An Exploratory study of Flood, 2022 and its Psychological Consequences on the Students of Secondary School in Pakistan

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ABSTRACT
The aim of this study was to investigate the psychological effects of flooding on secondary school children in the Rajanpur, Jampur, Taunsa, Dera Ghazi Khan, and Fazalpur districts. A total of 150 students from public schools in flood-affected areas participated in the study, which used a non-probability convenience sampling approach and a self-administered questionnaire to collect data. The collected information was then analyzed using descriptive statistics, such as percentage and mean scores, with the Statistical Package for Social Science (SPSS). The study found that the majority of students experienced negative psychological impacts from the flooding, including impacts on their emotional, mental, and academic development. Although both male and female students were affected, females experienced higher levels of psychological effects. This study highlights the importance of reducing flood risk before disasters occur, which can greatly reduce the devastating effects of floods. To effectively manage risks, it is essential to have a thorough understanding of the causes and risks associated with flooding.

KEYWORDS
Exploratory, Disaster, Flood, Psychological impact, Children

INTRODUCTION
Disasters are becoming more common and well-known on a global scale; they frequently present unanticipated, substantial hazards that might result in serious harm and even death (Stanley & Williams 2000). Floods have hampered children's emotional, intellectual, and physical growth, which is compromising the future of the country. While rebuilding the impacted communities, we must address the underlying causes of the flood. Our children's long-term scars from this calamity will get worse if we don't make quick investments in these places' recovery. Floods are increasing stronger and more frequent, which puts network infrastructure in danger and has an impact on children's general well-being in terms of access to food, exercise, and school attendance, as well as access to sanitary facilities and a sense of physical and social safety. For children during the flood, managing their own lives while witnessing the destruction of their houses and other personal belongings in front of their very eyes, as well as mourning the loss of cherished family members like dogs, was the most traumatic experience. The kids insisted that the whole thing had seemed more like a dream to them and that they could see the entire neighborhood submerged. The issues shared by all the children were difficulty sleeping, fears of losing their home, and worries about their pets. Some children claimed they had problems falling asleep because they believed the flooding and heavy rains would come again. Millions of children have suffered greatly as a result of the recent unsettling floods. (The Express Tribune, October 9th, 2010)

Floods are the most prevalent sort of natural disaster and are typically brought on by abrupt environmental changes. The frequency of floods is rising in Pakistan and other countries due to climate change (Sanjrani Manzoor et al., 2022). One of the most common natural disasters in South Asia, flooding exposes many communities to financial harm and other risks (Rentschler et al., 2022). Severance, over-topping, and in many cases constructive dam failure are among the key factors that contribute to floods. The land use pattern needs to be improved while considering how likely it is that a flood will occur.(Shah et al., 2020).

Children are the most vulnerable to the effects of a public health emergency since flood disasters have such catastrophic effects on individuals of all ages (Munro et al., 2017). While by September 28, 2022, the flooding has caused an estimated 34 million children to be in need of assistance, with an estimated 50% of those youngsters exhibiting signs and symptoms of distress (Cheema et al., 2023). After natural disasters like floods, children are particularly vulnerable to physical, mental, and sexual abuse because they lose security after being separated from their caretakers.(Karimzadi, 2022; Seddighi et al., 2021).

The long-term effects of disasters like floods include an increase in the probability of post-traumatic stress disorder, suicidal ideation, drug misuse, and child labor incidents (Kousky, 2016). Children's psycho-social well-being is impacted by factors such as lack of access to education, homelessness, and the trauma of losing a loved one during flood-related disasters.
The trauma related to experiences of the tsunami caused the students to have many psychological and emotional difficulties. (Senarat, 2021)

The amount of research makes it clear that natural disasters can have a detrimental effect on children's education, physical health, and mental health. The effects of the biggest disasters, however, can be much worse. Although though many influences appear to diminish over the short to medium term, larger effects that occur at critical junctures in a child's development may last a lifetime or even be passed on to the next generation. This is particularly valid when it comes to major health issues that arise during pregnancy or early childhood. The poor and countries in emerging regions often have more detrimental effects. In addition, many developing countries have a population that is significantly more child and adolescent-heavy than wealthy ones.

