

Women's Participation in Disaster Risk Reduction: Capacities and Challenges

Maryam Sedghi^{1&2} , Seyed Hamidreza Mofazzali¹ , Bahman Ahmadi Tavana³ ,
Hamid Mahallati⁴ 

Date of submission: 01 Dec. 2023

Date of acceptance: 21 Apr.2025

Original Article

Abstract

INTRODUCTION: Given the increasing natural hazards, there is an increasing emphasis on innovative disaster risk reduction (DRR) initiatives aimed at increasing resilience and recognizing women as key stakeholders in all disaster management activities, although their role remains limited for unclear reasons. Since understanding gender issues and their impact in shaping people's lives is crucial in disaster risk reduction, this study seeks to examine the effective role of women's participation in disaster risk reduction.

METHODS: In this descriptive-analytical and library study, factors such as women's empowerment, increasing participation in decision-making levels, improving access to resources and information, and changing traditional attitudes that play a role in reducing women's vulnerability were examined. The necessary data were collected by reviewing relevant parameters in reputable articles, reports and books. The statistical population includes women from disaster-prone countries such as Tamil Nadu (India), Bangladesh, Nepal, Tashkent (Uzbekistan), Ethiopia and other countries.

FINDINGS: The findings indicate that women's vulnerability to disasters is a combination of biological, social, cultural, economic and political factors, and that traditional caregiving roles, gender discrimination and inequalities in access to resources, information and decision-making increase their vulnerability. In addition, disasters impose more severe psychological, social and economic consequences on women.

CONCLUSION: According to the results, due to unequal social and cultural structures, women are more vulnerable to natural and man-made disasters. Therefore, disaster management policies and actions must be gender-sensitive. Empowering women, promoting their participation in decision-making, improving their access to resources and information, and changing traditional attitudes can reduce the impact of crises on women and increase the overall resilience of society.

Keywords: Disaster Risk Reduction (DRR); Disaster Risk Governance (DRG); Women; Resilience.

How to cite this article: Sedghi M, Mofazzali SM, Ahmadi Tavana B, Mahallati H. Women's Participation in Disaster Risk Reduction: Capacities and Challenges. Sci J Rescue Relief 2025; 17(2): 85-95.

Introduction

Traditional approaches to disaster management are aligned with various phases of the disaster cycle, including mitigation, preparedness, response, and recovery strategies. However, emergency management efforts often face significant challenges such as a lack of focus on multi-hazard scenarios, insufficient preventive

measures, and the failure to cover all phases of emergency management. As a result, some DRR efforts have introduced innovations in governance, risk knowledge, cost-benefit analysis, and accountability. Disaster Risk Governance (DRG) has attracted attention due to its ability to enhance the effectiveness of DRR and resilience-building efforts through participatory decision-making. (1) Risk governance establishes horizontal connections among ministries and government

1. Faculty member, Disaster Management Research Group, Natural Disaster Research Institute, Tehran, Iran

2. Head of Disaster Management Research Group, Natural Disaster Research Institute, Tehran, Iran

3. Secretary of the UNESCO Chair in "Disaster Risk Reduction and Resilience Training," Kharazmi University; Director of Education, Public Relations, and International Affairs, Applied Research Institute of Natural Disaster and Risk Management, Kharazmi University, Tehran, Iran

4. Iranian Red Crescent Society, Tehran, Iran

Correspondence to: Maryam Sedghi, Email: sedghimagi1360@gmail.com

departments, as well as vertical linkages with regional and local governments, assigning specific roles to relevant institutions. In general, DRG aligns with broader governance concepts that balance political interventions and diverse interests with political realities.

Good governance ensures efficient and effective outcomes in economic, social, and environmental decision-making, and thus, strengthening DRG is essential amid increasing disaster risks. According to the Sendai Framework for Disaster Risk Reduction, natural disasters from 2005 to 2015 caused an estimated economic loss of 1.3 trillion USD, displaced 144 million people, and affected another 1.5 billion, with women, children, and vulnerable populations being disproportionately impacted. (2)

Contemporary emergency management practices face numerous challenges, including inadequate focus on diverse hazards and insufficient measures in the prevention phase. DRG has therefore become central due to its capacity to enhance DRR and resilience-related efforts via participatory decision-making and involves the activities of ministries, public agencies, national and local governments, and the definition of specific roles for various institutions. Since effective governance plays a pivotal role in achieving efficient and impactful economic, social, and environmental outcomes, enhancing DRG amid rising disaster incidents is imperative.

