

Exploring Post -Disaster Livelihoods Opportunities for Women: A case study of District Sujawal & Badin Province of Sindh, Pakistan

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Abstract

This research aims to explore the impact of disasters on women's livelihoods and to identify and assess the opportunities available to women in the aftermath of such events in the Badin and Sujawal districts of Sindh Province. The focus is on women living in these areas. A multistage sampling method was employed to select households for the study, which involved intentionally choosing ten households from each selected hamlet. Consequently, the study includes a sample of 160 households from Badin and 120 from Sujawal, totaling 280 households across both districts. The research variables focus on livelihoods, opportunities, and the role of women in post-disaster recovery in Badin and Sujawal. Quantitative methods are employed to analyze both primary and secondary data pertaining to female livelihoods, while qualitative analysis is conducted through data reduction, presentation, and verification. Research has shown that rural women in disaster-prone areas of Sindh face significant limitations in accessing loans and assets, which obstructs their ability to improve their livelihoods after disasters.

Keywords: Post –Disaster, Livelihoods, Opportunities, resilience vulnerability poverty and displacement

Introduction

Disasters, whether induced by nature or human actions, have profound effects on communities across the globe. In Pakistan, the Sindh Province is especially vulnerable to

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natural calamities like floods, droughts, and heat waves, which impose serious repercussions on the livelihoods of its residents. Women, in particular, face greater challenges during these disasters because of societal expectations, restricted access to resources, and an escalated risk of poverty and displacement.

In spite of these hurdles, women in Sindh have shown incredible resilience and adaptability during times of crisis. This research seeks to investigate post-disaster livelihood opportunities, aiming to reveal how women in Sindh reconstruct their lives, revive their means of income, and play a vital role in the broader recovery of their communities.

Women tend to face greater challenges than men in the aftermath of disasters, and they are also more vulnerable to issues such as poverty, coerced marriages, and labor exploitation. This heightened risk can be attributed largely to their increased financial insecurity compared to their male counterparts. Moreover, it has been noted that women often have lower literacy rates and face restricted access to resources, including land for agriculture and other income-generating opportunities. Additionally, women tend to shoulder greater responsibilities, as they are more prominently represented in the agricultural and informal sectors, both of which are significantly impacted by natural disasters.

While climate change is a natural phenomenon, its effects are shaped by social structures, leading to unequal impacts across genders. Human activities further exacerbate this situation. Since women constitute a significant portion of the global impoverished population due to their dependence on men, they are more vulnerable to the repercussions of climate change compared to men. In fact, women account for 80% of those who have been displaced (Halton, 2018). Globally, their perceived access to resources is typically restricted, which hampers their capacity to adapt to climate change (Aguilar, 2008). In low-income economies, women frequently bear the responsibility for vital household tasks, such as obtaining food, water, and fuel. During times of climate change, these responsibilities can jeopardize their safety and well-being.

In a comparable manner, women who rely on agriculture for their livelihoods are compelled to travel to distant areas in search of resources during droughts, increasing their risk of harm and sexual violence (Williams et al., 2013). Likewise, women experience higher mortality rates due to climate change, especially during hurricanes and storms. Pregnant women are particularly vulnerable to illnesses transmitted through water and vectors. Their exposure to extreme weather events is exacerbated by limited resources, deep-seated biases, and gender discrimination (Levy and Patz).

This research explores the intricate connections among disasters, livelihoods, and gender, with the goal of gaining deeper insights into how women in Sindh manage the challenges and opportunities that disasters bring. By doing so, the study intends to provide valuable guidance for policies and practices that promote the resilience and empowerment of women in Sindh, both in the immediate aftermath of a disaster and in the long-term pursuit of sustainable livelihoods.

Scope of Research

The study will concentrate on the Sindh Province in Pakistan, specifically targeting both rural and urban regions impacted by disasters including floods, droughts, and heatwaves. It will also pay special attention to women aged 18 to 60 years from various socio-economic

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backgrounds who have been affected by these disasters. The research aims to investigate the livelihood opportunities available to women in Sindh following such events, particularly during the short-term and medium-term recovery phases. Additionally, the study will delve into aspects of livelihood recovery, economic empowerment, social protection, and community resilience.

