



Hacettepe University Graduate School of Social Sciences

Department of Health Management

**EXPLORE THE ROLE OF WOMEN IN DISASTERS: PROPOSE
SUGGESTIONS FOR WOMEN INVOLVEMENT IN DISASTERS
WITH FOCUS ON HEALTH SECTOR**

Behnaz ABOLSHAMS ASGHARI

PH.D. Dissertation

Ankara, 2018

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FOR WOMEN INVOLVEMENT IN DISASTERS WITH FOCUS ON HEALTH
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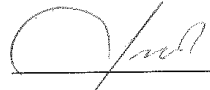
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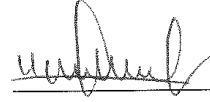
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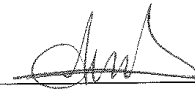
Prof. Dr. Yusuf ÇELİK] (Main Adviser)



Doç. Dr. Yasemin AKBULUT



Doç. Dr. Özgür UĞURLUOĞLU



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I agree that the signatures above belong to the faculty members listed.

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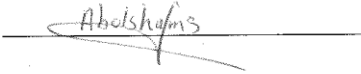
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Bu çalışmadaki bütün bilgi ve belgeleri akademik kurallar çerçevesinde elde ettiğimi, görsel, işitsel ve yazılı tüm bilgi ve sonuçları bilimsel ahlak kurallarına uygun olarak sunduğumu, kullandığım verilerde herhangi bir tahrifat yapmadığımı, yararlandığım kaynaklara bilimsel normlara uygun olarak atıfta bulunduğumu, tezimin kaynak gösterilen durumlar dışında özgün olduğunu, Tez Danışmanının **Prof. Dr. Yusuf ÇELİK** danışmanlığında tarafımdan üretildiğini ve Hacettepe Üniversitesi Sosyal Bilimler Enstitüsü Tez Yazım Yönergesine göre yazıldığımı beyan ederim.


Behnaz ABOLSHAMS

ABSTRACT

ABOLSHAMS ASGHARI, Behnaz. *Explore the Role of Women in Disasters: Propose Suggestions for Women Involvement in Disasters with Focus on Health Sector*, PH.D. Dissertation, Ankara, 2018.

Disasters are the events which make serious disruption in the society. Women are mostly considered as the victims of these disasters and their role is often ignored. Overlooking the participation of women in disaster management means that half of the entire affected population is ignored. Iran is one of the disaster prone countries and since there is not any clear picture regarding role and contribution of women in disaster preparedness and response, this study aimed to explore the role of women in disaster and propose suggestions for women involvement in disasters with focus on health sector. Qualitative method of grounded theory was used in this study and data was gathered by semi-structured interview with 19 participants. Six main categories of findings emerged from the data, namely: needs of women in disasters, women's vulnerability, women's capacity in order to be involved in disaster management cycle, barriers in front of utilization of women's capacity in disasters, role of women in delivering services in disasters and areas which need to be considered in planning for women contribution in disasters. The findings showed that women have special needs and are more vulnerable but their needs are neglected and their vulnerabilities are not recognized in disasters because available plans don't consider their roles since the plans have been prepared mostly by men. So it is necessary review and revise available plans in order to institutionalized women's formal involvement in disaster management cycle through empowerment of women, strengthen their capacities and advocacy with policy makers and religious leaders and in line with available rules and regulations and Cultural boundaries.

Keywords

Women, Role, Disaster Management, Health Sector, Health Policy

ÖZET

ABOLSHAMS ASGHARI, Behnaz. *Afetlerde kadınların rolünün belirlenmesi: sağlık sektörü özelinde afetlerde kadınların katılımına yönelik öneriler*, Doktora Tezi, Ankara, 2018.

Afetler, toplumda ciddi hasarlara sebep olan olaylardır. Kadınlar çoğunlukla bu felaketlerin kurbanı olarak görülür ve onların rolleri çoğu zaman göz ardı edilir. Afet yönetiminde kadınların katılımını dikkate almamak, etkilenen nüfusun yarısının yok sayıldığı anlamına gelmektedir. İran felakete eğilimli bir ülkedir ama afet hazırlık ve müdahale aşamasında kadınların rolü ve katkısı ile ilgili açık bir görüş yoktur. Bu nedenle, bu çalışma, afetlerde kadınların rolünün belirlenmesi ve sağlık sektörü özelinde afetlerde kadınların katılımına yönelik öneriler önermeyi amaçlamıştır. Bu çalışmada Nitel yöntem (Grounded Theory) kullanılmış ve veriler 19 katılımcı ile yarı yapılandırılmış görüşme yaparak toplanmıştır. Verilerden, altı ana kategori ortaya çıkmıştır: Afetlerde kadınların ihtiyaçları, kadınların dezavantajları, afet yönetiminde katılmak için kadın kapasitesi, afetlerde kadının kapasitesinden yararlanma önündeki engeller, kadınların afetlerde hizmet sunumundaki rolü ve afetlerde kadınların katılımını planlaması için dikkate alınması gereken alanlar. Bulgular, kadınların özel ihtiyaçları ve dezavantajlı olduğunu ve afetlerde onların ihtiyaçlarının ihmal edildiğini ve dezavantajlarının dikkate alınmadığını ortaya koymuştur. Ayrıca, mevcut planlar çoğunlukla erkekler tarafından hazırlandığı için kadınların rollerinin dikkate alınmadığı belirlenmiştir. Bu nedenle, kadınların resmi olarak afetlerde katılımlarını sağlamak için mevcut planları gözden geçirmek gerekmektedir. Bunun için kadının güçlendirilmesi, kapasitelerinin güçlendirilmesi konusunda politika yapımcılar ve dini liderlerle birlikte çalışılması gerektiği ve bunlar yapılırken mevcut kuralar, düzenlemeler ve kültürel sınırlamaların dikkate alınması gerektiği önerilmektedir.

Anahtar Sözcükler

Kadın, Rolü, Afet Yönetimi, Sağlık Sektörü, Sağlık Politikası

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ABBREVIATIONS

BAHA	Basije Hameganie Amoozeshe Ehia (Comprehensive CPR Training)
CPR	Cardiopulmonary Resuscitation
DAVAM	Neighborhood Emergency Response Volunteers project
DHM	Disaster Health Management
DMO	Disaster Management Organization
EMC	Emergency Management Center
EOC	Emergency Operations Center
GEM	Gender Empowerment Measure
IRCS	Iranian Red Crescent Society
IRGC	Iran Army and Islamic Revolutionary Guards Corps
MOH&ME	Ministry of Health and Medical Education
NDMO	National Disaster Management Organization
NGO	Non-Governmental Organization
PFA	Platform for Action
PTSD	Post-Traumatic Stress Disorder
UN	United Nations
UNHCR	United Nations High Commissioner for Refugees
VDT	Village Disaster Taskforce
WASH	Water and Sanitation
WHO	World Health Organization

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INTRODUCTION

A disaster is a sudden, devastating event that disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community's or society's ability to cope with it through using its own resources. Disasters are classified to natural and man-made disasters¹ (Birn, Pillay, & Holtz, 2016).

The incidence of disasters has increased in the 1990s. In 1999 alone, there were more than 700 disasters leading to the death of approximately 100,000 people. Since disasters lead to large-scale damage to the life of human being, having a sustained and comprehensive disaster management strategy is the serious need of the world (United Nations Division for the Advancement of Women, 2001).

In achieving this, and since disasters affect different groups such as poor, rich, men, women, young, old, indigenous or non-indigenous differently, the needs and concerns of all these groups must be necessarily integrated into the disaster management plans, policies and strategies (International Strategy for Disaster Reduction, 2002).

Although women are more vulnerable to disaster's risk, but since women's social role is central to disasters management strategies, they can support community to deal with disasters such as taking care of the family members and the storage of food and other essential items. The social role assigned to women in normal situation in some societies such as caregivers, extend to activities such as secure life and the continuity of livelihoods in times of disasters (Ariyabandu, 2003).

Seeing disaster through a gender lens can help policymakers and planners to identify key issues and realize critical gaps in current policies and plans and bring a gender perspective into the analysis of disaster mitigation and response activities.

The Islamic Republic of Iran is a disaster-prone country and has undergone various natural disasters including; droughts, floods, earthquakes, landslides and technological disasters within the last decades (Fatemi Aghda, 2009). About 99.4 per cent of Iranians follow Islam as their religion and gender distribution is equal (49 per cent of the population are women) (Statistic Center of Iran, 2016).

¹ The focus of this study is on natural disasters

The participation of women in disaster management plans and programs is on a low key profile in Iran. Since there is not any clear picture regarding role and contribution of women in disaster preparedness and response, this study aimed to explore the role and contribution of women and importance of gender mainstreaming in disaster management and propose suggestions for women involvement in disasters management with focus on health sector.

CHAPTER 1: LITERATURE REVIEW

Disasters are defined as unexpected events that leave huge human, material, and environmental losses for the affected society (Kelman, 2004). The affected society does not always have required resources to cope with such losses. Depending on the cause of disaster, two kinds either natural or man-made occurs (Shaluf & Ahmadun, 2006).

Natural disasters are increasingly threatening human communities. Poverty and environmental destruction increase the vulnerabilities to the natural disasters. During the decade of the nineties, the number and extent of such disasters enhanced by 10 percent and at least 90 percent of victims belonged to developing countries (United Nations Population Fund, 2004).

1.1. DISASTER MANAGEMENT

Disaster management aims to reduce the risk of hazards, prevent from losses, assure assistance to the affected population and achieve rapid and effective recovery (World Health Organization, 2002).

Disaster management consists of four phases but these phases do not occur in isolation or in precise order but they are overlapped and the duration of each phase depends on the magnitude of the disaster (US Department of Homeland Security, 2006) there phases are as follow:

- Mitigation - Minimizing the consequences of disaster such as public education
- Preparedness - Planning how to respond such as developing preparedness plans
- Response – providing appropriate services to the affected population such as search and rescue.
- Recovery - Returning the community to normal situation such as temporary housing

The world seriously needs a consistent disaster management strategy since disasters extensively damage the human life (International Strategy for Disaster Reduction, 2002) and within the last one and a half decade, such damages have increased

significantly (Shaluf & Ahmadun, 2006). Accordingly, the needs of a wide range of social groups including the poor, the rich, men, women, the young, the old, and indigenous/ non-indigenous must be considered for devising functional management policies (International Strategy for Disaster Reduction, 2002).

1.1.1. Mitigation

Mitigation activities are aimed at removing likelihood of disaster occurrence, or minimizing the impacts of disasters. Mitigation activities include different initiatives such as vulnerability analysis preventive health care; and public education. As a matter of fact, appropriate measures must be adopted in national and regional development planning. Access to valid information, warning against hazards, as well as the availability of information regarding disaster risks and required countermeasures contributes to the effectiveness of mitigation. The disaster management cycle in general and the mitigation phase in particular seeks to shape specific policies and plans that either modify the causes of disasters or mitigate their effects upon people, property, and infrastructure (Department of Provincial and Local Government, 2005).

1.1.2. Preparedness

The purpose of disaster preparedness programs is assuring an appropriate level of readiness through implementing programs that expand the technical and managerial capacity of governments, organizations, and communities to respond to any disaster. During this phase, special plans are developed by the government, organizations, and individuals so as to save lives, mitigate disaster losses, and improve disaster response operations. Preparedness measures include preparedness plans; emergency exercises/training; warning systems; emergency communications systems; evacuations plans and training; resource inventories; emergency personnel/contact lists; mutual aid agreements; and public information/education. The effectiveness of preparedness actions depends both on integrating appropriate measures in national and regional development plans and the availability and usability of information predicting hazards and disaster risks, and essential counter-measures (World Health

Organization, 2002). Preparedness is done at three levels namely at Institutional Level, at Society Level and at Family Level. At institutional level, governments and relevant organizations in charge of disaster management implement different preparedness programs such as training of staff in order to be able to have prompt and well-timed early warning and search and rescue activities. At society level, preparedness programs are carried in order to decrease loss of lives and resources and people suffer less during disaster. Local disaster management committee and voluntary groups are formed and trained to this end. Those women who are part of this committee or are volunteers gain knowledge, skill, and awareness during these trainings. Also, equipment is provided for search, rescue, and rapid response in this level also. At family level, women engage in different activities such as collecting firewood, dry food and etc. (Oxfam Great Britain, 2011).

1.1.3. Response

The objective of response plan is to improve life and health conditions and support the morale of survivals. Such response includes assistance like transporting refugees, making temporary shelters, supplying food, or establishing semi-permanent settlement and primary repair of damaged infrastructure. In fact, fulfilling the basic needs of people is in priority until later that more long lasting solution can be devised. Humanitarian organizations are active in this phase of disaster management cycle (Shaluf & Ahmadun, 2006). Neither institutional nor indigenous response mechanism can alleviate the risks incurred to women who do not get early warning timely. Generally, shelter is provided late and women's needs are not acknowledged. Their private issues and personal hygiene are as well neglected (UN-Women, 2004).

1.1.4. Recovery

Once the disaster is brought under control, the disaster stricken populations carry out a number of activities to restore lives and infrastructures. There is no clear-cut boundary separating immediate relief services, recovery, and long-term sustainable activities. It is even possible that during the recovery phase, implement some preventive measures in order to increase preparedness within community and try to

decrease vulnerability. This will lead to smooth transition from recovery to development. Recovery activities will be done until all systems back to normal situation or better conditions (Mehta, 2006).

Disaster preparedness, mitigation and risk reduction activities make up recovery processes and contribute to making community resilient against future disasters. Performing these activities throughout recovery process is desirable since those who are disaster stricken are highly stimulated to learn new ways of protecting themselves (International Federation of Red Cross and Red Crescent Societies, 2010).

On the whole, women's access to vital resources for disaster preparedness, response and recovery is less. In disasters, women are generally assigned to reproductive tasks including food collection and energy supply. They are as well responsible for taking care of children, sick, elderly, the home, and properties of the household (Women's Environment and Development Organization, 2008). It must be noted that in many communities, cultural values and care-giving responsibilities do not allow women to migrate and relocate in disaster. Women are inclined to sacrifice their own lives for the sake of other family members in any type of disaster (Patt, Angie, & Pablo, 2007).

1.2. VULNERABILITY ANALYSIS

The extent to which each community or even each member of the community is affected by a disaster is not the same. Those who are more vulnerable tend to surrender sooner and lose their normal function. Less vulnerable people feel the impacts of hazard less; they are less affected and are able to get back to normal life faster (Oxfam Great Britain, 2011).

Vulnerability is defined as specific conditions that effect on the ability of countries, communities, and individuals to prevent, mitigate, prepare for, and respond to hazards (Ariyabandu & Wickramasinghe, 2003). All individuals and communities are inevitably vulnerable to hazards but with different degrees and all have some degree of resourcefulness to decrease their vulnerability. Since 1980, vulnerability has come to limelight in disaster research and different definitions have been presented (Weichselgartner, 2001). Disaster definitions are variable from one discipline to the other (McEntire, 2005). International Strategy for Disaster Reduction defines vulnerability as the conditions influenced by physical, social, economic, and environmental factors or processes which make a community susceptible to hazards. McEntire (2005) elaborates that vulnerability is a dependent variable but the causative factor or triggering agent is the independent variable of a disaster. Disasters will not be moderated unless vulnerabilities are managed correctly. Vulnerability management is a process through which required decisions are adopted and actions are designed and performed in order to remove the disaster as much as possible (McEntire, 2001).

Inter-agency Secretariat for the International Strategy for Disaster Reduction confirmed the fact that women are more vulnerable group in disaster (2000). The poor, especially female and elderly populations are economically vulnerable since they are incurred by larger losses in disasters and do not have sufficient capacity to recover. Discrimination in access to resources and the power of decision-making are social factors that increase women's vulnerability to the consequences of disaster (World Health Organization, 2002).

Highly vulnerable women have particular needs and interests pre, while, and post-disaster. A number of causes (listed in Table 1.1) primarily drive vulnerability of people and social structures in natural disasters (Gokhale, 2008).

Table 1: Fundamental causes influencing the vulnerability of people and social structure

Vulnerability	Causes
Materials/ economic vulnerability	Lack of access to resources
Social vulnerability	Breaking up of social norms
Ecological vulnerability	Degradation of the environment and inability to protect it
Organizational vulnerability	Lack of string national and local institutional structure
Educational vulnerability	Lack of access to information and knowledge
Attitudinal and motivational vulnerability	Lack of public awareness
Political vulnerability	Limited access to political power and representation
Cultural vulnerability	Certain beliefs and customs
Physical vulnerability	Weak buildings or weak individuals

Source: Gokhale, 2008

Enarson (2000) enumerates the following factors as reasons that increase women's vulnerability in disaster;

- women do not have access to resources easily;
- women suffer from the gendered division of labor;
- women are not free enough to migrate and find work because their first and foremost responsibility is taking care of children and the elderly or disabled members of the family;
- as housing is usually demolished following a disaster, many households are obliged to seek shelter; and
- When women lose their economic resources, they are no more influential in family decision-makings.

1.3. DISASTER RISK CONSIDERATION

Disaster risk is known as the outcome of interaction between a hazard and the characteristics that result in vulnerability of people and makes them exposed.

Disasters are regarded as external shocks; however, disaster risk is the result of an intricate interaction between processes that contribute to exposure, vulnerability, and hazard (United Nations International Strategy for Disaster Reduction, 2009). In other words, disaster risk is a mixture of the severity and regularity of a hazard, the numbers of people and assets exposed to the hazard, and their vulnerability to damage (United Nations International Strategy for Disaster Reduction, 2015). Successful disaster management is only possible by predicting risks and optimizing the use of resources (Isik et al., 2015).

1.3.1. Risk Management and Women

Women define risk as how much the doing duties may be interrupted during and post disaster period. Women prefer to take other risks to lessen these kinds of risks. Natural disasters occur inevitably. Adopting different measures such as developing infrastructures like flood protection embankments help to moderate the extent of loss, damage, and severity of hazard. Additionally, different social programs like raising awareness and designing risk preventive practices are effective in this regard (Oxfam Great Britain, 2011).

In order to ensure gender sensitivity, some issues are faced by community-based disaster risk reduction measures. A socially and economically representative sample of disaster stricken men and women must be inquired and consulted with. Besides, gender analysis of the conditions of men and women enables more effective interventions that result in overall safety and resilience of families and communities. An empowering environment is critically needed for supporting this work (International Federation of Red Cross and Red Crescent Societies, 2010).

1.4. A GENDER APPROACH TO DISASTERS

The term “gender” refers to characteristics particular to men or women which emerge from social contexts, in contrast to those that have biological origins. For example, gender oriented approach of WHO to health entails analyzing the differences between men and women. Once differences are pin pointed, difference in exposure to risk, taking advantage from technology and health care, rights and responsibilities, and control over one’s life are recognized. Although the significance of gender approach is widely being emphasized in program planning and development, gender roles are still being overlooked in emergencies. As a natural consequence, the vulnerability of women, adolescents, or other marginalized groups intensifies in humanitarian response. On the contrary, if gender approach is adopted, needs of all groups are met; the relationships between men and women, the structure of the society, and the impact of conflict upon roles of groups within that society will be examined (World Health Organization, 2000)

1.4.1. Natural Disasters from a Gender Perspective

Gender differentiation is evident at various levels of disaster process such as risk exposure, risk perception, preparedness, response, physical impact, psychological impact, recovery, and reconstruction (World Health Organization, 2002). Men and women are differently affected by disasters since they bear different responsibilities in life, have different roles, and their capacities, needs, and vulnerabilities are quite different (Ariyabandu & Wickramasinghe, 2003).

If the consequences of disaster are underestimated and merely physical ones are anticipated but the social ones are overlooked, gender concerns may as well be marginalized. Women will be cruelly harmed unless disaster workers and officials customize measures according to their special needs. As a matter of fact, relief efforts are planned for all people present in the affected area but when existing structures of resource distribution are in favor of men, women get into trouble in taking advantage of relief resources (Pan-American Health Organization, 2001).

If preparedness plans don't consider gender analysis, relief efforts do not include gender perspective in their response plans. This leads to marginalization of women's special needs and concerns and they are not participated during disaster preparedness, response, and reconstruction since their potential is not fully recognized (Pan-American Health Organization, 2001).

An effective development process recognizes the needs of men and women and includes their potential contributions. A community-based disaster preparedness and response plan that considers women's physical, psychological, social, and economic vulnerabilities will be effective in minimizing their vulnerability to disaster. A plan that even recognizes women's capacities and uses them in relief efforts gradually changes dominant mindset about women (Pan-American Health Organization, 1998).

1.4.2. Elements Common to Women in Disaster-Prone Areas

There is a common point between women who live in disaster-stricken areas. Both are marginalized and do not have enough access to or control over resources. They are neither involved in decision-making. Even if they work, for example in agriculture industry, their income is grasped by their husbands (Taft, 1998).

Women in disaster-affected areas are labeled "invisible earners". Their productive tasks such as child-rearing and other domestic works or even the role they play in food production is not taken into account statistically (Chiu, 2002). In most of communities women are viewed as consumers rather than producers and their contribution to the development of their societies is often visible in the so-called "informal sector" (Lele, 1996).

Ideological presumptions and biases against women have caused that performing technical tasks be regarded out of females' domain. The direct result of such assumption is excluding women from construction works that are necessary following flood or earthquake (International Development Research Centre, 2004).

Women are the victims of traditional, routine, and gender-biased oppression. Inferior lower economic, social, and political position of women makes them more vulnerable. Women's high rate of poverty in one hand and cultural limitations constraining their activities on the other hand implies the fact that in disaster they

may suffer more seriously. Their contribution to food provision for the household, and their reliance on natural resources to remove their needs multiplies the impact of disaster (Gokhale, 2008).

A considerable number of case studies have proved that construction in urban areas is male-dominated but in rural areas it is communal and all powerful men, women, and even children are involved. Therefore, ideological ideas presumptions about women's contribution to social development must not be generalized (International Development Research Centre, 2004).

In some societies women suffer from malnutrition since cultural norms do not permit an equitable share of food. Therefore, during disaster when there is not adequate food supplies, women and girls are sacrificed first. In a male-dominated society, women are often forced to extend favor, mostly sexual, in exchange for gaining food or shelter for themselves or their children (International Development Research Centre, 2004).

Although women have outstanding role in "informal sector" in many countries, their potential as entrepreneur has never been invested in. women have demonstrated that they can improve economic progress and self-sufficiency. Nowadays, some countries have become inclined to take advantage of women's organizational and mobilizing capacities (International Development Research Centre, 2004).

Sociocultural belief systems often do not allow women's ownership of land or production technological equipment such as tractors or grinding mills in some countries. Lack of credit facilities, knowledge of how to access credit, and marketing and bargaining competence has adverse impact upon women. To sum up, all above mentioned issues are indicative of lack of women's empowerment in political, economic, and social areas (Motsisi, 1994).

In the aftermath of a disaster, women are severely affected and need social support more than any other time. In one hand, they go through the trauma of losing their spouse; on the other hand, they have to adopt new roles as bread winner and protector though they are not psychologically and physically prepared (Gokhale, 2008).

What is mainly sought in investigation of women in emergencies is empowerment. Empowerment is a process by which women become equipped with required power to take control of material resources (Boyd, 1999). Empowerment helps to better

utilizing the organizational and mobilizing capacities of women in emergencies. It is not necessary that a disaster occur to start empowerment but under such circumstances, some opportunities appear that are driving forces of empowerment. Disaster management experts must take advantage of the changing role of women as a result of disaster to the benefit of them so that they can have greater influence and control rather than being marginalized (Anderson, Howarth, & Overholt, 1992).

