

The silent epidemic; the toll of mental health in occupied Palestine

Said Shukri^{1,*}; David Holmes¹; Nabeel Shukri²; Hassan Shukri³; Fahed Saada⁴

¹ University at Buffalo Jacobs School of Medicine and Biomedical Sciences Main Street Buffalo, NY 14203. ² St. Matthew's University Lime Tree Bay Ave, West Bay, Cayman Islands. ³ CNY Neurological Consulting 5000 Brittonfield Pkwy # 116, East Syracuse, NY 13057. ⁴ St. Joseph's health, department of Neurology 301 Prospect Ave, Syracuse, NY 13203

Corresponding author: saidshukrimd@gmail.com

Received: (31/3/2022), Accepted: (17/5/2022)

ABSTRACT

Background: There is an elevated prevalence of depression and PTSD reported in residents of Occupied Palestine compared to their neighboring country of Israel. **Objective:** To determine the causes of increased prevalence of PTSD and depression compared to their Israeli counterparts, Palestinians would inform local and global mental health programs of the severity, allowing for better treatment opportunities. **Method:** Thirty-two original studies published between 1974 and 2020 were reviewed using a combination of PubMed, Google Scholar, and independent textbooks to search for materials and analyze statistics and information. The inclusion criteria included cross-searching the topics' Palestine, PTSD, Depression, Israel, and Jordan' and using this technique resulted in 120 articles. The following aspects were considered: study type, sample, article title, and key findings, limiting the literature review to 32 articles. **Results:** Palestinians are much more likely to suffer from PTSD and depression than the global average and their neighboring countries. The global prevalence of depression and PTSD are 5% and 3.6%, respectively. The prevalence of severe PTSD in children living in the Gaza Strip is 32.7%. Furthermore, depression in Palestine is among the highest rates in the world, affecting 40% of Palestinians.

Keywords: Posttraumatic Stress Disorder, Major Depression, Prevalence, War Trauma, Unemployment, Palestine, Israel, Jordan Meta-Analysis.

INTRODUCTION

The history of Palestine is chockfull of political conflict and instability. Many issues arise during times of instability, but one that has been severely overlooked is the prevalence of mental illness. According to Afana et al., historical events have resulted in approximately one-third of Palestinians needing mental health interventions. This makes mental illness one of the most significant but least acknowledged medical issues (1). Mental illness is challenging to diagnose, let alone treat in underserved areas, due to the lack of healthcare accessibility. According to WHO, 5% of the world's population suffers from clinical depression. This is merely a fraction of the depression rate in occupied Palestine, where forty percent of Palestinians are clinically depressed. (2, 3) The foundation of this discrepancy between Palestine and the rest of the world can be caused by many factors that will be examined in this study.

Post-traumatic stress disorder is also an illness that has plagued the Palestinian peo-

ple. According to the American Psychiatric Association, PTSD affects approximately 3.5 percent of U.S. adults annually; however, these rates are much lower than the PTSD prevalence in Occupied Palestine, in which nearly the entire population has experienced war within their lifetime. Hoppen et al. reported that 23.81% of adult war survivors across the globe met diagnostic criteria for PTSD, but these rates were significantly lower when compared to the rates found in the Palestinian adult population, where 68.9% of the general public in the Gaza strip were classified as having developed PTSD. (4, 5) Marie et al. also reported that 41% of Palestinian children suffered PTSD.(5)

Because Palestine is a country with scarce resources from years of humanitarian crises, it has left its residents with mental scars unseen by the rest of the world. Mental health is essential at every stage of life as it helps determine how we make daily decisions that will impact the future. This review aims to bring awareness to the under-

diagnosed, under-treated, and unspoken mental health issues in occupied Palestine. This study aims to identify some causes of the high prevalence of PTSD and depression in the Palestinian people.

METHODS

Thirty-two original studies published between 1974 and 2020 were reviewed using a combination of PubMed, Google Scholar, and independent textbooks to search for materials and analyze for statistics and information. The inclusion criteria included cross-searching the topics 'Palestine, PTSD, Depression, Israel, and Jordan' and using this technique resulted in 120 articles. The following aspects were considered: study type, sample, article title, and key findings, limiting the literature review to 32 articles.