Stakeholder participation in decision-making, alongside equity and justice, is a prerequisite for DRG. Therefore, women must be involved in all stages of decision-making and DRR activities. This point was emphasized at the 3rd World Conference on DRR and incorporated into the Sendai Framework in 2015 with the goal of promoting gender inclusiveness, though implementation remains unsatisfactory. Because gender shapes capacity and vulnerability, women are especially at risk before, during, and after crises, with specific needs and demands that become evident during various disasters. Thus, linking women's roles to DRG is crucial.

However, this study seeks to examine the effective role of women's participation in disaster risk reduction and explores the fundamental causes of women's vulnerability, the interrelation between their role and DRG, its significance, and the barriers limiting women's role in DRG. (3)

Methods

This is an applied and purposeful study conducted using a descriptive-library research method. The aim of this study is to understand the current situation or support the decision-making process. Descriptive studies conducted for planning purposes inherently involve prediction and estimation, along with a degree of probability of occurrence. To predict and estimate future conditions for a planning issue, it is necessary to be aware of its past and present status, understand the behavior of its variables and parameters, determine their coefficients of variation, and develop indicators for estimating and predicting them. Obtaining these indicators and describing the current situation requires descriptive research to enable visualization for planning purposes.

The necessary data were collected by reviewing relevant parameters in reputable articles, reports, and books. The statistical population includes women from disaster-prone countries such as Tamil Nadu (India), Bangladesh, Nepal, Tashkent (Uzbekistan), Ethiopia, and other countries. In this study, official reports produced by various institutions and reputable websites - such as the United Nations and the United Nations Office for Disaster Risk Reduction (UNDRR)- were reviewed.

The aim is to examine the underlying and influential causes of women's vulnerability to disasters and to provide a framework for strengthening the role of women in Disaster Risk Management (DRG) and Disaster Risk Reduction (DRR), based on their vulnerabilities to different disasters. The study also seeks to identify barriers through a review of prior literature. The analytical structure of this study is based on the following components: introducing the concept and importance of DRG, women's vulnerability to disasters, gender, emphasizing the role of women in DRG, and identifying constraints that limit their participation in DRG.

Findings

Disaster Risk Governance (DRG)

The Sendai Framework, the United Nations' main strategy for disaster risk reduction over the past 20 years, was adopted at the Third United Nations World Conference on Disaster Risk Reduction in Sendai, Japan, on 18 March 2015. It replaced the Hyogo Framework for Action (2005-2015), which aimed to build the resilience of

nations and communities to disasters. Prior to that, global frameworks such as the International Decade for Disaster Reduction (IDNDR) in 1989 and the Yokohama Strategy in 1994 had been adopted.

When developing an effective disaster risk reduction strategy, many factors need to be considered, including security initiatives, good governance, socio-economic development, food and water security, environmental sustainability, climate change adaptation and risk management initiatives. (4) These challenges are compounded when designing DRR strategies for low-income and developing countries due to weak regulatory frameworks, limited capacities, data gaps, and budget constraints. (5) Many of these issues are directly related to DRGs.

Over the past decade, DRG has gained prominence as a framework for informed decision-making, considered essential for communities exposed to risk. DRG refers to a set of methods and coordinated actions taken by government authorities, civil servants, media, the private sector, and civil society at community, national, and regional levels to manage and reduce disaster and climate-related risks. (6) DRG is grounded in the principles of good governance, including participation, accountability, transparency, equity, and effectiveness. More than 100 countries have introduced laws and policies to strengthen DRG. DRG facilitates the representation of various communities and vulnerable groups in decision-making processes and governmental interventions. When governments, civil societies, and experts from diverse backgrounds participate in collective decision-making, effective engagement is achieved. (5) However, these interactions—while understandable to groups affected by complex crisis conditions—are often ignored in practical decision-making processes. This oversight is especially critical in high-level decision-making aimed at minimizing the adverse impacts of disaster risks and uncertainties. Researchers have highlighted several strategies based on their findings, including strengthening community participation, establishing information and communication infrastructure, enhancing inter-organizational coordination, and adopting contingency planning tailored to the needs of each vulnerable group across various types of hazards. Among these groups, women—particularly female-headed or self-supporting households—are among the most vulnerable segments of society.

They face a multitude of issues, challenges, and barriers in their daily lives, and the incidence of natural disasters such as earthquakes or floods further increases the size of this group.