1.4.3. Different Impact of Disasters on Women

Vulnerable groups in emergencies consist of adolescents, pregnant women, lactating mothers, the disabled, and the aged. It must be noted that specific social and economic conditions create or enhance their vulnerability. Their reliance on external food aid causes that they permanently remain dependent and expect constant back up of local and international relief and development agents (Rogge, 2002). Beside the vulnerability which women have, disasters have different impact on women including:

- Loss of security and protection
- Loss of shelter
- Loss of access to productive means
- Inadequate sanitation, water contamination and disrupted supply
- Endemic and epidemic diseases
- Psychological aspects (Grisrt & Lubin, 1989).

Women suffer from indirect outcomes of natural disasters also. Women are not able to move freely because they are confined to the house and are not influential in decision-making. These all limit their participation and keep them away from information sources and coping strategies. In addition, as there are not enough opportunities for women to find an alternative source of income, their bargaining power in the family and community is undermined (Women's Environment and Development Organization, 2008). Effective and appropriate response to the needs of women affected by disaster is made more intricate due to the influence of a wide range of factors upon this group (Grisrt & Lubin, 1989).

Basically, mortality rate of men and women in natural disasters is different. According to the study of the London School of Economics (2006), the number of men and women victims in a disaster equals when they both enjoy the same economic and social rights. Whereas, when women are disadvantaged regarding their social and economic rights, they die more than men in disasters. This gender difference has been evident in a number of disasters including the Asian Tsunami; Hurricane Mitch, Hurricane Katrina, and other kinds of storms in America; European heat waves, and cyclones in South Asia, etc. in compare, in some natural disasters the number of men victims was higher since they put themselves at risk to rescue their families (Neumayer, 2006).

1.5. NEEDS OF AFFECTED POPULATION IN DISASTERS

Needless to say, sustainable development will not be realized unless the demands and interests of both men and women are fully recognized (Irish Aid, 2002). Gender inequality primarily threatens women: poverty effects on women differently from men because they are robbed of equal rights and opportunities, have no access to resources and services, and are not involved in important decisions that shape their lives and development (Irish Aid, 2004).

By involving both men and women in environmental management and understanding their needs and views, appropriate policies can be developed and the needs of whole communities are removed without jeopardizing the sustainability of the resources. Women need official channels of support so as to participate in decision-making process equal with men (World Bank, 2003).

In addition to the general impacts of natural disasters and insufficient health care, women are as well in danger of reproductive and sexual health problems, and enhanced rates of sexual and domestic violence that demands special response interventions. Women's susceptibility boosts when they lose their spouses and are obliged to provide services for their families independently and struggle to be recognized in particular systems. Besides, women's workload is so heavy since they have to take care of affected survivals (Irish Aid, 2006).

The relationship between men and women of each culture creates differences in the roles and responsibilities of them. It also generates inequalities in decision-making power, access to, and control over resources. These differences and inequalities cause women and girls encounter differently with risks and disaster impacts than men and boys. Gender-based stereotypes and behaviors about men and women as well contribute to gender discrepancies that sometimes overwhelming outcomes generate (International Federation of Red Cross and Red Crescent Societies, 2010).

1.5.1. Special Attention to Women and Their Needs

Disasters ruin lives and demolish properties and in this process women suffer more than men. Disaster may separate women and children from their families and

communities. Losing the support of the family or community enhances their vulnerabilities and they will be more exposed to abuse and exploitation (International Federation of Red Cross and Red Crescent Societies, 2010).

During conflict, when men are killed or have departed for fighting, women are left alone to pass children, older members, and the disabled ones across unfamiliar territories. Under such circumstances, women have to tackle huge impediments to assure the health and safety of others although their own vulnerability enhances due to malnutrition, sexual violence, and exploitation, sexually transmitted infection, unplanned pregnancy, and unassisted childbirth (Nachtwey, 2006).

Typically, women cannot use their physical power optimally. In some communities, their cover and clothing impedes their movement. There is some social discrimination against women that causes women are looked upon as second-class citizens. Families and communities rarely pay attention to women's points of view. They have no right in decision making. In a masculine society, they live under risk. They can neither earn money nor access to their own or their families' assets. Therefore, they cannot save or invest so as to decrease disaster risks. In some communities a woman's swimming, running, and climbing trees are forbidden so women who cannot acquire these skills are more vulnerable and exposed to risk during disaster. Women's education, medical care, and nutrition related matters are not minded in poor families. Thus, women's thoughts are not expressed and they cannot become cognizant. They are brought up physically weak and they cannot cope with disaster powerfully (Oxfam Great Britain, 2011).

As mentioned previously, socially constructed roles of women and existing injustice and inequalities make women more vulnerable against natural disasters such as drought, flood, and cyclones. They are also more susceptible to sexual harassment and other sorts of violence in times of disasters and need. Such risks boost during disaster (Irish Aid, 2005).

Women have to deal with different issues at different phases of disaster. In some cases, after the immediate post-disaster period, they were exchanged for food or in the late post-disaster period, girls were married off at an early age or they were wedded to older men, who actually bought them under the title of marriage (Gokhale, 2008).

In disasters which available resources are limited, discrimination against women, especially against girls, is more prominent. It is incumbent upon relief agencies to employ women as primary distributors of emergency supplies. They must as well be participated in the decision-making process of camps' condition in emergencies and disasters. Women should be regarded as partners collaborating shoulder to shoulder with men during disaster response phase (Raymond, Jane, & Thandiwe, 1994).

In many disaster situations, women who are typically subordinate bear more physical and emotional losses and confront with more stress than men including their preoccupation with dependent children. In such situation recovery activities and services is interfered by stress levels (Grisrt & Lubin, 1989).

Women are more prone to nervousness and hysterical attacks. It is therefore predictable to be stigmatized "mentally disturbed patients". A feature common to bizarre environments is stress and its impact upon people. Stress is capricious but always existing in different phases of disaster. Unusual situations like disasters are themselves strong stressors that cause severe tensions for people (Mocellin, Suedfeld, Bernaldez, & Barbarito, 2001). Women suffer from greater stress due to the multiple responsibilities and inferior social status. Stress debilitates a woman's resistance to disease and has adverse impact upon her ability to perform necessary economic and family activities (Kelly, 1999).

If the stressor is serious and permanent, women experience a condition resembling Post-Traumatic Stress Disorder (PTSD). Since women maintain the structure of the family, their psychological disorder may have a strong adverse impact on their dependent children (Mocellin, 2004).

In some countries, more than half of the households are led by women. Since these woman-headed households often have negligible control over resources, their young dependent children suffer severely from malnutrition and from the stress of being forced to struggle with adult responsibilities (Wiest, 2000).

Interruption of social relations as a result of disaster displacement implies the loss of security and protection. Lack of employment vacancies and the high rate of woman-headed households force more girls and women to do socially improper forms of wage labor. In some countries, many affected women turn to prostitution to earn

income for sustaining their families. The longer the unemployment lasts, the more likely prostitution occurs.

Consulting with a socially and economically representative sample of affected men and women is required for effective targeting and they need to be involved in decision-making. Disasters leave different effects upon men and women due to differences in social, economic, physical, and biological conditions. It is therefore recommended, effective responses that can meet the specific needs of affected groups are developed (International Federation of Red Cross and Red Crescent Societies, 2010).

Special health needs of women, particularly those of pregnant and lactating women are neglected in disasters (Gokhale, 2008). Health concerns of women are exclusive, from hygiene needs to life-threatening problems related to pregnancy and baby delivery. Women are quite vulnerable to bad nutrition. Vitamin and iron deficiencies, especially anemia, may result in loss of life of pregnant women and their babies. Malnutrition of young girls put them into trouble when later they decide to start families of their own (Nachtwey, 2006).

It is widely experienced that whenever women distribute food aid, it reaches to those who really need because women better know the needs of particular families including female-headed households. Besides, when women are distributor, less corruption and sexual exploitation occurs. Food programs must as well consider nutritional needs of women and girls (Nachtwey, 2006).

Collecting water is generally assigned to girls and women. If water source is distant or in an unprotected area, this task may be time-consuming, tiring, or even hazardous (Grisrt & Lubin, 1989).

Sanitary products for menstruation are essential for women's comfort, dignity, and mobility. Without these products, women may be crippled and not able to perform their daily routines and girls may have to avoid school (Grisrt & Lubin, 1989).

If women are forced to leave camp and refugee settlements, they may get into trouble and be in danger. Latrine and washing facilities must be placed near the living area. Enough lighting, night patrols, firewood collection guards, and separate living accommodation for lonely women and girls help to their protection against sexual abuse (Gokhale, 2008).

1.6. WOMEN EMPOWERMENT AND DISASTERS

Different kinds of disasters have different effects upon women and understanding the societal and cultural context is necessary for understanding the effect of disasters on women (Wilson, 2002). In some societies, women are condemned to inferior positions and disempowered. However, what they prove in production and distribution is opposite to such role stereotypes. It is therefore incumbent to put an end to such discrimination and appreciate women's capacity in disaster management cycle (Okeefe, Westgate, & Wisner, 1976). Although women are in subordinate position within the society and suffer from discrimination, women have specific potential that enables them to cope better with challenges. (Oxfam Great Britain, 2011).

Inattention to women's perspectives and their interplay with the environment produces policies that make them more marginalized and result in their criminal behavior (Irish Aid, 2006).

The empowerment of women is a new issue. It is a prerequisite to stabilize and to make development process sustainable (Omprakash, 2005).

Some policy makers believe that empowerment of women is a multi-dimensional process which helps them to get aware of their potentials and identity in all aspects of life. Some others contend that empowerment refers to the ability of women to manage responsibilities, to imagine a better future and to try to dominate over impediments which hamper their abilities. Empowerment is measured based on indicators such as active contribution in the household, the workplace, and the community (Omprakash, 2005).

The Gender Empowerment Measure (GEM) refers to the degree of which a woman is influential in decision-making, in politics, in professional life, and in organizations. The GEM has been applied increasingly for promoting the empowerment of Women (Omprakash, 2005). Only by training female teachers, the future generation will emulate these patterns of empowered women. So, empowering women economically, socially, and politically has turned into a necessity (Scribner, Truell, & Hager, 2001).

1.6.1. Role and Responsibilities of Women

Pre-disaster, women's social and economic contributions are not recognized (Wilson-Moore, 1999). Therefore, women and their dependent children turn more vulnerable compared to men (Cain, Syeda Rokeya, & Sharmsun, 1998). Women's contribution is a precious capital with regard to their potential productive and creative capacity. It can be recognized more fully applying consciousness-raising efforts (Zaman, 2002).

Despite the fact that natural disasters impact severely upon women, they give them an opportunity to reverse their gendered inferior status in the society and prove all negative stereotypes wrong (Enarson, 2000). Below are some examples of women's role in different disasters:

- Women have proven that they can not be indifferent to responding to disasters. In the aftermath of hurricane Mitch in 1998, women in Guatemala and Honduras started building house, digging well and ditch, hauling water, and building shelter. They have even proved to be fond of and functional in so-called "masculine tasks". Such behavior changes the image that society imposes regarding women's capabilities (Pan-American Health Organization, 1998).
- Women are competent at mobilizing the whole community against the disaster. They make up groups and networks of social actors who make an attempt to respond to the needs of the affected population. This sort of community organizing is vital in disaster management cycle (Pan-American Health Organization, 1998)
- Following the 1985 earthquake of Mexico City, women maquiladoras organized into the 19 de Septiembre Garment Workers' Union and the Mexican government found it useful for lobbying for reforming the condition of women's unemployment (Enarson, 2000)
- Reacting to augmented gender-based violence in Nicaragua after the occurrence of Hurricane Mitch, the NGO Puntos de Encuentro established a campaign that broadcasted this motto; "Violence against women is one disaster that men can prevent". This campaign could effectively change men's mindset about violence against women (Pan-American Health Organization, 2001).

- Following Hurricane Joan, women in Mulukutu, Nicaragua organized and designed a plan for disaster preparedness that entailed all the members of a household. Therefore, Mulukutu got prepared for Hurricane Mitch and it also returned to normal condition sooner than other affected communities.
- Disaster response measures of women fostered new skills such as management of natural resources and agriculture that enabled them to carry such skills into the job market (Pan-American Health Organization, 2001)
- Flood-affected areas were scrutinized to find about women's adaptation coping strategies. These strategies are as follow:
 - Moving to more secure places: higher sites, building temporary shelters, increasing the plinth level of their houses or homesteads, and migration;
 - In disasters, women try to save their livestock by moving them to high lands and they store seeds not to be damaged.
 - Women adapt their agricultural practices. For example, they shift to alternative crops and varieties that are flood or drought resistant, multiple cropping and intercropping methods, alternative irrigation facilities, mixing fertile with sandy soil, changing cultivation to more easily marketable crop varieties or to other animals.
 - During disaster, women resort to substitute health care like traditional medicine.
 - women also participate in collective actions such as forming community-based self-help groups and networks, group savings, or systems of group labor (Mitchell, Tanner, & Lussier, 2007).

1.6.1.1. Women and Preparedness Phase

Prior to disaster, a clear understanding of social roles of women and their dependent children is required in order to draw them in disaster mitigation, relief, and recovery meaningfully (Ressler, Tortorici, & Marcelino, 2003).

Effective community development demands women's participation. Active presence of women can improve the effectiveness of disaster preparedness and response plans. Women can help to the process of assessing vulnerabilities and capacities and

specifying appropriate measures to strengthen the capacity of those who are responsible to respond to the impacts of a disaster (Grisrt & Lubin, 1989).

Women need to be instructed how to act post-disaster and they must be motivated to participate in all phases of pre-disaster to post-disaster activities such as first aid, evacuation, hygiene issues, and safety procedures. Informing about the places where basic services will be provided for the survivors is quite helpful in preparedness phase (Williamson, 1994).

An effective strategy to respond to and remove the needs of disaster survivors is enabling them to mobilize their own resources (McCallin & Shirley, 1999). Strategies should be devised considering the culture and participation of concerned individuals (Bomquist & Mahlasela, 1998).

1.6.1.2. Women and Crisis Phase

Sense of fear is predominant in crisis phase and it leads to panic. Victims themselves feel altruistic and begin relief efforts. During this phase, correct statistics of the rate of disease in the population is not announced; therefore, it is wrongly imagined that women are well-protected against death (Grisrt & Lubin, 1989).

Disaster-stricken families lose most of their productive and functional facilities. Their source of income is interrupted. Head of households, usually men, are busy with collecting relief materials and they search around to find job. Meanwhile, women are responsible for the nutrition, health care, water, sanitation, and security of the family. Furthermore, preserving the dignity of the family is incurred upon women. They use their own knowledge, skill, and techniques to handle these all. They also take advantage of social networks to this end but their efforts are not fully recognized (Alam, 2007). It is men who decide about everyone's access to facilities during disaster (Rivers, 2002).

It has been seen that the rate of disease in the crisis is higher for women as a result of preferential treatment by male-dominated workers. According to health statistics and political statements, these kinds of traditional social values still dominate. Discrimination against women is felt more when there is competition over limited resources in disaster affected area. Relief agencies must employ women for

distributing emergency package. Considering this point will change the decision-making process to the benefit of women (Grisrt & Lubin, 1989).

The health of women is a prerequisite for the health of the whole family. Her knowledge of appropriate diet, food preparation, and personal and household hygiene impacts greatly upon the health of family. An unhealthy woman who does not mind her own health is not expected to be careful about the needs of her family and others (Kelly, 1999).

In times of peace, the responsibility of taking care of children, the sick, the casualties, and the elderly is vested upon women. This burden multiplies in disasters. In many cases, women have to fill the empty place of men who leave for fight, for finding job, or are killed and injured (Nachtwey, 2006).

During crisis and in refugee settlements, women and girls turn into the only humanitarian worker. They altruistically find food and fuel for their families even if they are put into danger. They have to collect water and sometimes have to travel far to find a water source. They assist with rebuilding schools. They may as well undertake additional tasks such as construction, physical works, and income generation (Nachtwey, 2006).

1.6.1.3. Women and Relief Phase

Women should be motivated to do impulsive mobilization during the relief phase. This sort of mobilization creates solidarity and helps to ease stress. Mobilization to help other victims has a positive effect upon community disaster mitigation approaches under distressing circumstances (Grisrt & Lubin, 1989).

When the situation is stable, women collaborate to restore their broken communities. They get engaged with reconstruction, reviving traditions and customs, and fixing relationships- all while providing care for future generation (Nachtwey, 2006).

Women and their families undergo numerous losses, a fact that is devastating. These adverse effects are aggravated by their reduced ability to endure losses. On the whole, the human response in relief camps in a disaster situation abounds bitter experiences. It is evident that all displaced and homeless survivors are not strong enough to resist against constant miseries. Nevertheless, it seems that some positive aspects can be

expected. Assisting displaced people during recovery and development, variety of behaviors and emotional reactions need to be taken into account (Mocellin et al., 2001).

What is typical of disaster situation is severity of losses and resulting stress level which defers recovery. Perceived subordination of women implies that women must tolerate more stress than men (Mocellin, 2004).

Domestic violence generally enhances in time of chronic displacement since refugees admit their long-lasting condition and lose their hope for repatriation and resettlement. Psychological treatment of girls needs more attention since relief camps will probably leave harmful impacts upon them, so that their adult lives will be influenced by this issue (Ager, 2005).

Women's stress in its turn worsens the problems they have with their own children. If women's emotional needs are not met, a nasty round of improper responses to needs of children may trigger (McCallin & Shirley, 1999).

Health professionals should extend their attention and treatments beyond the care offered in crisis phase to relieve stresses of people, especially women (Kelly, 1999).

Health care must be as available to women as to men. Kelly (1999) enumerates several reasons indicating why women refrain from clinics and hospitals:

- lack of female health staff;
- discounting traditional health care;
- lack of care and treatment for women's specific needs;
- awkward clinic hours; and
- far from home

The worst problem among those mentioned above is the absence of female examiners. Qualified women as health care workers need to be recruited. Accordingly, if there are some candidates who have essential competence for health care, their illiteracy does not matter. Women have always been excluded from the design and implementation of health care projects, especially in disasters and permanent settlements. One of the reasons that women's needs are not discerned or met is that they are not consulted with prior project implementation (Kelly, 1999).

Women have proved competent at food distribution. It is therefore reasonable that agencies invest in this capability of women and offer food assistance through women.

Women's participation in food distribution guarantees more equitable sharing that is to the benefit of children in particular, and the most needy in general (Grisrt & Lubin, 1989).

It must be noted that involving women in food assistance is impossible in many situations since food assistance is run under the supervision of government agencies and women are generally forbidden from communicating with officials. Additionally, food aid is a rewarding job for most mid-level entrepreneurs who have certain connection with relevant state officials (Hartmann & Boyce, 1989).

Attempts to channel food aid by means of women will be successful if they are done through spontaneous or introduced women's organizations. In Bangladesh, a number of poor women united to withstand some local power brokers and moneylenders who tries to govern and grasp the control of women's scant resources (Hossain & Dodge, 1998).

1.6.1.4. Women and Reconstruction and Development Phase

Utter knowledge of local social organization is pre-requisite of development planning and initiatives. Accordingly, prior to any planning and initiation, relevant information regarding social organization, gender relations, division of labor, land tenure system, political organization, legal systems, and religious and cultural beliefs and practices must be collected. Preferably, an inclusive anthropological or sociological analysis will be required. Furthermore, environmental assessments make planners and developers aware of production strengths and weak points. Women should as well be engaged into the process to the fullest (Grisrt & Lubin, 1989).

The effect of local and national politics on communities, especially on women must be taken into account. The empowerment of women aimed at improving their societies is only feasible if the existing power structure of developing countries give consent (Grisrt & Lubin, 1989).

Rural women typically work shoulder to shoulder with men in hut construction; whereas, urban women are captivated by pre-assumptions of labor division in construction projects and are excluded. In case, building resources are available and there is enough credit and support, women will be included in constructing emerging

communities or upgrading marginal residence. Cultural expectations and local conditions must be considered in this regard (Grisrt & Lubin, 1989).

Women who found the chance of attending in income-generation projects earned financial independence, improved self-esteem, and enjoyed social recognition and dignity. They could as well afford the expenses of their children's education (Grisrt & Lubin, 1989).

Providing women with employment opportunities in the recovery and reconstruction phase is highly recommended. Women who are determined to mobilize the whole community for taking part in community recovery and development programs are required to be economically empowered (Grisrt & Lubin, 1989).

Recovery program will make sense for women if they attend in all preparedness, mitigation and response phases (Kelly, 1999). Instruction and training is needed to make community sensitive to the maintenance of development projects (International Development Research Centre, 2004).

Some of the same problems experienced in preceding phases are encountered in the reconstruction and development phase, too. Women are shocked by demise of their family members. They may get sick and lose their stamina for care-giving. They may also be abused by their irritated spouse. Women may be left behind and abandoned, experience unwanted pregnancy, destitution, malnutrition, and joblessness. These all may lead to women's hopelessness and despair in camp environments (Wingo, 2000). This sense of despair may be related to their fear of being excluded for resettlement (McCallin & Shirley, 1999).

Recent literature is indicative of women's marginal role in development process. During recovery period, they can do community mobilization for better implementation of recovery programs if they are supported and correct planning is done. In many cases, gaining economic independence as a result of income-generation projects led to their higher capacity for mobilization (Stolen & Vaa, 1999). The level of vulnerability of women in predicaments is significantly different from one another. Disabled, elderly, pregnant, and lactating women and widows require extended assistance beyond recovery period but assisting other women until they gain food and economic autonomy is sufficient. These distinctions are key to specifying the sort and degree of support (Rogge, 2002).

It is increasingly being acknowledged that in addition to fulfilling the basic needs of the children and families, women can play a key role in income generating in their communities (Moffat, 1990). In refugee camps, women have proved to be good at earning income, managing food production, providing fuel and water, and attending in cultural, religious and political efforts (United Nations General Assembly, 1990). Planners who design protection and assistance programs for women must be more open-minded about the status of women beyond limited roles as a daughter, mother, or wife (Grisrt & Lubin, 1989). Women's participation in planning, implementation, monitoring, and evaluation does not only contribute to the provision of basic needs but it generates cohesion and solidarity that makes achievement of development goals more feasible (Logarta, 1998).

Some sorts of community-based activities occur within the villages, towns, and cities even when no natural disaster or conflict-based displacement is experienced. Organized women's associations emphasizing community empowerment operate actively. As disaster occurs, women and youth associations are mobilized with the aim of relief and recovery (Grisrt & Lubin, 1989).

Long-term development of displaced communities demands a combination of physical infrastructural upgrades and socio-economic development. Physical improvement that is a communal activity with outstanding participation of women includes construction, water and sanitation provision, or planting fruit and vegetable., this is also accompanied by some other invisible merits such as satisfaction with immediate results, and believing the abilities of women and the wider-community to be united to step toward socio-economic and political empowerment (Anderson & Woodrow, 2001).

As an example, both men and women collaborate in rehabilitation activities following cyclone in Bangladesh. All family members help one another repairing the houses. As cyclone ends, women do not hesitate to step into mud and water to clean their houses. They build and fix houses with the help of male members (Mehta, 2006).

Men and women have become aware enough to feel themselves as guardians of the environment. Women are rather dependent on the environment for removing their fundamental needs and they play a key role as managers (users and custodians) of natural resources. Reproduction and production tasks of the family are vested upon

women and water collection or providing the required energy of the household puts them in direct contact with the natural environment. Since women have limited source of livelihood, they are more reliant on natural resources than men are (World Resources, 2005).

