Coping Mechanisms for Trauma among Flood Disaster Victims in South-South Nigeria.

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ABSTRACT

This research looked at methods adopted as coping mechanisms for Post-Traumatic Stress Disorder (PTSD) among flood disaster victims in South-South Nigeria. This area comprises of six states, which is one of the regions most affected by flood. The study is guided by two objectives and related research questions which includes the PTSD indicators and the coping mechanisms among the flood victims. The research design utilizes survey method to collect primary data from the affected communities using questionnaire. The sample population is 1,063,732 from six most affected local government areas in each of the state. Sampling technique adopted is both purposive and random sampling with a sample size of 399, determined using Taro Yamane and participants selected across 30 communities. The data was analyzed using descriptive statistics in form of mean, percentages, and frequencies presented in tables. The findings revealed PTSD indicators such as anxiety, fear, nightmares, and physical symptoms like headaches and stomach pains, which is predominant among sampled communities, while coping strategies include prayer, seeking support from family and friends, accessing mental health care, and avoiding memories of the flood. The study concluded that flood victims experience significant psychological impacts, with diverse coping strategies. It recommends that government put in place funding, institutional framework and mental health professionals that will provide psychosocial support to the effected victims. This research underscores the importance of timely and comprehensive mental health interventions in post-disaster recovery efforts.

Keywords: Coping, Prevalence, Ecological, Psychosocial, Nightmares, Incapacitation, Trauma.

INTRODUCTION

Disasters, whether natural or man-made has been a phenomenon with mankind for a long time, shaping our social-economic lives. Disasters like flood, earthquake, hurricane, wildfire, typhoon, war, and many more has increased in recent years, bringing unimaginable hardships and long-term adverse effects on humanity (UN News, 2021). In 1992, The World Health Organization (WHO) provided one of several definitions of a disaster, stating that it is a sudden ecological phenomenon of sufficient magnitude that usually require external support for affected people to survive. Natural disasters have far-reaching effects on all forms of life on earth, because they have direct effect on biodiversity, while upsetting the equilibrium of the ecosystem, which include both living and nonliving components of the environment.

Every day, an estimated one disaster occurs around the world, and the frequency of these events has been steadily increasing over the last few decades. People, organizations, and countries face enormous challenges after the occurrence of different types of disasters like tsunamis, earthquake, mass shootings, nuclear accidents, desertification, communal violence, hurricanes, cyclones, bushfires, terrorist attacks, and war (Norris F. et al., 2002). One of the aftermaths of this escalating disaster situation is the direct effect it has on human life in form of trauma, which often requires external assistance for people to return to normal life after such tragedies.

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According to the American Psychological Association (2000), a person experiences trauma when their psychological well-being is negatively impacted by a singular, tragic event involving physical aggression. Victims of floods and other related disasters are usually impacted socio-economically and psychologically and this may lead to long-term mental health problems due to the trauma they experienced. Many traumatized flood victims often develop symptoms of post-traumatic stress disorder (PTSD), some of which could be categorized as Physiological, Behavioral or Psychological symptoms and many do not receive any form of guided assistance to help them cope with their incapacitation, hence the purpose of this research in evaluating the required support.

Background to the Study:

When disasters like flood occurs, many people are affected, leading to psychosocial effect among the affected population. In the past few years, there has been significant flooding event in Nigeria, affecting several communities across the country. People in the South-South of Nigeria are particularly susceptible to flood risks because of the topography and location within the Niger Delta.

In the South-South region, comprising of six states, namely: Edo, Bayelsa, Rivers, Akwa Ibom, Cross River and Delta, the communities are frequently exposed to flooding due to poor urban planning, inadequate drainage infrastructure and climate-related factors. Many victims are left to cope with not only the material loss but also profound psychological distress (Etuonovbe, 2011; Eguavoen, 2020). Despite the growing frequency and intensity of these disasters, there is limited empirical data on the prevalence and coping mechanism of PTSD among the affected population.