Rationale of Research

The study aims to investigate and address the challenges women face in the aftermath of disasters in the Badin and Sujawal districts of Sindh province, Pakistan. Despite the influence of climate change, marginalized communities often bear the brunt of disaster impacts, with women frequently at a heightened risk. This research seeks to enhance our understanding of the difficulties women encounter in these areas post-disaster by analyzing the connections between demographic changes, socioeconomic status, and the effects of climate change. The findings from this study can guide targeted interventions, policies, and community-based strategies to empower women, ultimately fostering the development of more equitable and effective disaster management practices in the affected regions.

Research Problem/Research Question

What specific challenges do women in Sindh encounter following disasters? How do women in Sindh view and take advantage of livelihood opportunities after such events?

Objective of Research

The study examines the impact of disasters on women's livelihoods and aims to identify and analyze the post-disaster livelihood opportunities available to women in the Badin and Sujawal districts of Sindh Province.

Theoretical / Conceptual Framework

This study is based on feminist theory, which highlights the significance of exploring the social and economic dynamics that influence women's lives. To assess the livelihood opportunities for women following a disaster, the livelihoods framework established by Chambers and Conway (1992) will be employed.

Significance of Research

This study will enhance the existing knowledge concerning post-disaster livelihoods, particularly emphasizing the experiences of women in Sindh, Pakistan. The outcomes of this research will guide policies and practices that support the livelihoods and well-being of women in areas impacted by disasters. By investigating the livelihood opportunities accessible to women following disasters, the study seeks to empower them and foster their economic and social independence. Furthermore, it will offer valuable insights into the efficacy of current disaster response initiatives and highlight areas that require enhancement.

Limitation of Research

This research explores the influence of various factors on the socioeconomic development of

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the Badin and Sujawal districts in Sindh Province, Pakistan. The results may be applicable to similar regions within the province, but caution should be taken when generalizing these findings to other parts of Sindh or Pakistan as a whole.

Literature Review

Chowdhury (2009) contends that women and girls from low-income households face a heavier workload and more responsibilities often taking on unpaid tasks to support their families. In rural communities plagued by poverty, women are relegated to menial tasks such as tending to livestock, farming for subsistence, and collecting essentials like water and firewood. By relying on their children to help with household chores, financially disadvantaged women put their own well-being at risk, as well as the future prospects of their daughters. The disparities between genders are particularly stark in impoverished households, especially in terms of access to proper nutrition, healthcare, and educational opportunities.

Razavi (2016) suggests that the challenges faced by women worldwide can be partly linked to the substantial underinvestment in girls. This contributes to a vicious cycle of poverty on a global scale. To empower women and help disrupt the cycle of poverty, it is essential to tackle gender inequalities by actively investing in women as vital economic contributors and ensuring their rights within a well-defined framework (Kabeer, 2015).

Marron et al. (2020) conducted a study examining the socioeconomic effects of gender-based natural disasters among family members in Haiti. The findings indicated that the disaster's impact varied by location and intensified with the earthquake's severity, regardless of the household leader's gender. Additionally, the research revealed a significant link between these impacts and the family's income. Households led by women faced an increasing income gap compared to those led by men, highlighting a disparity in the aftermath of the disaster. The study's results reinforce the notion that women are disproportionately affected by natural disasters, particularly regarding their income-generating capabilities in female-headed households. Furthermore, the research pointed out that existing gender inequalities were exacerbated following the earthquake in Haiti. These findings emphasize the importance of addressing the political ramifications of these disparities and developing solutions to support all community members.

In a study conducted by Nikkanen et al. in 2021, the researchers delved into the correlation between socioeconomic factors and preparedness for storms, as well as the resulting effects in Finland. Severe weather events, such as storms, can disrupt communities, resulting in both material damage and injuries. Previous studies on climate change adaptation and natural disasters have underscored the role of socioeconomic and demographic factors in shaping individuals' preparedness for and vulnerability to natural hazards. However, there is a significant gap in research focusing on areas with low exposure and risk, with a predominant focus on regions that are highly exposed and susceptible. The findings of this study revealed no significant correlation between individuals' employment status or educational attainment and their likelihood of taking precautions or suffering harm. Instead, the type of residential property owned emerged as a key influencing factor.