Women, with defined roles and rules, are indispensable members of any society. Inspection of the way and the reason of specific responses of people to disasters needs profound delve into the existing social structures. Not only social structures provide the foundation for responses, but also they considerably contribute to vulnerability. The vulnerability of women arises from cultural, political, and economic conditions. The poor, who are mainly comprised of women and their dependent children, are the most vulnerable. The organizational routes through which people find access to resources, social status, and even psychological well-being affect upon hazard perception, disaster mitigation, and recovery.

The condition of women must be recognized both regarding their potentials and their vulnerabilities. Women are required to work as partners in designing disaster preparedness and response plans for themselves and for their dependent children, since disasters multiply the responsibilities women have toward their children.

1.6.2. Gender Mainstreaming in Disaster Management

Disaster leaves a different impact upon women than men since each has a different position within the society and bears different responsibilities based on his/her potentials, demands, and vulnerabilities (Ariyabandu & Wickramasinghe, 2003). The poor, particularly women and elderlies suffer more since they experience more losses and have limited potential to recover (Working Group on Climate Change and Disaster Risk Reduction of the Inter-Agency Task Force on Disaster Reduction, 2006).

Findings of several studies show that women are exposed to risk more than men; women are important for the application of a disaster coping strategy. However, their capacities to reduce hazard, to prevent, and to tackle with, or recover from the impacts of disaster have not been fully understood (Ariyabandu & Wickramasinghe, 2003). According to Ariyabandu and Wickramasinghe (2003), women are

overrepresented as miserable victims in need of help but their potentials, knowledge, and skills are not fully acknowledged. Their attendance in decision makings for disaster and recovery planning has not been addressed effectively. It is therefore necessary to have a gender perspective in all relevant policies so as to be able to lessen their susceptibility. Gender equality will not be realized unless women are empowered to have a more prominent role in leadership, management, and decision making. They must not be regarded only as victims of disasters but as agents of change for risk reduction planning (International Strategy for Disaster Reduction, 2002).

The concept of gender mainstreaming was discussed in the Platform for Action (PFA) at the Fourth World Conference on Women in Beijing in 1995, the commitment to include gender perspective in all aspects of development and political processes of states (International Strategy for Disaster Reduction, 2002). Gender mainstreaming is explained as a process of integrating a gendered outlook with principal activities of governments at all levels for improving the role of women in the area of development, as well as for bringing women's values into the development work. Despite pursuing gender equality through gender mainstreaming, no significant attempt has been made for equal execution of specific measures to the benefit of women (European Commission, 1996).

Gender mainstreaming means both men and women be able to contribute to society's development and equally take advantage from society's resources (Employment and European Social Fund, 2005).

Gender mainstreaming makes women able to define their particular needs at the disaster management planning stage and in this way they can lessen their vulnerability. It empowers women since they can play equal roles in disaster management by applying their expertise in planning and implementing policies and measures in disaster management. Gender mainstreaming increases sensitivity to the issue of gender equity and equality and gender analysis is taken into account in disaster management, risk reduction, and sustainable development (International Strategy for Disaster Reduction, 2002).

Thus, policies and programs of disaster reduction must not be avoid of gender mainstreaming since "gender" defines capacity and degree of susceptibility to

disasters (Childs, 2006). Gender mainstreaming increases gender equality and helps to women's empowerment, especially wherever women are discriminated or inequality between men and women is bold. Gender mainstreaming helps effectively to the reduction of vulnerability of women, which is the result of various factors such as limited access to resources, and to the involvement of women in disaster reduction policy making process (International Strategy for Disaster Reduction, 2002).

However, gender mainstreaming is not realized overnight, but it is quite demanding and it proceeds slowly since numerous inputs from different corners including support, advice, competence training, development of methods and tools, and supervision in pursuing and assessment of progress is needed for a long period of time (McEntire, 2005).

The International Labor Organization defines gender mainstreaming as considering the experience, knowledge, and interests of women and men in development agenda and pinpointing the need for some alteration in that agenda, so that both men and women are able to attend in development process and benefit from it. To this end, mainstreaming gender perspectives into disaster risk reduction leads to involvement of both men and women as equal partners in decision making and as equal beneficiaries (Ariyabandu & Wickramasinghe, 2003).

Gender mainstreaming in disaster reduction has been shown as a parallel process to the mainstreaming of disaster reduction into sustainable development policies and activities. It is recommended that efforts should be made to increase a gender balance in decision-making positions to deal with disaster risk management (Ginige, Amaratunga, & Haigh, 2009).

To sum up, mainstreaming gender in disaster management plans and policies implies specifying the ways through which the position of men and women in society is shaped (International Strategy for Disaster Reduction, 2002). To put it differently, gender mainstreaming in disaster management means increasing awareness about gender equity and equality, so that the impact of disasters can be reduced, and gender analysis can be incorporated in disaster management plans and policies. When special needs and interests of vulnerable women is taken into account, better equality in disaster management will be achieved (International Strategy for Disaster Reduction, 2002).

1.7. RESEARCH ON DISASTER-SUBJECTED WOMEN

Amarnath et al. (1996) have explained if middle-class women take up economically productive roles what will be the consequences. The study examines whether the gender bias of men has undergone some change in the recent past. In order to do the analyses, researcher used six parameters including role perception, say in decision-making, acquisition of assets, economic freedom, spouse's co-operation, and perception of status change. A sample of 68 middle-class women employed in different sectors of Anantapur District (Andhra Pradesh) within the age group of 20 to 45 years was selected. The findings of this study showed that the employment of women has led to the women participation in decision-making process and thus, has lessened the degree of gender bias (Amarnath & Umamohan, 1996).

Kabeer (1999) used a three-dimensional conceptual framework to model the indicators of the empowerment of women: (a) "resources" which are considered as the pre-requisite of empowerment; (b) the "agency" as an aspect of the process; and finally (c) the "achievement" as a criterion of outcomes. According to the study, the most likely indexes of empowerment of women consist of: family structure, marital pros, financial self-sufficiency, freedom of movement, and lifetime experience of employment participation in the modern sector (Kabeer, 1999).

Disaster research has been mainly focused on disaster response and focus on gender has been widely ignored. Pioneer study about the "urgent need to study women and development issues" was carried out in early 1970s. A review of the literature of the last twenty years revealed that there are scant gender references to the extent of the problems of disasters and unbiased demographic ratio of women and men in developing countries (Grisrt & Lubin, 1989). Asymmetrical distribution of gender themes is evident in disaster-related literature. No statistics about women is mentioned in research literature (Grisrt & Lubin, 1989). The problems of women in emergencies demand prompt attention both in the field of research and planning (Grisrt & Lubin, 1989).

Only recently, disaster literature has extended and integrated women issues. Findings of another research confirm the necessity of investigating pre-disaster household responsibilities of women that expand following a disaster (Anderson et al., 1992).

These responsibilities range from productive responsibilities, to reproductive and maintenance e.g., water collection. Women perform as same as men in these tasks (Grisrt & Lubin, 1989).

1.8. DISASTER MANAGEMENT IN IRAN

The Islamic Republic of Iran is a middle-income country with a total population of 79,926,270 (2016), 15,600 \$ Gross national income per capita (PPP international \$, 2013), 74/77 years life expectancy at birth for men and women (2015), 1,082 \$ total expenditure on health per capita (2014) and 6.9 total expenditure on health as % of GDP (2014) (World Health Organization, 2016).

Table 2: Iran Health Profile

Total population (2015)	79,926,270
Gross national income per capita (PPP international \$, 2013)	15,600
Life expectancy at birth m/f (years, 2015)	74/77
Probability of dying between 15 and 60 years m/f (per 1 000 population, 2015)	102/63
Total expenditure on health per capita (Intl \$, 2014)	1,082
Total expenditure on health as % of GDP (2014)	6.9

Source: World Health Organization, 2016

Iran has successfully provided different services such as health, education and literacy to its people. Significant progress in women's education and health has been made in Iran since 1990. Many responsible organizations are trying to make further efforts to address female unemployment and the key achievements include an increase in the percentage of literate women compared to men aged 15 to 24 years from 90.56 percent in 1996 to 97.66 per cent in 2012.

Iran has made remarkable improvement regarding the status of health of Iranians over the last two decades. Iran has been able to extend public health preventive services through the establishment of community based primary healthcare network in the country.

Iran (the Islamic Republic) situated in Central Eurasia, is one of the disaster-prone countries. 181 disasters were recorded in Iran from 1900 to 2007, resulting in 155811 deaths, 168217 casualties, and 44037516 affected (Centre for Research on the Epidemiology of Disasters, 2009). Earthquake, drought, and floods are the most serious hazards, in terms of the rate of mortality, economic damage or people affected. In addition, since January 2007, Iran has accommodated 968000 refugees, a figure which places Iran among the world's top 10 refugee-hosting countries (United Nations High Commissioner for Refugees, 2007).

Following table shows the type of disasters has happened in Iran during 2000 to 2016 and its consequences. The table indicates a summary of disasters according to three indicators (Emergency Events Database, 2016).

Table 3: Type of Disasters which Occurred during 2000 to 2016 in Iran

Disaster type	Events count	Total deaths	Total affected	Total damage ('000 US\$)
Earthquake	38	28126	845753	2251928
Flood	12	234	216934	104898
Flood	12	542	1235383	742800
Landslide	1	20	4	0
Storm	1	28	0	0
Storm	1	12	185009	0
Storm	8	143	456000	49240

Source: Emergency Events Database, 2016

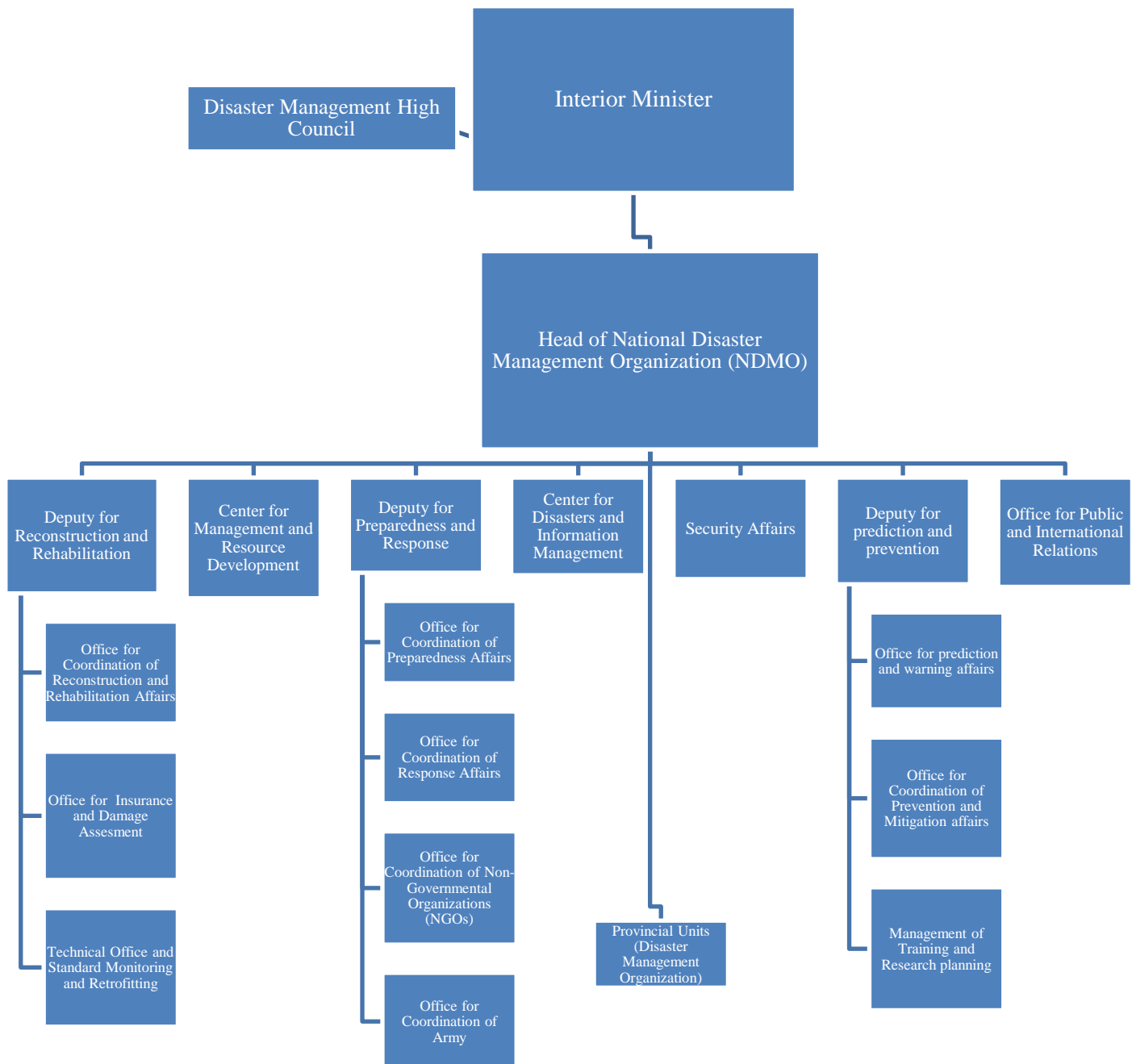
Disaster Health Management (DHM) is the systematic process of using administrative decisions, organization, operational skills and capacities to meet the challenge of planning for, responding to and recovering and mitigating from health consequences of disasters.

1.8.1. Disaster Health Management

Disaster management at the national level is the responsibility of National Disaster Management Organization under the higher supervision of the special deputy of

Interior Minister in this area. The same structure is mirrored at the provincial, township and local levels. The National Disaster Management Organization (NDMO) has been established to mobilize national, regional, and local capacities against disasters, and to put integrated management system into practice for cohesive policy making, planning, arranging research and administrative affairs, information distribution and monitoring different phases of disaster management besides for restoring and rebuilding disaster-hit areas by taking advantage of all necessary capacities and procedures related to relevant organizations and ministries. This organization is affiliated to the Ministry of Interior and the Head is appointed by the command of the Minister of Interior, approved by the High Council and the decree of the Minister of Interior. The provincial and regional branches have been formed under the control of Governor Generals and Governors, respectively (Fatemi Aghda, 2009).

Figure 1: Structure of National Disaster Management Organization



Source: <https://ndmo.ir>, 2016

The general responsibility of National Disaster Management Organization (NDMO) of Iran is implementing disaster risk reduction activities all over the country within disaster management cycles. If a disaster is recognized of national significance, the NDMO takes charge. If necessary, other Governmental authorities participate to provide additional support for disaster risk management.

The national structure of the NDMO is duplicated at provincial level. The Governor General and his heads of department embrace the provincial Disaster Management Organization (DMO), which coordinates disaster response at province level.

Each city in Iran is headed by a governor, who reports to the Governor General of the province and has a number of district – governors. The district level DMO has a key role in managing the immediate response after disasters.

As disaster strikes, the entire pertinent organizations are summoned by the Head of the High Council to collaborate in response operations based on pre-planned programs. Response operations will end by the command of the Head of the High Council.

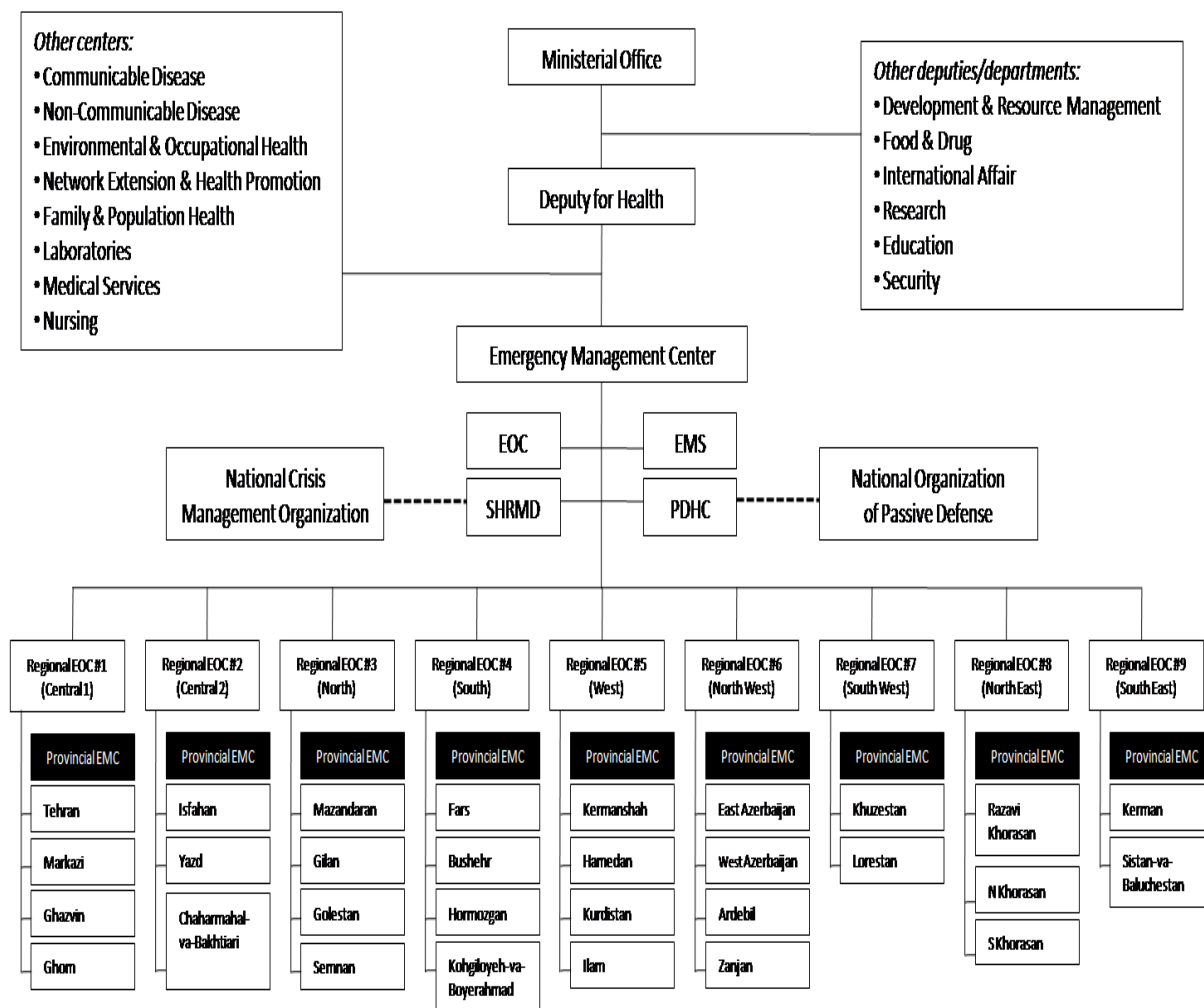
Specialized Working groups

14 Specialized Working groups under the overall supervision of the Ministry of Interior and headed by their ministries are responsible for managing, coordinating and administrating all activities related to disasters in their Organizations.

In health sector, Emergency Management Center (EMC), under Deputy of Curative Affairs in Ministry of Health and Medical Education (MOH&ME) is in charge for planning, coordination and supervision of health emergencies. Head of EMC is the secretariat for Health and Medical Care working group. EMC embraces Emergency Medical Service (EMS) and national Emergency Operations Center (EOC). EOC arranges all health response with the collaboration of representatives of health offices, other national governmental organizations, national nongovernmental organizations, international nongovernmental organizations and international organizations & United Nations (UN) agencies.

The country is divided to 9 emergency management regions; each consists of 2 to 4 provinces operating under the name of EOC. EOCs are established in national, all regions and all provinces.

Figure 2: Structure of Emergency Management Center and EOCs



Source: Ardalan and et al., 2009.

The interdisciplinary nature of health demands close collaboration of different organizations including MOH&ME, municipality, Water and Wastewater Organization, Iranian Red Crescent Society (IRCS) and etc. The intra-sectoral partners of EMC consist of Deputy for Health and Curative Affairs and different related deputies, centers and departments in MOH&ME. EOC is responsible for coordinating response to the health needs of affected population in any disaster (Ardalan et al., 2009)

Besides, Iran Army and Islamic Revolutionary Guards Corps (IRGC) have considerable capacity and facilities to respond to the needs of affected population in disasters. Regarding the importance of the community as the first respondent (Ardalan et al., 2006), BAHA (Basije Hameganie Amoozeshe Ehia) is defined as a

public awareness program implemented by EMC that has trained more than 200,000 people around the country on cardiopulmonary resuscitation (CPR).

Health system commenced community-based disaster management programs through using the capacity of PHC network to lessen the risk of disaster. “Village Disaster Taskforce” (VDT) model, was tested in Golestan province and was aimed at community participation, down-top approach and facilitation of warning dissemination and communication to grassroots. A community intervention experiment proved the effectiveness of the program for the community preparedness at household level (Ardalan, Holakouie Naieni, & Keshtkar, 2007).

DAVAM (Neighborhood Emergency Response Volunteers project) is another community-based program initiated by Tehran Municipality with the aim of developing community-based models in Tehran, the Capital city.

1.8.2. DAWAM Teams

Global experience ratifies this fact that disaster operations during crisis cannot be merely assigned to government since it is beyond the capacity of government to handle them independently. Seismic disasters occur rarely but no official response system is able to manage such extensive disasters satisfactorily. Besides, establishing and maintaining a real adequate response mechanism is too expensive to be created. The natural consequence is that it typically takes official response teams several days to reach to the affected sites and operate efficiently.

Local dwellers, neighbors, and family members are not saved by professionals who arrive late to the site, but they are rescued by earthquake victims. Despite volunteers' inclination to rush for help, lack of preparation prevents them from effective contribution. They generally have no knowledge or skill of search and rescue, handling victims, first aid techniques, etc. no team structure has been shaped and there is lack of rescue equipment, tools, and materials.

Uninstructed and not-prepared rescuers may even harm disaster victims or themselves in deliberately. When professionals arrive, there is no obvious plan for their collaboration with local volunteers. However, DAWAM volunteers approach is an attempt to mobilize the capacities of local residents, and at the same time it tries to

remove their deficiencies. Mobilization will not be successful unless appropriate “instruction” and “coordination” happens. Thus, a carefully designed program for training and improving practical experience is necessary for effective disaster response. DAWAM group clearly defines roles, functions, and procedures; therefore, activities are organized properly. The objective of DAWAM team is strengthening the capacity of communities at local level and mobilizes the potentials of Citizens to prepare for, respond to, and recover from disasters. It is a carefully designed program of training and practical exercises imparts the basic knowledge, skills and confidence that volunteers need for effective disaster response (Middle East Regional Centre for Best Practices, 2012).

CHAPTER 2: METHODOLOGY

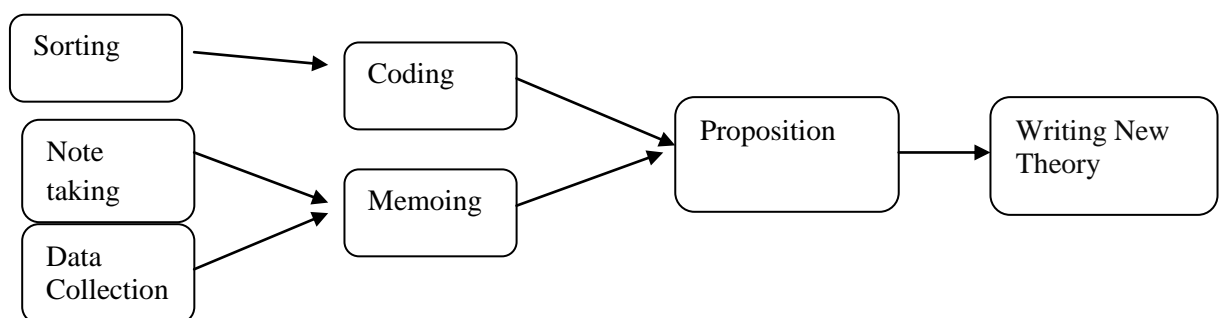
2.1. INTRODUCTION

Qualitative research is increasingly popular in health and medicine. The increasing popularity of qualitative methodologies for medical research has led to an increasing awareness of formal qualitative methodologies. This is particularly so for grounded theory, one of the most-cited qualitative methodologies in medical research (Bryant & Charmaz, 2007).