This lack of data hinders the development of targeted mental health interventions and policy responses tailored to the unique needs of flood victims (Udom, 2019). Also, in Nigeria government's policies prioritize delivering relief supplies to flood victims above helping them to cope with mental health difficulties like Post-Traumatic Stress Disorder (PTSD). According to (Kar 2024), timely intervention through coping strategies can help to prevent unset of mental health issues caused by stressors and other related consequences from the impact of disasters. The coping techniques for traumas, leading to rehabilitation, recovery, and building resilience are key components of this research, as it emphasizes the approach adopted by victims in managing their mental health and overall wellbeing.

Aim and Objectives

The aim of this study is to look at various approach adopted by the flood disaster victims within communities in South-South Nigeria in coping with post-traumatic stress disorder.

The specific objectives of the study are:

1. Assess the PTSD indicators among flood victims in South-South Nigeria

2. Evaluate the coping strategies for post-traumatic stress disorder among the flood victims

Research Questions

The following research questions will be answered:

1. What are the PTSD indicators among flood victims in the sampled communities?

2. What are the coping strategies for PTSD in the sampled communities?

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Conceptual Framework

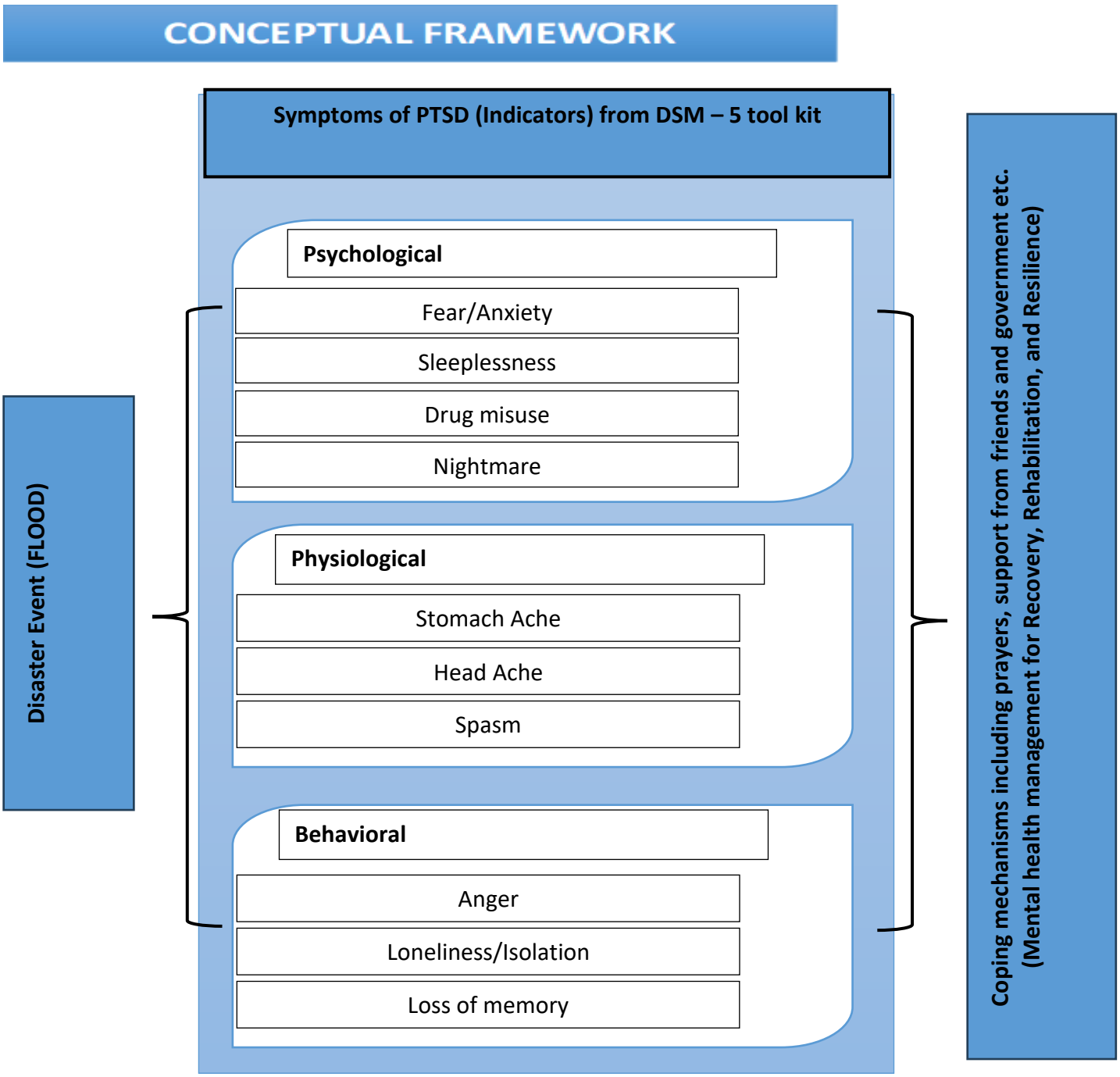

Figure 1: Conceptual Framework on Flood event, PTSD indicators and the coping mechanisms in management of trauma experienced by victims as developed by the researcher (2025).

Theoretical Encapsulation of Relationship Between Disaster, Trauma and Coping

According to (Quarantelli, 1988), the following extracted theories were stated as direct impact of disasters on the affected people:

1. Disasters are impediment to the normal functioning of society, which happens because of adverse impacts on the social structure. Effects of disasters extends beyond the physical realm, but also into other realms like psychological and emotional aspects too.
2. The capacity of the community member to adjust to its new surroundings and the victims' desire to make a good psychological transition are two factors that may mitigate the effects of disasters.
3. The definition of disaster varies from one situation to another, the meaning changes.
4. The coping strategies reduces the toll that disasters have on mental health.

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This theory agrees that disaster victims experience cognitive dissonance and psychological imbalances as a result of the severe interruptions to their regular way of life. The emotional and psychological distress resulting from disaster will require a way to device coping mechanisms for survival.