Importance of DRG

The importance of DRG has grown alongside the increasing trend of disasters. Many international frameworks have introduced evolving strategies to reduce disaster risk. For instance, the Hyogo Framework for Action (HFA) introduced an international strategy for Disaster Risk Reduction (DRR) from 2005 to 2015, aiming to build the resilience of nations and communities. Resilience and disaster risk reduction must be considered as part of urban design and strategies to achieve sustainable development. This framework identified some of the main gaps and challenges of the Yokohama Strategy when addressing the impacts caused by disasters. Among these challenges, governance was one of the first to be considered in terms of organizational, legal, and policy-related considerations. DRG is crucial for enhancing national and local community capacities during DRR activities. According to this framework, cross-border cooperation, mutual learning, information exchange, and effective methods, as well as risk monitoring and evaluation at national, regional, and global levels, facilitate DRG. (7) However, this framework failed to recognize the relationship between the roles of women in achieving DRG.

In 2002, another step was taken, and the Sendai Framework for Disaster Risk Reduction (SFDRR) was introduced for the 2015–2030 period, replacing HFA, with strengthening DRG as one of its priorities. This framework emphasizes the use of education and knowledge for preparedness and reducing disaster risks. The Sendai Framework contains 7 goals and 4 priority actions, as follows:

- Understanding disaster risk;
- Strengthening DRG to manage disaster risk;
- Investing in disaster risk reduction for resilience;
- Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation, and reconstruction.

The framework emphasizes the need to strengthen good governance through international cooperation for efficient and effective disaster risk management at the national, regional and global levels. The Sendai Framework recognizes the key, monitoring and coordinating roles of women in the

design and implementation of policies, programs and standards. (2)

Gender and resilience

Gender influences vulnerability, exposure and resilience to disasters in complex ways. In different societies, gender identity determines the roles and responsibilities of men and women in the family and community. Other aspects of identity—including ethnicity, race, disability, age or social status—also significantly influence resilience. Identifying vulnerable people and planning for appropriate services during crises are among the responsibilities of governments to reduce the impacts of disasters and increase community preparedness. Women are essential and vital stakeholders in disaster management and play a crucial role in community resilience. Resilience is defined as: the potential capacity of a system, institution or community in the face of hazards to adapt, resist or tolerate change in order to continue functioning and achieve an acceptable level of performance, to the extent that the social system is able to self-organize towards increased capacity. This is done by learning from past disasters to ensure better safety in the future.

Since each crisis is different from the next, and because men and women have significant needs and capacities based on their specific gender roles and social relations, insufficient attention to this reality, especially during disasters, creates dangerous social conditions. The various structural vulnerabilities that people face throughout their life cycle (from birth to old age) are well documented. Natural disasters hit the poorest communities hardest. Among these communities, individuals and groups who suffer from marginalization and discrimination are more likely to be negatively affected by disasters. In most cases, women and girls are portrayed as passive victims during crises, and their skills, capacities and myriad roles in disaster risk reduction are ignored.

However, there are countless examples of strong women and girls who, alongside men and boys, actively contribute to building the resilience of their families, communities and countries. In fact, each of them (women and girls) is a living testament to their inherent resilience and resilience. Unfortunately, they are often treated as an invisible part of society. Post-disaster responses and interventions often unwittingly create adverse conditions that reinforce gender inequality, including the distribution of resources and

equipment to male heads of household; the allocation of traditional jobs to men while neglecting to provide small jobs for women; advice and decision-making solely with the support of male heads of household; and the assumption that cultural constraints are fixed and difficult to change.

Women's vulnerability in disasters

Although women's increased vulnerability to disasters is primarily due to biological and physiological reasons, it is also linked to factors deeply rooted in the social and cultural context of the society. After a crisis, young girls are often forced to drop out of school to help reduce the burden of household chores; child marriage and child labor also occur in such situations. In some societies, after disasters, girls marry at much younger ages to older men. Based on studies conducted on major disasters, women's vulnerability and its underlying and contributing causes are classified into several groups, which are summarized in Table 1.

