

Journal of Sociology, Psychology & Religious Studies



Prevalence of PTSD among the Survivors of the Sinai Fire Disaster in Mukuru-Sinai Informal Settlement, Nairobi County, Kenya

Lucy Karambu Kiathe, Dr. Stella Nyagwencha & Dr. Peterson Mwangi

ISSN: 2706-6622

Prevalence of PTSD among the Survivors of the Sinai Fire Disaster in Mukuru-Sinai Informal Settlement, Nairobi County, Kenya

^{1*}Lucy Karambu Kiathe,

Postgraduate Student, United States International University-Africa

²Dr. Stella Nyagwencha

Lecturer, United States International University-Africa

³Dr. Peterson Mwangi

Lecturer, United States International University-Africa

*Email of the Corresponding Author: lkiathe@gmail.com

How to cite this article: Kiathe L. K., Nyagwencha S. & Mwangi P. (2024). Prevalence of PTSD among the Survivors of the Sinai Fire Disaster in Mukuru-Sinai Informal Settlement, Nairobi County, Kenya. *Journal of Sociology, Psychology & Religious Studies*. Vol 6(3) pp. 52-64. <https://doi.org/10.53819/81018102t2432>

Abstract

This study examined the prevalence of Posttraumatic Stress Disorder (PTSD) among survivors of the 2011 Sinai Fire disaster in Mukuru-Sinai informal settlement, Nairobi, Kenya. With global PTSD prevalence estimates ranging from 3.9% to 5.6%, and higher rates in disaster-affected populations, this research addressed a critical gap in understanding PTSD in vulnerable urban communities. Guided by the Shattered Assumptions Theory, which posits that traumatic events disrupt core beliefs about the world's benevolence and predictability, the study employed a descriptive correlational design. A sample of 294 survivors completed the PTSD Checklist for DSM-5 (PCL-5), with additional qualitative data gathered through key informant interviews. Results revealed that 27.9% of survivors exhibited clinically significant PTSD symptoms, with 23.8% experiencing moderate symptoms and 4.1% severe symptoms. The majority (72.1%) reported minimal or mild symptoms. These findings align with previous studies in similar contexts, such as the 22% PTSD prevalence in sub-Saharan Africa. Notably, despite 96% of respondents believing they had developed psychological issues post-disaster, only 4% sought professional help, indicating a significant treatment gap. The study concludes that while most survivors demonstrated resilience, a substantial minority continue to experience significant PTSD symptoms years after the disaster. Recommendations include implementing regular PTSD screening programs, developing targeted mental health interventions, and establishing community-based support groups. These findings underscore the need for long-term, culturally sensitive mental health

support in disaster-affected communities and highlight the importance of addressing barriers to accessing mental health services.

Keywords: *Prevalence of PTSD, Survivors, Disaster, Mukuru-Sinai Informal Settlement*

1.1 Introduction

The prevalence of Posttraumatic Stress Disorder (PTSD) among disaster survivors has been a critical focus of mental health research in recent years. Global epidemiological data show that over 70.0% of people have been exposed to at least one traumatic event, with 30.5% reporting exposure to four or more traumatic incidents (Benjet et al., 2016). The lifetime prevalence of PTSD ranges from 6.1 to 9.2 percent in national samples of the general adult population in the United States and Canada, with one-year prevalence rates of 3.5 to 4.7 percent (Koenen et al., 2017). However, these rates can be significantly higher in populations exposed to specific traumatic events, such as natural disasters or fire incidents.

Fire tragedies, in particular, can lead to severe emotional distress and physical damage, threatening life and property in unpredictable and terrifying ways (Pięta & Rzeszutek, 2021). The psychological impact of massive fire disasters on survivors' mental health was first documented following the Cocoanut Grove disaster in 1942 (Adler, 1943). Since then, numerous studies have highlighted the significant risk of PTSD among fire survivors. For instance, Schneider et al. (2012) found that individuals who experienced fire disasters were at increased risk of developing PTSD compared to the general population.

