PREVALENCE OF DEPRESSION AMONG WOMEN OF UNDERPRIVILEGE, FLOOD AFFECTED AREAS OF SINDH

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Abstract

This study examines the prevalence of depression among underprivileged women aged 18 to 50 residing in flood-affected areas of Sindh, Pakistan. Natural disasters often leave marginalized groups disproportionately vulnerable, and in this context, women faced severe hardships due to inadequate access to basic necessities such as food, clean water, shelter, and healthcare. A sample of 250 participants were assessed using the Hamilton Depression Rating Scale (HAM-D), administered through structured interviews in the local language. Results revealed a high prevalence of depression, with the majority of women experiencing moderate to severe symptoms. These findings highlight the substantial psychological burden of environmental disasters on vulnerable populations. The absence of medical practitioners and mental health specialists in these areas further intensifies the crisis, leaving women with little support. The study emphasizes the urgent need for culturally sensitive psychosocial interventions, improved healthcare access, and sustainable government-led rehabilitation initiatives in flood-affected regions to address the mental health consequences of climate-related disasters in Pakistan.

Keywords: Depression, Flood-affected women, Underprivileged population, Sindh, HAM-D.

INTRODUCTION

Floods remain one of the most devastating natural disasters in Pakistan, and Sindh province has been one of the most severely affected regions in recent years. The 2010 super floods and the most recent floods of 2022 displaced millions of people, destroyed agricultural land, washed away homes, and severely damaged essential infrastructure such as healthcare centers, schools, and roads. For communities that were already struggling with poverty, unemployment, and lack of education, these floods created a humanitarian crisis. Families lost their livelihoods, children were forced out of schools, and women in particular became more vulnerable due to cultural and social restrictions. In such disaster situations, the psychological problem is often remain unresolved and unasked because of lack of psychological services, yet it is one of the most damaging long term consequences.

Women, especially those from underprivileged and uneducated backgrounds, carry a heavier burden compared to men. In Pakistani society, women are often expected to manage household responsibilities, care for children, and provide emotional strength to their families even during crises. When disasters attack, women not only lose access to basic necessities such as food, clean drinking water, and shelter but also experience deep psychological stress. The trauma of losing a home, the uncertainty of survival, and the inability to access medical care place them at an increased risk of mental health problems. Depression, in particular, is one of the most common but underrecognized outcomes in such contexts. Unlike physical injuries that can be seen and treated, depression often goes unnoticed, leading to long-term suffering and impairment in daily life.

Researches over the world has shown that women are nearly twice as likely as men to experience depression, and natural disasters only intensify this risk. The World Health Organization (WHO, 2022) reports that in disaster-stricken populations, the prevalence of depression can range from 20% to 40%, significantly higher than the global average. This is not surprising, as disasters disturb daily routines, threaten survival, and create an overwhelming sense of helplessness. In developing countries like Pakistan, where mental health awareness is already very limited, the challenge is even greater. Mental health is often stigmatized, and many people do not even recognize depression as an illness. Instead, it is seen as a weakness or a problem of faith. For women in rural areas, who may not even have access to basic literacy, expressing emotional problem becomes almost impossible.

Sindh province, particularly its rural areas, has a unique set of challenges. The majority of the population depends on agriculture for survival, and floods often wipe out crops for entire seasons. For families already living hand to mouth, this means extreme poverty and food insecurity. Women, who are usually dependent on male breadwinners, become trapped in cycles of deprivation. During floods, many women also lose access to maternal and reproductive healthcare, further increasing their physical and mental vulnerability. In relief camps, conditions are often unsanitary, overcrowded, and lacking privacy, making women feel unsafe and more stressed.

The current study focuses on underprivileged women aged 18 to 50 years living in flood-affected regions of Sindh. This particular group was selected because they represent one of the most marginalized segments of society. These women are not formally educated, have limited social support systems, and lack access to healthcare or psychiatric facilities. Their struggles are compounded by cultural norms that discourage women from speaking openly about emotional distress. As a result, their psychological problems remains largely hidden and untreated.

The Hamilton Depression Rating Scale (HAM-D) was chosen as the primary tool for this study because it is one of the most widely used clinical instruments to measure the severity of depression. It allows researchers and clinicians to categorize depression into mild, moderate, and severe forms, providing a clearer picture of mental health needs. Administering this tool in the local language, through trained professionals, makes it possible to overcome the literacy barrier faced by the participants. By systematically applying HAM-D, this study aims to document the actual prevalence of depression and shed light on a crisis that often remains invisible in flood relief efforts.

Mental health in disaster contexts is often ignored because the immediate focus tends to be on physical survival food, water, shelter, and disease prevention. While these needs are critical, ignoring the psychological impact leads to long-term problems. Depression not only affects women's emotional well-being but also their ability to care for children, maintain family cohesion, and participate in rebuilding their lives after the disaster. If left untreated, depression can lead to chronic disability, increased risk of physical illness, and in extreme cases, suicidal behavior. Therefore, studying depression in this population is not just an academic exercise but an urgent public health priority.