METHODOLOGY

Research design

This study adopted research design, which included a survey, utilizing both qualitative and quantitative methods to gather data through tailored questionnaires with respect to the objectives of the research. The research focuses on the South-South geopolitical zone of Nigeria, a region rich in ecological diversity, economic activities, crude oil and hydrological significance, with a population of approximately 31 million. The study population is 1,063,732 from six most affected local government area in each state, which includes (Yenegua in Bayelsa), (Patani in Delta), (Oruk Anam in Akwa Ibom), (Odukpani in Cross River), (Esako Central – Edo) and (Ogba/Egbama – Rivers), based on data provided by National Emergency Management Agency- NEMA. A sample size of 399 was obtained through Taro Yamane's formular. Using purposive sampling, 30 communities was selected. In proportion to the population of each local government, the portion of questionnaires to be administered to each was determined and simple random sampling was used to collect data among indigenous individuals within the communities. The data was analyzed using descriptive statistics.

Data Presentation

The data obtained from the field were presented using mean, frequency counts, and percentages in tables. Out of 399 questionnaires that were sent, 343 were collected and used for the research. The survey questions were organized on a 5-point Likert scale consisting of "Strongly Agree," "Agree," "Disagree," "Strongly Disagree," and "Neutral" (N). These criteria were obtained by measuring the participant responses as follow: 4 for Strongly Agree, 3 for Agree, 2 for Disagree, 1 for Strongly Disagree, and 0 for Neutral. Information was analyzed using the means and criteria means. Means more than 2.0 were considered acceptable, whereas those lower than 2.0 were considered unacceptable. The mean was determined using the criterion: 4+3+2+1+0/5= 10/5= 2.

Challenges of collecting data among traumatized population

There is greater ethical concern in collecting data from population that are traumatized, especially with regard to their safety and personal information that could cause reminder of the event and retraumatized them. Participants have to be reassured of confidentiality and get informed consent to partake in the survey. There is also the memory challenge in terms of providing details, because of the psychological effect of the event on the respondents. Sometimes, some of the most affected population may not be willing to participate because of avoidance. There is also possibility of vicarious trauma affecting the researcher when relating to incidences among the affected people.