Instead of focusing on how disasters themselves affect children, more research is required to examine how living in high-risk locations for disasters affects kids. Regrettably, but also luckily, many of the negative consequences can be prevented because we are aware of ways to lessen the harm that natural catastrophes do to children. Diverging priorities, a lack of funding, and a lack of political will are barriers to the widespread adoption of these strategies. It's interesting to note that safety-net programmers for situations other than disasters and general advances in prosperity and development may be some of the finest ways to protect children in dire situations. There is also agreement on what has to be done to protect children following a disaster, such as providing shelter, reconnecting family’s right after, and conserving clean water supplies. Governments, international organizations, and nonprofit groups continue to strive for the adoption of those practices on a global scale.

LITERATURE REVIEW

Common psychosocial symptoms include earaches, headaches, and physical pain. In the first two years following a flood, the prevalence of mental health illnesses varies between 8.6% and 53%, according to flood research. Together, these elements have an enduring impact on the quality of life for flood survivors, and physical sickness brought on by floods may also be partially attributable to psychological trauma. (2008) (Peek, L. et al.)

The most significant psychological effects are caused by resource settings that are long-term, gradual, and co-morbid. The degree of historical flood exposure and disaster readiness are two risk variables for the development of psychiatric issues after natural disasters. Older age, female gender, socioeconomic status, family structure, religion, and social support, as well as traits associated to one’s self-reported physical health and personality. Furthermore, it is thought that psychosocial consequences may be more prominent in rural areas than in urban ones due to older populations, lower levels of education, and continuous exposure to extreme weather conditions in rural areas. (Berry et al., 2011 ;)

Direct shock exposure has frequently been noted as posing a hazard to the formation of detrimental psychological effects in both high- and low-resource countries. Six months after the Mexican floods of 1999, it was discovered that 25% of the population in general and more than half of individuals who experienced rapid flooding, unforeseen mudslides, mass casualties, and displacement had trauma and depressive symptoms (Norris et al., 2004). If they judged their loss as substantial, respondents were four times more likely to report having PTSD symptoms ten weeks following an unexpected, severe flood in Thailand. The prevalence of depression (51%) and PTSD (22%) was significantly higher in a remote Korean hamlet when flood-related injuries, relative fatalities, or property destruction occurred 18 months after the disaster. (Heo et al., 2008). The type of long-term damage caused by floods can be determined by research on the long-term psychological effects of flooding. A longitudinal study of these disorders found that over a two-year period, the prevalence of trauma and depression stabilized at levels that were considerably higher than those in the general population. Similar findings were made in Thailand, where it was discovered that there was an "anniversary reaction," or a resurgence in psychiatric symptoms, one year after the flood, despite a marked decline in mental health symptoms during the first year. This may be the case because floods can result in the development of PTSD both immediately and afterwards, with distinct short- and long-term symptoms. (Duet al., 2010).

Problem Statement

More than 33 million people in Pakistan were impacted by the flood of 2022. In Pakistan, where the monsoon rains began in mid-July, 154 districts have been hit by floods. Thus far, 1162 or more people have perished. So, residents of the impacted areas are vulnerable to health problems as well as mental, social, economic, and psychological changes. The wellbeing of children is being impacted by psychological changes. There aren't many research that discuss how floods in Pakistan may affect children's mental health. In order to better understand this, we conducted a study to determine how the flood disaster in Pakistan's District Rajanpur, Jampur, Taunsa, Dera Ghazi Khan, Fazalpur affected secondary school-aged youngsters psychologically.

Objective of the Study

In 2022 flood in Pakistan at secondary level District Rajanpur, Jampur, Taunsa, Dera Ghazi Khan,Fazalpur, This Research was to investigate An Analysis of Psychological Impact of Flood on Children in 2022 flood at Secondary Level District Rajanpur, Jampur, Taunsa, Dera Ghazi Khan, Fazalpur. Responses were obtained from 150 students from the district of Rajanpur, Jampur, Taunsa, Dera Ghazi Khan, Fazalpur. The study’s objectives were:
To explore the psychological effects of flood on children in 2022 flood in district Rajanpur, Jampur, Taunsa, Dera Ghazi Khan, Fazalpur.

**Significance of the Study**

Children's social environments are crucial for their psychological health following a severe weather event. In order to more accurately define contributing factors, safeguard children from negative mental health impacts, and identify healthcare needs, research is needed, especially on previously impacted children. Findings from our study will be useful in determining the psychological effects on health so that a follow-up programmer for children's psychotherapy after catastrophic occurrences like floods can be started.