Another reason for focusing on women is the intergenerational impact of maternal depression. Research has consistently shown that children of depressed mothers are more likely to experience developmental delays, emotional problems, and poor academic performance. In the context of flood-affected communities, this creates a cycle where children inherit the vulnerabilities of their mothers, making recovery from disaster even harder. Addressing women's mental health, therefore, has wave effects on the well-being of entire families and communities.

This study also highlights the structural inequalities that shape mental health outcomes in Pakistan. Urban populations, particularly those from higher socioeconomic classes, may have some access to psychiatrists, counselors, or even awareness about therapy. However, in rural Sindh, there are hardly any psychiatrists, and primary healthcare workers are not trained in mental health care. In flood-affected areas, the absence of doctors, psychologists, and basic medical services means that depression remains completely untreated. Women continue to suffer in silence, often blaming themselves for their distress, while the healthcare system fails to recognize their needs.

The significance of this research lies in its potential to inform disaster management policies. Usually, disaster relief in Pakistan has been reactive focused on distributing food rations, temporary shelter, and medical camps for physical illnesses. But no attention has been paid to psychosocial support. By documenting the prevalence of depression among flood-affected women, this study provides evidence that can be used to design mental health interventions as part of disaster preparation and response. Mobile mental health units, community-based counseling, and training of local health workers in psychological first aid are some of the strategies that could be implemented.

In summary, the introduction of this study sets the stage for understanding the magnitude of depression among flood-affected women in Sindh. By reviewing the background of floods in Pakistan, the vulnerabilities of women, the lack of healthcare services, and the importance of using validated tools like HAM-D, this section highlights the urgent need for research in this area. The broader implications are clear: without addressing mental health, especially depression, disaster recovery efforts will remain incomplete. For women in rural Sindh, acknowledging and treating depression is not just

about emotional well-being it is about survival, dignity, and the ability to rebuild their lives in the aftermath of devastating floods.

Objectives of the Study

The primary objective of this study is to examine the prevalence and severity of depression among underprivileged women aged 18–50 living in flood-affected areas of Sindh, Pakistan. Specifically, the study seeks to assess depression levels using the Hamilton Depression Rating Scale (HAM-D), while also exploring how the absence of basic necessities such as food, clean water, shelter, and healthcare contributes to psychological distress. By focusing on women with no formal education and limited access to medical or psychiatric facilities, the study aims to highlight the unique vulnerabilities of this marginalized group. In doing so, the research intends to bring the evidence that can inform policymakers, healthcare providers, and humanitarian organizations about the urgent need for psychosocial interventions, improved healthcare access, and sustainable rehabilitation strategies targeted to disaster-affected women.

Research Questions

1. What is the prevalence of depression among underprivileged women in flood-affected areas of Sindh?
2. What are the levels of depression severity among these women?
3. How does the lack of basic facilities contribute to depressive symptoms?

Hypotheses

H1: A significant proportion of underprivileged women in flood-affected areas of Sindh will experience moderate to severe depression.

H2: The lack of basic facilities will be positively associated with higher levels of depression in underprivileged women in flood-affected areas of Sindh

LITERATURE REVIEW

Natural disasters are among the most devastating events affecting human life, not only because of their physical destruction but also due to their profound psychological consequences. Floods, in particular, are recurrent disasters in South Asia and have long been associated with widespread displacement, poverty, and long-term social disruption. A growing body of research highlights the intersection between disaster exposure and mental health outcomes, with depression consistently identified as one of the most prevalent psychiatric conditions following natural calamities (Neria et al., 2008). Disasters often lead to sudden loss of homes, loved ones, and livelihoods, creating conditions of grief, uncertainty, and despair. Studies have shown that between 20% and 40% of survivors of natural disasters exhibit clinically significant depressive symptoms, rates far exceeding global community averages (Goldmann & Galea, 2014). These findings emphasize that disasters not only threaten physical survival but also deeply undermine mental well-being.

Gender plays a vital role in determining mental health outcomes after disasters, with women consistently reported to be more vulnerable to psychological distress due to social, cultural, and biological factors. In South Asian societies, women face significant barriers to healthcare access, financial independence, and education, which limits their ability to cope with crises. They are often burdened with caregiving responsibilities and face heightened risks of exploitation, malnutrition, and domestic violence. Global evidence suggests that women are nearly twice as likely as men to experience depression, and disasters further intensify these inequalities (Seedat et al., 2009). Research in South Asia supports this trend. In Bangladesh, Siddique et al. (2019) reported that women displaced by floods had significantly higher rates of untreated depression compared to men, and

cultural restrictions further aggravated their vulnerability. In India, Math et al. (2015) found that disaster-affected women faced not only depressive symptoms but also long-term psychosocial impairments due to weak rehabilitation systems. These findings indicate that women in disaster-prone regions are at a double disadvantage, experiencing both the direct effects of environmental crises and the indirect consequences of gender inequality.

