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

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Relationship between PTSD and Socio-Demographic Characteristics 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

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Abstract

This study investigated the relationship between post-traumatic stress disorder (PTSD) and socio-demographic characteristics among survivors of the Sinai Fire disaster in Mukuru-Sinai informal settlement, Nairobi County, Kenya. Despite the prevalence of fire disasters in informal settlements, there is limited research on their psychological impact, particularly in this context. The study was guided by the Shattered Assumptions Theory, which posits that traumatic events can disrupt individuals' core beliefs about the world's benevolence, meaningfulness, and their self-worth. A descriptive correlational design was employed, with a sample of 378 survivors selected through simple random sampling. Data were collected using a mixed-methods approach, including a questionnaire with the PTSD Checklist for DSM-5 (PCL-5) and key informant interviews. Chi-square tests were conducted to examine associations between PTSD and socio-demographic factors. The findings revealed significant relationships between PTSD symptoms and gender ($p=0.012$), age ($p=0.014$), and employment status ($p=0.008$), but no significant association with education level ($p=0.343$). Women, older individuals, and those experiencing employment instability were found to be more vulnerable to developing PTSD. The study concluded that socio-demographic characteristics play a crucial role in the prevalence of PTSD symptoms among disaster survivors, highlighting the complex interplay between individual characteristics and trauma response. Recommendations include designing targeted interventions for high-risk groups, integrating mental health support with employment assistance programs, developing age-

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appropriate PTSD interventions, and conducting regular assessments of socio-demographic risk factors to inform resource allocation and intervention planning. These findings underscore the importance of considering diverse socio-demographic factors in assessing PTSD risk and designing interventions for disaster-affected populations in informal settlements.

Keywords: *Socio-Demographic Characteristics, Disaster, Mukuru-Sinai Informal Settlement*

1.1 Introduction

Posttraumatic stress disorder (PTSD) is a mental health condition that can develop in individuals who have experienced or witnessed a traumatic event such as war, sexual assault, physical violence, natural disasters, or accidents (Fieldman, 2017; National Institute of Mental Health, 2020). The disorder is characterized by a range of symptoms such as intrusive thoughts, flashbacks, nightmares, avoidance of stimuli associated with the traumatic event, negative changes in mood and cognition, and increased arousal and reactivity (APA, 2013). The DSM-5-TR notes that these symptoms manifest a month after the traumatic experience and may persist long after the event. It also adds that these symptoms can significantly impair an individual's ability to function in daily life. Posttraumatic stress disorder (PTSD) can be treated with various forms of psychotherapy, medication, or a combination of both (Fieldman, 2017). Moreover, PTSD has been noted to be the most frequent psychopathology in the aftermath of disasters (Alase, 2017; Galea, 2017).

Universal population studies indicate that 28% to 90% of people in high-income countries have been exposed to at least one traumatic event in their course of life; the most frequent events are unanticipated bereavement, road traffic accidents, and physical assault (Galea, 2017; Kangaslampi et al., 2021). Despite this high exposure to stressors, the prevalence of PTSD ranges from 1.3% to 8.8% (Adhikari & Kc, 2019). PTSD can occur in people of any ethnicity, nationality, or culture, and at any age (Sanderson, 2017). Studies have shown that the prevalence of PTSD among disaster survivors can be alarmingly high. Research in various disaster-affected populations indicates that PTSD can affect anywhere from 20% to 40% of survivors, depending on the nature and severity of the event, as well as the availability of post-disaster support (Neria, 2008). In Kenya, limited research has been conducted on the mental health impact of fire disasters, particularly in informal settlements, highlighting a significant gap in understanding and addressing the needs of affected populations.

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.

