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Impact of Meditation on the Level of Post-traumatic Stress in Flood Victims of Sindh

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Abstract: *This study aimed to find whether meditation can be effective in terms of post-traumatic stress (PTSD) or not. The purpose of this current study was to analyse the flood victims specifically (IDPs) by the influence of meditation on state post-traumatic stress. Guided meditation is helpful in reduction of the stress. The study analyses how meditation reduces the post-traumatic stress of IDP flood victims. The study is experimental in nature. The survey was conducted from N= 100 participants IDPs by using convenience sampling. SPSS used to quantify the data. The measure used in the research was the 3.7 PTSD checklist civilian version of the flood exposure questionnaire to collect the data from Internally displaced persons. First, for the pre-test, it was provided before the meditation and the second time it was given after the guided meditation for the post-test. The result of the research supports that PTSD can be reduced by meditation.*

Key Words: Internally displaced persons, Flood victims, Meditation, Post-traumatic stress disorder, Stress Reduction

Introduction

Recurrent flooding across the globe causes increased degrees of disaster in both emerging and developed nations. The Indian subcontinent is considered to be one of the world's most disaster-prone regions due to its lack of resources and efficient post-disaster recovery procedures. In addition to their enormous detrimental impacts on human health, floods have a significant impact on mental health. The psychiatric ailment that is

most frequently identified in flood-affected communities is post-traumatic stress disorder (PTSD). According to epidemiological data, floods are the root of serious physical, social, and psychological disturbances that necessitate extensive community rehabilitation (Mason, Andrew, & Upton, 2010). "Flooding can have a significant negative physical impact on survivors due to injuries and unsanitary conditions, in addition to having a significant negative psychological impact in terms of

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mental illness, such as post-traumatic stress disorder (PTSD), anxiety, and depression” (Golitaleb, et al., [2022](#), p.212).

Trauma refers to feelings of physical and emotional tension. PTSD, which shows itself as sleep problems, emotional anguish, avoidance, and emotional arousal, is the psychiatric condition that persons who live in flood-affected areas are most likely to be diagnosed with (Golitaleb, et al., [2022](#)). The sensation of pain occurs only occasionally during periods of trauma (Sherin & Nemeroff, [2022](#)). This is why it is necessary to effectively cope with traumatic stress. Many techniques to manage traumatic events have emerged including the practice of meditation. It is very helpful for a person to calm down, in times of stress. “Floods as mass traumatic events are more likely to damage their victim’s feelings of happiness” (Yousuf, Mehmood, Aquil, Rija, Rahmat, & Malikzai, [2023](#), p.222). Studies of these phenomena have indicated that feelings of panic and worry may be a precursor of negative outcomes including post-traumatic stress disorder and meditation is equally effective in reducing the state of traumatic stress (Sarfaraz, Rafique, & Sohail, [2023](#)). Nationwide flooding has resulted in significant property loss, destruction of farmland and highways, and even fatalities. Hence applying meditation and finding out its impact on stress would provide great insight and holds significance (Pradhan, Najmi, & Fatmi, [2022](#)). Making someone more mindful and helping them calm down through meditation will eventually reduce their stress. Meditation has been effective in reducing the symptoms of stress (Schreiner & Malcolm, [2008](#)). Meditation is an ancient calming strategy which originated first in India thousands of years ago. There has been much research to notice the impact of meditation on stress. In an experiment, it was discovered that adolescents who never meditated experienced a relaxing response after practising it (Mohan, Sharma & Bijlani, [2011](#)). This indicates how meditation is effective in relaxing a person. The aim of the experiment was to evaluate if meditation can reduce the stress of participants after meditation. Thus, it was hypothesized that “guided meditation may reduce the post-

traumatic stress of IDP flood victims. In the study meditation is the independent variable and the dependent variable was the PTSD of the participants which was checked through the 3.7 PTSD checklist civilian version of the flood exposure questionnaire. The scope of the research is wide because stress is often influencing individuals hence providing effective techniques like meditation could reduce it. Determining this statement through this experiment would help other researchers get insight into the connection between these two variables PTSD and meditation.

The objective of the research is to analyse the impact of guided meditation on the reduction of post-traumatic stress disorder in IDP flood victims.

Research Question

What is the significant impact of guided meditation on the reduction of post-traumatic stress disorder in IDP flood victims?