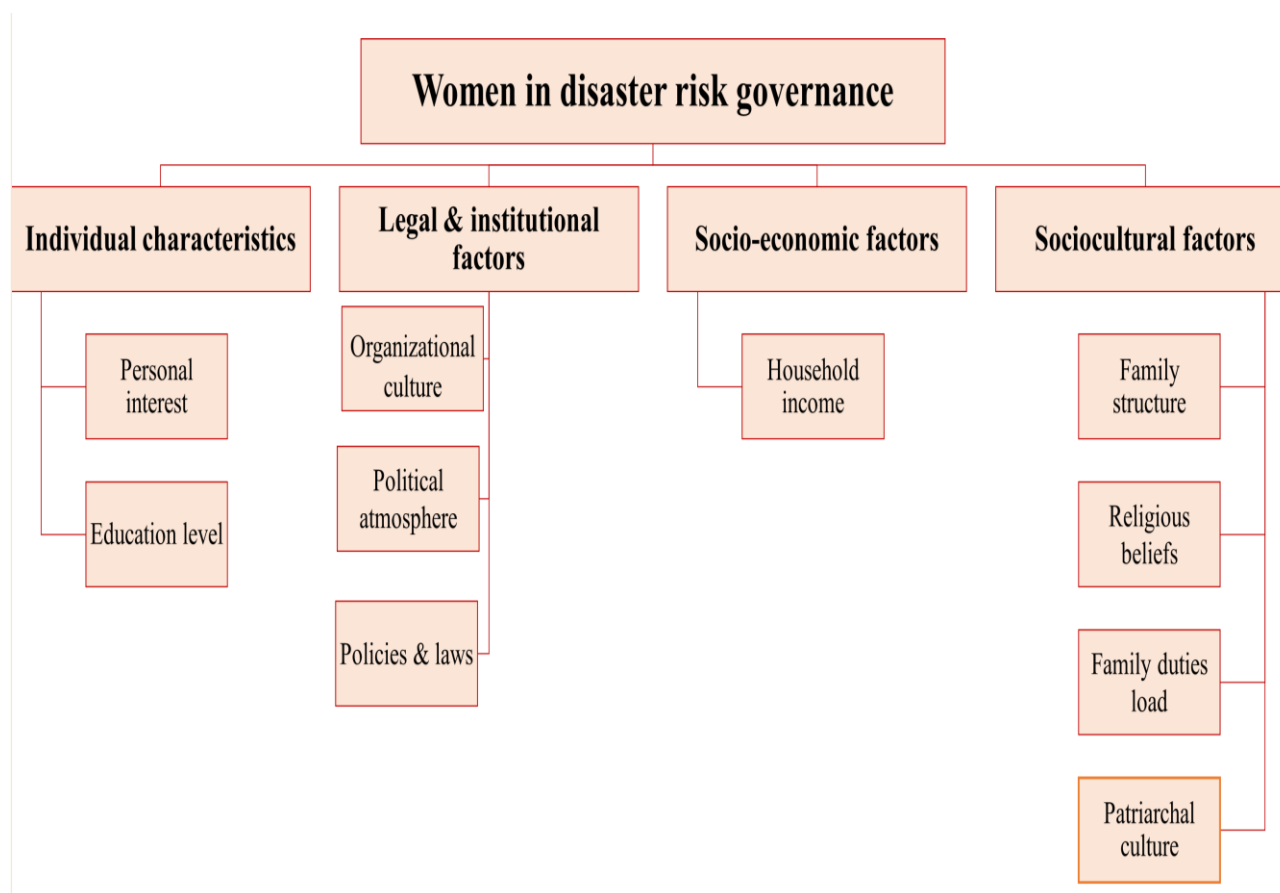
In many countries around the world, the number of women among the poor, homeless, and malnourished is higher, and these existing vulnerabilities intensify with the onset of a crisis. Many women struggle to maintain family life and rebuild communities and cultures after a disaster, often being perceived as victim-survivors (8), bearing the responsibility for caring for children and other disaster-affected relatives. Studies show that women are seven times more likely to die in disasters than men—mainly due to their social role as caregivers, caring for children and other dependent family members—and yet they receive less attention in this regard.

Women who lose their husbands in disasters become the sole providers for their families. Upon analyzing common factors in disasters, it becomes evident that one of women's specific vulnerabilities lies in overlooked gender-related patterns and factors. They are more often responsible for providing food and water, caregiving, emotional support at home, and protecting their families during post-crisis periods.

During crises, women are affected by cultural norms that restrict their roles and mobility and may lack adequate support and access to information. Even available shelters may not be designed to meet their gender-specific needs, which helps explain why female mortality rates are higher during crises.

Table 1. Root causes and influential factors of women's vulnerability

Vulnerability type	Causes
Economic vulnerability	Lack of access to resources
Social vulnerability	Breakdown of social patterns
Ecological vulnerability	Environmental degradation and the inability to protect it
Organizational vulnerability	Lack of strong national and local institutional structures
Educational vulnerability	Lack of access to schools, educational centers, and knowledge
Attitudinal and motivational vulnerability	Lack of public awareness
Political vulnerability	Limited access to power and political representation
Cultural vulnerability	Certain beliefs and customs
Physical vulnerability	Individual or family weakness

**Figure 1.** Factors affecting women's role in disaster decision-making

After a disaster, women usually take on the responsibility of rebuilding life in the absence of husbands and sons who are earning income. Ample evidence shows that during food shortages, women and girls are less likely to enjoy food security. (9)

Moreover, domestic violence against women increases after disasters—a trend reported in numerous crises globally. Domestic violence occurs in private settings and refers to any violent act aimed at controlling others, often rooted in

gender disparity, resulting in physical, sexual, or psychological harm. (10)

Class status, social frustrations, tension, material poverty, lack of work and adequate housing, psychological and sociological variables, and learned behavior within families are among the underlying factors contributing to the emergence and spread of such abuse. While women's vulnerability during disasters is evident, so is their resilience.