1.2 Problem Statement

Despite the high prevalence of fire disasters in informal settlements, there is a significant lack of research focusing on the psychological impact of these traumatic events on survivors, particularly in the context of Mukuru-Sinai. Global epidemiological data show that over 70.0% of people have been exposed to at least one traumatic event, with 30.5% of these reporting exposure to four or more traumatic incidences (Benjet et al., 2016). Moderate quality evidence finds the lifetime worldwide prevalence of PTSD in the general population to be around 3.9% (World Health

Organization, 2020). In Sub-Saharan Africa, the prevalence of Post-Traumatic Stress Disorder (PTSD) symptoms is estimated at 22.0% (95% CI 13.0-32.0%) according to Ng et al. (2020). They also note that people living in sub-Saharan Africa (SSA) are disproportionately exposed to trauma and may be at increased risk for posttraumatic stress disorder (PTSD). Existing studies tend to examine either PTSD or PTG in isolation, failing to explore the complex relationship between these two outcomes (Zoellner & Maercker, 2006). This narrow focus limits our understanding of the full spectrum of psychological responses to trauma and hinders the development of comprehensive interventions.

Moreover, the unique socio-economic and cultural context of informal settlements, which often includes high population density, substandard housing, limited access to healthcare, and inadequate emergency response systems, presents distinct challenges and resilience factors that are not sufficiently addressed in current research (Kimani et al., 2012). These contextual factors can significantly influence the prevalence and severity of PTSD symptoms, as well as the potential for PTG, among fire disaster survivors. A study of Hurricane Katrina survivors found that African Americans were more likely to experience PTSD symptoms than other racial groups (Rhodes et al., 2010). Consequently, there is a pressing need for research that takes into account the specific vulnerabilities and strengths of individuals living in informal settlements, in order to develop culturally sensitive and effective mental health interventions.

1.3 Research Objective

To determine the relationship between PTSD and socio-demographic characteristics among the survivors of the Sinai Fire disaster in Mukuru-Sinai informal settlement, Nairobi County, Kenya

1.4 Research Question

Is there a relationship between PTSD and socio-demographic characteristics 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), provides a valuable framework for understanding the psychological impact of traumatic events, such as the Sinai Fire disaster, on survivors' core beliefs and assumptions about the world. This theory posits that individuals hold fundamental assumptions about the world's benevolence, meaningfulness, and their own self-worth, which form the bedrock of their sense of security and well-being. When a traumatic event occurs, it can shatter these assumptions, leading to a profound psychological crisis and potentially contributing to the development of post-traumatic stress disorder (PTSD) symptoms.

In the context of the Sinai Fire disaster, survivors' basic beliefs about the world's safety, predictability, and controllability may have been severely challenged. The sudden and catastrophic nature of the fire likely disrupted their assumptive world, forcing them to confront the reality that misfortune can strike even those who perceive themselves as cautious and decent people. This shattering of assumptions can strip away the sense of security that once provided a buffer against

anxiety and vulnerability, leaving survivors psychologically unprepared to process and cope with the traumatic experience.

The Shattered Assumptions Theory highlights the critical role of the survivors' pre-existing worldviews in shaping their psychological responses to the disaster. It suggests that the extent to which the fire challenged or shattered their fundamental assumptions may influence the severity of their PTSD symptoms and their overall ability to recover and find meaning in the aftermath of the trauma. Survivors who held more rigid or inflexible assumptions may be more likely to experience a greater sense of dissonance and distress when confronted with the reality of the disaster, potentially exacerbating their PTSD symptoms.

Furthermore, the theory underscores the importance of the process of rebuilding and modifying assumptions in the wake of the traumatic event. For the Sinai Fire disaster survivors, reconstructing a viable assumptive world that integrates the trauma-related information without being overwhelmed by anxiety and vulnerability is crucial for their psychological recovery and the potential development of post-traumatic growth (PTG). This process may involve grappling with questions of meaning, reassessing priorities, and finding ways to restore a sense of safety and control in their lives. The theory's emphasis on early childhood experiences in shaping assumptive worlds may not adequately account for the influence of more proximal factors, such as socio-economic status, social support networks, and cultural context, which can play a significant role in shaping individuals' responses to trauma.

The Shattered Assumptions Theory offers a valuable starting point for understanding the psychological impact of the Sinai Fire disaster on survivors' core beliefs and assumptions. It highlights the need to consider the interplay between pre-existing worldviews, the severity of the traumatic event, and the process of rebuilding assumptions in the aftermath of the disaster when examining the relationship between PTSD and socio-demographic characteristics in this population.