RESULTS AND DISCUSSIONS

Sample distribution of Local Government areas in each state

Table 1 Sample distribution of Local Government areas from the six states

STATES		LOCAL GOVERNMENT	POPULATION	SAMPLE SIZE	SAMPLED COMMUNITIES
Akwa Ibom		**Oruk Anam**	**141,608**	**53**	**4**
Bayelsa		**Yenegoa**	**352,285**	**132**	**10**
Cross River		**Odukpani**	**104,333**	**39**	**3**
Delta		**Patani**	**67,707**	**26**	**2**

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Edo		**Etsako Central**	**139,200**	**52**	**4**
Rivers		**Ogba/Egbema**	**258,700**	**97**	**7**
	TOTAL		**1,063,732**	**399**	**30**

Source: Researcher's Fieldwork, (2025)

Demography of the respondents

Table 2: Summarized table encapsulating the key demographic data of the respondents.

Variables	**Categories**	**Frequency**	**Percent (%)**
Gender	Male	89	25.9
	Female	254	74.1
Marital Status	Married	247	72.0
	Single	84	24.5
	Divorced	12	3.5
Age	18-25 years	36	10.5
	26-39 years	108	31.5
	40-59 years	149	43.4
	60+ years	50	14.6
Academic Qualification	Primary	51	14.9
	Secondary	175	51.0
	Bachelor Degree	35	10.2
	HND/B.Sc.	68	19.8
	Post Graduate	14	4.1
Occupation	Farming	36	10.5
	Fishing	85	24.8
	Trading	199	58.0
	Civil Servant	14	4.1
	No job	9	2.6

There were 343 respondents; 254 were females (or 74.1% of the total), while 89 were males (or 25.9% of the total). This shows that the studied population was skewed toward females.

Out of the total number of respondents, 247 (72.0%) were married, while 84 (24.5%) were single, and 12 (3.5%) were divorced. This data revealed that most of the respondents were married.

From the data, the highest number of respondents are within the age bracket of 40 and 59 years (149 people, being 43.4% of the total), followed by those between 26 and 39 years (108 people, at 31.5% of the total). Most of the respondents with PTSD indicators were middle-aged adults ranging from 26 and 59 years, with cumulative percentage of 74.9%, while 36 respondents (10.5%) were in the age bracket of 18-25 years and 50 respondents (14.6%) in the 60+ age group.

According to the statistics, 51.0% of the respondents (or 175 people) had completed secondary school, while 68 people (19.8%) had HND/B.Sc., 51 (14.9%) had primary education, 35 (10.2%) had a bachelor's degree, and 14 (4.1%) had a postgraduate certificate; this suggests that most of the flood victims evaluated for PTSD had finished secondary school education.

On the vocation, the data shows that 199 people (58.0%) were involved in trading as their profession, while 85 responders (24.8%) are into the fishing, 36 (10.5%) in farming, 14 (4.1%) as public officials, and 9 (2.6%) unemployed. Summary indicated that most respondents were engaged in trading activities,

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Research Question One: What are the PTSD indicators in the flooded communities?

Table 3: Summary table that includes frequency, percentage and mean for PTSD indicators in the flooded communities