Examples of women's vulnerability in major crises

Disasters impact different communities differently, and women are often more affected than men. (11) For instance, in the Indian Ocean tsunami of December 26, 2004, the number of female casualties was four times higher than that of men. The tsunami killed 12,000 people, displaced 650,000, and injured more than 5,000 people in Tamil Nadu, India. The economic damage was estimated at \$437.8 million, and livelihood losses at \$377.2 million, totaling \$815 million. (12) In this event, more women and children were injured or killed in various regions. For example, in Nagapattinam, Tamil Nadu, about 2,406 women died compared to 1,883 men. When the tidal waves hit the shore, most fishermen were at sea—where the waves were relatively calm—while women waited on the shores to collect the catch and were swept away. Additionally, many women lost their lives trying to protect children and the elderly. Significantly, in this tsunami, many women perished due to traditional taboos preventing them from entering the sea in fishing communities (i.e., men's domain). Many women did not know how to swim. The tsunami revealed women's physical vulnerability and heavy dependence on men. (13)

Similarly, during the 1991 Gorky cyclone in Bangladesh, the female-to-male death ratio was 1:14. The 2015 Nepal earthquake reported that 55% of deaths were women and girls compared to men and boys. (14)

Based on Rivers (1982), in the Ashgabat earthquake, 33,000 people died—47% were women, 18% were men, and 35% were children. Also, in the Tashkent earthquake, women had a 20% higher mortality rate than men. Rivers attributes this to women's responsibility for caring for children, implying that their presence indoors and caregiving role increased their vulnerability. (13)

These examples demonstrate that current public decision-making regarding Disaster Risk Reduction (DRR) has failed to address the gender-specific impacts of disasters. Despite this, the participation of women at all levels of decision-making is crucial for socioeconomic development. In participatory decision-making, the inclusion of four key social categories is vital: governments, industry, civil society, and experts.

Women can represent all four groups—for example, female managers, leaders, political figures, policymakers, experts, academics,

researchers, doctors, scientists, and civil society agents. Women are regarded as agents of change within their communities and even on a broader scale. Therefore, the role of women as essential stakeholders in all decision-making levels toward achieving DRG is significant. Without their participation and perspectives, equality, development, and peace cannot be realized. The role of women is especially prominent in evaluating and analyzing the impacts of disasters, and the absence of women in disaster-related planning causes numerous problems during the response, recovery, and rehabilitation phases.

Psychological aspects

After a major disaster, women are more likely to suffer from depression and other emotional disorders. This psychological vulnerability stems primarily from their innate and familial instincts. Losing shelter and family members as a result of disasters is stressful, and in such situations, women are often expected to take on the role of family caregivers without considering their own needs, and feeding children or other family members becomes their main concern. Despite experiencing trauma and stress, their burden of responsibility increases, making them more vulnerable to physical, mental, and emotional stress.

It is generally assumed that men are physically and mentally stronger, tend to think in the present and focus on the current situation, but it is obvious that women have a greater capacity to cope with emotional challenges, physical pain and stress, and are more forward-looking and, when faced with an emotional issue, consider how existing solutions may affect the people involved in the crisis, while men often perceive the solution itself as the final outcome. Due to differences in cognitive processes, women play a more effective role in the psychological management of emotional situations. Therefore, they act as key factors in strengthening the cohesion of society by organizing group activities, forming social groups and promoting a happy life.

Socio-cultural consequences

After large-scale disasters, women often lose all of the social support structures they depend on and are forced to cope with the loss of their spouse while taking on additional responsibilities for the family, including young children. In such situations, they are required to take on new roles as breadwinner and protector, which can be

emotionally and physically overwhelming. According to research, women suffer in many ways during crises, some of which include:

- Widowhood leading to a loss of interest in life;
- Orphaned girls;
- Sexual and physical abuse by others or family members, coupled with enforced silence;
- Lack of legal and judicial protection, especially for illiterate women;
- Violation of privacy in emergency and semi-permanent shelters, creating a sense of insecurity among affected women;
- Increased responsibility for the well-being of the family at a time when it is difficult to meet basic daily needs;
- Increased levels of domestic violence.