2.1.2 Empirical Review

Numerous studies have investigated the relationship between post-traumatic stress disorder (PTSD) and socio-demographic characteristics among disaster survivors, yielding varied and sometimes conflicting results. A study conducted on survivors of the 2008 Wenchuan earthquake in China found that older individuals exhibited higher rates of PTSD symptoms (Zhang & Ho, 2011). This finding is consistent with the notion that age may influence vulnerability to PTSD, although other studies have found no significant association between age and PTSD risk (Breslau et al., 1999). Gender has also been identified as a potential risk factor, with a meta-analysis of 56 studies suggesting that women have a 2.3 times higher risk of developing PTSD than men (Tolin & Foa, 2006). This gender disparity has been attributed to various factors, including the higher likelihood of women experiencing certain types of traumas, such as sexual assault and intimate partner violence. However, some studies, such as Breslau et al. (1998), have found no significant association between gender and PTSD risk.

Race and ethnicity have also been explored as potential factors influencing PTSD prevalence among disaster survivors. A study of Hurricane Katrina survivors found that African Americans were more likely to experience PTSD symptoms than other racial groups (Rhodes et al., 2010). The authors suggest that this disparity may be related to the disproportionate exposure to stressors and losses experienced by African American survivors. However, other studies have found no

significant association between race/ethnicity and PTSD risk (Breslau et al., 1998). Socioeconomic status has also been investigated as a potential predictor of PTSD. Kessler et al. (2021) found that low socioeconomic status, in terms of education and income, was associated with a higher risk of PTSD among individuals seeking emergency department treatment following a motor vehicle collision. This finding highlights the potential role of socioeconomic disadvantage in exacerbating vulnerability to PTSD.

The relationship between education level and PTSD risk has yielded mixed results in the literature. Some studies, such as Arebo et al. (2022), have found a higher prevalence of PTSD among individuals with lower levels of education, while others, such as Agha and Haque (2021), have found no meaningful differences in post-traumatic growth based on education level, except for participants with primary education reporting significantly higher post-traumatic growth compared to uneducated participants. These discrepancies suggest that the relationship between education and PTSD may be complex and influenced by other factors, such as the nature of the traumatic event or cultural context.

Employment status has also been identified as a significant predictor of PTSD among disaster survivors. Fel et al. (2022) concluded that PTSD is not only the result of violence and damage caused by war but also of other stressful circumstances associated with social and financial conditions of life. Their study found that material security was associated with lower PTSD rates, but only among individuals without children. Similarly, Rhodes et al. (2010) recommended long-term health and mental health services for low-income disaster survivors, especially those who experience disaster-related stressors and loss, highlighting the potential impact of economic factors on PTSD development and recovery. These findings underscore the importance of considering socioeconomic factors when assessing PTSD risk and developing interventions for disaster-affected 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.

