CHAPTER-3
METHODOLOGY

Research methodology is a way to systematically solve the research problem and it may be understood as a science of studying how research is done scientifically. In includes various steps that are generally adopted by the researcher in studying the research problem along with the logic behind them. Research methodology does not only include the research methods but it also considers the logic behind the methods we use in the context of our study and explain why we are using a particular method or technique (Kothari, 2004). This logic is mainly guided by the theoretical framework. The methodologies comprises the technical practices used to identify research questions, collect and analyze data and present findings, and outlines the conceptual and philosophical assumptions that justify the use of particular methods (Payne and Payne, 2004).

So, methodology is holistic term used to describe the approach to the research and the way in which the methods used in the research relate to the underpinning theoretical framework. To begin with, the first section of the chapter deals with operationalizing the concept of health and domestic violence as it is used in the research. It is followed by brief description about the theoretical approach and lastly techniques and methods used in this study were discussed.

3.1 CONCEPTUAL FRAMEWORK OF THE RESEARCH:

In order to understand how adversely women’s health is affected in the wake of disaster, the aspect of general and reproductive health, mental health problems and overall quality of life were assessed. General health aspects revolve around the problems in conducting day to day activities, whether taken medication or hospitalized due to some ailment. It also included the aspect of substance abuse like consuming alcohol and tobacco. Investigation of reproductive health centered on the aspect of child birth, death due to abortion or still birth, birth control measures.

Anxiety, depression and post traumatic stress disorder (PTSD) was the measure of mental health problems.
Quality of life assessment included two component- Mental Health Component and Physical Health Component. While mental health component included the aspect of vitality, social functioning, role limitations due to emotional problem and emotional well being; physical health component encompasses physical functioning, role limitation due to physical problem, bodily pain and aspects of general health.

There have been many forms of domestic violence like violence against women by in-laws, violence related with dowry cases and others. But in the present study, domestic violence was operationalized within social relation of the family, with the focus on intimate partner violence (IPV), where husband is the main perpetrator of violence against his wife. IPV is defined by WHO as any acts of physical, sexual and emotional abuse by current or former partner whether cohabiting or not (Krug and Dahlberg, 2002).

In order to explore the incidence of IPV among both affected and unaffected communities, underlying dimensions were selected.

- **Respondent and her Husband, including Husband’s Controlling Behaviour:** It includes certain habitual behaviour of husband like smoking and consuming alcohol as well as certain controlling behaviour like stop wife from seeing her friends, speaking to another man, contacting with her family of birth and suspicion about wife’s faithfulness.

- **Attitude towards Gender Roles:** There are certain prescriptive and proscriptive norms for men and women in the society. This section tries to find out the opinion of respondents in general about families norms and what is the acceptable behaviour for men and women in the home.

- **Forms of Violence; Physical, Sexual, Emotional and Coping Mechanism:** Physical abuse was divided into six domains ranging from moderate to severe; slapping or throwing things, pushing, hitting, kicking, dragging or beating, choking or burning and threatening or using a weapon. Sexual abuse was divided into three items; sexual intercourse against the respondents’ will, using physical force to have sexual intercourse and making the respondent do something sexual that she found unnatural or degrading (Krantz et al., 2009).
Coping mechanism includes enquiries about social networking and support seeking behaviour of the victims of domestic violence.

Financial Autonomy: Financial autonomy has been operationalized in a way to understand the financial position of women. It includes queries about possession of movable and non movable property, source of income, if any, either respondent or her husband contributes more in the family in terms of money and whether in case of emergencies respondent could raise enough money to sustain her family.

3.2 PRESENT STUDY

With the above backdrop the present study, with an aim to locate women in disaster situation, was conducted in Basantpur block of Supaul District of Bihar having underlying rationale and objectives.

3.2.1 Rationale

Women are disproportionately affected by natural disasters, usually as a result of their gendered status in society (PAHO, 2001). Immediately following a disaster the “tyranny of urgent” prevails and gender concerns are overlooked or dismissed as irrelevant (Shrader, 2000 and Enarson, 2000). A narrow view of the consequences of disaster leads to a focus on the purely physical and the social realities are ignored, whereas gender concerns are marginalized (PAHO, 2001). Women will continue to be disproportionately affected by natural disasters unless their vulnerable status is not acknowledged. Available literature on disaster has also shown that our understanding on the issue of gender and disaster is limited and related literature in the study area is almost none or remarkably scarce. Except few studies in post Tsunami situation, understanding of the women’s experience in the aftermath of disaster in Indian context is almost rare. All these facts highlight the necessity for an organized, gendered approach to the study of natural disasters and their consequences. A gendered based approach to the study and analysis of natural disasters is essential in accomplishing this goal (Shrader and Delaney, 2000). In this study, I have tried to examine women’s experience in the aftermath of Kosi flood in Supaul district of Bihar and explored the issues related with women’s health and domestic violence. The research was carried out with underlying objectives.
3.2.2 Research Objectives

i) To explore particular health problem among women in post disaster situations in context of general, reproductive health and mental health problems.

ii) To examine the health related quality of life among women and assessing the needs of women.

iii) To explore the issue of domestic violence in the aftermath of a disaster by studying the type of violence (such as physical, emotional, sexual), its prevalence and its root causes among the community at the domestic level in post disaster situations.