Based on research regarding the socio-economic consequences of disasters and their impact on women in affected regions, the following issues are commonly observed: coping with new social roles such as widowhood, single parenthood, and work incapacity, feelings of isolation, social withdrawal, and loss of trust, disorder, and discontinuity in life routines. Emotional consequences often include anxiety, fear, humiliation, insomnia and nightmares, shame, denial, irritability and anger. Physical consequences may involve pain, sleep disorders, eating disturbances, miscarriage-related injuries, gynecological issues, and sexual assault.

Factors Influencing the Role of Women in Disaster Risk Governance (DRG) (Figure 1)

According to Saito (2011), the limited involvement of women in local government disaster planning in Japan led to numerous difficulties for women affected by the earthquake. (14) Despite the critical importance of women's roles in decision-making, their presence is often absent from most disaster management policies and programs. (17) Consequently, their needs and interests are generally neglected in disaster management planning. Indeed, one of the most crucial prerequisites for increasing women's participation in post-disaster activities is establishing a societal mindset that recognizes the necessity of their involvement.

Below are some of the factors influencing the role of women in DRG:

Patriarchal culture embedded in family structures

Many scholars see this as a major obstacle limiting women's role as decision-makers or leaders. In some societies, women are considered subordinate to their husbands and sons. Traditional societies often limit their roles to mothers and homemakers, limiting their opportunities for political decision-making. Furthermore, some cultures view women as second-class citizens, the weaker sex, and even less capable than men in caring for and raising children

According to Kassa (2014), patriarchal societies and cultures assign roles and responsibilities based on gender segregation. However, this situation can change by changing social culture and creating opportunities for women at all levels. (16) ...Women in society—including those who serve in parliament, hold government positions, participate in legislation, manage high-level organizations, or work in professional and technical fields—are representatives of their gender. However, in Asia, the presence of women in leadership and management roles remains significantly limited.

Religious beliefs

It affects the role of women in public participation and decision-making. For example, Protestantism, compared to Catholicism and Eastern Orthodoxy—which limit women's participation—promotes and accepts women as religious leaders. (20) Fortunately, Islam's equal view of men and women has created a basis for greater participation of women in the country.

Family structure

Studies show that the number and composition of family members affect women's decision-making power, especially in developing countries.

Baliyan (2014) points out that in Bangladesh, when many senior family members are men, women do not have enough freedom in household decision-making and education is a way to overcome this problem and empower women. (19)

In the process of community education and preparedness, the participation of the general public, especially women, in disaster reduction is institutionalized and becomes an integral part of their lives. Educating and increasing women's awareness of their specific needs leads to better responsiveness in planning and addressing problems in this area.

Household workload

Traditional societies believe that women's role is limited to household tasks such as childcare and cooking. (18) Consequently, women have less time to engage in other responsibilities, including community activities and volunteering. Because many men leave home to work elsewhere, women—especially after a disaster—take on more household duties, which prevents or limits their political and decision-making roles.

Education level

It is a unique characteristic and participation in any activity depends on the knowledge and expertise of the individual in that field. People with more knowledge and awareness can play a constructive and influential role in social groups. According to Hora (2014), the lack of adequate education among women in Ethiopia is one of the most important factors that prevent them from participating in leadership and decision-making roles. (18) Education is a very important factor since it helps in developing skills and knowledge such as public speaking, organizing and coordinating activities among women.

Personal interest

Women's attitudes limit their participatory role in politics and public decision-making. Specifically, women in developing countries, assuming that politics is opaque and violent, have little interest in playing a role in politics and decision-making. (20)

Policies and laws

In 1990, the United Nations Economic and Social Council set a target of 30% women in leadership positions, which was adopted in the 1995 Beijing Platform for Action. However, the reality has fallen far short of expectations. Most women are unaware of policies and laws related to women's empowerment. Sweetman (1997) identifies the set of regulations and institutional structures as a fundamental element in the framework for examining gender issues in developed societies. (19)

Organizational culture

Organizations reflect the values and capabilities of individuals, and these values modify the factors and behaviors that limit women's access to resources and decision-making. The often-patriarchal nature of government organizations limits women's role in decision-making. For

example, a study in Sri Lanka found that organizations do not treat men and women equally when selecting suitable candidates. (20) In addition, unfavorable working conditions, security issues, and patriarchal structures in organizations negatively affect women's participation.