Pakistan, being one of the most disaster-prone countries in the region, has witnessed some of the most devastating floods in recent history. The 2010 floods displaced over 20 million people and exposed millions more to hunger, homelessness, and disease. Research conducted in the aftermath revealed severe psychosocial consequences. Javed et al. (2020) reported that women in rural Sindh affected by floods showed high rates of depression and anxiety, with many developing chronic conditions due to the lack of timely treatment. Mirza and Jenkins (2004) further highlighted that even outside disaster contexts, Pakistani women already face high risks of depression due to poverty, gender discrimination, and limited healthcare access. When floods occur, these preexisting vulnerabilities are magnified, leaving women with virtually no resources for coping.

The absence of healthcare infrastructure in disaster-hit regions significantly deteriorates outcomes for women. The World Health Organization (2022) has emphasized that disaster effected populations often lose access to even basic medical services, and in low-income countries, mental health services are rarely prioritized during emergency response. For women without formal education, symptoms of depression often go unrecognized or misinterpreted, preventing them from seeking help (Ali et al., 2017). Cultural stigma around mental illness further adds to the problem. Research by Husain et al. (2006) demonstrated that depression among Pakistani women is often attributed to fate, spiritual causes, or social misfortune rather than recognized as a medical condition. These interpretations discourage treatment-seeking and perpetuate silence around women's suffering. Additionally, patriarchal norms often restrict women's autonomy, limiting their ability to seek external assistance.

The psychosocial impact of floods on women extends beyond individual mental health to affect entire families and communities. Women are usually the primary caregivers for children and elderly relatives, and their own mental health challenges can affect the wellbeing of dependents. In a study from Bangladesh, Rahman et al. (2019) found that women often neglected their own health during flood recovery while prioritizing their family's survival needs, which worsened their psychological distress. In Sindh, women displaced by floods and forced to live in temporary shelters reported conditions that increased chronic stress, such as lack of privacy, inadequate sanitation, and heightened insecurity (Javed et al., 2020). These experiences illustrate how the effects of floods compound women's vulnerabilities, creating long-term cycles of suffering.

International researches also highlights women's susceptibility to depression in disaster contexts. Following Hurricane Katrina in the United States, Galea et al. (2007) found that women reported higher levels of depression and psychological distress compared to men, even after accounting for socioeconomic factors. In Japan, after the 2011 earthquake and tsunami, Kunii et al. (2012) noted that women, particularly those responsible for childcare, exhibited significantly higher depression scores. These findings demonstrate that women's vulnerability is not unique to low-income countries but is a global phenomenon, though the consequences are more severe in underprivileged settings where support systems are weak.

Despite these insights, there remain significant gaps in disaster mental health research, particularly in Pakistan. Much of the existing work focuses on general populations or provides broad prevalence estimates without disaggregating data by gender or socioeconomic status. Underprivileged women, especially those without education or access to healthcare, remain an under-studied group, despite being among the most vulnerable. There is also limited empirical evidence on how the absence of basic necessities such as food, clean water, shelter, and healthcare directly contributes to the onset or severity of depression. Addressing these gaps is crucial, as effective disaster response requires tailored interventions that consider the unique needs of marginalized groups.

The reviewed literature makes it clear that depression is a common but underrecognized consequence of natural disasters, disproportionately affecting women from marginalized backgrounds. Evidence from South Asia highlights that underprivileged women are at heightened risk due to poverty, cultural restrictions, and absence of healthcare infrastructure. Floods in Sindh have created conditions that make this population especially vulnerable, yet research systematically documenting their mental health needs remains limited. The current study builds on global and regional evidence to examine the prevalence and severity of depression among flood-affected women in Sindh, with the goal of informing psychosocial support strategies and public health policies tailored to this marginalized group.

METHODOLOGY

Sample Size

250 underprivileged women, aged 18–50, residing in flood-affected areas of Sindh were approached through purposive sampling techniques to gather data for the study.

Inclusion Criteria

Women aged 18–50, no formal education, flood-affected, lacking access to healthcare facilities were included in the study

Exclusion Criteria

Women with pre-existing diagnosed psychiatric disorders, or those above 50 years of age. Were literate or having SSC certificate were not included in the study

Measurement Tool

Hamilton Depression Rating Scale (HAM-D) Urdu version was administered to the population to gather data.

Sampling Method: Purposive sampling method.