Trentin and colleagues (2023) examined how disasters affect gender dynamics, with a particular focus on migratory women in the region of Balochistan. The researchers

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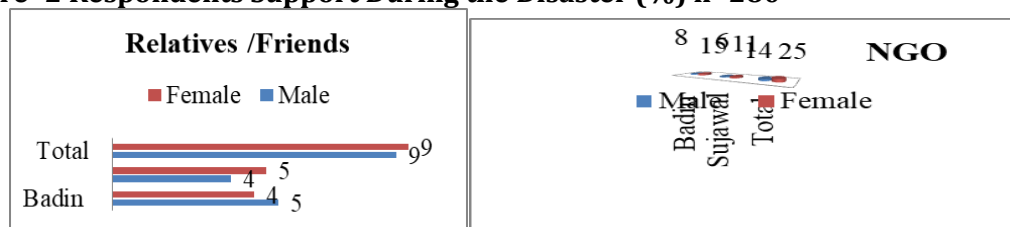
Table 01: Multistage Sampling for Selection of Households

Districts	Stages				
	Sample Talukas	Sample UCs	Sample Villages	Sample Households	Total Sample Size (n)
Badin	1	2	8	10	160
Sujawal	1	2	6	10	120
Total	2	4	14	20	280

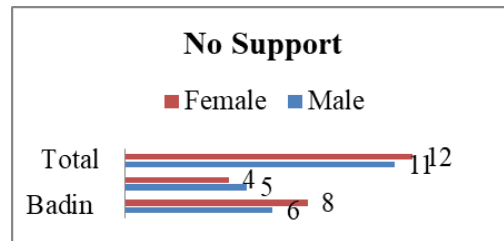
Households were carefully chosen for the study using a multistage sampling technique. One Taluka in the Badin district was chosen at random in the first round, and two union councils (UCs) within that Taluka were then chosen. Eight villages were then selected to take part in the study from each of these UCs. In Sujawal district, the same procedure was followed, leading to the selection of 20 sample houses from each district after two Talukas, four UCs, and 14 villages. Ten homes were then picked from each hamlet using the multistage purposive sampling technique. A total of 160 houses from the Badin district and 120 households from the Sujawal district were obtained through this painstaking process, resulting in a complete sample of 280 homes from the two districts.

Analyses and Interpretations

This study presents an examination of the various livelihood options available to women in disaster-prone areas following a catastrophe. Through an analysis of primary data, it is demonstrated that rural women have the opportunity to engage in a wide range of activities, including conceptualization, strategizing, and execution. In essence, women play a crucial role in the recovery and rebuilding process after a disaster, with ample prospects for them to contribute at every stage of the relief and reconstruction efforts.

Figure -2 Respondents Support During the Disaster (%) n=280

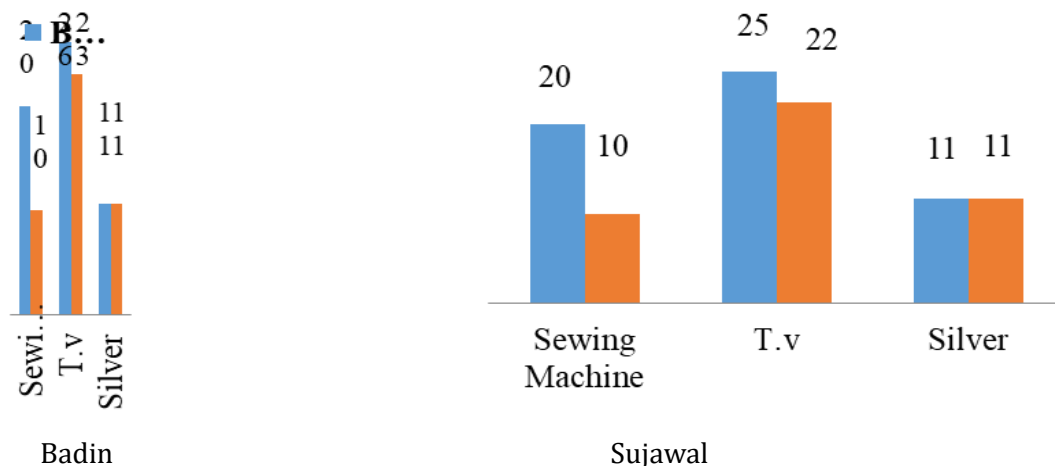
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Source: Survey Data: (2017-18)

Figure 2 shows that a sizable percentage of female respondents (25 percent) reported receiving assistance from non-governmental organizations (NGOs) during a crisis, compared to 12 percent who received government assistance, 9 percent who received assistance from friends or family, and 12 percent who received no assistance at all. By contrast, only 8% of male respondents reported receiving government assistance, and 9% said they were entirely dependent on family members. Furthermore, 14% of men received assistance from NGOs, compared to 11% who received no assistance at all.