In the context of informal settlements like Mukuru-Sinai, the risk factors for developing PTSD are compounded by pre-existing socio-economic vulnerabilities. High population density, substandard housing, limited access to healthcare, and inadequate emergency response systems exacerbate the impact of such disasters (Kimani et al., 2012). These conditions not only increase the immediate physical and emotional toll of the disaster but also hinder recovery and access to mental health support. Moreover, Hallegatte et al. (2017) noted that people of low socioeconomic status are more vulnerable to fire disasters and are more likely to suffer serious consequences during and after the impact. Despite the high prevalence of such incidents, there is a dearth of research focusing on the psychological impact of fire disasters on survivors in informal settlements like Mukuru-Sinai. Understanding the prevalence of PTSD among these survivors is crucial for developing effective mental health interventions and support systems. As Ng et al. (2020) pointed out in their study of sub-Saharan Africa, the prevalence of probable PTSD in the general population was estimated at 22% (95% CI 13%-32%), but this rate could be significantly higher in disaster-affected populations. Therefore, this study aims to bridge this gap by assessing the prevalence of PTSD among fire disaster survivors in Mukuru-Sinai informal settlement, providing critical insights into the mental health consequences of such traumatic events in vulnerable communities.

1.2 Problem Statement

Posttraumatic stress disorder (PTSD) is a significant contributor to the global burden of disease, estimated to affect almost 4% of the world's population (Koenen et al., 2017). In sub-Saharan Africa, the prevalence of PTSD symptoms is estimated at 22.0% (95% CI 13.0-32.0%) according to Ng et al. (2020). The Mukuru-Sinai informal settlement in Nairobi, Kenya, experienced a devastating fire tragedy in September 2011 when a fuel pipeline leak resulted in a massive inferno. This disaster claimed approximately 120 lives, left 116 people hospitalized with severe injuries,

and displaced hundreds of residents (Huho et al., 2016). The severity of this event, coupled with the poor living conditions in the informal settlement, suggests a high risk for persistent trauma among survivors. Despite the significant impact of this disaster, there is limited research on the long-term psychological effects on survivors, particularly regarding the prevalence of PTSD. This lack of information hinders the development of targeted mental health interventions and support systems for this vulnerable population.

Furthermore, there is a significant gap in the literature concerning the prevalence of PTSD among survivors of fire disasters in informal settlements like Mukuru-Sinai. Most existing research tends to focus on either immediate post-disaster responses or on populations in more developed urban areas, without adequately addressing the unique challenges faced by residents of informal settlements. The socio-economic and cultural context of these communities presents distinct risk factors and resilience mechanisms that are not fully captured in current studies. Additionally, the long-term trajectory of PTSD symptoms in this population remains unexplored, as most studies focus on the immediate aftermath of disasters. This study sought to address these gaps by assessing the prevalence of PTSD among survivors of the Mukuru-Sinai fire disaster more than a decade after the event. Understanding the prevalence and persistence of PTSD in this context is critical for designing effective, culturally appropriate interventions and for allocating mental health resources to support long-term recovery in vulnerable communities affected by similar disasters.

1.3 Research Objective

To determine the prevalence of PTSD among the survivors of the Sinai Fire disaster in Mukuru-Sinai informal settlement, Nairobi County, Kenya

1.4 Research Question

What is the prevalence of PTSD among the survivors of the Sinai Fire disaster in Mukuru-Sinai informal settlement, Nairobi County, Kenya?