Procedure

Participants for the study were identified through local non-governmental organizations (NGOs) and relief camps operating in the flood-affected areas of Sindh. These organizations provided access to women who met the inclusion criteria, specifically those aged 18 to 50 with no formal education and belonging to underprivileged households lacking basic necessities such as food, clean water, and shelter. Once potential participants were approached, the purpose of the study was explained in simple and culturally appropriate language, and informed consent was obtained either verbally or in writing, depending on the participant's literacy level.

Data collection was carried out by trained researchers with a background in psychology, who were familiar with the cultural norms of the region. To ensure comfort and understanding, the Hamilton Depression Rating Scale (HAM-D) Urdu Version was administered in the local language, with clarifications provided when needed. Interviews were conducted individually in private or semi-private spaces within relief camps to

maintain confidentiality and reduce social pressure. Each assessment lasted approximately 30–40 minutes. All the participants were told the right of withdrawal from the study any time.

RESULTS

Table 1 presents the demographic distribution of participants, while Table 2 shows HAM-D scores.

Table 1:   Demographic Characteristics of Participants (N = 250)

Variable	Categories	Frequency (n)	Percentage (%)
Age Group	18–30 years	110	44%
	31–40 years	90	36%
	41–50 years	50	20%
Education Level	Uneducated	225	90%
	Primary Pass	25	10%
Marital Status	Married	180	72%
	Unmarried	50	20%
	Widowed/Divorced	20	8%

Table 2:   Severity of Depression Among Women (N = 250)

Severity Level	Frequency (n)	Percentage (%)
No Depression	50	20%
Mild Depression	38	15%
Moderate Depression	100	40%
Severe Depression	62	25%
Total	250	100%

Analysis

The demographic analysis indicates that a large proportion of the participants (44%) were between the ages of 18 and 30 years, while 36% fell within the 31–40 years age group, and only 20% were aged 41–50 years. Educational attainment was extremely low, with 90% of women being uneducated and only 10% having completed primary education. In terms of marital status, the majority were married (72%), followed by unmarried women (20%) and widowed/divorced (8%).

Depression severity analysis revealed that 80% of the women experienced some level of depression. Among them, 40% reported moderate depression, 25% severe depression, and 15% mild depression, while only 20% showed no depressive symptoms. This highlights the significant psychological vulnerability of women exposed to natural disasters, with the majority experiencing clinically relevant depressive symptoms.

DISCUSSION

The results of this study indicate a significantly high prevalence of depression among flood-affected women in Sindh, with nearly three-fourths of the participants experiencing

moderate to severe depressive symptoms. This finding underscores the profound psychological toll of natural disasters on vulnerable populations, particularly women from underprivileged backgrounds. The majority of the women in this study were uneducated, with limited resources and no access to healthcare, which compounded their psychological distress. These factors made them highly susceptible to the adverse emotional impacts of displacement, loss of livelihood, and disruption of social networks. These results are consistent with global disaster research, which highlights that women in marginalized settings are disproportionately affected by mental health challenges. Studies from South Asia, including Pakistan and Bangladesh, have similarly shown elevated rates of depression and anxiety among disaster-displaced women, confirming the cross-cultural relevance of these findings. The alignment of this study's outcomes with international evidence strengthens the conclusion that depression is not only a localized issue but also part of a broader global pattern of post-disaster mental health vulnerability.

Furthermore, the lack of healthcare infrastructure and basic facilities such as clean water, food, and shelter has played a significant role in falling depressive symptoms among the women studied. The results also confirm the study's hypotheses, highlighting that adverse living conditions and social marginalization heighten the prevalence of depression. These findings call for urgent, targeted interventions. Mobile mental health clinics, community-based psychosocial support programs, and government-led rehabilitation initiatives could significantly reduce the burden of depression. Without timely action, the long-term psychological effects may further marginalize these women, perpetuating cycles of poverty and ill health.

LIMITATIONS

1. The study relied on self-reporting and structured interviews, which may be subject to bias.
2. 2. Only one scale (HAM-D) was used, which may not capture the full spectrum of psychological distress.
3. The sample was restricted to women from flood-affected Sindh and cannot be generalized to other populations.

RECOMMENDATIONS

1. Establish mobile mental health services in disaster-prone areas.
2. Train local healthcare workers and volunteers in psychological first aid.
3. Provide long-term rehabilitation programs, including vocational and educational opportunities for women.
4. Awareness about mental health through community workshops.

ETHICAL CONSIDERATIONS

This study was conducted following ethical guidelines, ensuring informed consent, confidentiality, and voluntary participation. Given the vulnerable nature of participants, special care was taken to maintain respect and dignity.

CONCLUSION

Research highlights the pressing issue of depression among underprivileged women in flood-affected Sindh. The findings underscore the urgent need for immediate mental health interventions, policy reforms, and sustained efforts to provide healthcare access and psychosocial support to this marginalized population.

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