**Research Question**

How to explore the psychological effects of flood on children in 2022 flood district Rajanpur, Jampur, Taunsa, Dera Ghazi Khan, Fazalpur?

**METHODOLOGY**

The researcher employed a quantitative research design and a descriptive research approach for this investigation. The SPSS Statistical Program for Social Sciences has been employed in studies that can be measured. The research questions posed in light of the investigation's objectives were also tested using t-tests. The replies were gathered via a questionnaire.

**Population**

Secondary schools in the District of Rajanpur, Jampur, Taunsa, Dera Ghazi Khan, Fazalpur made up the study's sample. All male and female pupils attending government schools in mentioned districts made up the study's target group.

**Sample**

The secondary school kids from Rajanpur, Jampur, Taunsa, Dera Ghazi Khan, Fazalpur flood-affected area were chosen by the researcher. 150 students were chosen for the sample using a suitable sampling method.

**Development of instrument**

To examine the psychological effects of flooding on children, a questionnaire was independently constructed. The researcher created one questionnaire for data collection purposes after consulting with a study of pertinent literature. A questionnaire was developed for respondents with two rating scales and response options of Yes and No in order to gather information and opinions. 16 statements and two criteria made up the questionnaire.

**Data Collection**

Only government secondary schools in district Rajanpur, Jampur, Taunsa, Dera Ghazi Khan, Fazalpur were used to acquire the data. The respondents received thorough advice that was prepared. Data were gathered using the questionnaire instrument.

**Data analysis**

Following data gathering, information was tabulated, evaluated, and interpreted by determining the percentage. A table was created for each item on the questionnaire to analyses the respondents. The details of the responses for each category, as recorded on a two-point scale, are as follows. The data were examined using the T-Test.

**Data Analysis and interpretation of data**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>Male</td>
<td>32</td>
<td>59.3</td>
<td>64.0</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>18</td>
<td>33.3</td>
<td>36.0</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>92.6</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

According to the table's description, there are 32 men and 18 women overall, making a total of 50. There are 59.3% more men than women. Both the valid male percentage and the cumulative percentage are 64.0%. 18 is the minimum age for female strength, making the proportion 33.3%, the valid percentage 36.0%, and the cumulative percentage 100%. Demonstrates that while both sexes were equally affected by the flood, more women than men were afflicted, which indicates that female students are more prevalent than their male counterparts. Following the flood disaster, which is the cause of depression, fear, worry, and stress, the majority of female students have various mental disabilities. According to the total proportion, female students are more negatively impacted by the flood disaster than male students.
According to the table's description, there are 16 rural and 34 urban people in total. The urban area percentage is 63.0%. Urbanism's valid percentage is 68.0%, and its cumulative percentage is 68.0%. Rural has a strength of 16, which results in a calculated percent of 29.6%, a valid percent of 32.0%, and a cumulative percent of 100.0%. Demonstrates that both locations have experienced flooding, but that urban areas have been damaged more severely than rural areas overall, indicating that urban areas experience higher rates of flooding than rural areas. After the flood disaster, which is the cause of depression, fear, anxiety, and stress, the majority of urban area pupils experience various mental disabilities. According to the total percentage, students in rural areas are more negatively impacted by the flood disaster than students in metropolitan areas.

<table>
<thead>
<tr>
<th>Table 2. Area wise analysis</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>34</td>
<td>63.0</td>
<td>68.0</td>
<td>68.0</td>
</tr>
<tr>
<td>Rural</td>
<td>16</td>
<td>29.6</td>
<td>32.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>92.6</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

According to the given table's description, the gender is 49, the t test value is 19.833, the mean difference is 1.3600, and the lower and upper bounds of the confidence interval are 1.2222 and 1.4978, respectively. The age is 49, the t test value is 13.845, the mean difference is 1.66000, and the lower and upper bounds of the confidence interval are 1.4191 and 1.9009, respectively. Total area is 49, the t test value is 19.808, the mean difference is 1.32000, and the lower and upper bounds of the confidence interval are 1.1861 and 1.4539, respectively.
confidence interval are 1.1861 and 1.4539. The table demonstrates that there is no significant association between gender, age, and class and that everyone is affected by the flood, regardless of gender, age, or class. Most secondary school students are dealing with a variety of financial issues, including decreasing wealth and rising poverty rates, as well as psychological issues like stress and depression.