2.1 Literature Review

2.1.1 Theory of Shattered Assumptions

The Shattered Assumptive World Theory, introduced by Janoff-Bulman (1992), posits that individuals possess a set of core beliefs or assumptions about the world, which are fundamental to their sense of security and well-being. These assumptions typically include beliefs about personal invulnerability, the predictability and controllability of events, and the benevolence and meaningfulness of the world. When a traumatic event occurs, it shatters these fundamental assumptions, leading to a profound psychological crisis. According to this theory, these set of fundamental assumptions that individuals hold, form the bedrock of their understanding about themselves, and the world in which they live. The creation of these schemas begins in early childhood and is based on caregiver's responsiveness and dependability (Bowlby, 1969) and as individuals move towards adulthood, these schemas become increasingly resilient and resistant to change (Fiske, 2004). By the time adulthood is reached these schemas are so deeply embedded that they typically go unquestioned and unchallenged (Janoff-Bulman, 1992).

Usually, three fundamental assumptions are represented in such schemas; the world is a benevolent place, the world is meaningful, controllable, predictable and just, and as individuals, we are worthy

decent people (Janoff-Bulman, 1992). He notes that such assumptions provide individuals with a sense of security and safety by allowing them to believe that misfortune can be prevented if they do the right things, engage in appropriately cautious behaviors and behave as decent people. Although they argue that these assumptions are acting at the deepest levels of the psyche, they actually bear little resemblance to reality and are in fact nothing more than representations of the world (Janoff-Bulman, 1985). The result of this is that individuals are psychologically unprepared for engaging with traumatic events, which by their very definition are unexpected, unpredictable and uncontrollable (Joseph, 2012). Thus, when traumatic events are encountered, the result is a shattering of these fundamental assumptions about the individual and their place in the world (Janoff-Bulman, 1992).

Trauma survivors are forced to face the stark reality that they inhabit a world, which is risky, in which tragedy and misfortune do actually happen to good, careful people (DePrince & Freyd, 2013). Trauma strips away the sense of safety and security that these fundamental assumptions once provided according to Janoff-Bulman (2004). He emphasizes that the task of the trauma survivor is to reconstruct a viable assumptive world view that encompasses the trauma related information without being defined wholly by anxiety and vulnerability.

Support for the notion that worldview shattering is responsible for trauma symptoms is equivocal. Research aimed at assessing the shattered assumptions hypothesis has relied almost exclusively on the World Assumptions Scale (WAS) (Janoff-Bulman, 1989), which has been shown to have psychometric problems (Elklit et al., 2007; Kaler et al., 2008). However, while the theory states that worldview content is largely unconscious, the WAS requires participants to rate their global perceptions about abstract notions such as the degree to which the world is just.

This theory informs this study in that it highlights the impact of traumatic experiences on an individual's fundamental assumptions about themselves and the world. When faced with a traumatic event, such as the Sinai Fire disaster, survivors' basic beliefs about the world's benevolence, meaningfulness, and their self-worth may be shattered. This disruption in their assumptive world can lead to the development of post-traumatic stress disorder (PTSD) symptoms.

In the context of this study, the Shattered Assumptions Theory suggests that the survivors of the Sinai Fire disaster may have experienced a significant challenge to their pre-existing worldviews. To recover from the traumatic experience, it is necessary for them to create new assumptions or modify their old ones. This process of rebuilding their assumptive world is crucial for their psychological recovery and may influence the development of post-traumatic growth (PTG). However, the Shattered Assumptions Theory has limitations in fully informing this study. The theory does not provide a clear explanation of the specific relationship between trauma and people's views regarding the meaningfulness and benevolence of the world. Moreover, the theory's emphasis on the role of early childhood experiences in shaping an individual's assumptive world may not be applicable to all scenarios captured in the current study, which focuses on adults who have experienced a specific traumatic event.

2.1.2 Empirical Review

The prevalence of Posttraumatic Stress Disorder (PTSD) among disaster survivors has been a subject of extensive research, with studies revealing varying rates across different populations and types of disasters. Koenen et al. (2017) conducted a comprehensive analysis of data from 26 population surveys across 24 countries, including low-income, middle-income, and high-income

nations, as part of the World Health Organization World Mental Health Surveys. Their study, which included 71,083 respondents aged 18 and older, found that the cross-national lifetime prevalence of PTSD was 3.9% in the total sample and 5.6% among trauma-exposed individuals. Notably, half of the respondents with PTSD reported persistent symptoms, highlighting the chronic nature of the disorder in many cases.