Literature Review

Floods are natural disasters that can have profound psychological effects on individuals, leading to post-traumatic stress disorder (PTSD) symptoms. Meditation has gained recognition as a potential intervention for reducing stress and trauma-related symptoms. This review aims to explore the existing literature on the effectiveness of meditation as an intervention for reducing post-traumatic stress in flood-affected individuals. Natural calamities like floods influence both the land and the population. Due to its geographic location, Asia is considered the most disaster-prone region in the world¹ and experiences a high incidence of natural catastrophes. Disasters produce massive destruction that results in the loss of life, property, and infrastructure, and studies have revealed a range of psychological suffering in the victims, including somatization, sadness, anxiety, and post-traumatic stress disorder (McFarlane, Clayer, & Bookless, [1997](#)).

According to studies, the high flood risk makes an already underprivileged population's

low health and educational outcomes worse. Flooding has a significant impact on survivors' psychological health, particularly in low-income nations where there are few resources for post-disaster recovery and coping mechanisms. However, the necessity for psychosocial support among flood survivors in India is little supported by scientific research (Kar, Sharma, Murali, & Mehrotra, 2004). In reality, Pakistan was listed as one of the most flood-affected nations during the years, 2010 and 2013 (Mustafa & Wrathall, 2011; Federal Flood Commission, 2012). Pakistan has ranked anywhere between the first and sixth position on this list. Interactions between flooding, its consequences and restoration leading to health and well-being outcomes for individuals, there are often complex pathways and mechanisms that affect well-being. Kate (Walker-Springett*, Butler & Adger, 2015). According to Bubeck, Otto, and Weichselgartner (2017), floods can have a variety of repercussions on civilizations, including damage to property, loss of life, injuries, and mental health effects. One such method that may help with the psycho-rehabilitation of those exposed to flooding is psychological care provided by emergency personnel. In order to determine "whether exposure to floods and psychopathologic symptoms like PTSD and depression are correlated, a recent cross-sectional study from Kashmir examined the effects of distinct social support from family and relatives in adult survivors" (Dar, Iqbal, Prakash, & Paul, 2018, p.234).

An individual would have extreme sadness, anxiety, and post-traumatic stress disorder (PTSD) as a result of the devastating flooding and trauma of losing their house, loved ones, way of life, source of income, crops, and livestock. Previous research has shown that post-traumatic depression is prevalent among flood survivors worldwide and that flood victims have long-term psychosocial impacts such as pain, anguish, learned helplessness, and social dysfunction, all of which can eventually result in depression (Shah et al., 2022). In South Asia, financial crises following disasters are seen as a risk factor for PTSD since they can cause mental stress. Following a

disaster, variables such as the destruction of homes and property, physical injury to oneself, family member physical injury, and family member death may all have an impact on the chance of developing PTSD (Pyari et al., 2019). Individuals experienced increased suicide ideation, negative cognition, sleep deprivation, avoidance, emotional numbness and mood, and other psychiatric comorbidities after flood exposure. Natural causes of flooding are generally the result of climate change (Jamshed et al., 2020).

Methodology

The study uses experimental research design to analyse the impact of guided meditation on the reduction of post-traumatic stress disorder in IDP flood victims. For this purpose, pre-test and post-test were conducted from n=100 respondents. the sampling of the study is convenience sampling was used. The independent variable of the study is guided meditation and the dependent variable is Post-traumatic stress flood.

Control Procedure

We just choose IDP Internally displaced persons (Flood victims).

Material

The equipment utilized to conduct the experiment included: a questionnaire, pens for the participant to fill in the questionnaire inventory and refreshments.

Measures

Measures used in this were .3.7 PTSD- checklist civilian version scale. The scale induced 9 items for example. They were each given rating on a 5-point Likert scale. Ranging from 1(Strongly disagree) to 5(Strongly agree). Rating the level of PTSD on each individual both pre and post.

Sample

The participants for this study were the IDP Flood Effective 2022 from which 50 males and 50 females were included starting from the age

of 16, so (n=100). They were recruited from the camp of Shah Faisal Colony at Karachi on the dry Malir riverbed next to an industrial area in Karachi.

Procedure

This research experiment was conducted on the flood affected. Participants were recruited by the IDPs and approached through the camp of Shah Faisal Colony at Karachi on the dry Malir riverbed next to an industrial area. To begin with, we informed the organisers about the experiment and got permission ethically. After getting permission, we visited the area and asked participants for volunteer participation in the study. For their consent and we informed them that their participation is completely voluntary and that they can withdraw at any moment. After receiving their concerns. N=100 participants were selected on a random basis n=50 were male participants and n=50 were female participants. The participants were

administered the questionnaire. All the instructions were given clearly upon any queries they were clearly explained. After that, we thanked them and gave them a meal as a token of appreciation. The total time taken in the experiment was 2 hours including all activities such as recruiting participants, settling them down, filling out the forms and giving them instructions. Lastly after the collection of the data they were scored and calculated.