RESULTS

According to the National Institutes of Health (NIH) and World Health Organization (WHO), the global prevalence of depression and PTSD are 5% and 3.6%, respectively. (6, 7) These rates dramatically differ from what is reported to be the rates in the Palestinian people, where approximately 40% and 68.9% suffer from depression and PTSD, respectively. Furthermore, a study conducted by Kaplan et al. used 880 participants derived from a random sample of the general urban population of the Hadera District in Israel to compare rates of depression between Arab and Jewish individuals living in Israel. Each participant was given the Harvard Department of Psychiatry National Depression Screening Day Scale (HANDS), and a score greater than 9 indicated severe depression. This study reported that 8.2% of Jewish males, 12.7% of Jewish females, 19.1% of Arab males, and 30.9% of Arab females fell within this range of severe depression. The rate of scores in this group was 2.5 times higher among Arabs than among Jews. (8) The results of this study further reiterate a discrepancy between not only Palestinians and Israelis but also between Arabs and Jews living within Israel. Suicide can be a byproduct of depression; with depression rates so astonishingly high, it is understandable to assume suicide rates would also be elevated; however, Gaza's youth are turning to suicide at a shockingly high rate. According to

OCHA, an appalling 38% of young people in Gaza have considered suicide at least once, and an annual suicide mortality rate of 1.8%. (9, 10)

Additionally, PTSD is another mental illness that has overwhelmed Palestinians. A study by Bleich *et al.* looked at the prevalence of PTSD within a sample of 4,584 Israelis, which was representative of the general population. The results of this study reported that 9.4% of the sample had PTSD, but reassuringly, 82% of the sample reported feeling optimistic about their future. (11) However, this was not the case for Palestinians. A study by Sam Tyano reported that evidence for PTSD was found among 70.2% of the Palestinian population and 50.2% of the Israeli-Arab population. Comparatively, the Jewish population of Israel with the highest PTSD rates were as follows: Katif, 27.9%; Efrat, 27.4%; Giloh, 16.4%; center of Jerusalem, 13.9%. (12) To put this into perspective, according to Müller et al., 12.9% of U.S. veterans were diagnosed with PTSD after a follow-up of 9.6 ± 5.6 years post-war. (13) This suggests that the high levels of PTSD in the war-stricken areas of Palestine do not fully explain these astonishing rates of PTSD.

DISCUSSION

The WHO's International Classification of Diseases (ICD-10) defines depression as experiencing various symptoms ranging from mild to severe. The classifications of depressive disorder reported range from the following symptoms: reduced concentration and attention, reduced self-esteem and self-confidence, ideas of guilt and unworthiness (even in a mild type of episode), bleak and pessimistic views of the future, ideas or acts of self-harm or suicide, disturbed sleep, and diminished appetite. (14) Furthermore, the ICD-10 diagnostic criteria for PTSD are defined as either of the following being presents: Inability to recall, either wholly or partially, some critical aspects of the period of exposure to the stressor or persistent symptoms of increased psychological sensitivity and arousal (not present before exposure to the stressor), shown by any two of the following: (15)

- a. Difficulty in falling or staying asleep.

- b. Irritability or outbursts of anger.
- c. Difficulty in concentrating.
- d. Exaggerated startle response.

The WHO also reports that depression results from a complex interaction of social, psychological, and biological factors and that people who have gone through adverse life events such as; unemployment, bereavement, and traumatic events are more likely to develop depression. Furthermore, they explain that the most likely causes of increased PTSD prevalence are witnessing violence, experiencing war, or interpersonal violence/accidents.

Causes of Depression

Though the discrepancies between depression rates in Palestinians and the rest of the world may be associated with genetic factors, this is less likely. According to the New York University Medical Center And School Of Medicine, Israeli Jews are the genetic brothers of Palestinians, Syrians, and Lebanese, as they all share a common genetic lineage with a shared set of genetic signatures that stretches back thousands of years. (16) Furthermore, depression rates among Jordanian individuals are much more similar to those found among Israelis, affecting 3.56% of the general Jordanian population. (17) One explanation for the discrepancies previously described is the differences in healthcare availability. Israel provides universal healthcare for its citizens, while Palestinians do not have the same resources offered. According to The Commonwealth Fund, healthcare spending for Palestinians was equivalent to USD 294 per Palestinian in 2012 compared to USD 2,046 per Israeli in 2011 (18).

Other factors that could cause such a dramatic gap between the rates of depression in these countries is the difference in infant, child, and maternal mortality rates (Table 1). (19)

Table (1): comparing infant, child, and maternal mortality rates in Israel v. Palestine.

	Israel	Palestine
Infant Mortality Rate	.29%	1.79%
Child Mortality Rate	.29%	2.09%
Maternal Mortality Rate	.002%	.047%

Studies have shown that disruptions in social and economic structures characterize war zones and regions of political violence. These disruptions have numerous negative consequences, such as deterioration of the economic situation of individuals and families and deterioration of the national economy due to increasing unemployment and poverty. (20) Unemployment rate in Palestine was 24% in the fourth quarter of 2021 and 50.2% in the third quarter in Gaza alone. This can be compared to Israel's 2021 fourth-quarter unemployment rate of just 4.3 percent. (21, 22) OCHA reported that the youth unemployment rate in Gaza was 70% in November of 2020, with young graduates making up 58% of unemployed youth. (23) According to the Palestinian Bureau of Statistics, almost one-third of Palestinian families live below the poverty line, defined as a monthly income of less than USD 640; this is a common cause of increased depression. (24)

Causes of PTSD:

Although PTSD prevalence can be explained by many things, experiencing interpersonal violence or war are common culprits. While war has troubled a majority of the world with issues that are not individualized to just Palestine, the results of this study have demonstrated that PTSD rates are extraordinarily high in this area.