The prevalence of PTSD can be significantly higher in populations directly affected by specific disasters. For instance, Perrin et al. (2007) examined the prevalence and risk factors for PTSD among rescue and recovery workers involved in the World Trade Center site following the 9/11 attacks. Their analysis of 28,962 workers revealed an overall PTSD prevalence of 12.4%, with rates ranging from 6.2% among police to 21.2% among unaffiliated volunteers. This study underscored the variability in PTSD rates across different occupational groups involved in disaster response and highlighted the increased risk for those with less prior disaster training or experience.

In the context of natural disasters, Adhikari and Kc (2019) investigated the prevalence of PTSD among adult survivors of the 2015 Nepal Earthquake. Their cross-sectional study of 291 adult survivors, conducted 10 months after the earthquake, found a PTSD prevalence of 24.10%. The study also noted that intrusion symptoms were the most prevalent, with a mean score of 3.24 ± 0.71 . This research highlights the significant psychological impact of natural disasters on affected populations and the persistence of PTSD symptoms even months after the event.

The prevalence of PTSD can also vary depending on the type of disaster and the specific population affected. Cherry et al. (2021) studied the prevalence of mental disorders in firefighters who responded to the 2016 devastating fire in Fort McMurray, Alberta, Canada. Using a combination of online questionnaires and structured clinical interviews, they estimated the prevalence of PTSD at 21.4% (15.7% to 29.1%) among the firefighters. This study emphasizes the high risk of PTSD among first responders and highlights the importance of mental health support for those involved in disaster response and recovery efforts.

The prevalence of PTSD in urban settings, particularly in informal settlements, presents unique challenges for researchers and mental health professionals. Sekoni et al. (2021) conducted a cross-sectional survey of 550 women aged 18 and above from selected slums in Ibadan, Nigeria, revealing a PTSD prevalence of 4.18% with a mean PTSD score of 5.80 ± 7.11 . Their study identified significant associations between PTSD and factors such as sexual abuse in childhood, past year intimate partner violence, and anxiety. These findings underscore the complex interplay between environmental stressors, personal history, and mental health outcomes in urban informal settlements.

In the Kenyan context, Jenkins et al. (2015) assessed the prevalence of probable PTSD and its associated risk factors in a general household population in Maseno area within Kisumu County. Their cross-sectional household survey found that 48% of respondents had experienced a severe trauma, with an overall prevalence rate of 10.6% for probable PTSD. This study highlights the significant burden of PTSD in rural Kenyan communities and emphasizes the need for targeted mental health interventions in these areas.

Further illustrating the impact of displacement on mental health, Musau et al. (2018) examined the prevalence of PTSD among internally displaced persons (IDPs) following the post-election violence in Kenya in 2007/8. Focusing on the Maai Mahiu camp in Nakuru County, their study revealed a remarkably high PTSD prevalence rate of 62.1%, with comparable rates across genders (57.8% among males and 62.8% among females). The researchers attributed this high prevalence

<https://doi.org/10.53819/81018102t2432>

to the unique circumstances of the IDPs, who had been violated by known neighbors and continued to live in the same region despite the country being at peace. These findings underscore the lasting psychological impact of political violence and forced displacement.

The prevalence of PTSD among specific occupational groups exposed to traumatic events has also been a focus of research in Kenya. Ongecha et al. (2014) assessed the prevalence rate of PTSD and associated risk factors among motor vehicle accident (MVA) survivors attending the orthopedic and trauma clinic at Kenyatta National Hospital, Nairobi. Their cross-sectional study of 264 patients found that females had a higher PTSD rate of 17.9% compared to males at 11.7%. Notably, the majority of those with PTSD (42.9%) were young adults aged 20-29 years. These results highlight the differential impact of traumatic events across gender and age groups, emphasizing the need for targeted interventions for high-risk populations.