2.1.1. Conceptual Framework

In this qualitative study grounded theory has been used in an attempt to find empirical support for a better definition of role of women in disasters in Iran. Grounded theory is a qualitative research method developed by Glaser and Strauss (1967). Its purpose was to devise a way to extrapolate field data and generate a theory that accounts for the observed phenomena. One important characteristic of grounded theory is that it is explicitly emergent. It begins with problem formulation, followed by data collection, and it does not always have a hypothesis but rather a proposition (Dick, 2005). This process might be summarized as following:

Figure 3: The Process of Grounded Theory



Source: Dick, 2005

Grounded theory develops a generalized conclusion from particular incidents. After problem formulation, the next stage of the process is phenomena detection, followed

by data collection, and identification of themes that emerge from the data, thus generating a potential theory. The theory is then applied to specific behaviors (Dick, 2005).

2.1.2. Grounded Theory Methodology

Grounded theory must have special characteristics to be legitimately referred to as 'grounded theory. The fundamental components of a grounded theory study are set out in below table. These components may appear in different combinations in other qualitative studies; a grounded theory study should have all of these (Morse, Corbin, Charmaz, & Stern, 2009).

Table 4: Fundamental components of a grounded theory

Openness	Throughout the study	Grounded theory methodology emphasizes inductive analysis. This means that it develops new theories or hypotheses from many observations.
Analyzing immediately	Analysis and data collection	In a grounded theory study, analysis must commence as soon as possible, and continue in parallel with data collection, to allow theoretical sampling
Coding and comparing	Analysis	Data analysis relies on coding and comparing.
Memo-writing	Analysis	The analyst writes many memos throughout the project.
Theoretical sampling	Sampling and data collection	By carefully selecting participants and by modifying the questions asked in data collection, the researchers fill gaps, clarify uncertainties, test their interpretations, and build their emerging theory.
Theoretical saturation	Sampling, data collection and analysis	Often this is interpreted as meaning that the researchers are hearing nothing new from participants.
Production of a substantive theory	Analysis and interpretation	The results of a grounded theory study are expressed as a substantive theory, dependent on context and never completely final.

Source: Morse, 2009

2.1.3. Disadvantages of Grounded Theory Methodology

In Grounded theory large amount of data is produced which it is almost difficult to manage these data. Also using grounded theory method need skilled researcher. Not having s standard rules for categorizing is another disadvantage of this method. In addition, this method is prone to researcher- included bias

2.2. RESEARCH OBJECTIVES

Disasters have different impacts on people and their root cause is often in the severe imbalance between rich and poor countries (Raymond et al., 1994). In different societies, members are differentiated in terms of age and sex. This differentiation is most pronounced in industrialized societies where the status of women is one of formal dependency and hence structural subordination (Sandy, 2004). Sexual discrimination and male dominance is exaggerated and even glorified in such societies.

These culturally diverse discriminatory ideologies often have detrimental effects on the treatment of women under normal societal conditions and this situation is even more severe in disasters. With the disruption of established male-dominated social control mechanisms, women and their children are the first to be neglected and/or abused (Arizpe & Aranda, 1981).

The gendered roles and responsibilities women have in their paid work and home lives affect women over the course of emergencies and disasters. Like so many aspects of health and public health, women have particular concerns and issues that are different than those for men, and importantly, not all women have the same needs or experiences when it comes to emergencies and disasters. Also women have special capacities which needs to be considered in disaster management plans (Women and Health Care Reform, 2009).

This study is going to explore the role and contribution of women in disasters. The objectives of this study are as follows:

- 1- Explore gender differences in vulnerability to and impact of disasters
- 2- Explore the role of women in preparedness phase of disaster management

- 3- Explore the role of women in response phase of disaster management
- 4- Explore the potential contribution of women in health sector in disasters
- 5- Propose Suggestions for women involvement in preparedness and response phase

2.3. RESEARCH DESIGN

In this study a qualitative approach was employed. Qualitative methods were used to segment and categorize individual responses. In this study, researcher sought to learn from participants what is the role of women in emergencies and how they can contribute to health sector.

Researcher asked open-ended questions from participants about women' role in disasters. The initial research questions were:

- Have you ever experienced a disaster?
- Tell me about what you exactly observed

Researcher changed the interview questions based on the analysis of previous interviews. Interviews were conducted and transcribed in Persian but coding and categorizing the interviews were conducted in English.

2.4. POPULATION

Grounded theory studies are characterized by theoretical sampling, but this requires some data to be collected and analyzed. In grounded theory research, participant selection is not accomplished through probability sampling methods but on the basis of topic relevancy and purposively. In this study, based on the experience and knowledge of population, samples were hand pick up.

The population for this study was policy makers, experts from government, civil society, affected population and academia who had experienced at least one disaster or had enough information regarding disasters and women role in disasters. Since the focus of this study was on health sector, policy makers were selected from Ministry of Health and Medical Education and also Iranian Red Crescent Society. In addition, affected population of Varzagan and Shonbe earthquake was selected for interview.

Another group for interview was the academic personnel of “Health Management in Disaster” branch. The NGOs which were active on women issues was the another group for interview. Also, those who were working on disaster management issues in government body such as Ministry of Health and Medical Education including health network and National Disaster Management Organization were selected as expert of government to be interviewed.

2.5. DATA COLLECTION AND ANALYSIS

The research proposed a qualitative descriptive design for the study. Qualitative method of grounded theory was used in this study and data was gathered by semi-structured interview, document review and observation.

The research began with interview with participants. Data collection entailed the researcher conducting one to one semi-structured interviews which included open-ended questions with the participants. Interview started with asking questions about “personal experience of disasters” and it was followed with other questions regarding women’s role and involvement in disasters. In some cases interview was repeated because of unclear response to questions especially the questions related to interaction with policy makers and possibility of women involvement in disaster management cycle.

To complement the interviews, literature review and desk review of available information, academic literature as well as papers and reports about disaster management, vulnerability of women, legislative and institutional frameworks and policies about women’s need in disasters, including a brief overview of relevant international standards was done.

The gathered data was analyzed using constant comparative analysis method through using MAXQDA10 software. Data collection and analysis were conducted simultaneously.

Qualitative data were gathered through conducting interview with 19 individual during July 2013 to December 2014. With verbal permission of participants, interviews were digitally recorded and transcribed. Transcriptions were reviewed for content, accuracy, and discrepancies between the recording and the transcription.

Duration of interviews varied from 47 minutes to 118 minutes. The average length of the interviews was 67 minutes. Paper copies of transcribed interviews are available for further reference. Transcription records were analyzed using successive iterations of open coding, axial coding, and selective coding. Open coding involved reviewing each question and generating keywords and phrases for responses. Then based on the objectives of the study and available codes, preliminary categories were generated. These steps were repeated until the categories were saturated and analysis produced no new codes or categories.

The analysis took place during the data collection period, and was thoroughly integrated in to all aspects of it, including an analysis of every interview and observation directly after they were given.

Observation balance out the things people say during interviews and either confirms or contradicted their spoken viewpoints.

Throughout the study, researcher didn't write extensive case-based memos however she wrote some case-based memo after some of interviews.

2.6. ETHIC CONSIDERATIONS

Ethical consideration was addressed at each stage of the research process from the choice of topic to selection of design and publication of the findings. This study was a qualitative study and data were gathered through interview with participants and asking about their point of view related to the topic of this study. So this study didn't need to get permission from the Ethics Board.

As part of ethic consideration and as in any ethical study, researcher ensured that participation in this study was voluntary and participants could withdraw at any time. Researcher also informed participants about confidentiality of interviews and making all responses anonymous before analysis. In this study

Confidentiality and protection of participants are crucial to the success of any study. To protect confidentiality of participants in the current study, no identifying information was collected or retained. Participants were assigned numbers to maintain anonymity. Coded responses represented a composite of attitudes, beliefs, and perceptions, further ensuring anonymity. Participants were informed that their

participation was voluntary and that their responses would remain anonymous for reporting purposes. The result of a respondent's interview was not shared with any other respondent. Participants were informed that anything they might say during the interview would be considered on the record.

CHAPTER 3: RESULTS AND FINDINGS

In this study data were collected through interview with 19 participants (8 males and 11 females), 68% married and 32% single, they were aged minimum 27 and maximum 63 years old (with average 40.9), and the majority were graduated from at least four-year university education (nine bachelor, six master and four PhD education).

Table 5: Participants' Demographic Profile in Terms of Gender, Age, Education, and Martial Status

Participant's information		N	(%)
Gender	Male	8	42
	Female	11	58
Age	25-45	11	58
	More than 45	8	42
Education	Bachelor and below	12	63
	Master	4	21
	PhD	3	16
Marital Status	Married	14	74
	Single	5	26

Six main categories of findings emerged from the data, namely:

- The needs of women in disasters
- Women's vulnerability
- The women's capacity in order to be involved in disaster management cycle
- Barriers in front of utilization of women's capacity in disasters
- Role of women in delivering services in disasters
- Areas which need to be considered in planning for women contribution in disasters

The categories are explained below.

3.1. NEEDS OF WOMEN IN DISASTERS

Disaster needs assessment system usually does not consider women's loss and needs. There were many ideas about the needs of women in emergencies. All participants emphasized that women have special needs in disasters and emergencies which needs to be considered. These special needs have been summarized in below table.

Table 6: Needs of women in Disasters

Main Category	Sub Category	Frequency
Needs of Women	Psychosocial needs (emotional problems, mental health, psychosocial pressure (Stress, anger))	26
	Culturally appropriate cloths (head covering such as scarf)	25
	Women- friendly distribution pattern (long queue (women can't compete with men) and weight of distributed package)	20
	Special supplies (related to women's reproductive health such as sanitary pad and underwear)	19
	Water and sanitation (toilet/ latrine/ shower (enough, separated and accessible))	18
	Appropriate needs assessment (attention to needs of different group)	15

Women are often primary carers for children, the elderly, sick and injured family members. For women who now head households, their child and other care responsibilities prevent them from accessing aid. Some times their attempts to access aid place their children at increased risk (if they are left unattended or taken to a crowded distribution site). The ability of women to care for their children is affected

by the effects of the disasters on their physical and mental health. Participant (P7) in this regard stated that:

The earthquake was enormous and left girls and women with more problems than men. Harrowing scenes and deadly injured survivors aggravated their problems. People were all shocked and agitated. Hospital personnel were confused.

Almost all participants mentioned to psychosocial needs of women as the most important need which has to be considered in all response plans. Participant (P10) in this regard mentioned that:

Red Crescent teams and ambulances rushed to the site and started treatment of kids and women. But the interesting thing was, sending two groups of consular to Shonbe and Tasuj for counseling women and relieving their traumas since the number of women suffering from emotional problems was both considerable and in disguise.

Participant (P8) mentioned that:

At first glance you may see those who are homeless, search for shelter, or ask for more tents but what I noticed was their emotional needs.

Participant (P16) reiterated emotional needs of women and mentioned that:

Many of them who had missed their intimates had some unique needs which were not considered the most important. In these moments, all want to help, build a house, do this, or do that but no one cares about their emotional problems. I found that they needed a shoulder to cry on.

Emotional needs have different aspects but in most of the disasters these needs are ignored. Participant (P6) in this regard mentioned that:

The day which I arrived, mental health services have not been activated. In the 13-14 days after earthquake some people came there to provide mental health services in basic level. Psychological outcomes of earthquake were still tangible and people confessed nothing was done for their rehabilitation.

Disaster affects different people in different way and it leaves age groups with different needs. As mentioned earlier, Psychological needs are one of the important needs in disasters but it is not just for adults. This is one of the important needs of children also. Participant (P17) in her words stated to and mentioned that:

My son avoided using bath room for two days. He was scared and couldn't urinate. I myself forced him and made it hard on him but those in charge of mental health did not do anything special. We worked out our problems on our own. No one instructed us what to do. There was no class to educate us, or if there was any we were not informed about it. They didn't instruct us.

Participant (P7) talked about her personal experience and stated her feeling after earthquake in her words. She said that:

My in laws including my sister in law, her daughter, my father in law, and my husband's aunt which all died in earthquake, were all with us, in our home when the earthquake struck. I never forget their death and this makes me angry.

These psychological pressures in disasters have different consequences. Participant (P2) in this regard stated that:

Stress itself because of the earthquake or other reasons provoked the labor and women started delivering earlier. We experienced it in Pakistan earthquake. Beside the psychological needs, Participants implied to the need for special supplies related to women's reproductive health (including sanitary supplies) and they mentioned that these supplies in most of the disasters are missing part which needs to be available in response phase for all women.

Participant (P17) said:

A crate full of sanitary pads was distributed. Within seconds, a long line formed for collecting the same. Once again, the crate had to be opened out of the boxes and each woman was given only five pads. It was a scene struck by sadness, the absurdity of handing out unconcealed pads to women most of who were covered in Islamic headscarves. They were supposed to walk home holding the things in their hands. One woman took what was handed out. "Do you know how difficult it is to be a woman in a tent?" she asked. "This isn't enough!" "I know," I said. "I'll try to find more." Was the reply the relief volunteer had to say.

Participant (P3) mentioned to this issue by say in that:

Some patients' companions in the hospitals were women and they needed underwear but this need had been ignored. Those accompanying casualties were just physically healthy but they were also traumatized. The person bedridden received service and was attended but those accompanying patients and casualties such as their mother, father, child, one of the relatives or neighbors were ignored. They had some needs which were not cared. Some of these women needed underwear but no one minded it.

Most of the time women are receiving the relief goods and items which target the needs of family and don't address the special needs of women. Also participants implied to culturally appropriate cloths like head covering.

Participant (P7) stated that:

I was sleeping when earthquake happened and I was not wearing scarf. It was so embarrassing for me that my brother in law and also some members of team which were there saw me without scarf. At that time I wished to die.

Majority of participants implied to WASH (Water and Sanitation) needs of women and its importance to them. They also implied to location of water-points and their distance from residential area.

Participant (P19) in this regard mentioned that:

On the way to Azarbaijan, we saw 10-15 caravans of trucks carrying bread, water, victuals, clothes, and blanket. Each of these villages was flooded with these commodities but there was no toilet or latrine. No one among millions of people on the way coming for help, didn't predict the need for a latrine especially for women.

Participant (P12) reiterated the need for latrine and mentioned that:

About needs of women, latrine and bathroom was not fulfilled.

Participant (P4) mentioned that:

In some cases service providers realize that there is need for latrine but even if these needs were noticed, gender issue was not observed. When we talk about toilet, we need enough both for men and women and in different places, easily accessible, or safe at night but in most of the time this issue was not observed.

Participant (P13) stated that:

Interestingly, once we arrived to the field, there was no toilet. This problem is not as important for men as women. Women do mind it. Even the toilets which established later were so far from residential places. Lack of bathroom troubled women more. Men can travel to another village and take a bath but it is not possible for a woman to do so.

In this regard participant (P8) stated that:

There is a tough situation in here. There is no bathroom. Women don't know what to do. The bathroom brought here is not standard. The door was blown away by wind. No one could use it. Rarely did people use it. Around 1000 households emigrated. Those who had pregnant women couldn't live in tents. They rented a house in Khormuj. Conex boxes were initially given to families of martyrs and veterans of the imposed war. They first asked us about it but later it was manipulated.

As mentioned earlier women have their special needs which need to be taken into consideration but what is more important is assessment of these special needs.

Participant (P18) in this regard mentioned that:

Some items are specifically for women. In some cargoes they were found but it was not correctly estimated how many are needed. When you enter into Red Crescent storehouse, you can see food packages for each household including rice, tea, washing powder, and also sanitary napkin. But, there are some single families that they don't need such pads or the number of women of each family was not estimated to see how many pads are required. These points were also left unnoticed.

Almost all of participants mentioned that in distribution of relief good and items women's special needs are not considered with proper attention. In most of disasters huge numbers of people try to get relief items through going to a relief distribution center and waiting in a long queue for long time. What mentioned by many participants was that there isn't any proper distribution plan in response phase which in most of cases lead to crowds in distribution center. Usually, it is very difficult for the relief workers to keep discipline in distributing relief items amongst affected people. Besides, in most of the societies which are male dominant, it is difficult for women to compete with men in receiving relief goods and items. However, nowadays many organizations are considering advantage and disadvantage of women and trying to make relief items and also distribution women friendly.

Participants implied especially to the weight of distributed package and mentioned that it is important women can carry these packages also.

Participant (P11) said that:

Standard packages were not gender oriented. Rice bags were 20 to 50 kilograms. If a woman has no man at home and sends her child to carry it, what the child has to do with this heavy bag? The distributed package must be portable. It must be at most 2 to 5 kilos that even a woman can carry easily. They were none observed even in huge disasters where access is restricted and packs are hurled out of helicopters. Food access was also problematic. Men may be more excited to get them but not women.

In summary participants mentioned to the special needs of women such as psychosocial support which needs to be considered in all plans and programs. Also some participants mentioned that after the disaster, supports are favoring men's need than women. Paying attention to the needs of women and providing appropriate response to their needs is unavoidable in any disaster.

3.2. WOMEN'S VULNERABILITY

Vulnerability of women is a fact and the results of some research show that vulnerability is a cultural and organizational issue and vulnerability of women increase in case of disasters. Vulnerability can be minimized if adequate measures of assistance and physical and legal protection are adopted and women receive relevant knowledge and awareness in preparedness phase (Raymond et al., 1994). Below table summarize the factors which effect on women's vulnerability.

Table 7: Factors affect women's vulnerability

Main Category	Sub Category	Frequency
Factors affect women's Vulnerability	Health problems	29
	In appropriate service delivery (right time and way)	19
	Women's behavior	18
	Cultural boundaries	18
	Gender sensitivity	14
	Dependency to men	13
	Limited access to resources	11
	Social, and historical structure	10
	Women's involvement in disaster management plans and programs	9
	Demise of family's head	8
	Homelessness	4
	Level of economic development (lack of financial resources)	4
	Insecurity	3

In this study, participants had different ideas on vulnerability of women. All of them mentioned that women are most vulnerable in disasters.

Participant (P4) stated that:

Social, cultural, and historical structure and the level of economic development which didn't satisfy the needs of women prior to earthquake, dramatically enhanced women's, children's, and the elderly problems after earthquake. Insecurity, demise of family's head, health problems, lack of financial resources, and homelessness harassed women. Even women of those families which somehow survived, experienced heavier work load following the crisis and encountered with harder house chores.

Participant (P14) stated:

When a first responder is inquired about his memories about the crisis or what concerned him the most, they mostly mention children grief and mental and psychological pains of women. This ratifies the fact that vulnerability of women and children in disasters is far more tangible than those of other age and sex groups. On the other hand, critical role of women in the family stresses and reminds us of this point that a restoring and rehabilitating victim family is not possible unless women and children's problems are settled down specifically and substantially.

Some participants mentioned women' dependency to men as a factor which increases women's vulnerability. Participant (P17) in this regard mentioned that:

In our district, women are not allowed to decide and men usually decide for them. Earthquake generates new vulnerable groups and brings about some vulnerability in the society.

Participant (P16) stated that:

Women in our country are severely emotional and dependent on their families. Over 90% or even 99% of volunteer groups who come to the site are men. They can't culturally communicate with women and appease their grief. This adds to women's problems and vulnerabilities.

Participant (P12) said:

In this district (Varzaghan), majority of women depend financially on their fathers or husbands. They are mostly housewives and not money making. On the other hand, traditionally and culturally, properties and real estate belong to men. Hence, women do not have direct access to money and properties; this fact makes them more vulnerable after a crisis like earthquake. Condition is more intriguing for women who lose their householder.

Some participants mentioned cultural boundaries as factors which effect vulnerability of women. Participant (P17) who was in Dashtestan flood and baffled by non-stop water overflow said:

I felt an undertow and sank down into the water. Two young men came to me and pulled me out. If they hadn't rushed to help, I would have been washed away.

Participant (P8) stated:

There was a man next to me whom I didn't know but we decided to help one another or we would have been carried away by flood of water. When I think back about that night, I feel ashamed but at that moment I couldn't do anything but ask for help from that man.

Vulnerable people almost are not able to meet their own needs and in most of the time are the last to benefit from assistance programmes. This issue often applies

about women and their dependent children. Having information about cultural context is important to understand the impact of disasters on people especially on vulnerable groups (Wilson, 2002). Participant (P7) stated:

Cultural issues restrict women's access to humanitarian aid centers. Furthermore, since they are responsible for and watchful of their offspring, they can't leave home easily. They are as well prohibited against interaction with stranger men (even service providers).

Majority of participants stated that most of provided services are not gender sensitive and it increases the vulnerability of women. Since most of women are not involved in planning process, their needs are ignored in disasters. Participant (P5) stated that:

One of the main reasons of women's vulnerability once a crisis takes place is their more limited access to resources in comparison with men. After earthquake struck Bushehr, mostly men attended in decision making and planning sessions and expressed their opinions. Limited services and facilities which were distributed in the society at that time were mostly captured by men.

Participant (P15) declared that:

Culturally, women were less attending in social groups and public places; therefore, they got secluded after earthquake and their voice was not heard by authorities and policy makers. They couldn't even articulate their needs and demands. That's why; planners don't pay special attention to the needs of women and they turned blind eye to post crisis conditions of them.

There are some deviations in some communities such as, save money without husband's permission which are acceptable in the society because men as and society benefit from these deviations but some deviations such as going to shelter home without husband's permission are not acceptable because men can't benefit directly from these deviations. These deviations can be cause of women's high death during disaster. Participant (P1) said that:

People are mainly farmer in Varzaghan. Once earthquake occurred, men were out working on their farms but women and children were at home. Thus, most of victims were women and children.

Participants also mentioned to the services which are provided by relief organization in response to the needs of affected population. Some of them stated that inappropriate service or the services which are not provided in right time and way, increase vulnerabilities of women. Participant (P10) mentioned that:

First days following the crisis, there was much chaos and humanitarian assistance arrived at the evening when weather was getting dark. Many women who had lost their husbands were afraid of going to the site to receive service.

The social structures of most societies formally ignore the women in the society or downgrade them to inferiority and dependency which this increase their vulnerability through disempowerment of them. However, in reality the actual performance of

women differs significantly from gender ideology and role stereotypes in most societies. It is therefore essential to consider these realities in planning in order to take these differences into consideration and pay special attention to the impact of disasters on women, and to recognize women's potentials, capacities and contribution in disaster management cycle. It has been explained that vulnerability of the population is the main cause of disasters, and that vulnerability is increased by socio-economic conditions which can be modified by conscious action (Raymond et al., 1994).

Briefly, participants mentioned to the vulnerability of women such as dependency which increase their special needs in disasters. Participants also agreed that most of services which are provided in the scene are not gender sensitive and this issue also needs to be considered in developing any plan and program related to disasters. They mentioned that cultural norms have to be integrated in disaster management cycle and all plans and efforts. Advocacy on women's contribution in disaster management plans and programs is so important in order to decrease women's vulnerability.

