bruises, cuts, welts, lumps or other injuries?			
BTQ7.6	Not including any punishments or beatings you already reported In Question 5, have you ever been attacked, beaten, or mugged by anyone, including friends, family members or strangers?			
BTQ7.7	Has anyone ever made or pressured you into having some type of unwanted sexual contact? Note: By sexual contact we mean any contact between someone else and your private parts or between you and some else's private parts"			
BTQ7.8	Have you ever been in any other situation in which you were seriously injured, or have you ever been in any other situation in which you feared you might be seriously injured or killed?			
BTQ7.9	Has a close family member or friend died violently, for example, in a serious car crash, mugging, or attack?			
BTQ7.10	Have you ever witnessed a situation in which someone was seriously injured or killed, or have you ever witnessed a situation in which you feared someone would be seriously injured or killed?			

TABLE A.2 Posttraumatic Stress Disorder (PTSD) (ITQ)

Questionnaire for assessing Post-traumatic Stress Disorder (PTSD) and complex PTSD; Questions from PTSD7.11 until PTSD7.30 are to be asked only in case there was at least one answer to questions BTQ7.1 through BTQ7.10. Otherwise, move to the next section.

PTSD7.11	Name the most traumatic event from BTQ: (1-10)		
PTSD7.12	When did [please name the most troubling experience as answered in PTSD7.11] Occur?	1 = less than 6 months ago 2 = 6 to 12 months ago 3 = 1 to 5 years ago 4 = to 10 years ago 5 = 10 to 20 years ago 6 = more than 20 years ago	

Below are a number of problems that people sometimes report in response to traumatic or stressful life Events. Please read each item carefully, Then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month (1. Not at all 2. A little bit 3. Moderately 4. Quite a bit 5. Extremely)

PTSD7.13	Having upsetting dreams that replay part of the experience or are clearly related to the experience?	
PTSD7.14	Having powerful images or memories that sometimes come into your mind in which you feel the experience is happening again in the here and now?	
PTSD7.15	Avoiding internal reminders of the experience (for example, thoughts, feelings, or physical sensations)?	
PTSD7.16	Avoiding external reminders of the experience (for example, people, places, conversations, objects, activities, or situations)?	
PTSD7.17	Being "super-alert", watchful, or on guard?	
PTSD7.18	Feeling jumpy or easily startled?	
PTSD7.19	In the past month, have the above problems - Affected your relationships or social life?	
PTSD7.20	In the past month, have the above problems - Affected your work or ability to work?	
PTSD7.21	In the past month, have the above problems - Affected any other important part of your life such as parenting, or school or college work, or other important activities?	
PTSD7.22	How true is this of you? when I am upset, it takes me a long time to calm down.	
PTSD7.23	How true is this of you? I feel numb or emotionally shut down.	
PTSD7.24	How true is this of you? I feel like a failure.	
PTSD7.25	How true is this of you? I feel worthless.	
PTSD7.26	How true is this of you? I feel distant or cut off from people.	
PTSD7.27	How true is this of you? I find it hard to stay emotionally close to people.	

TABLE A.3 Depression (WHO-5)

No.	In the past two weeks, how often were you:	0. At no time 1. Some of the time 2. Less than half the time 3. More than half of the time 4. Most of the time 5. All of the time
GA52	I have felt cheerful and in good spirits	
GA53	I have felt calm and relaxed	
GA54	I have felt active and vigorous	
GA55	I woke up feeling fresh and rested	
GA56	My daily life has been filled with things that interest me	

TABLE A.4 Risk of common health problems (GHQ-12)

We would like to know how your health has been in general, over the past few weeks. Please answer all the 12 questions simply by stating the answer which you think most nearly applies to you. Remember that we want to know about present and recent complaints, not those you had in the past. Using a scale from 1 to 4 where:

1. better than usual 2. No difference (as usual) 3. Worse than usual 4. Much worse than usual, ...