Results

SPSS was used to quantify the data. According to the results from the Independent T-Test, the mean score of the pre-test score came out to 32.35 later the effect of meditation reduced the stress intensity to 25.93. The mean difference is 6.42. This result shows there was a decrease in post-traumatic stress of IDP (Flood victims) and it supports the hypothesis.

Table 1

Group Statistics

Post-traumatic stress	Gender	N	Mean	Std. Deviations
Pre	Male	50	32.35	6.86725
Post	Female	50	25.93	6.23651

The results of the study show that group statistics for the variable "Pre and Post-Traumatic Stress" are based on gender. There were n=50 male and n=50 female respondents who participated in the study voluntarily by using convenience sampling of the study. The

mean score of the study shows there is a difference in the pre-test and post-test scores of the study. The post-results mean and standard deviation are interesting. The post-test results show that there is less amount of post-traumatic stress on stress after the meditation.

Table 2

Independent Sample T-test

	T	Df	Sig. (2-tailed)	Mean difference	Lower	Upper
Pre	50.823	99	.000	32.58000	31.3080	33.8520
Post	40.574	99	.000	24.8807	24.8807	27.4393

Results of an independent samples t-test comparing the mean difference in Post Traumatic Stress ratings between two-time points (Pre and Post) are shown in the table. The p-values (two-tailed), degrees of freedom (df), and t-values are presented. For each time

point, the mean difference as well as the lower and upper bounds of the 95% confidence interval are given.

According to the analysis, there were significant differences between the Pre and Post time points for PTS (t(99) = 50.823, p

.001). With a 95% confidence interval of 31.308 to 33.852, the mean difference for the Pre time point was 32.580. Similar to the Pre time point, the Post time point's mean difference was 24.8807, with a 95% confidence interval spanning 24.8807 to 27.4393. The findings show a marked decline in post-traumatic stress scores between Pre and Post time points.

Discussion

This research seeks to explore the effect of meditation on PTSD flood victims. The investigation revealed that meditation is helpful for PTSD people. We had taken only a hundred sample sizes if we had taken a wide sample, this research could have been done in a better way and the results would have been better and better. People with PTSD require early diagnosis and treatment. We should give them proper meditation, so it would have been better for them. To the best of our knowledge, PTSD requires special attention during future disaster preparation. This research is very helpful in that type of situation for the future. PTSD is one of the most understudied, those who belong to a better socioeconomic status may find more difficulties compared to lower socioeconomic status people, facing a disaster and living in a camp would be a depressing experience for them. In addition to that, victims cannot focus on their children's education and their future unless they feel safe.

Due to the overcrowded situation, we reduced the sample size is 100 whereas our actual size was 200. If the sample size is huge so the results come better and better. Some participants there only filled pre-questionnaire and at the time of the Post questionnaire, some

of them made excuses and backed out from the research. In this situation, if use purposive sampling and overcome this limitation in the future. And some ladies withdraw from the research due to their veil and privacy from male participants. In the future should focus that dividing a male participant and a female participant into separate places. We faced a lot of noise issues and were over-excited that children were hard to handle, and this caused a distraction. In the future, do this research lab, laboratory or a specific place where we control extraneous variants. Since many of the IDPs who are the poorest are still living in camps, it is possible to keep an eye on the health of those whose families have not frequently had access to medical services and income support programmes. Incentives for IDPs to return to rural areas are necessary not only to relieve urban congestion but also to fulfil a fundamental entitlement of people affected by the floods. Between now and the start of the following crop cycle, many IDPs have already begun to return and need some kind of income. We recommend that the IDPs be rehabilitated as soon as possible to their homeland/ areas so that they can assimilate with their own people who while being displaced have been separated in the many camps. They need not only financial support but also emotional and social support. Rehabilitation in their areas is key. We also noticed that along with humans their livestock has also been emotionally affected as we were informed that milking cycles and calving has been adversely affected. The effect on the children and Youth is yet to be assessed. Although we have seen procreation increase. Also, an experiment of Trauma release exercises should also be tried.

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