3.3. THE WOMEN'S CAPACITY

Women are a vital piece of the planning process for disaster risk mitigation and response, enhancing disaster planning with different perspectives that often focus on community needs and vulnerable groups. Women have special capacities which enable them to play an important role in disaster management process. Below table summarize the capacities of women which can be utilized in disaster management process.

Table 8: Women's capacity

Main Category	Sub Category	Frequency
Women's Capacity	Women have capacity to be involved in training of their fellows (Women have easy access to local staff)	26
	Women have capacity to relieve mental, psychological and emotional problems	23
	Having plan for using women's capacity	20
	Changing attitude to women (Women are not just vulnerable group)	19
	Train women in line with their capacity (Empower and built capacity)	18
	Women are more committed and it needs to be considered in planning to use their capacity	18
	Considering gender sensitivity in using of women's capacity (Considering cultural norms)	18
	Identify women's capacity	15
	Considering different type of capacities (Physical, social and behavioral)	11

In some societies disaster management system does not consider women's capacity and knowledge in any planning and mostly considers women as vulnerable group and

victims of disasters. Although it has been observed that women have performed admirable role in response to disasters in some societies but it has not been institutionalized yet. In fact women's role is recognized in family and society to some extent, but institutions have very little reflection on women's role. Sometimes institution failed to recognize that disaster management system can bring opportunity for women's empowerment. Institutions develop their programmes without considering women's capacity and skill. Therefore, the entire disaster management process tend to lose the opportunity of using women's capacities and potentials and promoting women's role as active agent in bringing positive changes in disaster management policies and plans.

All participants agreed that women have good capacity and it is worth to utilize this capacity in disasters and all we need is strengthen this capacity. They agreed that considering women as vulnerable group prevent of using of this valuable capacity. So it is needed to change the attitude and perception regarding women. Participant (P16) mentioned that:

I believe that the first thing which we should determine is what this group (women) is supposed to do. In other words, needs must be defined. We experienced crisis i.e. Bam earthquake and other earthquakes. We can somehow predict needs which appear during crisis. These needs must be well defined. Then, it must be clarified how women can help to fulfill those needs. It is then that regarding need peculiarities, we must search for those who have the same peculiarities or in advance we must train them. I mean we have to use of capacity of women in order to respond to the needs of affected women. It is what the women prefer in our culture. So I say that in some cases there is capacity and we need to empower it and in some cases we need to build capacity from the scratch.

Participant (P1) mentioned that:

There is no doubt that women have good capacity and we have to use of this capacity but what is important is having plan for that. Without having plan in preparedness phase regarding the capacity of women in fact we waste this capacity and also time and resources in response phase.

Participant (P4) also stated that:

Capacity is same as physical, social, and behavioral vulnerability. Instead of dividing capacity into man capacity and woman capacity, I divide it into above mentioned items and then based on context; I investigate whether women contribute more or less. If you are to check women's capacity, it must be done under a gender sensitive framework. This is what we ignored in Varzaghan earthquake. Most of service providers even they didn't know what they are going to do in the field. We overwhelmed with lots of people which came there to help to affected people but from one hand they didn't know what they are going to do and from other hand we had to respond to their needs also.

Participant (P13) said:

In many cases, abundant roles are perceived for women. In some places some movements have been started or they are at the start line and not fully matured, yet. During the war, there were some women who cleaned vegetable, knit socks, etc. at home. They were unemployed people whose capacities were used at home. I don't mean women's role is limited to these few examples but you must identify capacities and plan for them. We need to work on it. We are in the beginning of this way and we have a long way to go.

Participant (P14) mentioned that:

Women effect on dynamism and upheaval process during crisis management since they play different roles. They can be both influential upon general movement trend in crisis management and can lead and modify behavior in disaster-stricken areas. This was exactly what we witnessed in Bam earthquake. Though they were damaged, they were attentive to their fellowmen.

Most of the participants based on their experiences mentioned to the active role of women in different disasters and participant (P11) mentioned that:

What we observed about women in Boushehr earthquake was their active role in different cultural, social, economic, etc. areas during earthquake. The most important area in which crisis management is influenced by women activities was training field. Women trained their fellows on different issues like how to cope with this situation. Based on lessons learned of this earthquake we suggested different plans to the head of health network and mentioned that we have to taking advantage of all scientific and practical potentials of women for working out problems and relieving mental, psychological, and emotional problems. Also we suggested different capacity building plans.

Emotions and instinctive delicacies make women more committed than men. Bam earthquake proved that women establish emotional relationship with disaster-stricken people. Participant (P3) stated that:

When I was coming back home after two month, I was crying, I had strange feeling. From one hand I wanted to come back home and see my family and on the other hand those who I was dealing with during these two month, were somehow like member of family. I was in day to day interaction with them. They shared good and bad moments with me and I couldn't forget all these things.

In some context cultural boundaries are so important for the affected community and this is also good opportunity to utilize women's capacity in such context. Participant (P2) which had international experience stated that:

Our experience in Pakistan showed that women have easy access to the local staff because they were one of them and this is a positive point in order to use of capacity of women in disasters (in Iran we have the same culture). The only need is providing more opportunity for them to grow up and to be helped. It is the same in Iran also. Positive impact of involvement of women in disaster is that: they are women they know much better than a men about the women needs, about the support which should be delivered to the affected women and young girls. Plus I believe they can be better manager.

In brief, it has to be mentioned that women have good capacity in order to be utilized in response to the needs of affected population in any disaster but what is more important is strengthening this capacity and empowering it in preparedness phase and providing opportunities for women to grow up. Without building new capacities and strengthening available ones, women's contribution in disasters lead to wasting time and resources and makes delay in providing appropriate services.

3.4. BARRIERS IN FRONT OF UTILIZATION OF WOMEN'S CAPACITY IN DISASTERS

Although women have special capacities which disaster management process can benefit from them but sometimes there are some barriers which limit utilization of these capacities. Below table shows the barriers which were raised during interviews by participants.

Table 9: Barriers in front of utilization of women's capacity

Main Category	Sub Category	Frequency
Barriers in front of utilization of women's capacity	Cultural norms	19
	Lack/ insufficient training for women (Women have not been well trained for disasters and lack of specialized women)	18
	Religious limitations	17
	Rules, regulations and attitudes	16
	Traditional socialization	14
	Wrong perception regarding women's capacity	12
	Community- specific norms	8
	Pre-requisitions about using of women's capacity (Language)	6

Division of labour among men and women is shaped based on the social norms and culture in the society. This division of labour which is constructed by society shapes perception about women and men.

Traditional social norms and culture is establishing and reinforcing the traditional division of labour. This division of labour and cultural norms is even visible in seeking for help and also providing services in disasters. These attitude and cultural norms need to be considered in disaster management plans. As it was mentioned

earlier, women have good capacity in order to be utilized in disaster but what is important is using this capacity in line with local cultural norms.

All of participants mentioned to these cultural norms and agreed on considering these norms in providing any services to affected population. Participant (P16) stated that:

In response phase, 60% men and 40% women are required. The main reason is that a woman will be able to help another woman better than a man and the number of women who suffer from emotional trauma is a lot. It is also in occult. Let's give an example. In Haris earthquake, I got to a devastated house. The father and mother had died. There was a teenage girl and it seemed she was in her critical stage of life i.e. puberty. Naturally, teenagers are oversensitive in this stage. There was also a 2 or 3-year-old kid. We arrived the first hours post-earthquake. Their house had collapsed and corpses were taken away. These two children had hugged one another and sat next to the havoc and spoke to none. When I went to speak to this girl, I found she wasn't at ease with me. I felt it. These are cultural frames engraved in the mind. You can't change it momentarily. But if there were a woman, she could touch her hand. This simple touching lets energy flow and let the person feel secure next to a congener. But there was no woman, unfortunately.

In support of this, participant (P14) stated that:

Our traditional socialization process restricts women from acquiring lifesaving skill; as a result women are vulnerable to lose their life.

It has been observed that women can save women easily and women prefer to ask help from women without any hesitation. Considering cultural boundaries women do not let men touch them for rescue. In some societies there is a cultural taboo of letting other men touches a woman's body. This is why women seek help from other women and it reflects in women's unwillingness to accept help from men. Participant (P11) stated that:

Social, cultural, and historical context and economic development level which didn't fulfill needs of this group prior to earthquake aggravate women's, children's, and senior citizens' problems post-earthquake, too. A good example in this sense is lack of female physicians. Culturally, women in this area prefer to visit a female doctor. After crisis, this special need increases. However, there is lack of female doctors. I mean cultural issues play important part in this regard.

Participant (P7) in this regard mentioned that:

There are few facilities in here. Sanitary pad, tissue, and soap were distributed but only those who were nimble could get one. I had problem. I asked my husband to go and get a sanitary pad. He said that he was ashamed. He didn't go. If these commodities were distributed via card and by a special campaign, nobody would be robbed of his rights. Culturally, women can't go to a man and ask for a sanitary pad.

Participant (P9) stated that:

Culturally, men can't communicate well with women. So trained women forces are needed in crisis. For example, in some cases we can't touch a woman to carry her. There are religious limitations, anyway.

All participants mentioned to these cultural norms and some of them stated that we have some norms which are general and all people all over the country have to respect to them. However there are some cultural norms which are specific for some parts of country. In this regards participant (P16) stated that:

First responders must be fully aware of cultural issues so as to know how to talk to for example a six- year-old girl. Offering a lip stick as a gift to a 5 or 6- year-old girl is seriously against values and is considered abnormal in rural context but the same present to a girl in Qeitarie of Tehran will make her so happy.

Participant (P8) stated that:

Once Bushehr earthquake happened, Basiji women were sent to the area and they were mostly natives. They were consequently familiar with cultural traits and customs of victims. In some cases, they were not specialized but in some other cases they acted well.

Participant (P13) raised this issue by saying that:

In Bam earthquake, because the severity of disaster was so severe, women's working did not seem against local culture. During six months that I was there and later whenever I went there I noticed an interesting point. I found that their culture changed as a result of this presence. Many people accepted different cultures that first responders had brought from different cities. In other words, different cultures that first responders brought along from different cities affected on them. International and national groups who came to work there could feel clear change in women. They tried to follow non-locals' wearing style, behavior, etc. I mean, the socio-cultural status of people had ruined so badly that no one cared why a girl comes to help. No one stopped or hinted her against it. They wanted to ask for help. No matter who helped. But in long term it made some problem and what I noticed in recovery phase was that the local people didn't like responders from different culture come to help them. Because they thought that they ruin their culture and have negative impact on the young people.

Most of participants mentioned that most of the time the cultural norms affect any decision and plan in disasters. Participant (P4) stated this issue with raising a personal experience. He said that:

Some years ago when I was in Foreign Ministry, United Nations High Commissioner for Refugees (UNHCR) decided to open its office in Iran. Therefore, we accompanied them to Ahangaran County near Mashhad. It was a project on providing refugees with water. We entered into the village. As we entered, women ran inside their homes and hid and peeped out of a window. We found that there was a Qanat at the center of the village. Men were in a queue to carry water. Women had put their buckets behind the wall. As men were done and left, women fetched water. I asked UNHCR representative if they had inquired about the local community culture. Here, women even don't appear before men to carry water".

This is so important in making any decision. Because without considering local culture any investment will lead to wasting resources.

Cultural norm is not the only factor which affects utilization of women's capacity in disasters. Sometimes there are some rules and regulations or even attitudes which have effect on it also. Most of decision makers in the country are men and they decide about needs of women. Participant (P14) raised this issue by saying that:

Women first respond to any disaster, yet they are not consulted in any institutional disaster response or disaster management planning.

Some participants mentioned to pre-requisitions about using of women's capacity in disasters. Participant (P15) said that:

If we admit the significance of women's presence, its pertinent infrastructure must be prepared in advance. In our country, Hijab is mandatory and it may be limiting for a woman. So they must be trained beforehand. For example, if suddenly her scarf is removed, what should she do? Service providers must themselves be healthy and feel secure so as to be able to help others.

Most of participants which they had many field experiences in different disasters mentioned to language as an essential pre-requisition and stated that communicating with affected population in order to figure out their needs and provide appropriate services is essential and in this regard knowing the local language is so important. Especially in Iran which there are different culture and also language it is more important.

In this regard, participant (P12) stated:

Speaking regional language is pretty essential. Some groups especially women had come from Tehran who couldn't speak Turkish. I wonder how they could communicate with natives. In some cases, knowing a language may not be much critical but it is a pre-condition for some affairs such as consultation. Otherwise, a native must accompany consultants as a translator. During crisis when there are few resources available and there is a mess everywhere, having non-natives who aren't good at language is not recommended. As I mentioned earlier women are important resources in psycho-social support so if we want to be successful in using of women capacity we have to choice those who are familiar with local language and culture.

In disasters, men lose their job or their income earning activities and in some cases taking care of family members is not affordable for them. In such situations men's inability in providing services for their families is acceptable in the society. Men can leave their families and move to new places to earn money but it not acceptable about women. Women are expected to do their regular responsibility of caregivers, cook, cleaner etc. Sometimes wrong perception regarding women's capacity lead to keeping women at home and don't using their capacity properly.

In this regard participant (P14) stated that:

Women in our society have good capacity but perhaps the only main barrier in front of them in order to use of their capacity is they are not giving enough opportunity to grow up in the management system. If these people count more on their authenticity and get out of their cocoon, they will gain more and will be damaged less. But this mentality that women are oppressed and innocent, this will aggravate this state. I can say in our culture staying at home and cooking is more acceptable than going out and earning money.

However wrong perception regarding women's capacity leads to missing this capacity but on the other hand it doesn't mean we can use all these capacities in disasters. In this regard participant (P1) stated that:

People think those who work easily in normal circumstances, must rush to the disaster stricken region and help to people. However, reality is different. Those who are not accustomed to unidentified situations will get confused as they enter the environment. They themselves have some needs that must be fulfilled. Imagine their needs are added to those in need. What will happen? The most important result is slower response to the needs. Most of these do not tolerate more than a few days and return.

Nontraditional skills training in preparedness phase help women and men to cope with disasters consequences easily. In fact such training equips women with critical skills and knowledge and it helps in transforming the perceptions of the community towards women. It also helps men to understand the importance of women's skills and contribution in disasters for survivors of disasters.

Training is important component in disaster management cycle. In order to be effective in response phase, the training of responders in preparedness phase has not to be forgotten. Most of participants implied to practical training of women in preparedness phase and mentioned that it is missing part in our disaster management system.

Participant (P16) declared that:

In an earthquake disaster, we need "well-trained" first responder women, not some well-off sissy girls of Tehran who are coincidentally emotional, too. They are just a barrier there. They make thousands of troubles both for themselves and others around. I remember as I was in Turkey, I got to visit EMS. They had an organization called UMKE, attached to EMS, which worked under its supervision. That organization, same as our Red Crescent, is engaged with first aid and rescue. So, UMKE is our Red Crescent counterpart and it acts under the supervision of Health Ministry. I noticed female doctors and nurses were all quite ready, lively, and energetic. They told me that three times a year they experience living under hard circumstances. They are taken out to ten-day camps for example mountains. One of our camps is in the desert, the other in the jungle. We are taken there to learn how to cope with difficult situations. For example we are commanded to climb up and down the mountain or stand up in a line as army troops. They are really treated as an army person. Even their clothing and

solemnity is reminiscent of army men. I don't want to use the term "manly". No offence to women; however, they were really man like. Our women are sissy. When they want to jump over a brook, one must help them. For example, a car turns upside down. It is about to fire. The woman which is inside the car is waiting for someone to come and take her out. I have seen these in all 4-5 thousands of missions I have ever had. In Turkey a car had turned upside down. One of UMKE women crept under the car like a man. She was quite mobile. I think we need to have such trained women to attend in the field. Our culture and principles don't allow us to communicate easily as a man with a woman. Therefore, women must participate in crisis more prominently.

In support of what this participant said, another participant (P8) mentioned that:

In professional training classes, mostly men participate. Women tend to participate in theory classes. These trainings and opportunities for women are even less available in counties.

All participants agreed that the relevant trainings have to be done in preparedness phase and disaster field is not time to start teaching. Participant (P16) mentioned that:

Crisis and disaster is not a time to start teaching. I believe it is like a battlefield and demands army processes. So, if women want to be active in this field, they must be instructed. This is our current problem. Crisis field has no room for amateurs but needs professionals. There is not enough time to teach amateurs or we will miss the time and it is not fair. When I say 50% of those who come to the field must be woman, I mean professional women, not a group of women who were emotionally moved, communicated in Facebook, emailed one another, saw tragic scenes on TV but when they come to the field, they get depressed, cry, have long nails, and are quite in contrast to the disaster stricken culture. The disaster stricken can't accept that this person help her or is even able to do so. We must look like them, move and give service firmly. I agree with professional women presence but not amateur ones.

Participant (P11) stated that:

Perhaps, we are forced to take a group of women there and then we are forced to return them since they are not able to do what we demand or their capabilities were not assessed correctly. Merely women's presence doesn't suffice. Women must be helpful. If they are supposed just to fill a vacancy, it is not useful at all. It is necessary to teach those who come for help to be self-sufficient so that they don't need others around them. Women need special training in this case.

Participants had different idea regarding NGOs involvement in first days after disasters. Most of them mentioned that disaster management is the responsibility of government and they agreed that NGOs can't be effective in first days after disasters since most of their staff are women who have not been trained correctly. Participant (P19) stated that:

We need professionals. I believe disaster is not a place for amateurs. All believe that NGOs must come to the scene. But I say no. professionals must be in the scene and NGOs must just support, sponsor, give blanket, food, etc, help, take casualties back to their homes but if they enter into the process, the same chaos will happen.

What some participants implied to it was shortage of specialized people especially women in disaster. They said that our problem in the country is not using of women capacity but is shortage of specialized staff. Participant (P15) in this regard mentioned that:

Post-earthquake and because of earthquake, midwives came here, to the health center every day. But it lasted for some few days. Afterwards, neither a midwife nor a physician came. They say we lack specialized personnel .Yesterday, a doctor came that had no stamp. He didn't even take a look at patients' files. Lack of specialized personnel is a huge problem in crisis. Generally, we lack specialized Personnel in normal situation, let alone once earthquake happens which situation gets worse.

Participant (P7) stated that:

Not only there is lack of specialized personnel, but also they are mostly male. Women are reluctant to be visited by a male physician. So, when the only doctor in here is male, they either avoid being visited or they go reluctantly. I myself went to ultrasound in Bushehr. It was a man. The best doctor in here is also a man. If there was a woman, I preferred to go to her.

Participant (P8) implied to this problem in her words by saying that:

Once the earthquake happened, our midwife was away and is not substituted, yet. The doctor's internship had finished the same day and there was no doctor, either. There was only family health worker present. I myself slept inside the car 3 to 4 days following the earthquake. There was no staff. I was under severe pressure. If there was a skilled person available previously, we wouldn't face so many problems during the crisis.

Briefly, it was mentioned that women have capacity in order to be used in response to any disaster and the most important thing is providing opportunity for them in order to empower them and strengthen this capacity. However there are some barriers in front of them. The most important issue which has to be considered is cultural norm which has to be integrated in all decisions and plans related to disasters. What is important is considering the culture of affected population and respect to it. Another important issue is rules and regulations available in the community which sometimes limit women's involvement in disasters. Male-dominant training or lack of appropriate training impacts on women's contribution in disaster management. What is important is paying attention to these factors and consider them in all plans and decisions.

3.5. ROLE OF WOMEN IN DISASTERS

Role allocations are based on the traditional gender roles which assign caring tasks at home to women and public domain tasks to men. This role allocation applies to disasters also. As mentioned above, women have special capacities which can be utilized in disasters. Women can play crucial role in preparedness and response phase of disasters. The role which women can play in disasters has been summarized in below table.

Table 10: Role of women in disasters

Main Category	Sub Category	Details of sub category	Frequency
Role of women in Disasters	Role allocations are based on the traditional gender roles (caring tasks and psycho social counseling task)		16
	Role of women in preparedness phase	Training in preparedness phase is important entry point for mainstreaming women role in disaster management	29
		Members of the community based groups	25
		Member of DAWAM teams which are being trained and transfer the knowledge to the members of family	10

Main Category	Sub Category	Details of sub category	Frequency
Role of women in Disasters	Role of women in Response phase	Providing emotional support	28
		Care of member of family	26
		Reproductive Health	26
		Health domain such as mental health	24
		Support the family member in providing services (support their husbands and it needs advocacy and raising awareness in community)	19
		Collect relief goods	17
		Distribution of donated goods	16
		Leader of family (creating warm family gatherings)	15
		Ensure food and water, cleaning	14
		Clean the debris	14
		Productive and social role	12
		Burial of dead bodies	9
		Manager of team	9
		Less contribution in first aid (women needs to be trained and involved)	8
Needs assessment	7		

In developed societies the members of community choose their own roles within society. These choices are based on equal access to available opportunities. Unlike in some other societies traditional and cultural norms shape gender roles. In fact how women see themselves in the society and are seen by others is related to the choices that women make about themselves. That might be the reason that many women are

seen in first aid and psycho- social counseling. Participant (P12) in this regard mentioned that:

In NGOs coming from different cities, the role of women was quite prominent. No matter what special field they were active in (either they worked with children, adults, environment, etc.), the presence of women was tangible. You could see them working and it was very interesting. When a city is devastated, it turns insecure. However, women were present there working attentively.

Sometimes gender roles are shaped based on personal characteristics. For example, since women are considered more tolerant and empathetic, psycho social support is assigned to women. However the same practice disadvantages men from accessing psycho social counseling from women. Also if women are not given equal opportunity in the relief and rescue tasks, they will lose opportunities to learn new skills. This is the situation in disasters also. Disaster management has different phases and women have different roles in each phase. All participants stated that role of women in preparedness phase is much significant than other phases because government has started different plans in order to mainstream women in disaster management.

As part of the process of mainstreaming disaster risk reduction, women should be encouraged and enabled to become leaders in their communities, for example, by becoming members of the community disaster risk management team. This will facilitate the inclusion of women's knowledge and skills into the community's disaster management plans and strategies.

We have national women's organizations in 31 provinces throughout the country. Regarding the women's role in education, training, and culture, women's activities in reducing natural disasters' risk is quite effective. We have women community based groups and we train these groups with different skills like first aid. I think women take and transfer this knowledge to their families and by that help to risk reduction.

This is what participant (P1) mentioned to it.

In this regard participant (P15) stated that:

Holistic coordination and organization ought to be done by men but women are better at more detailed one. There is now a project being implemented in region 6 called "Dawam" which has involved women and train volunteer ones. These volunteer women then transfer what they have learned to their spouses and children. They are more active because they spend more time at home. It is the same in disasters, too.

In support of this, participant (P2) stated that:

In preparedness, with regard to Pakistan and Iran and even in Turkey context, women or mother are the main pillar of the house. So if you train or if you make

mothers aware of the preparedness and of the disaster response, they can easily teach their kids and husband as well because they are more conscious about the house, about the family to some extent than men. So using them in preparedness phase will lead more effective and efficient result.

As it was mentioned earlier, cultural norms play important role in mainstreaming women in disaster management process. In some cases cultural norms are even more important than rules and regulation. Participant (P19) implied to this issue by saying that:

I think we can't state where women are more influential. But there is something I need to mention. Culturally, we are easily impressed. We are influenced by our mothers because we love our mothers more than our fathers. This is a fact. We have a closer relationship with our mothers. If my mother is trained and learn some principles that alleviate the effects of crisis and then convey those principles to me, definitely I will be trained, too. Thus, mothers' roles in preparation are culturally and educationally very critical and it is even inconceivable. So mothers' role in preparation is extremely important; both culturally and educationally and I believe it is even inconceivable.