A study conducted by Yahia et al. reported that a survey distributed among 1,185 Palestinian pupils aged 14 to 20 found that 80% reported prolonged curfews and school closures, 70% reported disruption of education, about 51% reported attack of a family member by the Israeli army or by settlers, about 58% reported restriction of movement that affected the family, and 8.3% reported that a family member had become disabled as a result of an attack by the Israeli army or settlers. (25)

Studies conducted among Palestinian children and youth from 1986-to 1993 revealed that children's exposure to traumatic events was associated with concentration, attention, memory problems, aggressive behavior, bedwetting, and withdrawal behaviors, which can all be signs of PTSD (26).

With this in mind, it is essential to recognize the need for mental illness intervention in occupied Palestine. These conflicts have grown far beyond acceptable ranges but not beyond control. The authors of this study have specific recommendations that can be used to aid the Palestinian people. One is the need for private organizations to continue providing medical relief to the people of occupied Palestine while recognizing the severity of depression and PTSD. These organizations can begin emphasizing mental health in their treatment plans through counseling and proper medications. Also, Palestinians need better access to mental health specialists, especially the people of Gaza, whose prevalence rates are so high. This is not possible with the travel restrictions and the ban of the people from Gaza from entering Israel, even just for medical care. I also believe that counselors should be accessible in schools. Since a high rate of depression and suicide affects young adults, this would be a great way to limit this discrepancy between the younger population and the general public.

Further, the unemployment rate in Palestine is much too high, especially with graduates making up the majority of these statistics. Despite the interruption of schooling and daily lives from wars and acts of violence, Palestine has a high graduation and literacy rate. These individuals should be allowed to work and travel outside the occupied areas. Also, most Palestinians do not feel safe or comfortable reporting crimes committed to them by Israeli settlers, which plays a significant role in PTSD prevalence. Political changes need to be made to ensure the safety of Palestinians while encouraging and acting upon crimes reported.

As with any study of this nature, there were limitations. Limitations included various sources conducted solely in Palestine or Israel rather than in both countries. For this reason, there is no uniformity across the sta-

tistics found for each country. This study did its best to compare the prevalence of depression and PTSD using sources representative of the general population. Another limitation includes the significant differences between the West Bank and Gaza. Speaking about Palestine is difficult because the rates of illness, unemployment, education, and violence are not the same or similar.

Further limitations include the fact that Palestine has been described as an "uncharted territory" due to a lack of accurate data, resources, or records. Also, certain studies that surveyed Palestinian youth relied exclusively on one source of information (i.e., the youth themselves). The lack of multiple sources may have led to biased reporting on exposure to violence and the effects on mental health.

CONCLUSION

The excess of war and deficiencies experienced in Palestine over the last 75 years reinforce the indication of an immediate need to develop the proficiency among mental health professionals and the volume of services offered. Mainly, there is a need to develop mental health services by strengthening and increasing the number of mental health staff members, especially within schools in Palestine. (1) PTSD and depression develop from complex risk factors, including genetics, personality, and life events. It is believed that violence, crimes, wars, and interpersonal injury are the main culprits of PTSD, while increased unemployment and infant, child, and maternal mortality rates play a significant role in depression prevalence in Palestine.

Author's contributions

Said Shukri: writing original draft, reviewing and editing the final draft; **David Holmes:** writing original draft, editing the final draft; **Nabeel Shukri:** editing the final draft; **Hassan Shukri:** editing the final draft; **Fahed Saada:** editing the final draft.

Competing interest

None of the authors have any competing interests to report.

FUNDING

No funding was needed.