GA7	Can you focus on your work as usual?	
GA8	Do you find it difficult to sleep because you are nervous or preoccupied?	
GA9	Do you feel you are playing a useful role toward the people around you?	
GA10	Can you make decisions as usual?	
GA11	Do you feel under continuous pressure?	
GA12	Do you feel capable of overcoming your problems?	
GA13	Are you happy and satisfied with your accomplishment at work?	
GA14	Do you feel able to face your problems?	
GA15	Do you feel sad and that there is no way out?	
GA16	Have you lost your self-confidence?	
GA17	Do you see yourself as a useless person?	
GA18	Are you able to feel happy notwithstanding the surrounding circumstances?	

Note: the questions are asked about the last two weeks

TABLE A.5 Aggression

Using the 5-point scale, indicate how uncharacteristic or characteristic each of the following statements are in describing you? 1. Not like me at all 2. Not much like me 3. Neutral 4. somewhat like me 5. very like me		
AGG4.1	Given enough provocation, I may hit another person.	
AGG4.2	I often find myself disagreeing with people.	
AGG4.3	At times I feel I have gotten a raw deal out of life.	
AGG4.4	There are people who have pushed me so far that we have come to blows.	
AGG4.5	I can't help getting into arguments when people disagree with me.	
AGG4.6	Sometimes I fly off the handle for no good reason.	
AGG4.7	Other people always seem to get the breaks.	
AGG4.8	I have threatened people I know.	
AGG4.9	My friends say I am somewhat argumentative.	
AGG4.10	I have trouble controlling my anger.	
AGG4.11	I wonder why sometimes I feel so bitter about things.	
AGG4.12	I sometimes feel like a powder keg ready to explode.	