Figure-3. Distribution of Female Respondents According to Type of Assets Before and After Disaster (%) n=280

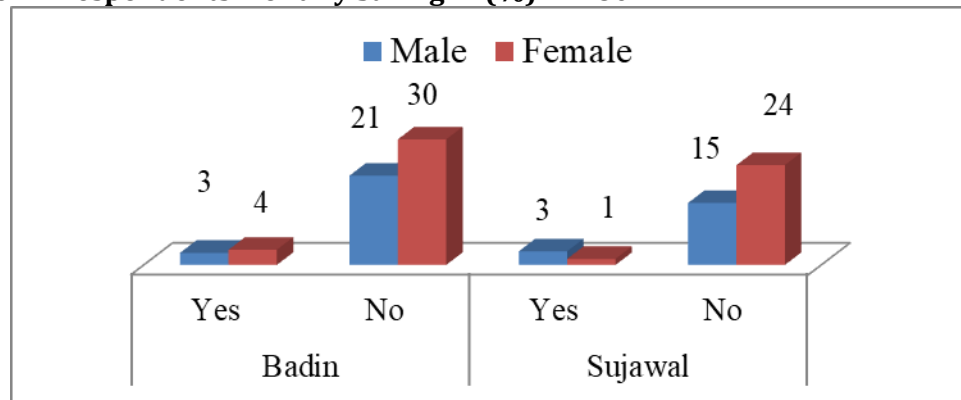


Source: Study Survey: (2017-18)

In Figure 3, the distribution of assets in the study area is depicted before and after the disaster. Prior to the event, 26% of households owned T.Vs and 25% owned sewing machines, while 20% owned both. Following the disaster, only 23% of households had T.Vs and 10% had sewing machines, as many were unable to salvage all their belongings due to flooding

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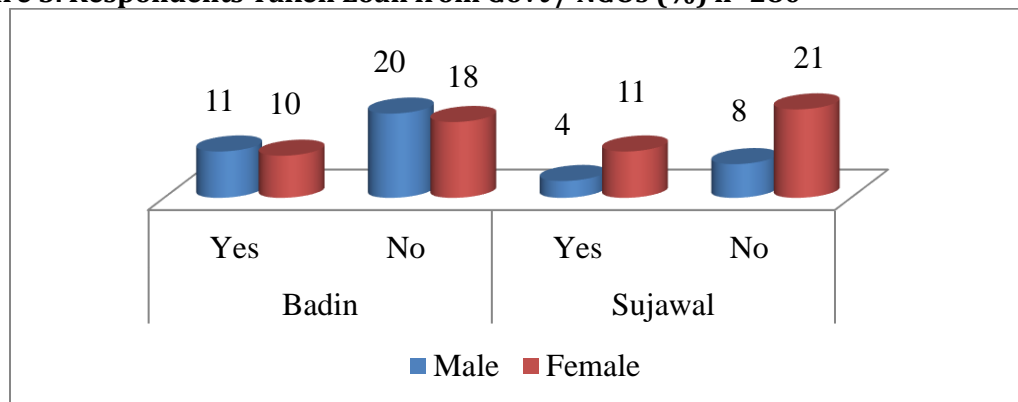
Figure- 4. Respondents Monthly Saving in (%) n=280



Source: Study Survey (2017-18)

This graph illustrates that approximately 4% of female respondents saved their money, whereas only 3% of male respondents saved their income; due to poverty, they are unable to save more.

Figure 5. Respondents Taken Loan from Govt / NGOs (%) n=280



Source: Study Survey: (2017-18)

In the Study area, Figure 5 illustrates that approximately 11% of female respondents opted to take a loan from an Ngo/Government organization. Conversely, 21% of female respondents chose not to take out loans in times of disaster.