2.2 Conceptual Framework

Conceptual framework is a combination of different unproven ideas which can only be interpreted through observable ideas or activities to help solve a problem. The conceptual framework is as shown in Figure 1.

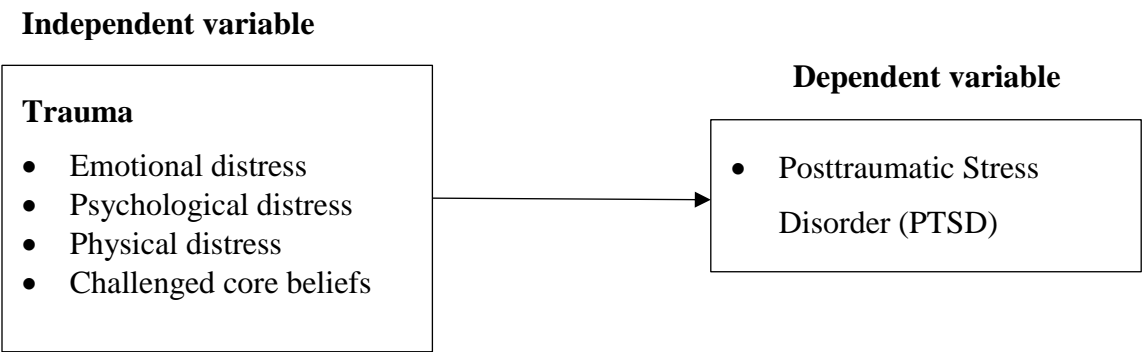


Figure 1: Conceptual Framework

The independent variable is the trauma arising from the fire disaster. The impact of trauma may cause several changes in survivors such as emotional distress, psychological changes in way of thinking, physical changes in the body such as pain, or gastric problems as well as spiritual distress in survivors as they grapple with the aftermath of the disaster. The dependent variable is PTSD as an outcome of the stress response to a traumatic event.

3.1 Methodology

The study employed a descriptive correlational design to investigate the prevalence of Posttraumatic Stress Disorder (PTSD) among survivors of the Sinai Fire disaster in Mukuru-Sinai informal settlement, Nairobi County, Kenya. This design was chosen for its ability to establish statistical relationships between variables while providing a detailed and accurate picture of the characteristics and behaviors of the study population. The target population comprised residents of Mukuru-Sinai who were directly affected by the fire disaster of September 12, 2011. A sample size of 378 participants was determined using Cochran's (1986) sample size formula, with a 10% attrition factor included to account for potential non-responses or incomplete data. Simple random

sampling was utilized to select participants from a comprehensive list of affected individuals compiled with the assistance of local authorities, including chiefs and community elders.

Data collection was conducted using a structured questionnaire that included the PTSD Checklist for DSM-5 (PCL-5), a validated 20-item self-report measure assessing the presence and severity of PTSD symptoms. The PCL-5 was chosen for its alignment with DSM-5 criteria for PTSD and its established reliability and validity in assessing PTSD symptoms. The questionnaire was administered face-to-face by trained research assistants to ensure accurate completion and to provide clarification when needed. To enhance the depth of understanding, qualitative data was also collected through interviews with key informants, including representatives from Red Cross, St. John Ambulance, local elders, and administrative officials. Ethical considerations were rigorously adhered to, including obtaining informed consent, ensuring confidentiality, and providing psychological support for participants who might experience distress during the study.