Political environment

The presence of women in political positions is very important because of its strategic importance and its benefits and impacts. Because women are so few in decision-making processes, their power at the national level has been reduced. For example, in Nigeria, an unhealthy political climate has hindered women's participation in political and decision-making positions, and the chance of women being elected as local government advisors has dropped to about 4%. (21)

Household income

Poor socio-economic status influences the low level of women's participation in decision-making. The level of household income determines the socio-economic conditions and since women are economically dependent on their male counterparts in the family, this limits their decision-making power. (18)

Discussion and Conclusion

Although the social, economic, and political status of women in society increases their vulnerability in natural disasters, women are not helpless victims. Women are important agents of change and therefore need to be further empowered and supported. Recognizing and utilizing their skills and capacities as a social force, as well as guiding them to strengthen efforts to maintain the safety of communities and dependents, is a primary mission in any disaster risk reduction strategy. In every society, especially rural ones, women are the backbone of the rural livelihood economy. Their role in the family is productive and significantly contributes to the sustainability of both family and society. Providing food, water, and fuel are the main concerns of rural communities, which are mostly addressed by women.

Women involved in emergency relief, temporary shelter, and reconstruction following a natural crisis acquire considerable knowledge and expertise that can benefit communities facing similar future crises. If women engaged in crises can meet and learn from the experiences of other women who have successfully dealt with similar

challenges, they can better manage disaster consequences, save time, and avoid repetitive mistakes. This study identified ten factors limiting women's roles in decision-making related to DRG and DRR. These factors are categorized into four groups: socio-cultural factors, socio-economic factors, individual characteristics, and legal and institutional factors.

Patriarchal culture, religious beliefs with an extreme approach, and far from a modernist reading of religion, family structure, and the amount of work at home are categorized as sociocultural factors. Income and household jobs are placed in the socio-economic group, and education level and personal interest are considered as individual characteristics. Also, the political environment, policies, laws, and organizational culture are categorized as legal and institutional factors. The figure below summarizes the factors that affect the role of women in disaster decision-making.

Women are key stakeholders in all disaster management and risk reduction activities and play a crucial role in community resilience. Their participation in post-disaster development programs can accelerate community progress towards DRG. Therefore, it is recommended that organizations set the participation of all stakeholders, especially women, in DRG and reduction programs as a strategic objective and continuously measure progress towards this objective.

Increasing resilience during disasters can also increase adaptive capacity and sustainable livelihoods in communities, so this group should be further empowered and supported. Meeting the needs of women and girls during disasters and using their capabilities in decision-making processes is crucial and should be prioritized. In this regard, education plays a vital and important role for target groups and decision-makers. In addition, gender issues should be quickly and effectively incorporated into research, planning and actions by agencies responsible for the crisis and given special attention.

As previously mentioned, there is an urgent need for widespread public education to change perceptions and motivate different groups, especially women and other highly vulnerable populations, which requires further efforts.

Finally, some recommendations are made in this regard, including:

- Incorporate a gender-sensitive approach in national and local disaster management policies, emphasizing social justice.
- Develop frameworks to evaluate women's participation in DRG and DRR to measure the actual extent of their involvement in decision-making processes.
- Establish advisory bodies centered on women within disaster governance structures, especially in vulnerable areas.
- Implementation and training suggestions for promoting the role of women in DRG
- Design specialized training programs to empower women in crisis leadership, focusing on managerial skills, communication, risk assessment, and data analysis.
- Establish "Local Resilient Women" networks to exchange experiences and transfer knowledge from women with successful crisis management backgrounds.
- Support small and livelihood-based women's businesses in high-risk areas to strengthen local resilient economies.
- Encourage applied research and case studies on women's roles in recent disasters in Iran and similar countries.
- Conduct practical workshops for relief workers and crisis managers on analyzing gender-specific needs during crises.
- Review and revise laws and regulations related to disaster management, highlighting women's activities.
- Form permanent task forces to monitor and address barriers to women's participation in DRG within the national disaster management organization.
- Ensure women's representation in policymaking meetings, crisis committees, and local councils related to disaster management.

Compliance with Ethical Guidelines

There were no ethical considerations in this research.

Funding/Support

This research has not received any financial support.

Author's Contributions

All authors played an equal role in conceptualizing, drafting, and final editing the article. This article is derived from a presentation whose initial idea was formed in IRCS and subsequently expanded and refined to its current form. Also, Maryam Sedghi was responsible for correspondence and editing the final version submitted to the journal.

Conflict of Interests

The authors declare no conflict of interest.