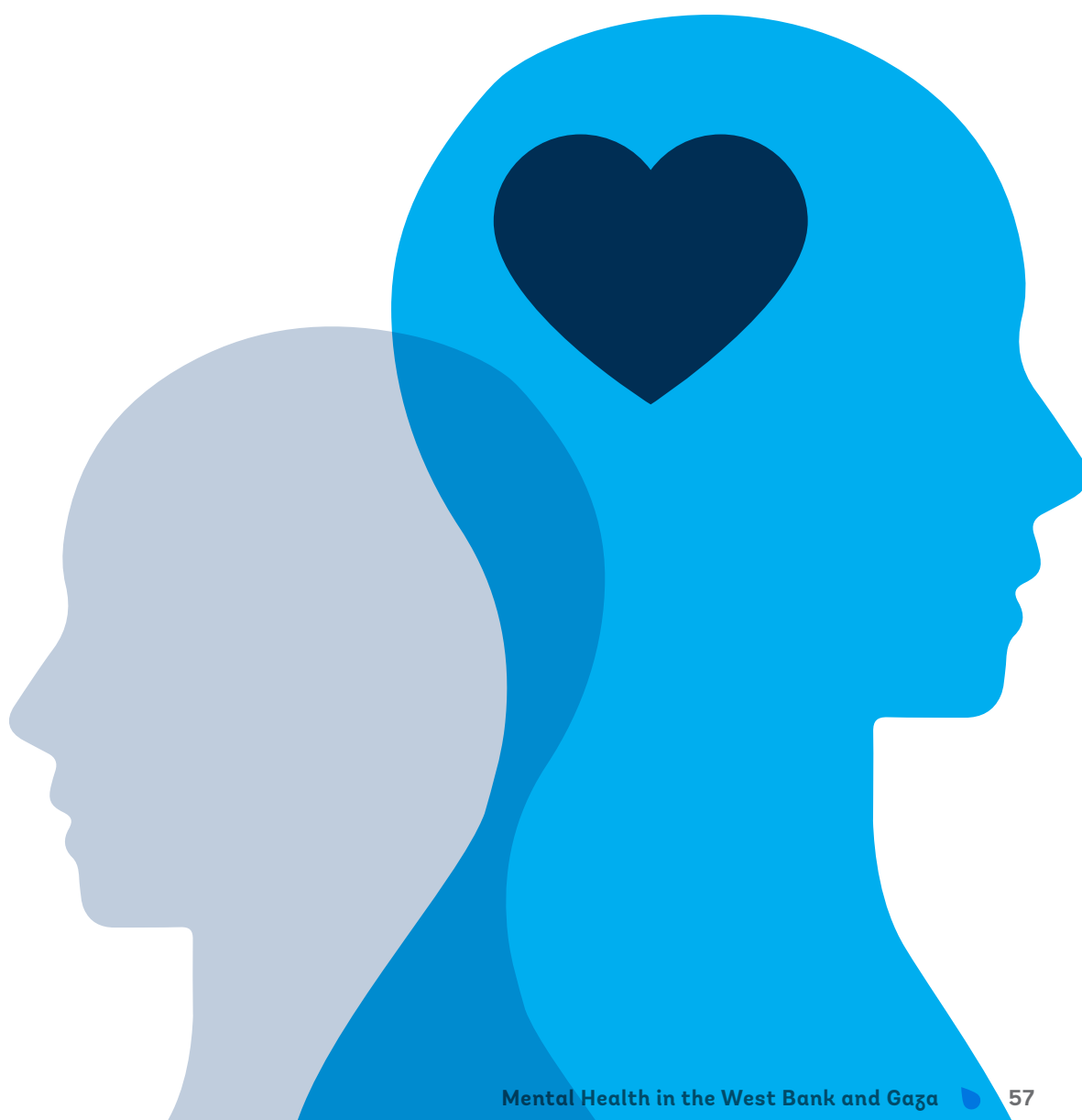
TABLE A.6 Life satisfaction

		(1) very satisfied Not satisfied at all (10) very satisfied Very satisfied										
5 GA	All things considered, how satisfied are you currently with your life?	1	2	3	4	5	6	7	8	9	10	
6 GA	To what extent are you currently satisfied with your health?	1	2	3	4	5	6	7	8	9	10	

The mean, median and range of each mental health outcome is listed in Table A.7.

TABLE A.6 Mean, median, minimum and maximum of mental health indicators

Measure	Mean (weighted)	Median (weighted)	Minimum	Maximum
Depression symptom severity score	54.84	56.00	0.00	100.00
PTSD symptom severity score	0.91	0.00	0.00	5.00
Risk for mental health problems index	1.95	2.00	1.00	4.00
Aggression index	1.89	1.94	0.96	5.00
Life satisfaction (average)	6.99	7.00	1.00	10.00
Psychological distress composite index (combining depression, PTSD, and risk for mental health problems)	0.35	0.34	0.00	1.00



A2 CONFLICT EVENT DATA

The Armed Conflict Location & Event Data Project (ACLED), uses a global methodology to track a range of violent and non-violent actions by political agents, including governments, rebels, militias, identity groups, political parties, external actors, rioters, protesters and civilians, (ACLED, 2019). This report uses the ACLED codebook to categorize the violent events that were registered in West Bank and Gaza in May 2021.

TABLE A.8 ACLED events classification

General	Event type	Sub-event type
Violent events	Battles	Armed clash
		Government regains territory
		Non-state actor overtakes territory
	Explosions/ Remote violence	Chemical weapons
		Air/drone strike
		Suicide bomb
		Shelling/artillery/landmine/IED
		Remote explosive
	Violence against civilians	Grenade
		Sexual violence
Attack		
Demonstrations	Protest	Abduction/ forced disappearance
		Peaceful protest
		Protest with intervention
	Riots	Excessive force against protesters
		Violent demonstration
Non-violent actions	Strategic developments	Mob Violence
		Agreement
		Arrests
		Change to group/activity
		Disrupted weapons use
		Headquarters or base established
		Looting/ property destruction
		Non-violent transfer of territory
Other		

In only 15 days, from 6 May to 21 May 2021, 371 violent acts were registered in West Bank & Gaza. Riots, explosions, remote violence, and violence against civilians represent 86 percent of all ACLED events over this time period. We provide further information on each of these type of events below.