Data analysis for the prevalence of PTSD was conducted using descriptive statistics. PCL-5 scores were categorized into four severity levels: minimal or no PTSD symptoms (0-20), mild PTSD symptoms (21-30), moderate PTSD symptoms (31-50), and severe PTSD symptoms (51-80). The frequency and percentage of respondents falling into each severity category were calculated to determine the overall prevalence of PTSD among the survivors. A cut-off score of 31 on the PCL-5 was used to indicate clinically significant PTSD symptoms, based on its ability to balance sensitivity and specificity in identifying PTSD cases. The analysis was performed using SPSS software (v23), with results presented in tables and graphs to clearly illustrate the distribution of PTSD symptoms among the study population.

4.1 Results and Findings

The study achieved a high response rate, with 294 out of 340 questionnaires completed and returned, yielding an 86% response rate for the quantitative data collection. All 10 targeted key informant interviews were successfully conducted, resulting in a 100% response rate for the qualitative component. The overall response rate for the study was 84%.

The socio-demographic characteristics of the respondents revealed a relatively balanced gender distribution, with 52% male and 48% female participants. This near-equal representation allows for a comprehensive understanding of the experiences and challenges faced by both genders in the aftermath of the disaster. Age distribution among the respondents showed that the majority (41%) were in the 35-44 years age group, followed by 33% in the 25-34 years group. The 45-54 years and 18-24 years age groups each comprised 12% and 6% of the respondents, respectively. The older age groups of 55-64 years and 65+ years had the lowest representation at 8% and 6% respectively. This age distribution suggests that the study primarily captured the experiences of adults in their prime working years. Regarding education levels, 45% of respondents had less than high school education, 42% were high school graduates, and 13% had college or technical school education. This distribution indicates that a substantial portion of the respondents had limited formal education.

Employment status among the respondents showed that 9% were employed full-time, 39% were employed part-time, and 52% were unemployed. This high unemployment rate suggests significant financial hardships among the study population. The study also found that 96% of respondents believed they might have developed psychological issues since the disaster, highlighting the widespread perception of mental health impacts. However, only 4% reported having sought

professional help or treatment for these concerns, indicating a significant gap in mental health service utilization. Among those who sought professional help, only 4% were given a formal diagnosis for their psychological issues. Of those who received a diagnosis, 89% disclosed this information to family members, while only 11% shared it with friends. This pattern suggests that family members serve as the primary source of social support for individuals grappling with the psychological aftermath of the disaster.

4.2 Prevalence of PTSD among the survivors of the Sinai Fire disaster

The first objective of this study was to determine the prevalence of PTSD among the survivors of the Sinai Fire disaster in the Mukuru-Sinai informal settlement, Nairobi County, Kenya. To achieve this objective, the PCL-5 (PTSD Checklist for DSM-5) was administered to the respondents. The severity, the PCL-5 scores were categorized into four severity levels: minimal or no PTSD symptoms (0-20), mild PTSD symptoms (21-30), moderate PTSD symptoms (31-50), and severe PTSD symptoms (51-80). The frequency and percentage of respondents falling into each severity category were calculated to determine the overall prevalence of PTSD among the survivors. The results are as shown in Table 1.

Table 1: Prevalence of PTSD among the Survivors

PCL-5 Severity	Interpretation	Frequency	PTSD Prevalence
0-20	Minimal or no PTSD symptoms	120	40.80%
21-30	Mild PTSD symptoms	92	31.30%
31-50	Moderate PTSD symptoms	70	23.80%
51-80	Severe PTSD symptoms	12	4.10%
Total		294	100%

The PCL-5 assessment of PTSD symptoms among the 294 survivors of the Sinai Fire disaster revealed a range of symptom severities. Out of the total sample, 120 respondents (40.8%) reported minimal or no PTSD symptoms, falling into the 0-20 score range on the PCL-5 scale. The next category, representing mild PTSD symptoms with scores ranging from 21-30, included 92 respondents, accounting for 31.3% of the sample. These two lower severity categories combined encompassed 72.1% of the total respondents, indicating that a majority of the survivors reported either no, minimal, or mild PTSD symptoms at the time of the assessment. Scores lower than 30 in this study indicate the respondent either had subthreshold symptoms of PTSD or does not meet criteria for PTSD. Moving to the higher severity categories, 70 respondents (23.8%) scored in the range of 31-50 on the PCL-5, which is interpreted as moderate PTSD symptoms. This group represented nearly a quarter of the total sample.