Acknowledgments

None

References

1. Global Assessment Report on Disaster Risk Reduction, UNISDR France. 2015 [Internet] [cited March 4, 2015]. Available from: <https://www.undrr.org/publication/global-assessment-report-disaster-risk-reduction-2015>
2. UNISDR. Sendai Framework for Disaster Risk Reduction 2015-2030, United Nations, Geneva: Switzerland, 2015. Available from: <https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030>
3. Renn O. Inclusive risk governance in 2011-2012. Distinguish Lecture Series, Environmental Science and Policy Programme, ed. Michigan State University. USA. 2012
4. Issue Brief: Disaster Risk Governance. New York: USA. 2015 [Internet] [cited November 22, 2015]. Available from: https://www.undp.org/sites/g/files/zskgke326/files/publications/Issue_brief_disaster_risk_reduction_governance_11012013.pdf
5. UNISDR. Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters, United Nations International Strategy for Disaster Risk Reduction, Geneva: Switzerland. [Internet] [cited January, 2005]. Available from: https://www.unisdr.org/files/1037_hyogoframeworkforactionenglish.pdf
6. Javadian R. [Social work responses to earthquake disasters: a social work intervention in Bam, Iran (Persian)], *International Social Work*, Iran. 2007; 50(3): 334-346. <https://doi.org/10.1177/0020872807076047>
7. Alston M. Women and Climate Change in Bangladesh, London and New York: Routledge. First edition. 2015 <https://doi.org/10.4324/9781315774589>
8. World Health Organization: Violence against woman. Geneva: Switzerland. [Internet] [cited March 25, 2024] Available from: <https://www.who.int/news-room/fact-sheets/detail/violence-against-women>
9. Alam K., Rahman, M.H. Women in natural disasters: a case study from southern coastal region of Bangladesh, *International Journal of Disaster Risk Reduction*, Bangladesh. 2014; 8:68-82. <https://doi.org/10.1016/j.ijdr.2014.01.003>
10. Oxfam. The tsunami's impact on women. UK: 2005. Publisher: Oxfam International. Available from: <https://oxfamlibrary.openrepository.com/bitstream/handle/10546/115038/bn-tsunami-impact-on-women-250305-en.pdf?sequence=1&isAllowed=y>
11. Gokhale V. Role of women in disaster management: an analytical study with reference to Indian society. The 14th World Conference on Earthquake Engineering October 12-17, Beijing, China. 2008 <https://doi.org/10.1108/dpm.2008.07317eab.007>
12. Kathmandu Post, Earthquake: 55 pc of dead are women, children. [cited May 19, 2015]. Available from: <http://kathmandupost.ekantipur.com/news/2015-05-19/earthquake-55-pc-of-dead-are-women-children.html>, Nepal.
13. Rivers J.P.W. Women and children last: an essay on sex discrimination in disasters. 1982; 6(4): 256-267. <https://doi.org/10.1111/j.1467-7717.1982.tb00548.x>
14. Saito F. Women and the 2011 east Japan disaster, *Gender & Development*. 2012;20:265-279. <https://doi.org/10.1080/13552074.2012.687225>
15. UNISDR. Making disaster risk reduction gender-sensitive: policy and practical guidelines. Published by UNISDR, UNDP and IUCN. Geneva: Switzerland. 2009. [Internet] [cited June 2009]. Available from: https://www.unisdr.org/files/9922_MakingDisasterRiskReductionGenderSe.pdf
16. Kassa S. Challenges and Opportunities of Women Political Participation in Ethiopia. *Journal of Global Economics*. 2015; 3(4): 162. <https://doi.org/10.4172/2375-4389.1000162>
17. Baliyan K. Participation of woman in household decision making: a case study of Muzaffarnagar district, Uttar Pradesh, *Bhartiya Krishi Anusandhan Patrika*. 2014; 29:159-161.
18. Hora E.A. Factors that affect women participation in leadership and decision-making position, *Asian Journal of Humanity, Art and*

- literature. 2014; 1:97-118.
<https://doi.org/10.18034/ajhal.v1i2.359>
19. Sweetman C. Gender in development organizations. Oxfam: 1997:5. Available from:
<https://oxfamilibrary.openrepository.com>
<https://doi.org/10.3362/9780855987497.000>
 20. Jayatilake L. The decision-making role of women in the public sector of Sri Lanka, 10th International Conference on Sri Lanka Studies, University of Kelaniya. 2005: 179.
 21. Asaju K. Adagba S.O. Women participation in national development in Nigeria: the imperative of education, Journal of Public Administration and Governance. 2013; 3:57-69.
<https://doi.org/10.5296/jpag.v3i1.3214>