Logistic Regression Equation

- $Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5 + B_6X_6$
- Where:
- Y = Binary Dependent Variable (i.e. for Gender)
- 1 = women
- 0 = men
- b_0 = Intercept/Constant

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- b1 b2 b3 b4 b5 b6 = Coefficient
- X1= Support from Govt / NGOs
- X2 = Support from Relative/friends Support
- X3 = Assets
- X4= Savings
- X5 = Taken loans from Relative/friends
- X6= Taken loans from Govt/NGOs

Table 2. Variables in the Equation

Variables	B	Wald	Sig.	Exp(b)
Support from Govt /NGOs	.457	4.167	.041*	1.579
Support from Relative/friends Support	.010	9.816	.002**	1.010
Assets	-1.628	4.818	.028*	.196
Savings	.022	20.612	.000**	1.022
Taken loans from Relatives/friends	-.039	4.167	.040*	.961
Taken loans from Govt/NGOs	-.255	7.715	.001**	.775
Constant	-5.473	20.612	.000**	.004

-Square e= 0.61

-2 Log likelihood =38.693

Values for variables such as assets, loans from friends and family, and loans from the government or non-governmental organizations being smaller than 1. Conversely, the Exp (b) values for variables such as savings, support from friends and family, and support from the government and non-governmental organizations are more than 1, indicating that the likelihood of women having assets and loans increases as their numbers rise. This model's R² value of 0.61 indicates that it accounts for 61% of the variation in the dependant variable. Furthermore, the model's goodness is suggested by the low Minus 2 Log likelihood value. The empirical findings confirm that in disaster-prone areas in Sindh, rural women have limited access to loans and assets to enhance their livelihoods post-disasters. However, they have more savings and support to improve their livelihoods in such challenging circumstances.

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Conclusion

The aforementioned opportunities underline the importance of women's roles in disaster-prone and disaster-affected districts throughout Sindh province. The analysis of primary data obtained from Badin, Sujawal, and Thatta districts gives strong evidence from the local people about rural women's expected contributions to reconstruction and rehabilitation activities. It has been observed that rural women in these areas have faced numerous challenges during disasters, and their male counterparts have played a supportive role in helping them navigate through these difficult situations. For instance, there have been instances where men have assisted women in activities such as poultry farming, milking cows, and running small-scale businesses to generate income and improve their families' financial well-being. Additionally, local authorities, in collaboration with governmental and non-governmental organizations, have implemented emergency programs during and after disasters to empower women socially and economically.

Recommendations

☐ Women should be given priority in resource allocation, as they possess the resilience and determination to uplift not only their families but also entire communities from poverty in the wake of disasters.

☐ Enhancing sustainable livelihoods and empowering local communities for effective natural resource management in order to minimize vulnerabilities related to livelihoods and gender. This can be achieved through comprehensive training programs that cover a range of interconnected topics such as the adoption of modern agricultural techniques, improving livestock management practices, breeding strategies for livestock enhancement, promoting reproductive health awareness, and creating income-generating opportunities. Furthermore, open dialogues within and between communities at the local level to address gender vulnerabilities during disasters might be organized in various study areas and rural regions throughout Badin and Sujawal districts. These efforts seek to promote awareness and advocate for gender equality while also investigating practical methods to eliminate gender gaps in disasters using locally accessible resources.

☐ Enhancing the skills and livelihood opportunities of local communities, with a focus on women and marginalized groups residing in disaster-prone regions, through vocational training programs. These initiatives aim to improve expertise in various crafts such as embroidery, handmade production, and dairy processing. Furthermore, residents with expertise in these fields are encouraged to pass on their knowledge to others in the community, fostering a culture of skill-sharing and empowerment.

☐ Study findings suggest that the Government of Sindh's provincial disaster management authorities should increase their efforts to efficiently manage various types of disasters in order to reduce the impact on both human lives and resources.

☐ Policymakers, non-governmental groups, and academics should address gender-specific vulnerabilities during catastrophes. This includes addressing the special healthcare, economic, and security requirements of women after a disaster, and creating processes to ensure fair and unbiased distribution of relief supplies.

☐ It is imperative to implement more effective policies and initiatives to enhance

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women's opportunities for accessing education, income, and ownership resources, with a particular emphasis on rural communities.

It is imperative that training programmes encompass a diverse range of interconnected fields, such as the implementation of cutting-edge agricultural technologies, effective livestock management practices, and the improvement of livestock breeding techniques. Additionally, there is a pressing need for education on reproductive health and strategies for income generation within these sectors.

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