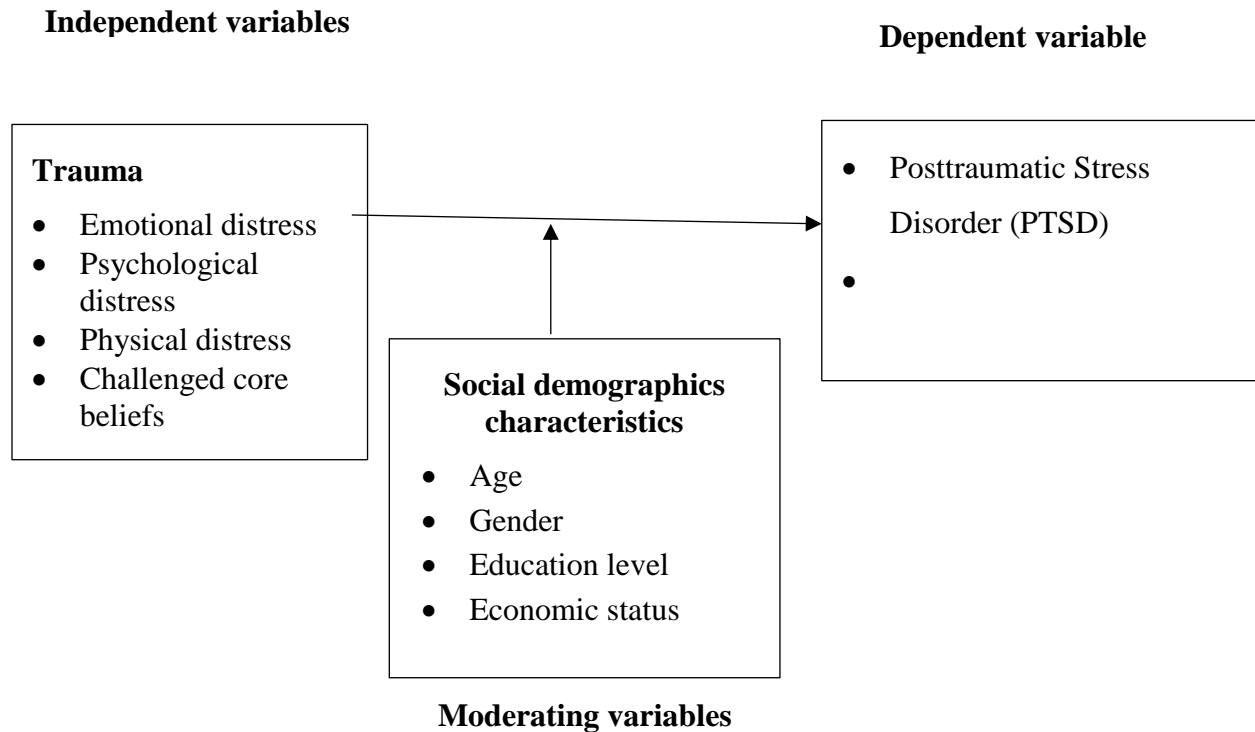


Figure 1: Conceptual Framework

The conceptual framework presents the independent, moderating and the dependent variables. 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 moderating variables are the social demographics characteristics that include age, gender, economic status, education level cultural factors and marital status. These can cause the survivors to process the trauma differently. The dependent variables is PTSD as an outcome of the stress response to a traumatic event..

3.1 Methodology

The study adopted a descriptive correlational design to investigate the relationship between PTSD and socio-demographic characteristics among the survivors of the Sinai Fire disaster in the Mukuru-Sinai informal settlement, Nairobi County, Kenya. The descriptive correlational design was chosen as it allows for the establishment of a statistically corresponding relationship between two study variables (Tobi & Kampen, 2018). The target population for this study was the residents of Mukuru-Sinai who were directly affected by the fire disaster through injury, death of a loved one, or witnessing the distressing event happening to a loved one. The study employed a simple random sampling technique to select participants from the pool of fire victims, with the help of local authorities, including chiefs and local elders. The sample size was determined using Cochran's (1986) formula, yielding a total of 378 respondents, with an additional 38 participants (10%) used for a pretest study.

Data were collected using a mixed-methods approach, incorporating both quantitative and qualitative data. For the quantitative data, a questionnaire was administered face-to-face, which included the PTSD Checklist for DSM-5 (PCL-5) to assess PTSD symptoms and a researcher-developed section on socio-demographic characteristics. The PCL-5 is a 20-item self-report measure that assesses the presence and severity of PTSD symptoms, with items corresponding to the DSM-5 criteria for PTSD (Blevins et al., 2015). Qualitative data were gathered through interviews with key informants, including representatives from the Red Cross, St. John Ambulance, local elders (Nyumba Kumi), and the local administration (Chief). The study obtained ethical approval from the United States International University-Africa Institutional Review Board (IRB) and the National Commission for Science, Technology, and Innovation (NACOSTI) before commencing data collection.

The collected data were analyzed using both descriptive and inferential statistics. To determine the relationship between PTSD and socio-demographic characteristics, chi-square tests were conducted to examine the associations between PTSD and various socio-demographic factors, including gender, age, education level, and employment status. The tests aimed to identify statistically significant relationships between these variables and the prevalence of PTSD among the survivors. The study also employed univariate analysis to further explore the relationships between PTSD and socio-demographic characteristics.