As all participants mentioned, training is important entry point for mainstreaming women role in disaster management. Participant (P15) in her own words mentioned to this issue and stated that:

Women's associations and feminine community-based organizations at national level can fall effective in different aspects of culture building and education. It deserves women to be treated as influential agents who build cultures and their capabilities and strengths must be considered as powerful arms in the field of education and training. Therefore, crisis management must not focus merely on men.

Participant (P14) in this regard mentioned that:

Critical situations are appropriate time in which women can demonstrate their capabilities in different cultural, social, economic, etc. fields. The area affected mostly by women is education and training.

All participants mentioned that beside what was mentioned about women role in preparedness phase, they also have active role in response phase. Participants implied to the role of women and mentioned that women have different role in response phase.

During the disaster, almost all income source of the family are collapsed. Men and women lose their income, assets and employment opportunities but since men are considered as bread-winner in the community, more attention is paid to them in disasters. Although women tolerate some losses but responsibilities are shifted to women to take care of family members, ensure food and water, cleaning, and do some other tasks based on the impact of disasters within community. Since women have

different attitude of living collectively, they can easily shift their roles based on the needs.

During the disaster, men and women's roles change in their respective areas and women perform both reproductive and productive responsibilities which although these are not recognized in the society but enable them to gain knowledge and experience and use this knowledge and experience during response to disasters. During disaster, women take responsibilities of all works as well as influence and guide family members in order to remove distress. First they remove and clean the debris to ensure a safe place to stay.

Participant (P11) stated that:

In Varzaghan earthquake I observed that vulnerable groups including kids, pregnant women, etc. were assigned to women because they are tenderer or it is better that nurses be out of women. Besides, women even helped with debris shooting. They were physically weaker than men but they did it. They aimed to preserve the family properties so they engaged with debris shooting.

Some of affected women after disasters collect all scattered household utensils and usable things, collect safe pure drinking water, take care of the injured people, and console traumatized member of their family or community. They do these things because they have proactive nature. Participant (P10) stated that:

Three hours after Boushehr earthquake, I arrived there. I observed women which they were helping to their family members in cleaning debris. Some of them were searching for kitchen stuff under debris. Most of them had established tent in the yard of their building in order to save their properties.

During emergencies, most of families depend on relief efforts since income source of family is collapsed. Usually distribution of relief items and goods start late and quantity of relief items are not enough also. In this situation, men are not able to properly take care of their families and tend to migrate. At that time women try to fill the gap and take care of families.

Participant (P5) mentioned to this fact by saying that:

Capacity building of grass root is pretty important for which women can be used. Women had an effective role in creating warm family gatherings. Men could not do so. There was a grandmother there and all relatives got together in her house. She was somehow an intangible leader of those around her. I saw seven to eight colonies like this in which women were the leader.

Participant (P11) in this regard stated that:

After Bam earthquake, women made up a colony. Survived children such as her nieces and nephews, the children of relatives and neighbors gathered around her. Those colonies were quite obvious. There was an undercurrent of leadership in those colonies. For example, all food was distributed under her supervision. If

somewhere water was being distributed, that person fetched it. In fact, she was the trustee of the group. Old people are usually trusted. I saw two or three colonies like this.

In recent years women's role in disaster management is increasing in many countries. Traditionally women's contribution in disaster management rarely was recognized but recently women's contribution is increasing and community recognize their contribution in disaster management cycle such as collecting relief goods and so on. Participant (P16) about collecting relief goods said:

After flood government promised to help us by giving loan but it didn't happen. At least I can say for me. So I had to go to near cities to work and earn money. My wife was taking care of my parents and also kids and at the same time she had to collect relief goods however it was not easy for her but we didn't have any other choice.

Beside the role which women as affected people have in coping with the situation, they also have different role as service providers in disasters. One of the most important things which women can do is providing emotional support to the affected population. Participant (P17) mentioned to women role in this regard and stated that:

After earthquake struck, some groups came here and established some tents. They talked inside the tents with women. They rushed to whoever had a problem to help them with. Though they didn't solve problems but at least they were much helpful in soothing victims' reactions such as mourning and catharsis. Some both visited the tents of survivors and sympathized with traumatized women and girls. I witnessed they helped much with holding mourning ceremonies. Some of these women answered the religious questions of people.

During disasters most of the families lose their properties and they depend on the distributed goods. Women can be active in distribution of donated goods. Participants mentioned to this issue and Participant (P7) based on her personal experience said that:

People from different cities had collected donations and came to the region along with first aid responders. Many rescue women helped with distribution of these donations which were mostly clothes. Some held sewing and hair dressing classes for women.

Participant (P5) in his own word said that:

I observed that there were some women among service providers. For instance, we went into a storehouse in Tabriz and saw women working there. In fact, I think gender balance was being observed because men could also do these kinds of errands. For example, there were water tanks, ewers, etc. in the storehouse and women were distributing them. Anyway, I am not sure if it was planned beforehand or it was based on gender needs but they were satisfying and cooperated well. I was quite surprised but they were out of local forces.

One of important things especially in mass casualties is burial of dead bodies. This issue is much important in some culture and religion. Participant (P14) stated that:

Certain mechanisms following disasters are essential. Not only should dead corpses be buried as soon as possible, it is necessary that customary rituals are observed so as to prevent further depression and sense of guilt among survivors. At this point, a cultural institution such as Basij turns more important than ever. It is especially important for mobilizing women since the number of disaster stricken women and mournful mothers rises significantly. Women's mobilization can have specific function in this regard and it can prevent numerous following psychological problems of survivors. This point was one of our shortcomings in Bam earthquake. After Bam earthquake we thought about it and decided to work on it. Some progresses have been done however this part is one of our missing parts in response phase.

Participant (P16) in this regard mentioned that:

Bam earthquake took toll of a huge number of people and lots of dead corpses were left. Burial of dead corpses had to be done in no time. What made this difficult was burial of women's dead bodies and observing Islamic codes of ethic. However, some days following the disaster, a group of women came to help with dead women's burial. It was a major problem in several first days.

Beside all roles which women can have in disasters, they mostly are active in health domain such as mental health, environmental health, or prevention of communicable diseases. Participant (P9) in this regard mentioned that:

The capacity of women which was utilized the most was generating a sympathetic and emotional atmosphere for alleviating pains and sorrow of survivors. Iranians are emotional but women have preceded men in this regard. That's why most of rescue women tried to sympathize with the grief-stricken people. Although women helped with debris shooting, they were more prominent in mental support, pregnancy health, personal care, and nutrition.

Participant (P4) stated that:

What I have seen in my missions is that women are very active in response phase but they are fewer than men. There are generally 60% of men but 40% of women. A woman can easily help another woman but not a man. In our culture, men can't help women and women themselves prefer to help to a woman than a man. Furthermore, the number of women suffering from emotional problems is huge and it is usually implicit.

Participant (P2) reiterates the importance of culture in providing any services and mentioned to the importance of role of women by saying:

Culturally using female service providers for instance under the gender sub cluster we use female psychologist. They went them, they talk to them about their psycho- social problems, about their needs from the service providers their problems with the children, so using female staff in such culture opens all the gates and remove all the barriers affects have.

Women role in health domain is not only on emotional support. One of achievements in health sector is providing reproductive health services in disasters. Participant (P9) about this achievement stated that:

During disaster people can be hurt or may be injured besides death. In addition, different diseases i.e. fever, common cold, skin disease, diarrhea, burn and gastrological problems can also spread during disaster. As part of quick

response, affected people are given emergency medical services which are provided by mobile medical team, outreach clinics and special clinics. In most of the cases, standard of these services are poor due to limited resources, weak road communication and lack of adequate number of health worker. Besides, in this process, it is difficult to provide attention to women's special demands for example women's reproductive health facilities however what I observed in Shonbe was "mother and child" tent established by Iranian Red Crescent Society. Midwives were providing Reproductive Health services for affected population. Actually reproductive health services under "mother and child" tent, is the most important achievement of health sector.

Participant (P8) about "mother and child" tent mentioned that:

All children below 5 years old were looked after the first 7 days following earthquake. Teams went to the region along with a Behvarz and child's profile. They took along vaccines and supplements. During the first days, hospitals gave some delivery kits to emergency centers to use. Since we have no delivery bed in here [in health house in Shonbeh], deliveries were done inside the ambulance. I wish they had given these kits to the centers in advance. The day after earthquake struck, all pregnant women were specified and we visited them with a midwife who accompanied us. Examinations were done from one tent to another. We went there along with the Behvarz, patient's profile, and a complete kit. The first three days following earthquake, all pregnant women of the region were taken care.

Participant (P2) who had international field experience said that:

One of the things which I observed in Pakistan earthquake was this: women they are willing to work for free and these women assembled and made these reproductive health kits available. Because they know those affected women are in need for these. So, I found that women are always ready to help others. I don't want to say more than men but they are really willing if give them opportunity they will work. Because of the culture in Pakistan, -of course if nobody is there they accept male service providers however- women always prefer use female service providers. I observed mobile service unit witch it is a van with an extended tent and staffed with female doctor, nurse or midwife and assisting staff and they were providing basic health care to the affected. It was quite easy to mobilize there. After coming back from Pakistan I suggested similar thing to Iranian Red Crescent Society. IRCS worked on it and now there is similar structure with some differences which Boushehr and Varzaghan earthquakes showed that this structure is effective however there are some rooms for improvement.

Disaster managers need to be trained and receive appropriate knowledge about disaster management cycle with focus on providing proper services in response phase. Raising awareness in society especially for women will lead to reduced losses during disaster and will enable women to serve as resources. For example, a woman who is provided with training in first aid or fire-fighting can be a resource in all phases of disaster management.

As all participants mentioned, women are active in health domain but still contribution of women in first aid services is a challenge. Participant (P13) in this regard mentioned that:

I admit that women were pretty helpful following earthquake event but the number of women brought to the region as first aid responder was few. Most of the rescuers were men. Culturally, women of this area prefer to be examined by a woman than a man. I felt many women were not comfortable with men. There are abundant female nurses in the hospitals but very few of them are brought to the region by ambulance.

Women's role in disasters is not only about providing services. Sometimes the support which they provide for their husband is so important also. Participant (P16) mentioned to this point by saying that:

An important issue which is usually ignored is the role of rescue men's wives. I believe professional rescue men's wives must also attend in crisis management training courses. Even a primary level instruction or merely their physical presence suffices. These women usually don't understand their husbands. Accompanying their husbands and understanding the difficulties of their profession can be very useful. For example, these women must be brought to "survival in difficult situation" camps to understand how important their husbands' role as rescue men is, especially within the first days following an occurrence. It is very important that my wife and I have a common understanding and I can't create many of these attitudes. My wife thinks that I want to shrug off responsibilities but if she participates actively and see how sensitive the situation is, she will let me work assuredly and she will even support me and spirit me up. This is another effective role of women in crisis. It may seem a trivial issue but has considerable outcomes.

Sometimes involvement of women in different phase of disasters and emergencies especially in the rescue and early warning, challenge their traditional roles however sometimes local women are best choice for activities such as needs assessment because they are familiar with situation, customs and culture. Participant (P18) mentioned that:

We used of local women in needs assessment because women know the needs of women even better than men and also the culture and it helped us in providing appropriate services for women. They know what the women needs are right after any disaster and they can easily be voice of the affected women in the planning and management process. For example we put scarf in our supplies because they just moved out from the derbies.

Beside women's role as service provider, women can dominantly act as powerful directors in crisis. Directing others in crisis demands their conscious collaboration.

Participant (P6) stated that:

What I saw in Varzaghan earthquake was that women directors spend more time for creating an atmosphere of sympathy between group members and encouraged them to do so. As a result, their activities accelerated. One of the

most important measures in solving crisis in damaged areas is empowerment of women and improving their management and decision making. This is what I witnessed in Varzaghan earthquake. Those teams whose managers were women worked late and didn't get tired of working. This is because of women's effective role in team management and creating a sense of sympathy among members.

Briefly, it was mentioned that role allocations are based on the traditional gender roles. About the role of women in disaster management, it was mentioned that training of women is so important because they can transfer these knowledge to the family members and by this increase the awareness of community.

The most important role of women in response phase is attending in needs assessment in order to respond to women's need effectively. Women are active in providing health services such as psychosocial support to the family members and affected people and also reproductive health services. Caring of family members is another role which has been assigned to the women based on traditional norms.

Because of religious and cultural considerations in the country burial of women's dead bodies is so important and women have great contribution in this regard. One of the important parts in response phase which has been neglected is contribution of women in providing first aid which needs to be improved.

3.6. AREAS WHICH NEED TO BE CONSIDERED IN PLANNING FOR WOMEN CONTRIBUTION IN DISASTERS

Findings of this study show that although women have capacities in order to be involved in disaster management process but what is important is empowering these capacities or even building capacities in local communities. There are some pre-requisite in this process which needs to be considered in planning phase. Below table shows the summary of pre-requisite which raised by participants as the factors which need to be considered in developing any plan for women involvement in disasters.

Table 11: Areas which need to be considered in planning for women contribution in disasters

Main Category	Sub Category	Frequency
Areas which need to be considered in planning for women contribution in disasters	Considering culture, rules and regulations in all plans and programs	27
	Appropriate management of available resources (distribution plan)	19
	Raising awareness of community in preparedness phase	18
	Appropriate training of people (such as first aid skills)	14
	Empowerment of women	14
	Coordination between responsible organizations	12
	Representation of women in decision making bodies (Inclusion of women in the task forces)	12
	Involvement of women in needs assessment	11
	Raise awareness of disaster management officials on women issues	9

If women are the ones who take care of the sick in the household, they must be provided with information about health resources, recognizing infectious diseases and other medical conditions which require immediate attention, and how to respond them. So, if it is planned to use women capacity in different area, it is needed to train them for specific roles.

It is necessary all family members equipped with some training such as essential rescue and first aid skills in order to be able to help themselves and others in disasters. Women also tend to relate these skills to day today's safety and caring roles. Increased participation of women in learning the real skills, rather than just attending the meetings is needed.

All participants mentioned to the training as key component in disaster management cycle and participant (P1) about the positive points of first aid training to women mentioned that:

Female first aid responders can contribute effectively to management of unprecedented events by strengthening their educational background and also their operational stamina.

In some societies women expect men to rescue them since they believe that men are the prime rescuers, and they will rescue them in case of disasters and emergencies but this sense of dependency will lead to panic, trauma and helplessness. So women need to be trained in order to decrease their dependency to men in disasters.

Besides the training of women, government officials need to be trained on gender and leadership programs at district levels in order to integrate gender issues in disaster management process. In fact gender and disaster training will help them to recognize the importance of integration of gender perspective in developing policies, designing programs and implementation of activities. Conducting such training to women will give them necessary confidence to articulate how gender sensitive interventions can be incorporated in any program in the context of both development and disasters.

Participant (P15) said that:

When I arrive to the field I saw many Basiji women. Since Basiji women had previously been trained, they are adequately prepared to contribute effectively in emerging critical conditions following disasters. If they additionally pass special classes on crisis management, they will be more prepared to help the victims.

Participant (P18) mentioned that:

Unique characteristics of Basiji women in one hand and their organizational qualifications on the other hand make them competent at coping with hardship and capable of assisting. Since first aid and rescue in disasters demand special

expertise and training, it is incumbent upon first aid responders to take special classes on how to play an active role and fulfill the needs of victims once needed.

In emergencies which resources are scarce, providing services in professional way and through professional responders are so crucial otherwise it leads to wasting time and resources. Participant (P16) mentioned to this point and emphasized on special training of responders before disasters by saying that:

Women come with a painting notebook in hand. These psychological techniques help for cooling down. That's good but I think we even need a professional psychologist who has experienced being in such critical conditions. They should not get emotional but must be aware of cultural issues of this nation. They have to be trained well in advance. They must be aware of what they are going to do in the field and also situation.

Needs assessment is the most important step in providing any services in disaster. Participant (P14) mentioned to the importance of needs assessment and importance of women contribution in needs assessment by saying that:

To some extent, probable needs which may rise in critical conditions can be predicted. These needs must be quite specified and then what women can share to remove them must be analyzed. Accordingly, relevant to those needs, qualified candidates can be pin pointed or form now on they can be instructed. If we are aware of the fact that there were some needs in an event which necessitated a woman's presence but since there was no well-trained woman, those needs were left unfulfilled, we can start to plan for this deficiency from now and train them so that they can participate appropriately in case.

Participant (P8) about the importance of training for women stated that:

Undoubtedly, vulnerable groups including children, pregnant women, etc. can assuredly be assigned to women to take charge of since women are tenderer. Besides, it is better that nurses be chosen out of women. What matters is that they must be trained to be self-sufficient and don't depend on others. This is more critical in case of women.

Culture and Regulations are two factors affecting on women's collaboration. The extent to which regulations and social interactions allow women's involvement matters. Sometimes, there are obliging rules but social conditions hamper them. There are no clear-cut boundaries. Apart from physical conditions that make some works masculine by nature and some others more elegant, there is generally no clear prohibition. There are some exceptions but there are generally no boundaries but the person must be definitely trained. Participant (P7) in this regard mentioned that:

Based on our culture in this region [Varzaghan] women has not to be so visible, so in any planning for women contribution it has to be considered and train and empower women for those responsibilities and roles which don't need for more visibility.

The simple and easily usable tips for saving lives made women realize that they don't necessarily depend on male help which sometimes does not come in time due to the general chaos in the disaster situation and sometimes is not accepted by women themselves for fear of gender based violence. Moreover once women are equipped with the necessary skills they can negotiate for better service and through participation in different task force they can make sure that special needs of women will be integrated in all plans and policies. Inclusion of the women in the task forces leads to inclusion of women's needs in all plans and programs. Participant (P19) in this regard mentioned that:

I observed some young affected people which they were sitting and waiting for others to come for help while usually, they are used to be working; they are experienced, not sissy as the urban. But they didn't know what they can or have to do. I think in disasters people must be taught not to give up during disaster but to stand on their own feet. It needs to raise awareness on population especially women on disasters and the things which they can do. Raising awareness and self-esteem of women in damaged areas paves the way for their better collaboration. Regarding the effective role of women in areas damaged by earthquake, they must be instructed so that their awareness boosts and they improve culturally and socially and gain more skills.

The empowerment of women is a contemporary issue. Women empowerment is a necessary condition for sustainability of the development process. In fact the empowerment of women is an active multi-dimensional process which enables women to realize their full identity and powers in all spheres of life. Empowerment of women will enable them to handle responsibilities, to envision a better future and to work to overcome the obstacles that confront them. Women empowerment in development leads to better contribution in disasters. (Omprakash, 2005). Participant (P14) mentioned that:

Empowerment, once implemented flawlessly, can enable removing many crises. By the way, empowerment demands good instruction. Education helps to evolution of social and spiritual personality of the casualties. It is crystal clear as awareness increases, achieving financial and social welfare, higher economic revenue, and optimum usage of facilities will be guaranteed. Empowered women can take care of their needs and also other needs in disasters. However some steps have been taken in this regard but there is a long way ahead. What all female first responders wish is that one day they can enjoy equal training as their male counterparts and Red Crescent supports them adequately. Women should be instructed and permitted to attend in different maneuvers and be organized as capable teams.

What is important in women's participation in disasters is availability of clear policies and systems in place to ensure integration of women's needs in response plans. Participant (P11) mentioned that:

Some policies are general but some need to be gender sensitive. For example, if a loan is going to be granted, it must be considered that in some families, a woman is the head of the family or a woman may be the owner of a land so insurance policies must include women, as well.

Most of participant mentioned that there isn't problem with providing resources in disasters but what happens in the field is mismanagement in distribution of these resources. Participant (P5) in this regard stated that:

Resource mismanagement occurred. Many people sought to get blanket, tuna fish, etc. but it wasn't managed. When we visited tents, we could see some had stored canned food inside the tent and some didn't have even one. Especially, those women who had missed their household or were alone didn't ask for help because men distributed commodities and it was usually done in the evening and it wasn't customary for women to go out under such circumstances. Any village we entered in, we were faced by a group of people who rushed to us for getting blanket but as we went into their tents, we saw 30 blankets piled which was 6 or 7 times more than their need. They had even stored a lot of bottles of water which could be enough for several months. But we visited some tents which women living with their kids and they didn't have anything because of mismanagement in distribution. This is another major problem we had. When a truck arrived, people climbed it up to take as many things as they could or they attacked extensively for giving help. Anyway, helping was not programmed beforehand.

Participant (P16) stated that:

When I arrived to Shonbeh I observed that there was no need to rescue operations. People themselves had already done that. All casualties were taken away. However, there were more than 5 or 6 hundred Red Crescent personnel in the field. The problem was that if we gave one piece of bread to people, we needed four more for rescuers. When there is nothing for rescuers to do, they sit together and play joke on one another. Especially in the culture which women can't communicate easily with men, this behavior was not acceptable at all. The rescue women and rescue men were sitting together, telling story, telling joke, and picking up donated juice and drink. On the other hand, survivors who are traumatized and have lost something or somebody or are worried that they may lose someone get sad to see these happy-go-lucky people. Also, Security is severely threatened in such situation. Anyone can dare sew and wear an NGO uniform, come to the region, rub children's jewelries, kidnap, etc. These problems are experienced in all crises but they are not reformed quickly. Where there is no division of labor, these things are unavoidable.

Participant (P13) reiterated this issue by saying:

Another point there which I observed in the field and can also be deemed as a lesson is that people of different capabilities and status did some works irrelevant to their main capabilities. I saw a doctor who carried people by his car. He just meant to help. We were somehow instructed but calling for and mobilizing Basiji people, who passed different courses on first aid and rescue, is

avored. This doctor had better be organized, sent to hospital to serve effectively. I myself was a member of Basij prior to crisis. There were many courses which weren't run properly or they didn't even accomplish. Even most of women which were there, tries to help but mostly they were assigned to take care of children and nothing more.

Most of participants agreed that division of labor is key component in disaster management. They also mentioned that women's role is changing but what is important is giving appropriate role to them based on their capacities and also culture.

Participant (P18) in this regard mentioned that:

Women's role has been changed. For example in Bam earthquake, if a woman undertook a responsibility, it was done haphazardly. Suddenly they said we need some to help with this and there were some volunteers among which there were women, too. No position or role was specified to be assigned to a woman. However, since recently crisis management and human resources was pondered upon, some roles were defined for women. For example in Bushehr earthquake, there were pregnancy health teams whose members were all women and they were appropriately trained. There are some activities for which men are not capable. Previously, men were forced to do them but now roles are defined. However, more attempts are needed to be made.

In disasters which the entire community needs to work together, creation of the proactive collaborative spaces ensures effective co-ordination to meet the emergency needs of the diverse groups. Capacity and willingness of men and women pushes more women in first aid and psycho-social counseling and men in the rescue, coordination and carcass disposal task forces.

All participants mentioned that lack of coordination between organizations involved in disasters leads to wasting time and resources. Participant (P1) mentioned that:

The main lack in Iran, in disaster response regard, is coordination between and among the stockholders .I mean yes MOHME can be responsible however to make the response quicker, to make the response more effective and efficient MOHME as the manager style can easily utilized IRCS capacity in proving response, proving supplies and providing facilities and I mean the structure. IRCS has this capacity; also has women teams which have trained them on different issues. So there is good capacity in IRCS and MOHME can use this capacity. I mean this lack of coordination between organizations is one of barriers in using of women capacities in disasters.

Participant (P8) mentioned that:

In Bushehr earthquake, Red Crescent didn't cooperate with us at all and worked independently. They were not familiar with our forms and had filled most of pregnant women care forms wrongly. Generally, their attitudes and methods were quite different from our routines and mostly they were controversial.