S/N	Statement	SA	A	D	SD	Mean
1	Anxiety/fear during or after the flood event	144 (42.0%)	133 (38.8%)	42 (12.2%)	24 (7.0%)	3.16
2	Sleeplessness during or after the flood event	78 (23.0%)	125 (36.9%)	69 (20.4%)	67 (19.8%)	2.63
3	Engagement in drug misuse	173 (50.4%)	115 (33.5%)	31 (9.0%)	24 (7.0%)	3.27
4	Experience of nightmares during or after the flood event	119 (34.7%)	146 (42.6%)	56 (16.3%)	22 (6.4%)	3.05
5	Experience of anger during or after the flood event	120 (35.0%)	129 (37.6%)	70 (20.4%)	24 (7.0%)	3.01
6	Experience of memory loss during or after the flood	141 (41.1%)	86 (25.1%)	83 (24.2%)	33 (9.6%)	2.98
7	Experience of social isolation/loneliness during or after the flood event	96 (28.0%)	153 (44.6%)	73 (21.3%)	19 (5.5%)	2.96
8	Experience of stomach pains during or after the flood event	119 (34.7%)	122 (35.6%)	68 (19.8%)	29 (8.5%)	2.97
9	Experience of headache during or after the flood event	162 (47.2%)	112 (32.7%)	52 (15.2%)	17 (5.0%)	3.22
10	Experience of spasm (shaking body) during or after the flood event	129 (37.6%)	143 (41.7%)	57 (16.6%)	14 (4.1%)	3.13

The findings in Table 2 revealed that the PTSD indicators in the flooded communities are prevalent, as evidenced by high frequencies and mean scores for various symptoms. Anxiety and fear during or after the flood had a significant mean score of 3.16, with 80.8% of respondents agreeing or strongly agreeing. Engagement in drug misuse was notably high, with a mean score of 3.27 and 83.9% of respondent in agreement. Experiences of nightmares (mean = 3.05) and anger (mean = 3.01) were also common, with more than 70% of respondents for each affirming these indicators. Physical symptoms like headaches (mean = 3.22), stomach pains (mean = 2.97), and body spasms (mean = 3.13) further demonstrate the physiological impact of the flood. Emotional and cognitive effects, such as memory loss (mean = 2.98), social isolation (mean = 2.96), and sleeplessness (mean = 2.63), were also prominent. Overall, these results indicate a multifaceted impact of PTSD in the flooded communities, encompassing psychological, physical, and behavioral dimensions. Responses on anxiety, drug misuse, and headaches are the most significant PTSD indicators.

Research Question Two: What are the coping strategies to PTSD by victims of the flood?

Table 4: Summary table with frequencies and percentages for coping strategies to PTSD by victims of the flood

S/N	Statement	SA	A	D	SD	Mean
1	You pray regularly because of the flood	136 (39.7%)	142 (41.4%)	38 (11.1%)	27 (7.9%)	3.13
2	You seek support from friends, family, or group	127 (37.0%)	152 (44.3%)	49 (14.3%)	15 (4.4%)	3.14
3	You got support from Government for the flood	129 (37.6%)	142 (41.4%)	51 (14.9%)	21 (6.1%)	3.10
4	You receive mental health care for the flood	115 (33.5%)	142 (41.4%)	57 (16.6%)	27 (7.9%)	3.08

5	You avoid remembering the flood event	134 (39.1%)	134 (39.1%)	50 (14.6%)	24 (7.0%)	3.10
6	You spend time with friends and loved ones	123 (35.9%)	158 (46.1%)	51 (14.9%)	11 (3.2%)	3.14

The results in Table 4 indicate that victims of the flood employed various coping strategies to manage PTSD, with all strategies receiving relatively high mean scores, suggesting significant utilization. Praying regularly emerged as a common strategy (mean = 3.13), with 81.1% of respondents agreeing or strongly agreeing. Seeking support from friends, family, or groups (mean = 3.14) and spending time with loved ones (mean = 3.14) were also highly adopted, with over 80% of respondents affirming these strategies. Receiving government support (mean = 3.10) and mental health care (mean = 3.08) were also notable, although slightly fewer respondents strongly agreed. Avoidance of remembering the flood event was another prevalent coping mechanism (mean = 3.10). The avoidance coping approach for most of the respondents was based on their traditional believe that when you detach from your mind adverse situations, the effect will vanish and this is also linked to their local culture. Overall, the findings show that spiritual practices, social support, and avoidance behaviors are key coping strategies among flood victims, alongside limited reliance on institutional or mental health services.