REFERENCES

- 1) Marie, M. Hannigan, B. & Jones, A. (2016). Mental health needs and services in the West Bank, Palestine. *International journal of mental health systems*. 10(1).1-8.
- 2) Evans-Lacko S, Aguilar-Gaxiola S, Al-Hamzawi A, Alonso J, Benjet C, Bruffaerts R, Chiu WT, Florescu S, de Girolamo G, Gureje O, Haro JM, He Y, Hu C, Karam EG, Kawakami N, Lee S, Lund C, Kovess-Masfety V, Levinson D, Navarro-Mateu F, Pennell BE, Sampson NA, Scott KM, Tachimori H, Ten Have M, Viana MC, Williams DR, Wojtyniak BJ, Zarkov Z, Kessler RC, Chatterji S, Thornicroft G. (2018). Socio-economic variations in the mental health treatment gap for people with anxiety, mood, and substance use disorders: results from the WHO World Mental Health (WMH) surveys. *Psychological medicine*. 48(9). 1560-71.
- 3) Upbin, B. (2013). A Young Doctor Fights The Depression Epidemic In Palestine.
- 4) Hoppen, TH, M. & orina, N. (2019). The prevalence of PTSD and major depression in the global population of adult war survivors: a meta-analytically informed estimate in absolute numbers. *European Journal of Psychotraumatology*. 10(1). 1578637.
- 5) Marie, M. SaadAdeen, S. & Battat, M. (2020). Anxiety disorders and PTSD in Palestine: a literature review. *BMC psychiatry*. 20(1). 1-18.
- 6) World Health, O. (1992). *The ICD-10 classification of mental and behavioural disorders: clinical descriptions and diagnostic guidelines*: World Health Organization.
- 7) Health USDo, Human S. (2017). *Post-Traumatic Stress Disorder (PTSD)*. National Institute of Mental Health.
- 8) Kaplan G, Glasser S, Murad H, Atamna A, Alpert G, Goldbourt U, Kalter-Leibovici O. (2010). Depression among Arabs and Jews in Israel: a population-based study. *Social Psychiatry and Psychiatric Epidemiology*. 45(10). 931-9.
- 9) On the Brink: Gaza's Youth Are Turning to Suicide amid Growing Desperation - Occupied Palestinian Territory. ReliefWeb.
- 10) Palestine - Suicide Mortality Rate (per 100,000 Population) 2022 Data 2023 Forecast 2000-2015 Historical.
- 11) Bleich, A. Gelkopf, M. & Solomon, Z. (2003). Exposure to terrorism, stress-related mental health symptoms, and coping behaviors among a nationally representative sample in Israel. *Jama*. 290(5). 612-20.
- 12) Tyano, S. (2003). Post-traumatic stress disorder in Israeli children. *International Psychiatry*. 1(2). 7-8.
- 13) Müller, J. Ganeshamoorthy, S. Myers, J. (2017). Risk factors associated with post-traumatic stress disorder in U.S. veterans: A cohort study. *PLoS one*. 12(7). e0181647.
- 14) Ritchie, H. Mathieu, E. Rodés-Guirao, L. Appel, C. Giattino, C. Ortiz-Ospina, E. Hasell, J. Macdonald, B. Beltekian, D. Roser, M. (2021). Coronavirus pandemic (COVID-19). Published online at OurWorldInData. org.
- 15) Center for Substance Abuse T. Trauma-informed care in behavioral health services. 2014.
- 16) Hammer MF, Redd AJ, Wood ET, Bonner MR, Jarjanazi H, Karafet T, Santachiara-Benerecetti S, Oppenheim A, Jobling MA, Jenkins T, Ostrer H, Bonne-Tamir B. (2000). Jewish and Middle Eastern non-Jewish populations share a common pool of Y-chromosome biallelic haplotypes. *Proceedings of the National Academy of Sciences*. 97(12). 6769-74.
- 17) Griffin, M. Mitchell-Gillespie, B. Hashim, H. AlHeresh, R. (2021). Predicting Depression among Jordanian Adults with Disabilities According to the International Classification of Functioning, Disability and Health: A Pilot Study. *Disabilities*. 1(4). 450-8.

- 18) Blumenthal, D. (2017). A Visit to Israel Sheds Light on Two Health Systems. *The Commonwealth Fund*.
- 19) Rosenthal, FS. (2021). A comparison of health indicators and social determinants of health between Israel and the Occupied Palestinian Territories. *Global Public Health*. 16(3). 431-47.
- 20) Haj-Yahia, MM. Charles W. (2018). Greenbaum, PhD, and Laila Lahoud-Shoufany, MA2. *Journal of Interpersonal Violence*. 1. 28.
- 21) Gaza Unemployment Rate Soars to 50.2% in Months Following May Escalation. 2022.
- 22) Palestine Unemployment RATE2022 Data - 2023 Forecast - 1995-2021 Historical.” Palestine Unemployment Rate - 2022 Data - 2023 Forecast - 1995-2021 Historical.
- 23) On the brink: Gaza's youth are turning to suicide amid growing desperation. Islamic Relief. 2020.
- 24) CHILDREN IN THE STATE OF PALESTINE UN General Assembly, United Nations Children's Fund (UNICEF). 2018.
- 25) Haj-Yahia MM. (2008). Political violence in retrospect: Its effect on the mental health of Palestinian adolescents. *International Journal of Behavioral Development*. 32(4). 283-9.
- 26) Qouta, S, Punamäki, R-L. El Sarraj, E. (2008). Child development and family mental health in war and military violence: The Palestinian experience. *International Journal of Behavioral Development*. 32(4). 310-21.