The study addressed various ethical considerations to ensure the well-being and rights of the participants. Informed consent was obtained from all participants, and they were assured of confidentiality and their right to withdraw from the study at any point. To minimize potential harm, trained mental health professionals were available to assess and provide support to participants who experienced distress during the study. Anonymity was maintained by removing any identifying features from the questionnaires, and data were coded for analysis. The study also ensured cultural sensitivity by considering the community's specific beliefs, practices, and social norms when designing and conducting the research.

4.1 Results and Findings

The study's objective aimed to elucidate the relationship between Post-Traumatic Stress Disorder (PTSD) and socio-demographic characteristics among survivors of the Sinai Fire disaster in the Mukuru-Sinai informal settlement, Nairobi County, Kenya. The analysis employed chi-square tests to examine the associations between PTSD and various socio-demographic factors, including gender, age, education level, and employment status. These tests were conducted to determine whether there were statistically significant relationships between these variables and the prevalence of PTSD among the survivors. The results are presented in Table 1.

Table 1: PTSD and socio-demographic characteristics among the survivors

Socio-demographic Characteristic	Chi-square Value (χ^2)	Degrees of Freedom (df)	P-value	Significance
Gender	6.32	1	0.012	Significant
Age	12.87	4	0.014	Significant
Education Level	2.14	2	0.343	Not Significant
Employment Status	9.56	2	0.008	Significant

The findings revealed a significant association between gender and PTSD symptoms ($\chi^2 = 6.32$, $df = 1$, $p = 0.012$). This result suggests that there is a relationship between gender and PTSD symptoms among survivors of the Sinai Fire disaster. The significant p-value indicates that the distribution of PTSD symptoms varies between males and females in this population. This implies that gender may be an important factor to consider in the assessment and treatment of PTSD in disaster-affected populations. This finding aligns with existing literature that often reports gender-related variations in PTSD symptomatology. Age was also found to have a significant relationship with PTSD symptoms among the survivors ($\chi^2 = 12.87$, $df = 4$, $p = 0.014$). The significant p-value indicates that the prevalence of PTSD varied across different age groups. This finding underscores the importance of considering age-specific vulnerabilities and resilience factors in disaster mental health interventions.

The study found no significant association between education level and PTSD symptoms ($\chi^2 = 2.14$, $df = 2$, $p = 0.343$). This result implies that the likelihood of developing PTSD following the disaster was not significantly influenced by the survivors' educational attainment. This finding suggests that in the context of this particular disaster, other factors may have played a more prominent role in determining PTSD symptoms.

Employment status, however, demonstrated a significant relationship with PTSD symptoms ($\chi^2 = 9.56$, $df = 2$, $p = 0.008$). This finding indicates that the survivors' employment status was associated with their likelihood of developing PTSD. The significant association could reflect the role of economic stability and resources in coping with traumatic experiences. It may also suggest that employment-related factors, such as job loss or financial stress resulting from the disaster, could contribute to the development of PTSD symptoms. This finding highlights the importance of considering socioeconomic factors in disaster mental health interventions and the potential need for integrated psychosocial and economic support in disaster recovery efforts.

Based on the findings, the first null hypothesis (H_0) stating "There is no significant relationship between PTSD and socio-demographic characteristics among the survivors of the Sinai Fire disaster in Mukuru-Sinai informal settlement, Nairobi County, Kenya" was rejected. The chi-square analyses revealed statistically significant associations between PTSD symptoms and three out of four examined socio-demographic characteristics: gender ($p = 0.012$), age ($p = 0.014$), and employment status ($p = 0.008$). These results indicated that these factors were indeed associated to the likelihood of developing PTSD among the survivors. However, the study found no significant relationship between education level and PTSD symptoms ($p = 0.343$). Therefore, while the null hypothesis was rejected for gender, age, and employment status, it failed to be rejected for education level.