RIOTS

- 🔥 Riots are violent events where demonstrators or mobs engage in disruptive acts, including but not limited to rock throwing, property destruction, etc. Rioters may begin as peaceful protesters, or may be intent on engaging in spontaneous and disorganized violence from the beginning of their actions. Contrary to armed groups, rioters do not use sophisticated weapons such as guns, knives or swords. “Crude bombs” (e.g. Molotov cocktails, petrol bombs, firecrackers) may be used in rioting behaviour (Raleigh, C. 2010).
- 🔥 Riots were the most common event that were reported. It sums 419 of 897 total event’s.
- 🔥 Al Quds, Bethlehem, Hebron, Nablus, Ramallah were the top 5 governorates with more events, they sum: 72, 44, 68, 66, and 44 riots respectively

EXPLOSIONS AND REMOTE VIOLENCE

- 🔥 ‘Explosions/Remote violence’ refers to “one-sided violent events in which the tool for engaging in conflict creates asymmetry by taking away the ability of the target to respond”. The tools used in instances of ‘Explosions/Remote violence’ are explosive devices, including, but not limited to, bombs, grenades, improvised explosive devices (IEDs), artillery fire or shelling, missile attacks, heavy machine gun fire, air or drone strikes, or chemical weapons. (Raleigh, C. 2010)
- 🔥 58 percent of the explosions and remote violence events were reported in Gaza and North Gaza.
- 🔥 98 percent of the explosions and remote violence events were commanded by military forces of Israel. Aircrafts, military vessels, and drones, struck different targets along the coast of Gaza, some refugee camps were also attacked.

STRATEGIC DEVELOPMENTS

- 🔥 This event refers to activities of violent groups that are not itself recorded as political violence, yet may trigger future events or contribute to political dynamics within and across states.

VIOLENCE AGAINST CIVILIANS

- ACLED defines ‘Violence against civilians’ as violent events where an organized armed group deliberately inflicts violence upon unarmed non-combatants. By definition, civilians are unarmed and cannot engage in political violence. The perpetrators of such acts include state forces and their affiliates, rebels, militias, and external/other forces. (ACLED, 2019).
- 39 events against civilians were reported, 23 of them were conducted by military forces against them.
- Beatings and open fire were the most common incidents.

BATTLES

- “ACLED defines a battle as “a violent interaction between two politically organized armed groups at a particular time and location.” Battles can occur between armed and organized state, non-state, and external groups, and in any combination therein. There is no fatality minimum necessary for inclusion.” (ACLED, 2019).
- Battles are events between armed Palestinian groups and Israeli military forces. They represent 2 percent of total occurred events.
- Nablus, Hebron reported more than a half of total battles.

TABLE A.9 Frequencies of ACLED events in WB&G

Event Type	Description	#
Battles	Armed clash	21
Explosions/Remote violence	Air/drone strike	256
Explosions/Remote violence	Shelling/artillery/missile attack	55
Protests	Excessive force against protesters	11
Protests	Peaceful protest	53
Protests	Protest with intervention	21
Riots	Mob violence	280
Riots	Violent demonstration	139
Strategic developments	Agreement	1
Strategic developments	Change to group/activity	3
Strategic developments	Disrupted weapons use	3
Strategic developments	Looting/property destruction	3
Strategic developments	Other	12
Violence against civilians	Attack	39

TABLE A.10 ACLED events by governorate

Governorate	Battles	Explosions / remote violence	Protests	Riots	Strategic developments	Violence against civilians	Total
Al Quds	2	0	11	72	5	15	105
Bethlehem	2	0	11	44	2	0	59
Deir El Balah	0	39	1	0	0	0	40
Gaza	0	1	0	0	2	0	3
Gaza City	0	94	2	2	4	1	103
Hebron	5	0	10	68	0	18	101
Jenin	2	0	9	37	0	1	49
Jericho	0	0	0	7	0	0	7
Khan Yunis	0	59	1	2	3	1	66
Nablus	6	1	4	66	1	0	78
North Gaza	0	84	0	0	2	0	86
Qalqilya	0	2	3	25	0	0	30
Rafah	0	29	1	0	1	0	31
Ramallah and Al Bireh	4	1	13	44	0	1	63
Salfit	0	0	6	12	1	0	19
Tubas	0	0	5	11	0	0	16
Tulkarm	0	1	8	29	0	2	40
Total	21	311	85	419	21	39	896



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