Participant (P6) stated that:

In Sana or Chargah, there was a tent of Imam Khomeini Relief Foundation called mother and child health which may be effective only in emergencies but they were not familiar with our routines and guidelines. None of them

cooperated with us and each did as they wished. A representative was chosen by governor-general to do necessary coordination but there was such confusion that coordination seemed impossible.

Briefly it was mentioned that local people are the first responders to any disasters and raising awareness of local communities about disasters and some basic trainings such as first aid trainings are the first step in disaster management cycle.

It was indicated that In order to use of women's capacity in disasters they need to be empowered and involved in decision making process through representation in different task force such as needs assessment task force and considering cultural norms in this process is unavoidable.

It was pointed out that some times the capacity and resources are available and local community also is ready to help in disasters but what is important in order to use of available resources and capacities effectively is coordination between responsible bodies in disasters. It was mentioned that lack of coordination will lead to waste of time and resources or duplication.

CHAPTER 4: CONCLUSION

This study was aimed to explore the role of women in disasters in Iran. Therefore it was needed to realize the special needs and vulnerability of women first like what has been posed in research objectives.

4.1. NEEDS AND VULNERABILITIES OF WOMEN

This study indicated that women have special needs in disasters which in most of the cases these needs are neglected. This negligence is evident in extant condition of relief efforts following disaster that do not count specific physical and mental health needs of women into account. If mitigation, relief, and reconstruction policies do not address men and women equally, it can be claimed that economic and social rights are violated. Civil and political rights are ignored if women have no chance to take part in all levels of decision-making for mitigation and recovery.

It was found out that the needs of survivors from different social groups surpass existing resources because major resources are not distributed equally within societies. Critical survival and recovery resources are distributed differentially, to the benefit of men.

Assessment of the special needs of women in disasters can lead to fair resource allocation, and preparation of appropriate relief packages for women and girls. Therefore consultation with women is important in order to know their special needs and concerns.

Disaster action plans must not be void of special consideration of the risks that are threatening women's wellbeing in disasters.

In order to better detection of women's vulnerabilities and needs in disaster and enhance effective response to their needs, it is necessary to consider needs of vulnerable women and children, involve women particularly in the planning for culturally-sensitive disaster management plans in community and designing and distributing relief goods and items in different languages and customized for different communities.

4.2. ROLE OF WOMEN

In this study the author attempted to explore women's role in disaster management of Iran. Women's disaster management skills grew out of their experience in handling family affairs and contributing to family livelihood but the management skills of women have been neglected in disaster management cycle.

Until recently, the significance of gender relations and gender equality has been both understudied and utterly ignored in discussions of disaster management. These discussions primarily developed with Fothergill (1996), who smartly detected a trend of gender differentiation in disaster process in terms of childcare responsibilities, poverty, social networks, traditional roles, discrimination, and other issues of gender stratification (Fothergill, 1996). Results indicated that women have good capacities in order to be utilized in disasters and integration of women's role in disasters management is one of the key components in order to respond to any disaster effectively. Actually, women are not as helpless as they have been represented by disaster managers and practitioners and also community members. A number of researchers have realized that the management skills of women are beneficial for communities hit by natural disasters (Enarson, 2000).

Gender determines the cultural, social, religious and historical features of men and women as well as the roles and responsibilities assigned to men and women by society and social expectations. These realities get more intricate as other factors such as age, marital status, social class, ethnicity, religion, and refugee status are added (Pincha, 2008)

Results showed that the status, role, and position of men and women in society define how they respond to disasters. Traditionally, there have been clear gender division lines that allocate housework to women but leadership or decision-making to men. Generally, men do "public" and visible activities during crisis but women deal with "private" matters and they are left invisible. What understood from the results was a picture of disaster response in which men were preferred for handling the affairs of the affected communities. Consequently, even when women had equal capacities and experiences, they were not given equal or any roles in disaster management and

neglect of women's participation in different phases of disaster management was a common issue.

The exclusion of women meant the neglect of women's needs in the post-disaster phase. The physiological, mental, reproductive health and social needs of women were not met as a result of their absence in decision and policy making and also in disaster management positions. It was clear that men could not identify the different needs of affected women as much as was necessary since they don't have any sense about women's needs (Raymond et al., 1994).

In fact it is necessary to make disaster preparedness and response plans gender sensitive in order to analysis roles of women and men in disasters. This practice has been started in early 2000 in some countries. European countries have promoted gender sensitive disaster risk reduction activities by default and through available laws, education and generally gender sensitive practices. Disaster preparedness and response plans same as development plans are gender sensitive and European countries have made significant improvement in this regard. In Asia, some progresses have been made with regards to development of gender sensitive plans and guidelines and capacity building activities but these commitments have not been fully resulted in development of concrete gender sensitive (United Nations, 2009).

In accordance with the male-dominant structure of disaster management systems in Iran, It was observed that, women have the capabilities to assist in response phase. Securing food, water and fuel are key community concerns, which women take care of them.

Turkey, same as Iran is prone to natural disasters and has a male-dominant structure for coping with disasters. The 3rd International Workshop on Gender and Disaster was held by Kocaeli University, in October 2008 to address the importance of gender in disaster.

In Turkey, the role of women in rehabilitation was observed after the Golcuk earthquake where almost 20,000 people lost their lives. In response to this earthquake although women had made significant role but since they couldn't participate in developing plans because of their gender, their usefulness as resources was limited. In Turkey, remarkable increase has been made in women's participation in different phase of disaster management cycle since the urban earthquakes of 1999. This

increase mainly happened in those organizations that are in charge of preventing disasters, following a disruption of traditional male-female structure and recognition of the importance of women's presence in earthquake crisis. These changes turned women into precious resources. Although no woman took part in search and rescue operations of Golcuk-Kocaeli earthquake, women showed more frequent participation in subsequent disasters (Isik et al., 2015).

Pakistan also is one of the countries which women's involvement in disaster management is a new concept. Before 2005 earthquake and 2010 flood, gender issue was of less significance. Cultural limitations which had deprived women of their basic needs made situation complicated in 2010 flood disaster. Accordingly, National Disaster Management Authority (NDMA) of Pakistan decided to create a Gender and Child Cell to avoid challenges similar to those of 2010 flood. With assistance of Ministry of women development and Benazir crisis center eleven such centers were established with predetermined standard operating procedures but in reality, there was a big gap between policies and what actually was put into practice. There are many good policies but they do not endow pertinent countries with better outcomes. It is quite demanding to translate national policy to local level. One of the impediments against ideal implementation of Pakistan policy is the fact that the number of women working in the national disaster management system is few (Naseem Baig & Sharif, 2013).

In India, although an administrative structure for disaster management has been developed but women's role in disasters has not been fully integrated in policy guidelines. Capacity building to work with women to facilitate care for women survivors is one of the priorities in India (Bhadra, 2017).

In Bangladesh many plans have been developed to reduce women's vulnerabilities however these plans have a little impact on practice and there is a long way to go to fully implement these plans. Involvement of women in climate and disaster resilience is considered as a key factor as they have a vital role to play in decision-making and responding to disasters but this role has not been fully Institutionalize yet (Mondal, 2007)

4.3. WOMEN'S EMPOWERMENT

Despite abundant numbers of women's informal participation in disaster reduction, they are still kept away from formal planning and decision-making. Women's empowerment is one of the key elements in order to increase their formal participation in disaster management cycle. Although women commonly organize themselves to establish community support services to meet basic needs of family in the disaster period and have capacities in order to be used in response to disasters but this issue has not been institutionalized in all plans and strategies yet and their efforts are often invisible or go unacknowledged. Similar findings have been reported by a number of researchers who noted women's involvement in family enterprises such as farming, gardening or ranching (Aboobacker & Nakray, 2011)

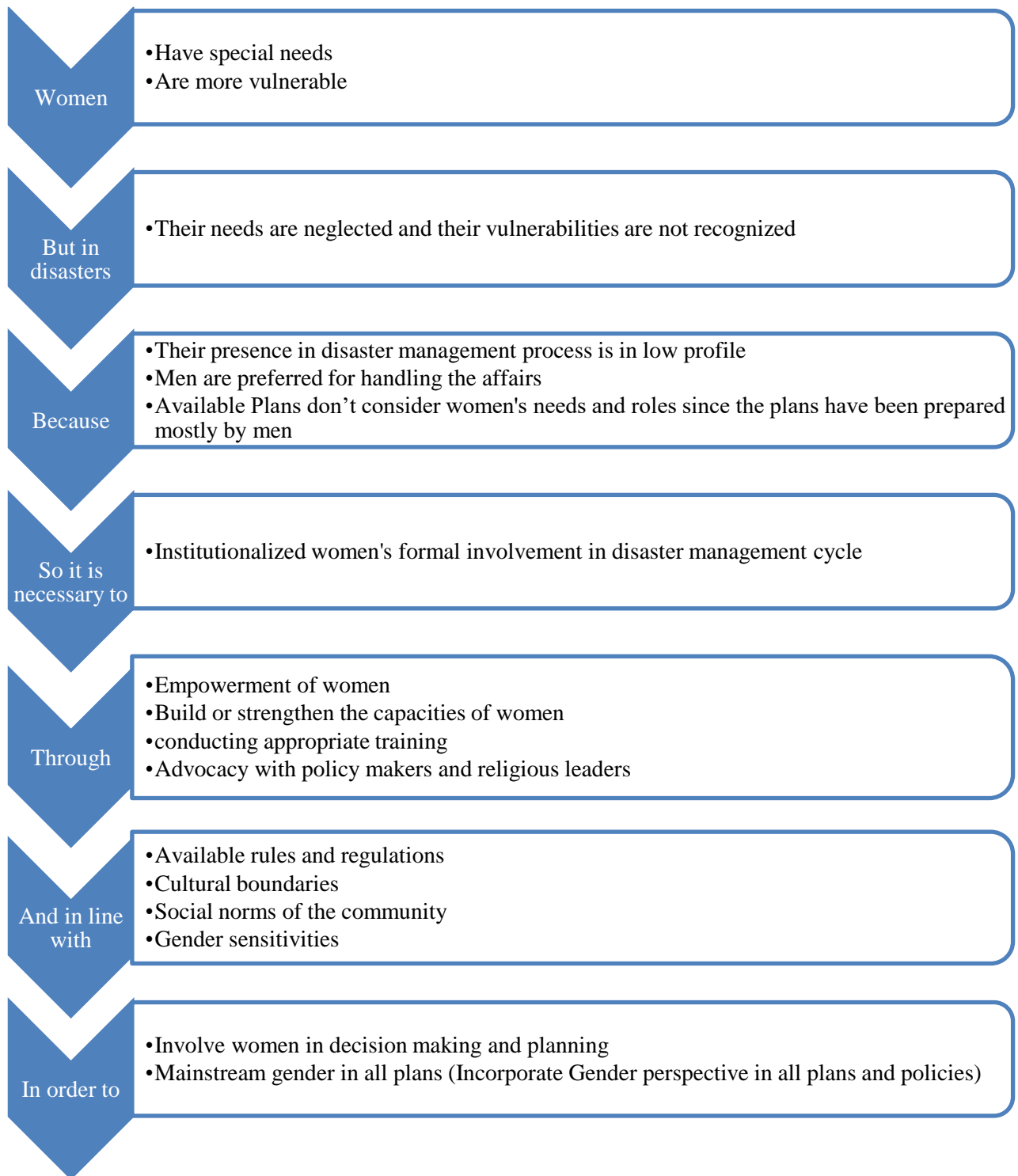
In fact the issue of women and their role in disaster management has been overlooked. Overlooking the participation of women in disaster management means that half of the entire affected population is ignored and community puts aside 50 per cent of its human resources, including the contributions that can be made by the female population. Also, the urgent health needs of women affected by disasters may not be met because men (as victims or leaders) are not fully aware about the specific needs of women in different stages of their lives which is related to ageing, pregnancy, breast feeding and reproductive ailments, etc. Therefore disaster management plans and policies with a gender perspective are required to integrate women involvement in disaster management policies and plans. Also building or strengthening the capacity of women and empowering it in preparedness phase is a must.

Results implied that although women are interested and have capacities to be involved in disaster management plans and strategies but the norms of community and social, economic and cultural barriers limit their participation in decision making and planning processes. In fact their current presence in the community is not enough to reduce their vulnerability during disaster through participation of women in disaster management cycle. In fact current disaster management plans and policies do not address disaster prevention and mitigation from a women's perspective and provide insufficient responses and increase disaster losses. The destructive effects of

disasters on women and girls can be modified and lessened by mainstreaming their capacities in post-disaster phases. The findings suggested that women's participation in disaster management should be strengthened in line with their socio-cultural and economic backgrounds. Disaster management officials can benefit from women's knowledge, skills and capacities in policy-making, planning and resource allocation if it is in line with rules and regulations and community norms and culture.

Experience with various disasters all around the world confirmed that a gender-responsive design is important for successful disaster management plans and strategies. New disaster management plans must form with the aim of eliminating the risks to women, as well as using women as precious resources of ideas, skills, and knowledge. It is suggested that policies on gender and disaster management be combined together. What is of critical importance in any planning is correct analysis of social patterns and norms. Another important matter is incorporating women in plans and strategies and utilizing their capacities for disaster prevention and response. Women should also have access to education opportunities and actively participate in planning, risk reduction, decision-making, search and rescue and rehabilitation activities. It is of vital importance to create a structure that does not de-prioritize women's experiences and needs.

Figure 4: Women Involvement in Disasters



CHAPTER 5: RECOMMENDATIONS

Women involvement in different phases of disaster management will decrease their vulnerabilities. Mainstreaming women's role in disaster management can be beneficial for both men and women. In other words, disaster management can benefit from women's knowledge, skill, and strategies if their presence in disaster management is facilitated. Consequently, disaster management program will be more effective and discrimination against women will also be removed. Women's true contribution to disaster management demands their presence in decision-making process. Therefore, decision making process should not be pre-decided or controlled. Women can have important role in disaster response because they can help highly vulnerable victims, such as women, children, and the elderly. Therefore, it is priority in Iran to advocate for changes in policies and practices at the institutional level in order to address these issues adequately. Women must be empowered so as to be pioneers of change within the society. Following, some recommendations are presented for women's involvement in disaster management:

5.1. AT PREPAREDNESS PHASE

Developing specific activities at community, managerial, and political levels and implementing them in preparedness phase are necessary within a long-term planning for integrating women's role in disaster management cycle. The nature of activities should advocate for women's participation in decision-making and disaster management cycle. Suggested activities are as follow:

1. It was observed that if a process is not helpful and women friendly, women will be reluctant to it. Therefore, organizational policies and processes must be reviewed and revised in case to ensure women friendliness. It must as well be noted that stress or excess workload is not imposed on women through women leadership initiatives.
2. Appropriateness of relief items: when relief packages are being designed and prepared, gender and culture-specific needs should be considered. Women and men need to be consulted on the items of relief goods in order to make sure that

these items are appropriate for them and meet their needs. Particular hygiene needs of women and girls should be predicted also. Relief packages must contain sanitary pads and clean strips of cloth, plus underwear for women and girls.

3. Special health needs of women should be considered in disaster relief efforts. Women, due to their specific health needs seek female medical personnel. It is particularly important when cultural norms prevent women from being examined by male physicians, or when they are not able to move. Therefore, the availability of female and male health personnel is particularly important after a disaster.
4. For designing training package it is recommended to consider gender issue in the content of training. Women's participation in preparing proper content and dissemination of information is inevitable. Ensuring that information about disaster management assistance reaches men and women in a clear and timely manner can also determine the success or failure of programs.
5. Persuading local government authorities and community leaders, especially the religious ones, to embrace both men and women in disaster management activities and decision-making is not an easy task to do. This might be because of cultural norms. While there is no simple solution to manage this complex situation, different actions can be taken to gradually shape government and community support. After disasters, there is a window of opportunity to reduce potential barriers so that beneficiaries can have equity in relief and recovery processes. This period of time can be utilized to bring positive changes within legislation, community attitudes and values. Inclusion of women in disaster management programming requires measures that guarantee:
 - increase access to resources by women
 - contribution of women in planing and decision making processes
 - realize the impact of disasters on women and men's social roles, responsibilities and personal well-being
6. There is Women Affairs Department in most of the government organizations. Assigning a woman for disaster management can help to raise awareness of women, ensure commitment and develop skills regarding the integration of women in disaster management process. For example, the focal point could

coordinate, facilitate and implement the gender disaster management training. She can promote gender mainstreaming process in the organization.

7. Support preparation of information, training, and communication activities: These activities need to be designed with and for women. Activities should be culturally sensitive and available in local languages.
8. Advance engagement of both men and women in community-based early warning systems to make ensure that procedures consider both female and male needs.
9. Develop gender-sensitive indicators in order to be used in all national reports and related policies and mechanisms by government authorities.
10. Provide opportunities for formal and informal networking between women and also between women and disaster management planners and responders at the local level;
11. Provide opportunities for job exchange and other initiatives which will increase communication between women as disaster managers and service providers
12. Integration of women role in all disaster management plans and policies is so important in order to reduce women vulnerabilities in disasters. In this regard, important questions which have to be answered in developing any plans are as follow:
 - How are women differently affected by the disaster?
 - Does women have particular vulnerabilities?
 - Does gender norms of the community affect aid seeking behavior and/or access to aid?
 - Does women have less access to aid/ information due to cultural norms?
 - Are local women being actively participated in developing plans and implementation of policies and activities?
 - Have women and men been involved in decision-making and employed as aid workers at all levels?
 - What are the factors in order to increase participation of women in the disaster management programs?
 - What are the positive and negative impacts of women's participation in disaster management

- Does the participation of women in the disaster preparedness and response plans increase their work load?
- What are the entry points for participation of women in disaster preparedness and response plans?
- What are the factors which can increase participation of women in the disaster management programs?
- Do the women would like to participate in disaster management just at a formal level?
- Does the participation of women in disaster management address the special needs of women?
- What are the factors which increase women contribution in decision making process?
- Is the participation of women in disaster management and in response phase sustainable?

5.2. AT RESPONSE PHASE

1. It cannot be expected that affected men will be able to represent the needs of female in affected population. What women know about their needs is different from what is perceived by men. Both men and women prefer to talk about their personal sensitive issues with somebody of the same gender. Besides, different age groups have different attitudes about their needs and priorities. Hence, consultation with these various groups helps to identify their special needs.
2. Both men and women should be members of assessment and response teams in order to consider special needs of both groups and also respond to their needs properly. If these gender-based teams are kept in the same balance during the operation, the respective needs of women and men will be better addressed.
3. Community-based hazard assessment helps to the detection of special needs of vulnerable women and children, particularly women who suffer from disabilities, mental disorder, or severe medical problems; senior women, new immigrant women, minority-language speakers, single mothers, poor and low-income women and others;
4. Beneficiary registration and relief distribution systems: procedures of relief registration and distribution should take needs of all vulnerable and needy households into account and ensure their access to relief services. It usually occurs that women and other vulnerable or marginalized groups are overlooked and do not receive relief assistance, especially when assistance is based on registration of male heads or on the basis of physical damage and loss. So presence of women in registration and relief team will help to consider women's need and provide services properly.
5. Women generally feel embarrassed to approach men for their personal hygiene requirements such as sanitary and undergarment supplies, therefore, it is recommended that distribution of such supplies is not assigned to men but to women. On the other hand, pregnant and lactating women have special nutritional needs which have to be considered. Vitamin supplements must be included in family or mother and baby assistance packages.

6. Women may need counseling services to cope with changes in gender roles, and the situations after disasters. Conducting counseling sessions for men and women can also help them to release tensions and cope with situation.
7. Planning shelter and human settlements must be carried out with regard to socio-cultural and economic needs, safety and preferences of men and women. Engagement of women in planning process will lead to integration of their special needs in disaster management process. Possibly, shelters must be erected near to original home, so that residents feel safer due to the familiarity they have with their surroundings and they can do rebuilding and recovery more easily. After disaster communities are encouraged to stay together in shelter areas because communities can be a source of strength and support and often maintain security. The space and design of shelters play important role in better privacy for female members against neighbors and passerby. Secure doors and enough light are important. Cooking, bathing, and toilet location must also be safe and culturally suitable. Therefore, designing of such facilities must be done with participation of both male and female beneficiaries. Public bathing buildings must be segregated based on each sex. Kitchens also need to be adjusted to local food preparation customs.
8. It is quite important that women and men in disaster-stricken area actively participate in the design and location of new shelters and common infrastructure such as water and sanitation facilities. Local participation in physical reconstruction should be motivated. For example, women must be employed and trained in terms of construction-related skills.
9. The role of women in securing food and income, as family members or heads of the household, need to be recognized and livelihood recovery activities should be designed in order to meet their needs.
10. After disasters, women usually lack access to safe obstetric care. Women's involvement in providing reproductive health services is so crucial and important.
11. Getting feedback from both male and female beneficiaries about services to ensure that what is being provided is appropriate and is meeting their needs is important.

12. It is important to provide male and female health personnel to meet health and rehabilitation needs of affected population, particularly when cultural norms prevent women from being examined by male health staff, and when women's mobility is constrained.

5.3. PROPOSE SUGGESTIONS FOR HEALTH SECTOR

Models of disaster management must be related to development theory. These models need to be combined with theories of behavior that represent cultural rules and social contexts as well as global political and economic processes (La Rad, 1993).

The health of women is very important since it affects the well-being of their family, children and also their entire community. The knowledge of woman about nutrition, and personal and household hygiene, will affect the health of her family. Women's health is an important issue in disaster management. In order to respond to women's health needs, it is important to assess their needs properly. Involvement of women in needs assessment process is a key issue which has to be considered. Also, in response phase and considering the culture of country, women can have important role in providing health services for affected population.

There are prominent indications of a direct correlation between women's status in the society and the probability of receiving ample health care during disaster or under environmental stress. Accordingly, poor women or those who live in countries that there is more gender inequality are more exposed to the highest risk (UN Women, 2009)

As pre-requisite and in order to provide effective services in response phase, disaster health master plans need to be developed before disasters and in preparedness phase. These plans must include the needs of different groups especially women and consider women as resources.