To further explore the relationship between PTSD and socio-demographic characteristics, key informants were asked about their observations regarding how PTSD symptoms manifest across different demographic groups. A Red Cross volunteer (RC3) shared their insights on gender differences:

"We noticed that women in the community tend to report more emotional symptoms like anxiety and depression, while men often express their distress through irritability or increased alcohol use. It's also been our experience that women are generally more willing to seek help for their symptoms." (Participant (RC3), personal communication February 2024)

The interviewees were also asked about how factors such as education level, employment status, or family structure might influence PTSD symptoms. A village elder (VE1) provided perspectives on the influence of socioeconomic factors:

"Those who lost their livelihoods in the fire and remain unemployed appear to have more severe and persistent PTSD symptoms. The constant stress of financial instability seems to compound their trauma. On the other hand, survivors who managed to find stable employment or had strong family support networks generally show better recovery."
Participant (VE1), personal communication February 2024).

4.2 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.

4.3 Discussion of findings

The objective of this study sought to investigate the relationship between Post-Traumatic Stress Disorder (PTSD) and socio-demographic characteristics among survivors of the Sinai Fire disaster in the Mukuru-Sinai informal settlement, Nairobi County, Kenya. Chi-square tests were employed to examine associations between PTSD and various socio-demographic factors, including gender, age, education level, and employment status. The findings revealed significant associations

between PTSD symptoms and gender ($\chi^2 = 6.32$, $df = 1$, $p = 0.012$), age ($\chi^2 = 12.87$, $df = 4$, $p = 0.014$), and employment status ($\chi^2 = 9.56$, $df = 2$, $p = 0.008$). However, no significant association was found between education level and PTSD symptoms ($\chi^2 = 2.14$, $df = 2$, $p = 0.343$). These results led to the rejection of the null hypothesis for gender, age, and employment status, indicating that these factors were indeed associated with the likelihood of developing PTSD among the survivors.

The findings of this study regarding the relationship between PTSD and socio-demographic characteristics among survivors of the Sinai Fire disaster align with several previous studies while also presenting some unique insights. The significant association found between gender and PTSD symptoms is consistent with a substantial body of research. For instance, Tolin and Foa (2006) conducted a meta-analysis of 56 studies and found that women had a 2.3 times higher risk of developing PTSD than men. This gender disparity is further supported by Arebo et al. (2022), who reported that female respondents had higher odds of developing PTSD compared to male respondents (AOR: 0.49; 95% CI: 0.30–0.81; $P = 0.005$) among people with HIV in Uganda. Similarly, Osiemo et al. (2022) found a high prevalence of PTSD (71.2%) among female survivors of sexual violence in Nairobi County, Kenya. These findings collectively underscore the importance of considering gender-specific vulnerabilities in PTSD assessment and treatment.

The significant relationship observed between age ($p = 0.014$) and PTSD symptoms in this study is corroborated by some previous research, although the literature presents mixed findings. Zhang & Ho (2011) found that older age was associated with higher rates of PTSD symptoms among survivors of the 2008 Wenchuan earthquake in China. Conversely, Arebo et al. (2022) reported a higher prevalence of PTSD among individuals aged 40 years and above (47.6%) in their study of people with HIV in Uganda. On the other hand, Mejia et. Al (2024) found that there was less risk of PTSD at an older age ($p < 0.001$). These diverse findings suggest that the relationship between age and PTSD may be context-dependent and influenced by other factors specific to the traumatic event or population studied. The results highlight the necessity of considering age-specific vulnerabilities and resilience factors in disaster mental health interventions.

This result suggests that there is a relationship between gender and PTSD symptoms among survivors of the Sinai Fire disaster. The significant p -value indicates that the distribution of PTSD symptoms varies between males and females in this population. This finding aligns with existing literature that often reports gender-related variations in PTSD symptomatology. Cofini et al. (2005), Seponski et al. (2019) and Atwail, et al. (2023), found that being female predisposed a survivor to experience higher PTSD and higher mental health symptoms. This implies that gender may be an important factor to consider in the assessment and treatment of PTSD in disaster-affected populations and the kind of interventions to undertake.