The highest severity category, indicating severe PTSD symptoms with scores ranging from 51-80, included 12 respondents, making up 4.1% of the sample. When combined, the moderate and severe symptom categories accounted for 27.9% of the total respondents. This proportion, representing 82 individuals out of the 294 surveyed, reflects the prevalence of clinically significant PTSD

<https://doi.org/10.53819/81018102t2432>

symptoms among the survivors, based on the study's defined cutoff score of 31 on the PCL-5. The assessment results demonstrate a spectrum of PTSD symptom severity among the Sinai Fire disaster survivors, with a substantial minority experiencing moderate to severe symptoms that may require clinical attention, while the majority reported symptoms below the clinical threshold.

To provide a more comprehensive understanding of the survivors' experiences, qualitative data was collected through interviews with key informants. The following responses highlight some of the key themes that emerged from these interviews, offering insight into the lived experiences of those affected by the disaster. One of the Red Cross respondents (RC1) described their experience with psychological distress symptoms following the fire disaster:

"I have been struggling with intense feelings of fear and anxiety ever since the fire. I often have nightmares and flashbacks of the event, which makes it difficult for me to sleep well and concentrate on daily tasks. This has affected my work a lot." (Participant RC1, personal communication, February 2024)

An elder from the Nyumba Kumi (NK2) shared how the psychological symptoms have impacted their daily life:

"The constant state of hypervigilance and emotional distress has made it challenging for me to engage in social activities and maintain relationships with others. I find myself withdrawing from people and avoiding places that remind me of the fire. This has affected my marriage and my relationship with my children" (Participant NK2, personal communication, February 2024)

4.3 Discussion of findings

The objective of this study was to ascertain the prevalence of Posttraumatic Stress Disorder (PTSD) among survivors of the Sinai Fire disaster in the Mukuru-Sinai informal settlement, Nairobi County, Kenya. To achieve this, the PTSD Checklist for DSM-5 (PCL-5) was administered to 294 survivors, categorizing the results into four severity levels. The findings revealed that 40.8% of respondents reported minimal or no PTSD symptoms, 31.3% experienced mild symptoms, 23.8% demonstrated moderate PTSD symptoms, and 4.1% reported severe symptoms. In total, 27.9% of the sample, representing 82 individuals, exhibited clinically significant PTSD symptoms based on the study's defined cutoff score of 31 on the PCL-5. A cutoff score of 31 was chosen based on its ability to balance sensitivity, that is correctly identifying those with PTSD and specificity that is correctly identifying those without PTSD. This balance was crucial for reducing false positives and false negatives in this study.

The prevalence of PTSD among survivors of the Sinai Fire disaster in Mukuru-Sinai informal settlement, at 27.9%, aligns with findings from several studies conducted in similar contexts. This rate falls within the range of PTSD prevalence reported in various disaster-affected populations across different countries. For instance, Ng et al. (2020) found that the overall pooled prevalence of probable PTSD in sub-Saharan Africa was 22% (95% CI 13%–32%), with current prevalence rates reaching up to 25% (95% CI 16%–36%). The slightly higher rate observed in the current study could be attributed to the specific nature of the fire disaster and the living conditions in the informal settlement. These conditions may include other subsequent traumas the respondents may have faced since the Sinai fire. A high prevalence was found among IDP's living in Maai Mahiu camp in Nakuru County. The study examined the prevalence of PTSD and associated socio-demographic factors. The prevalence was 62.1%. They attributed the high prevalence to fact that

the respondents were IDPs who had been violated by neighbors who were known to them and who were still living in the same region, despite the fact that the country was at peace.