CONCLUSION OF THE STUDY
The study demonstrates that floods have a detrimental effect on children's emotional, physical, and academic development. More than half of children, including girls, exhibit symptoms following a disaster, according to a recent study. Psychological counselling, which takes into account the effects of this issue, is the most crucial service that must be provided to them. Therefore, it's essential to provide aid as soon as possible following a tragedy to minimize any potential long-term impact. Children's fundamental rights are also found to not always be upheld or taken into account in humanitarian circumstances, such as disaster relief camps. There are issues with gender insensitivity in the camps as well. In the camp, girls were having issues with hygiene, the proper disposal of sanitary products, and other issues. One of the other major problems is the camp's scarcity of food and water, which contrasts with other camps where these things are plentiful. At both schools and camps, there were available services like counselling and psychological first aid, but they were underutilized. It serves as a reminder that each school and each camp needs to have a sufficient number of specialists and professionals, notably social workers, in order to provide these services. Networking and coordination issues also existed within the camps. The importance of social work specialists in this situation is also brought to our attention. Children must be taught about catastrophe risk reduction and preventative measures in order to lessen trauma after a disaster. The curriculum and rules need to address it. The state's present policy, if properly executed, Also, there is an urgent need for inclusive and child-centered research that considers the gender, physical requirements, and psychological problems of those children during and after such catastrophes, and the policies need to be changed as a result. Floods cause property damage, human life loss, and loss of livelihoods, all of which contribute to an increase in poverty. Disasters also undermine all educational endeavors in the vast majority of underdeveloped countries. It has been emphasized that schoolchildren, as well as the surrounding infrastructure, are vulnerable to flood catastrophes, endangering the children's access to a quality education, information, and sanitary circumstances, as well as their participation rights. Before a disaster, it is important to identify and control the risk of flooding. (Dhiman et al., 2019; Lai et al., 2020; Pham et al., 2021). Effective risk management requires a thorough understanding of flood risk and its causes. (Muis et al., 2015).

LIMITATION OF THE STUDY
➢ The study was only done on five districts of Punjab, thus more research must be done throughout Pakistan for the results to be generalized.
➢ A descriptive study was undertaken to compare how floods affected children's psychological health but no other aspects of their physical health. Hence, additional research is needed to understand how the flood has affected the social, economic, emotional, physical, and social health of the young people.
➢ Children with special needs and those who were ill in the homes of friends and family were also excluded from the sample design, as were children of all age groups who attend school.
➢ Due to the practical selection, it was unable to assess the age-wise influence. The analysis is only applicable to a small portion of the Districts of Rajanpur, Jampur, Taunsa, Dera Ghazi Khan, Fazalpur, despite the fact that the 2022 floods had an impact there.

DISCUSSION
As the primary cornerstones for a nation's human development, consistent economic growth, and decrease in poverty. In both developing and developed countries, classroom-based formal education is essential for the development of human capital because schools offer teaching to students with skilled teachers and a friendly learning environment for different cultures. (Clark. et al., 2020).

However, children who are not in school pose a significant risk to the growth of the Pakistani economy and the global economy in general. The primary reasons why kids aren't in school are lack of access to education, poverty, ignorance, lack of schools, "ghost" schools, "ghost" teachers, etc. This study examined how Pakistani children's and teenagers' educational outcomes were impacted by the floods by impacting their psychological health, using a descriptive practical research style using percentage estimation. Understanding stress and the pressures that floods place on people is essential because it enables us to comprehend the effects that these stressors have on people's short-, medium-, and long-term welfare as well as their mental health as individuals and as a population. People's firsthand experiences with disasters or those that arise as a direct result of those exposures are considered primary stressors. Every disaster includes these pressures. Following disasters, the majority of people are in despair. During and after major disasters, families, communities, and statutory and...
non-statutory organizations shield people from psychosocial hardship, yet every population possesses an innate capacity for both individual and collective psychosocial resilience. Secondary stressors are those that follow or result from primary stressors; examples include infrastructure breakdown, challenges with residents returning to normal after a disaster and repairing their homes, or inability to adjust to the "new normality" or the new set of living conditions that result from them.

According to the research, as is shown in Table, the floods that hit Pakistan in 2022 may have had an effect on students' psychological health and academic results. Also, 59.3% of male students and 33.3% of female students were affected. The frequency of psychological effects connected to floods was higher than normal health.

REFERENCES


Wamukonya, N. &Rukato, H., 2001, Climate change implications for southern Africa: A gendered perspective, viewed 14 May 2013, from