The lack of a significant association between education level and PTSD symptoms in this study diverges from some previous findings but aligns with others. Arebo et al (2022) reported a higher prevalence of PTSD among those with no formal education (56.3%) in their study. However, Agha and Haque (2021) found no meaningful mean group differences in post-traumatic growth based on education level, except for participants with primary education reporting significantly higher post-traumatic growth compared to uneducated participants. Edeh et al. (2023) comparative study sought to find the prevalence difference in PTSD between two communities, one with direct exposure to the conflict and another with indirect exposure some years after the crisis in Benue state in Nigeria. An association was found between a lower educational qualification and PTSD

($\chi^2 = 8.373$; $p = 0.039$). This showed that PTSD can be a prolonged mental ill-effect of crisis and proximity to trauma sites increases vulnerability including lower education. These contrasting results suggest that the relationship between education and PTSD or post-traumatic growth may be complex and potentially moderated by other factors such as the nature of the traumatic event or cultural context.

The significant relationship found between employment status and PTSD symptoms in this study is supported by previous research emphasizing the role of economic factors in mental health outcomes following traumatic events. Fel et al. (2022) concluded that PTSD is not only the result of violence and damage caused by war but also of other stressful circumstances associated with social and financial conditions of life. Their study found that material security was associated with lower PTSD rates, but only among individuals without children. Similarly, Rhodes et al. (2010) recommended long-term health and mental health services for low-income disaster survivors, especially those who experience disaster-related stressors and loss, highlighting the potential impact of economic factors on PTSD development and recovery.

The rejection of the null hypothesis for gender, age, and employment status, but not for education level, in this study reflects the complex interplay of socio-demographic factors in PTSD development. These findings are broadly consistent with the literature, which often reports mixed or context-dependent results. For example, Ndeti et al. (2022) found that female gender, along with other factors such as major depression and stress, were significant predictors of suicidal ideation among Kenyan students. Also Musau et al. (2018) examined the prevalence of PTSD and associated socio-demographic factors among IDPs following the post-election violence in Kenya in 2007/8. The study focused on the Maai Mahiu camp in Nakuru County found that the data did not reveal any socio-demographic variable as a predictor for PTSD development. The variability in findings across different studies underscores the importance of considering multiple socio-demographic factors and their potential interactions in understanding PTSD risk and developing targeted interventions for disaster-affected populations.

Yousef, et al (2021) study investigated trauma exposure and estimated PTSD prevalence among university students in Deir-ez-Zor, a Syrian suggested that early intervention to help the affected population restore their mental health, enabling them to face the challenges and demands of the post-conflict period. Also, Aoun, et al. (2018) who conducted a study aimed at examining post-traumatic stress disorder (PTSD) symptoms and identifying associated risk factors in a sample of Syrian refugees living in North Lebanon felt that early screening could help identify individuals who would benefit from mental health interventions. Such measures would have helped the survivors of the Mukuru- Sinai fire.

5.1 Conclusion

The study concludes that socio-demographic characteristics, particularly gender, age, and employment status, are significantly associated with the prevalence of PTSD symptoms among survivors of the Sinai Fire disaster. These findings highlight the complex interplay between individual characteristics and trauma response, suggesting that certain demographic groups may be more vulnerable to developing PTSD following a disaster. The lack of association between education level and PTSD symptoms indicates that the impact of trauma transcends educational backgrounds in this context. These conclusions emphasize the importance of considering diverse socio-demographic factors when assessing PTSD risk and designing interventions for disaster-affected populations.

6.1 Clinical Implication

The associations between PTSD and socio-demographic characteristics suggest that targeted interventions may be necessary for specific groups, such as women, older individuals, and those experiencing employment instability.

7.1 Recommendations

The study recommends that mental health service providers design targeted interventions for high-risk groups, such as women and older individuals. Local government agencies should integrate mental health support with employment assistance programs for unemployed survivors. Mental health professionals should develop age-appropriate PTSD interventions that consider the unique needs of different age groups. Research institutions, in collaboration with local health authorities, should conduct regular assessments of socio-demographic risk factors to inform resource allocation and intervention planning.

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