DISCUSSION OF FINDINGS

PTSD Indicators in Flooded Communities

The findings reveal that anxiety, fear, sleeplessness, drug misuse, nightmares, anger, memory loss, social isolation, stomach pains, headaches, and body spasms are prevalent PTSD indicators among the flood victims. These symptoms align with the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), which categorizes PTSD as a mental health condition triggered by traumatic events, characterized by intrusive thoughts, emotional disturbances, and physical manifestations (American Psychiatric Association, 2014).

Several studies corroborate these findings. For instance, Briere and Scott (2015) identified heightened anxiety, recurrent nightmares, and physical symptoms like headaches as common PTSD indicators in trauma survivors. The association between PTSD and somatic complaints, such as stomach pains and headaches, has also been documented in disaster-affected populations (Kılıç et al., 2021). Similarly, Nazia et al. (2024) reported that communities affected by flood disasters in Pakistan exhibited high levels of sleeplessness, fear, anxiety, psychological and social isolation/constraints, consistent with this study's findings. These results underscore the multidimensional impact of flooding on mental and physical health, necessitating integrated approaches for intervention, including mental health services and community support systems.

Coping Strategies for PTSD

Flood victims reported coping strategies such as regular prayer, seeking support from social networks, receiving government support, accessing mental health care, avoiding flood-related memories, and spending time with loved ones. These strategies align with the transactional model of stress and coping, which emphasizes problem-focused and emotion-focused coping mechanisms (Lazarus & Folkman, 1984).

Spiritual practices, such as prayer in form of meditation, have been widely recognized as effective coping strategies in trauma contexts. Akosile et al. (2020) highlighted the significant role of religious faith in fostering resilience and reducing PTSD symptoms among disaster victims in Nigeria. Also, Cho (2022), Swenson et al (2023), Toussaint et al (2023) have all emphasized the importance of religion in reducing trauma among disaster victims. Usually, the affected people see the event as an “Act of God” and test of their faith, hence the need to make recourse to their creator through spiritual faiths, expressed in their religion. Similar, study by Nazia et al. (2024), shows that community-based social support from distance and near relations has helped to mitigate PTSD symptoms by providing emotional and instrumental assistance to affected people. One notable outcome of this study is engagement with friend and love ones which play a significant role as coping mechanism for PTSD among the affected communities, going by the fact that (82%) of respondent were attuned to this. According to this study, governmental and institutional support also plays a critical role and this is seen in Carbone et al. (2019) which mentioned that access to mental health services and financial aid can significantly reduce PTSD

prevalence among disaster victims. The strategy of avoiding traumatic memories is consistent with findings by Bryant et al. (2016), who observed that cognitive avoidance is commonly adopted by individuals seeking to reduce distress after traumatic events. The avoidance-based approach in relation to action-based approach as coping methods has demerit. Avoidance which could be behavioral or emotional in nature, could provide immediate relief to the affected people. However, it has the tendency of perpetuation of memory of the event and re-traumatization, which could also lead to complications thereafter. The action approach will involve professional interventions, where evidence based clinical methods could be adopted in the treatment of the trauma. For instance, Cognitive Processing Therapy (CPT) and Prolonged Exposure (PE) are employed in reversing avoidance of event (APA Guideline). This allows the affected person to move from passive state event that could trigger recurrence to an active state of recognition and permanent recovery.

CONCLUSION AND RECOMMENDATION

In conclusion, this study highlights the significant psychological impact of flooding on affected communities, revealing common PTSD indicators such as anxiety, fear, nightmares, and physical symptoms like headaches and stomach pains. It also identifies diverse coping strategies, including prayer, social support, and avoiding traumatic memories, that flood victims utilize to manage PTSD symptoms. These findings underscore the need for comprehensive mental health interventions that address both the emotional and physical health needs of disaster survivors, ensuring that no group is overlooked in post-disaster recovery efforts, so as to foster the desired recovery, rehabilitation and resilience. This can be archived if government design appropriate institutional framework and create funding that will ensure proper mental health intervention and follow-ups with affected communities through professionals, who will create awareness of the PTSD symptoms, build trust and promote open discussion in other to give room for relationship that enable free exchange of information among concerned parties.

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