Coming figures are the suggestions to increase the role of women in health sector in disaster management from preparedness to response phase:

Figure 5: Development of Preparedness Plans

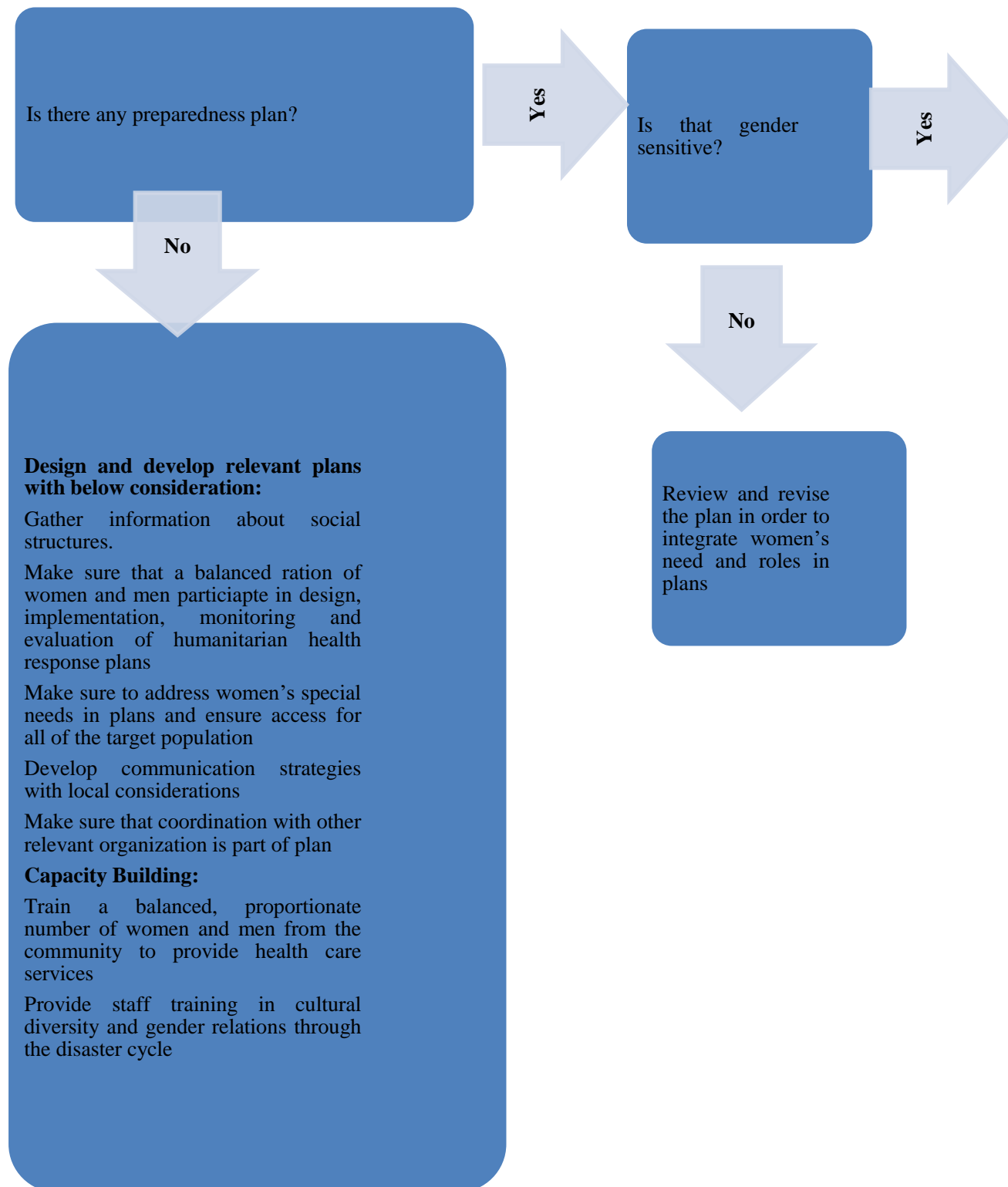


Figure 6: Development of Response plans

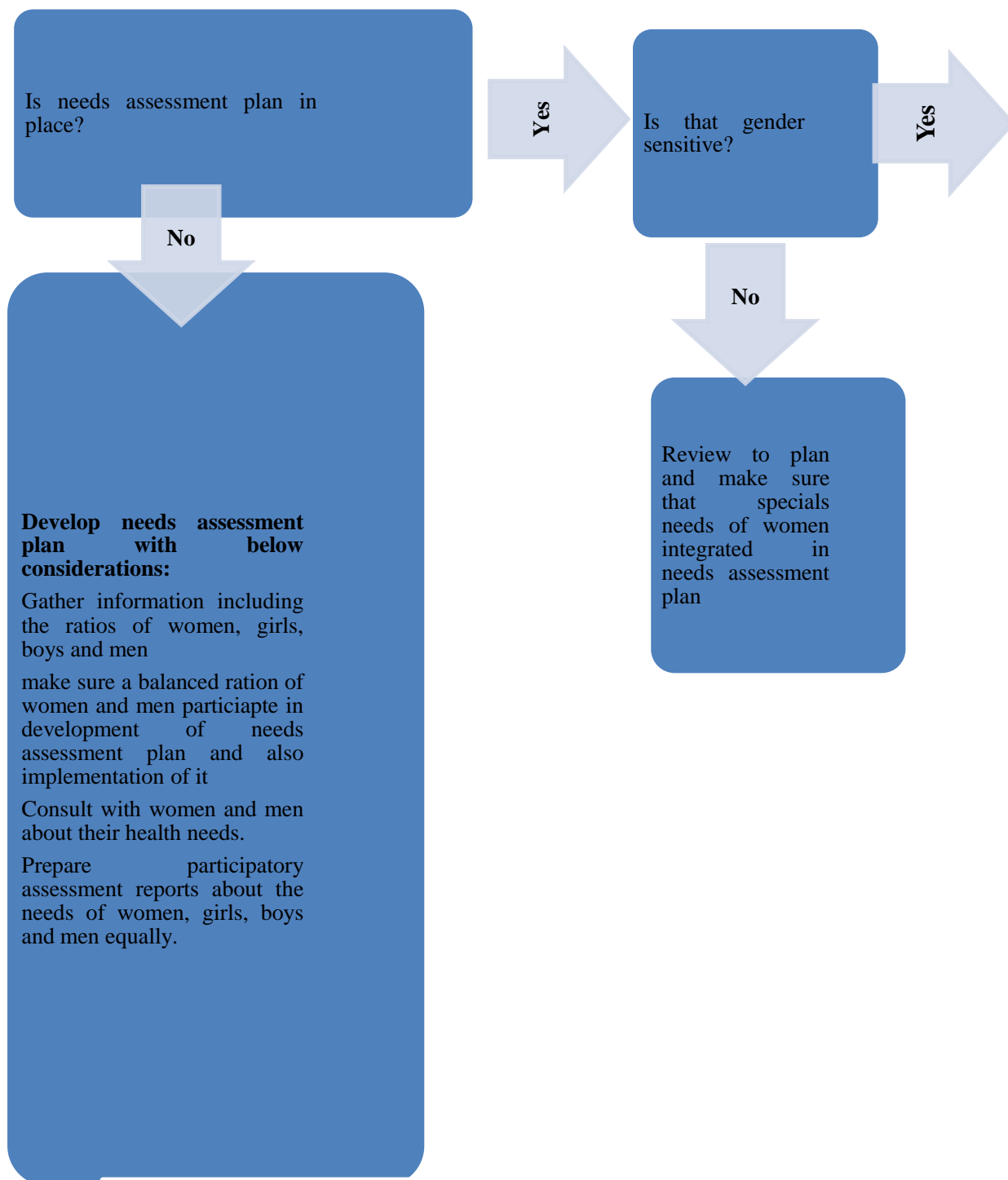
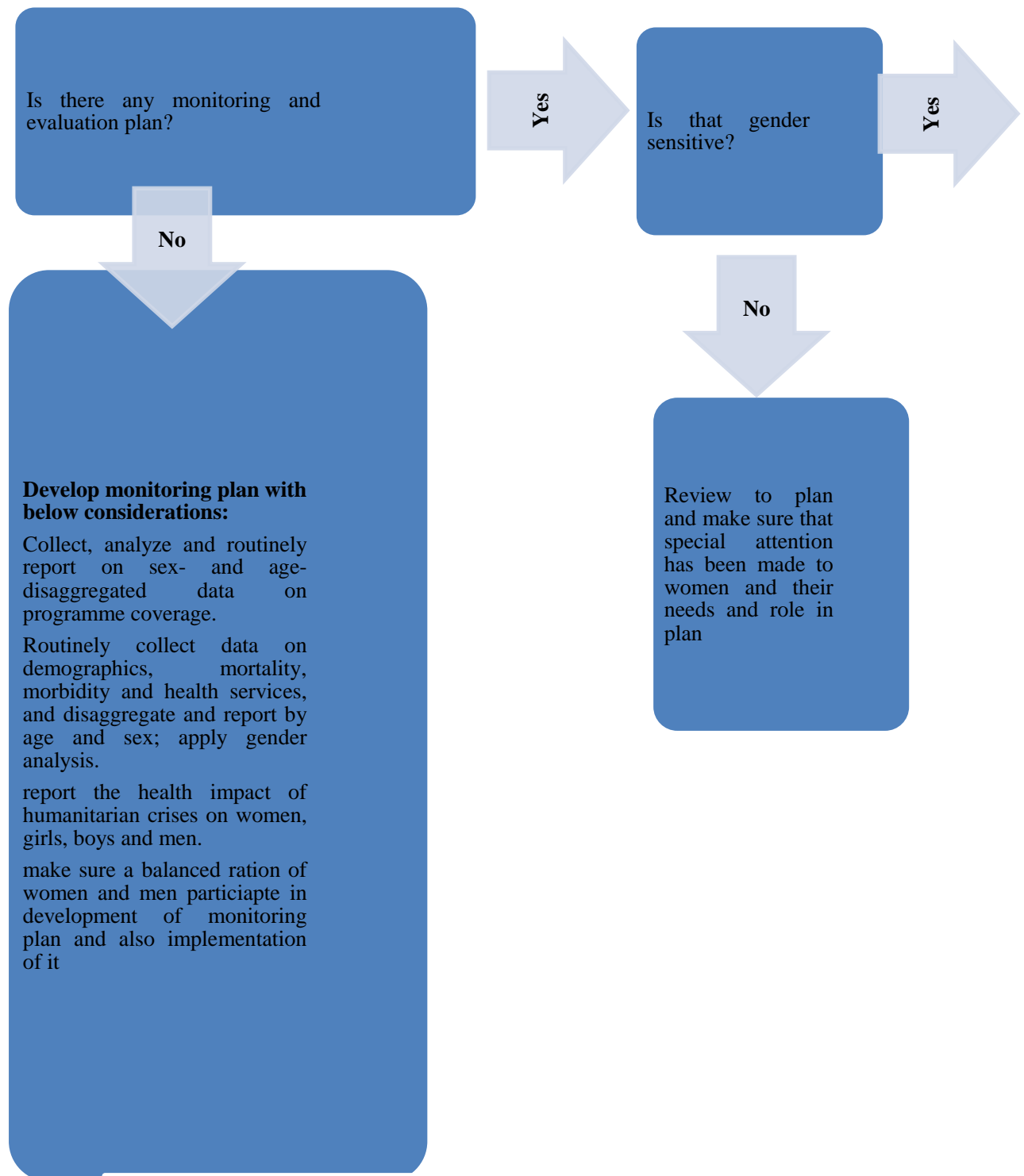


Figure 7: Providing Services



Figure 8: Monitoring and Evaluation



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APPENDIX

APPENDIX 1: QUESTIONNAIRE



HacettepeUniversity
Institute of Social Science

Dear Participant,

I am Behnaz Abolshams postgraduate student in Health Institute Management in Hacettepe University in Turkey. My dissertation research title is “Explore the role of women in disaster management: design a model for Health sector of Iran”. In brief, my dissertation is addressing attitudes and values regarding women role in disaster management in order to design a model for health sector. This involves collecting data on personal attitudes and values regarding women roles in disaster management. The questionnaire itself includes predominantly open-ended questions and approximate time for completion and interview is about 45 minutes. The information you are providing is solely for research and academic purpose only and will therefore be treated with utmost confidentiality, as your honesty is of almost important.

I would appreciate it if you kindly become a participant in my dissertation study. Thank you for your time in aiding my research and again I am very grateful for your assistance in advance.

If you have any further questions or would like to be given more information about the study, do not hesitate to contact me through below email address.

Behnaz09@hacettepe.edu.tr

Kind regards,

Behnaz Abolshams

Section A: Demographic Information:

- 1) What is your sex? _____
- 2) What is your age? _____
- 3) What is your marital status? _____
- 4) What is your education level? _____
- 5) What is your job title or level? _____

Section B: Disaster Management:

1. Have you ever experienced a disaster? Yes No
If yes when?
2. What do you think is the place of women in disaster management?
3. From your perspective, what are the special needs of women?
4. Tell me about your experience on role of women in disaster management?
5. Take me through your experience regarding first day after disaster.
6. Take me through process of interaction with policy makers regarding the use of capacity of women in disaster management cycle.
 - i. What did influence their viewpoint
7. Take me through your observation regarding women involvement in disaster management.
 - i. At what stage did women get involved?
 - ii. Explain the process (case example)
 - iii. What was their specific role?
8. When you look back on the women involvement process, are there any other issues that stand out in your mind? How did the issues affect what happened? What was your role in responding to it?
9. If you think now about role of women in disaster management, when you prefer to use of their capacities? and what are the things that you would normally consider in this process? What are the areas that women should actively be a part of disaster management?

10. How easily were women to be involved in disaster management cycle?
 - i. What positive impacts have occurred in disaster management since women have been involved in it?
 - ii. What negative impacts, if any, have occurred in disaster management since women have been involved in it?
11. Given your experiences, do you have any suggestions as to how women role can be improved both in disaster management cycle and in the community?
12. From your perspective, to what extent is it possible to involve women in disaster management cycle?
13. Is there something else you think I should know to understand role of women in disaster management?
14. Is there something you would like to add?
15. Is there something you would like to ask me?

APPENDIX 2: LIST OF PARTICIPANTS

Participant	Gender	Age	Education	Working Position	Working sector	Marital status	Duration of interview (minute)
P1	Male	57	PhD	Deputy	Government	Married	53
P2	Male	48	PhD	Representative	International	Married	47
P3	Female	38	Bachelor	Program officer	Government	Single	51
P4	Male	63	Master	Advisor	Government	Married	103
P5	Male	43	PhD	Director General	Government	Married	49
P6	Female	27	Bachelor	Expert	Government	Single	56
P7	Female	35	Diploma	Affectee	unemployed	Married	62
P8	Female	28	Bachelor	Midwife	Government	Single	74
P9	Female	31	Bachelor	Family Planning Officer	Government	Single	58
P10	Male	34	Bachelor	Reporter	Civil Society	Single	83
P11	Female	47	Bachelor	Consultant	Government	Married	59
P12	Male	41	Bachelor	Head	Civil Society	Married	75
P13	Female	37	Master	Service provider	Government	Married	70
P14	Female	48	Master	Lecturer	Academia	Married	118
P15	Female	51	Bachelor	Head of group	Civil Society	Married	64
P16	Male	47	Bachelor	Head	Government	Married	97
P17	Female	28	Associate	Affectee	Unemployed	Married	48
P18	Female	46	Master	Director	Civil Society	Married	55
P19	Male	45	Bachelor	Service provider	Civil Society	Married	50

APPENDIX 3: DETAILS OF CODES

Main Category	Sub Category	Details of Codes
Needs of Women	Psychosocial needs	Emotional problems, mental health, psychosocial pressure, Stress, anger, consulting services, physical care and treatment, more sensitive and dependent to family, empathy
	Culturally appropriate cloths	Head covering, scarf, gender sensitive, community culture
	Women- friendly distribution pattern	Long queue, women can't compete with men, weight of distributed package, limited access, distance
	Special supplies	Related to women's reproductive health, sanitary pad, underwear, pregnancy, delivery
	Water and sanitation	Toilet, latrine, shower (enough, separated and accessible)
	Appropriate needs assessment	Women's needs are mostly neglected, attention to needs of different group, single family, gender oriented, special supplement for pregnant women, being part of team, assessment training

Main Category	Sub Category	Details of Codes
Factors affect women's Vulnerability	Health problems	Physical problem, health problem, more be affected, more vulnerable
	In appropriate service delivery	Mostly in evening, it is not in right time and way, distribution by men
	Women's behavior	More visible, working long hours, considering local norms
	Cultural boundaries	Social vulnerability, local culture, believes, tradition
	Gender sensitivity	Gender roles, approach, attitude
	Dependency to men	Can't work without man's permission, lack of saving
	Limited access to resources	Can't get loan easily, rules and regulation
	Social, and historical structure	Social, Historical, Cultural, Economic
	Women's involvement in disaster management plans	It is in low profile, low contribution, male-dominant community, disaster plans, preparedness plans, response plans
	Demise of family's head	Dependent, lack of access to resources
	Homelessness	Security issues, treat, more vulnerable
	Level of economic development	Lack of financial resources, dependent, lack of access to available resources, rules and regulation
Insecurity	Single family	

Main Category	Sub Category	Details of Codes
Women's Capacity	Women have capacity to be involved in training of their fellows	Women have easy access to local staff, have different role in disasters, more committed, have capacity, empowerment
	Women have capacity to relieve mental, psychological and emotional problems	Sensitive, capacity, center in family
	Having plan for using women's capacity	Women need opportunities to grow up
	Changing attitude to women	Women are not just vulnerable group, women are better managers
	Train women in line with their capacity	Empower and built capacity, training
	Women are more committed and it needs to be considered in planning to use their capacity	Identify capacities and plan for it, gender sensitive
	Considering gender sensitivity in using of women's capacity	Considering cultural norms, national policies
	Identify women's capacity	Using of experiences of other countries, physical capacity, social capacity, considering context
	Considering different type of capacities	Physical, social and behavioral



Main Category	Sub Category	Details of Codes
<p>Role of women in Disasters</p>	<p>Role allocations are based on the traditional gender roles</p>	<p>Caring tasks and psycho social counseling task, women do more informal task, gender balance</p>
	<p>Role of women in preparedness phase</p>	<p>Training in preparedness phase is important entry point for mainstreaming women role in disaster management, Training of their fellows, informal training, sharing knowledge, appropriate training, gender sensitivity, drills</p>
		<p>Members of the community based groups, member of DAWAM groups, informal group, active in disaster risk reduction, early warning</p>
		<p>Member of DAWAM teams which are being trained and transfer the knowledge to the members of family, Simple training, first aid training, transfer knowledge</p>

Main Category	Sub Category	Details of Codes
Role of women in Disasters	Role of women in	Providing emotional support for family members, conducting religious ceremonies, praying
	Response phase	Care of member of family, taking care of children and elderly, main pillar of house
		Reproductive Health, delivery, mother and child, pregnancy
		Health domain such as mental health, psychological support, health advice
		Support the family member in providing services support their husbands, advocacy, raising awareness
		Distribution of donated goods, cloths, relief package
		Leader of family, creating warm family gatherings
		Ensure food and water, collect good, support family, cleaning
		Clean the debris, support family, get some necessary stuff (cooking stuff) which are under debris
		Productive and social role, hair dressing, training, entrepreneurship
		Burial of dead bodies, Relief support, empathy, funeral ceremony, answering to religious questions, cultural norms, local norms, dead bodies management
		Manager of team, manager of NGO, manager of informal groups, decision making, division of labor
		Less contribution in first aid, women needs to be trained and involved
	Needs assessment, appropriate needs assessment, part of team	

Main Category	Sub Category	Details of Codes
Barriers in front of utilization of women's capacity	Cultural norms	Local culture, norms, rules and regulations, available plans and policies, social and cultural infra-structure
	Lack/ insufficient training for women	Women have not been well trained for disasters and lack of specialized women, specialized training, lack of local NGOs,
	Religious limitations	Religious beliefs, taking care of children is priority
	Rules, regulations and attitudes	Lack of professional staff in high level positions, disaster management is not priority
	Traditional socialization	Lack of local trained service providers
	Wrong perception regarding women's capacity	Attitude of policy makers, attitude of community
	Community-specific norms	Women must work at home, informal sector, invisible
	Pre-requisitions about using of women's capacity	Local context, language, local norms

Main Category	Sub Category	Details of Codes
Areas which need to be considered in planning for women contribution in disasters	Considering culture, rules and regulations in all plans and programs	Local culture, national culture, rules, division of labor
	Appropriate management of available resources	Distribution plan, monitoring and evaluation of plans, involve women in distribution
	Raising awareness of community in preparedness phase	Simple training, community based training, networking, informal sharing knowledge
	Appropriate training of people	Such as first aid skills, search and rescue, training in hard situation for both men and women
	Empowerment of women	Involvement of women in decision making, planning, policy making, needs assessment, monitoring and evaluation
	Coordination between responsible organizations	Coordination between MoHME and IRCS, health staff, health services, coordination plan, responsible organization
	Representation of women in decision making bodies	Inclusion of women in the task forces, working groups, plan development teams
	Involvement of women in needs assessment	Appropriate needs assessment, training of women, development of relevant questionnaire with women's participation
	Raise awareness of disaster management officials on women issues	Changing attitude, develop gender sensitive plans

APPENDIX 4: ETHICS BOARD WAIVER FORM FOR THESIS WORK

 <p style="text-align: center;">HACETTEPE UNIVERSITY GRADUATE SCHOOL OF SOCIAL SCIENCES ETHICS BOARD WAIVER FORM FOR THESIS WORK</p>
<p style="text-align: center;">HACETTEPE UNIVERSITY GRADUATE SCHOOL OF SOCIAL SCIENCES HEALTHCARE MANAGEMENT TO THE DEPARTMENT PRESIDENCY</p> <p style="text-align: right;">Date: 16/01/2018</p> <p>Thesis Title / Topic: EXPLORE THE ROLE OF WOMEN IN DISASTERS: PROPOSE SUGGESTIONS FOR WOMEN INVOLVEMENT IN DISASTERS WITH FOCUS ON HEALTH SECTOR</p> <p>My thesis work related to the title/topic above:</p> <ol style="list-style-type: none"> 1. Does not perform experimentation on animals or people. 2. Does not necessitate the use of biological material (blood, urine, biological fluids and samples, etc.). 3. Does not involve any interference of the body's integrity. 4. Is not based on observational and descriptive research (survey, measures/scales, data scanning, system-model development). <p>I declare, I have carefully read Hacettepe University's Ethics Regulations and the Commission's Guidelines, and in order to proceed with my thesis according to these regulations I do not have to get permission from the Ethics Board for anything; in any infringement of the regulations I accept all legal responsibility and I declare that all the information I have provided is true.</p> <p>I respectfully submit this for approval.</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <p>Name Surname: ABOLSHAMS ASGHARI</p> <p>Student No: BEHNAZ</p> <p>Department: N09240954</p> <p>Program: HEALTHCARE MANAGEMENT</p> <p>Status: <input type="checkbox"/> Masters <input checked="" type="checkbox"/> Ph.D. <input type="checkbox"/> Integrated Ph.D.</p> </div> <div style="width: 35%; text-align: right;"> <p>Date and Signature</p> <p><i>Abolshams</i> 16 Jan. 2018</p> </div> </div>
<p><u>ADVISER COMMENTS AND APPROVAL</u></p> <div style="text-align: center; margin-top: 20px;">  <p>Prof. Dr. Yusuf CELIK</p> <p>(Title, Name Surname, Signature)</p> </div>

APPENDIX 5: THESIS ORIGINALITY REPORT



**HACETTEPE UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
THESIS/DISSERTATION ORIGINALITY REPORT**

**HACETTEPE UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
TO THE DEPARTMENT OF HEALTH MANAGEMENT**

Date: 03/02/2018

Thesis Title / Topic: Explore the Role of Women in Disasters: Propose Suggestions for Women Involvement in Disasters with Focus on Health Sector


According to the originality report obtained by myself/my thesis advisor by using the Turnitin plagiarism detection software and by applying the filtering options stated below on 03/02/2018 for the total of 140 pages including the a) Title Page, b) Introduction, c) Main Chapters, and d) Conclusion sections of my thesis entitled as above, the similarity index of my thesis is 17 %.

Filtering options applied:

1. Approval and Declaration sections excluded
2. Bibliography/Works Cited excluded
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I declare that I have carefully read Hacettepe University Graduate School of Social Sciences Guidelines for Obtaining and Using Thesis Originality Reports; that according to the maximum similarity index values specified in the Guidelines, my thesis does not include any form of plagiarism; that in any future detection of possible infringement of the regulations I accept all legal responsibility; and that all the information I have provided is correct to the best of my knowledge.

I respectfully submit this for approval.


Date and Signature
07-02-2018

Name Surname: Behnaz Abolshams Asghari
Student No: N09240954
Department: Health Management
Program: Doctor of Philosophy in Healthcare Management
Status: Masters Ph.D. Integrated Ph.D.

ADVISOR APPROVAL

APPROVED.



Prof. Dr. Yusuf ÇELİK