The findings of this study are comparable to those reported by Adhikari and Kc (2019), who found a PTSD prevalence of 24.10% among adult survivors of the 2015 Nepal earthquake. Similarly, Bah (2020) reported a PTSD prevalence of 21.8% among Ebola survivors in Sierra Leone. These studies suggest that the prevalence of PTSD among disaster survivors in various contexts tends to fall within a similar range, typically between 20% and 30%. However, it's important to note that some studies have reported higher prevalence rates, such as Cofini et al. (2015), who found a 43% PTSD prevalence among earthquake survivors in Italy, and Musau et al. (2018), who reported a 62.1% PTSD prevalence among IDPs following post-election violence in Kenya.

The study's finding that 23.8% of survivors experienced moderate PTSD symptoms and 4.1% experienced severe symptoms is particularly noteworthy. This distribution of symptom severity is consistent with the findings of Koenen et al. (2017), who reported that half of the respondents with PTSD across 24 countries experienced persistent symptoms. The presence of a substantial minority with clinically significant symptoms underscores the need for targeted mental health interventions, as highlighted by various researchers (Koenen et al., 2017; Bah, 2020; Taru et al., 2017). The study also found out that only 4% of the survivors sought help. This agrees with Koenen et al. (2017) study that posited that only half of those with severe PTSD report receiving any treatment and only a minority receive specialty mental health care globally. This may indicate poor help seeking behaviors or unavailability of such services for this population.

The study found that a majority of survivors (72.1%) reported minimal or mild PTSD symptoms. This finding diverges somewhat from studies like Sheikh et al. (2014), who found that 42.2% of IDPs in Nigeria had a diagnosis of PTSD, and Taru et al. (2017), who reported that 55.5% of armed conflict victims in Nigeria had PTSD. The lower prevalence of severe symptoms in the current study could be due to various factors, including the time elapsed since the disaster, the specific nature of the traumatic event, or the resilience of the affected community.

The prevalence rates observed in this study, while significant, are lower than those reported in some other Kenyan studies. For example, Jenkins et al. (2015) found an overall prevalence rate of 10.6% of probable PTSD in a general household population in Kisumu County, while Tippens et al. (2021) reported that 52.8% of urban-displaced Congolese adults in Nairobi experienced psychological distress. The differences in prevalence rates across these studies highlight the variability in PTSD manifestation across different populations and contexts, even within the same country, and underscore the need for context-specific assessments and interventions.

5.1 Conclusion

The study concludes that a minority of survivors of the Sinai Fire disaster in Mukuru-Sinai informal settlement experience clinically significant levels of Post-Traumatic Stress Disorder (PTSD) symptoms. While the majority of survivors reported minimal or mild PTSD symptoms, the presence of moderate to severe symptoms in a significant portion of the population highlights the long-term psychological impact of the disaster. This finding underscores the enduring nature of trauma-related symptoms and the need for ongoing mental health support in disaster-affected communities, even years after the event. The varying levels of PTSD symptom severity observed among survivors suggest that individual differences in trauma response and resilience play a crucial role in long-term psychological outcomes following such catastrophic events.

6.1 Clinical Implication

The findings of this study have several important clinical implications for mental health professionals working with survivors of disasters and other traumatic events. First, the prevalence of PTSD symptoms among a significant minority of survivors highlights the need for long-term mental health screening and support in disaster-affected communities. Clinicians should be aware that PTSD symptoms may persist for years after the traumatic event and should incorporate trauma-informed approaches in their assessment and treatment strategies.

7.1 Recommendations

The study recommends that local health authorities implement regular PTSD screening programs in the community to identify individuals with persistent symptoms. Mental health organizations should develop and distribute psychoeducation materials about PTSD symptoms and available support services. Community leaders, in collaboration with mental health professionals, should establish community-based support groups for survivors to share experiences and coping strategies. The Ministry of Health, in partnership with NGOs, should train local health workers and community leaders in basic trauma-informed care and referral procedures.

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