3.3 THEORETICAL ASSUMPTION OF THE STUDY: THE VULNERABILITY APPROACH

Closer examination of disaster literature has revealed that there is pattern of gender differentiation at all level of disaster process and that, women and men may suffer different negative health consequences after the disaster. Women and men have specific vulnerabilities to risk and disaster (OXFAM, 2011). According to Blaikie et al., (1994) vulnerability is a key concept in predicting and understanding the existence of differentiated impacts on the various groups in a society. So, in researching women in disaster situation, the theoretical and methodological orientation is guided by the vulnerability theory to disaster. Before discussing the theoretical perspective in detail, the vulnerability aspect of area under study is discussed, which somehow support the usage of vulnerability theory for this study.

3.3.1 State’s Vulnerability

The National Human Development Report (2007) of the Planning Commission shows that Bihar comes at the bottom of the Human Development Index (HDI) among the 15 states which were studied. Bihar's HDI (0.476) is too low compared to the first ranking Kerela (0.827). Bihar is way below the average national HDI (0.612).

The 2008 Kosi river floods impacted already vulnerable communities with low human and economic development indicators and relatively low coping capacities. Bihar is
the third most populous state in India with nearly 8.5 percent of the country’s population. Although there have been many positive developments in the areas of economic growth, female literacy, infant mortality, and others, the state remains one of the poorest in India with 42 percent living below the official poverty line and a rural poverty ratio of 45 percent in 2004, the second highest after Orissa. The average annual per capita income of Bihar is a third of the national average. The state is also highly rural with 89 percent of the population living in rural areas (GoB, WB and GFDRR, 2010.)

The five districts affected by the flood were among the least developed even before the 2008 flood. Available district-level indicators show that they lagged behind the state as a whole: literacy rates in 2001 were lower than the state average of 47.5 percent. Female literacy rates were even lower, less than 20.5 percent on average (GoB, WB and GFDRR, 2010). The state of infrastructure was poor in these districts. Rural connectivity levels were extremely low, with less than half of the villages in each district having access to a paved road (Census 2001).

3.3.2 Vulnerability to Flooding

In an estimate it was found that 16.5% of the total flood area of the country is from Bihar and 56.5% of the total flood affected people in the country is from Bihar. Out of this 76% belong to N. Bihar (N. Bihar District Models Childlines, 2008). The population in Bihar is perennially affected by floods with Bihar being the most flood-prone in the country. As shown in the table-1.2, 4.26 m hec. area is liable to flood in Bihar. About 30 of its 38 districts (73 percent of its geographical area) is flood prone and afflicted by floods almost annually, especially from the rivers west of the Kosi. Bihar’s hydrological vulnerability is aggravated by its flat topography, high rainfall (more than 2,500 mm annually and up to 80 percent of annual precipitation from June to September) and high sediment loads of rivers. In particular, the Kosi River is well-known in India for rapid and frequent changes of its course and the extensive flood damages it causes almost every year. As its waters carry a heavy silt load and the river has a steep gradient, the river has a tendency to move sideways. In about 200 years, the river has moved laterally by about 150 km (GoB, WB and GFDRR, 2010).
3.3.3 Women and Gender Issue

Bihar has around 49.6 million women and 54.2 million men. While the sex ratio of the state declined from 919 (Census of India, 2001) to 916 (Census of India, 2011), child sex ratios in the same period declined steeply from 942 to 933. The age of marriage is increasing and the fertility rate is declining – both of which are positive developments.

However, high level of illiteracy coupled with a high maternal mortality rate – both indicators of low human development of women – is a cause of alarming concern. In Bihar, strong footholds of caste and patriarchy are everyday realities in women’s lives. These two institutions define and govern a woman’s status, her work, and agency. Yet, there are slow and steady changes in the policy. Women’s reservation in the Panchayat is a crucial landmark in this regard. Its ramifications are going to be far reaching in the decades to come (Sharma et al., 2012).

Vulnerability to violence: According to NFHS-III, Bihar has the dubious distinction of being the state with the highest number of women having been beaten by their husbands. Making the situation worse, many women in the state find nothing wrong with what is a punishable offence under the Indian Penal Code and the Protection of Women from Domestic Violence Act of 2004. These are the findings of the latest National Family Health Survey-III, covering the period 2005-2006 for the entire country and 2006-2007 for Bihar. According to the survey, 59% of women in Bihar have been beaten by their husbands and 32% of women find such abuse justified if a woman argues with her spouse, shows disrespect to her in-laws or is suspected of having an extra-marital relationship. More than half the surveyed adults in the age group of 15-49 (57%) believe it is justified for a husband to beat his wife under specific circumstances. The survey found that in Bihar, the perpetration of physical, sexual and emotional violence against women cut across demographic categories. If 66% of males in the lowest wealth index scales had perpetrated violence on their wives, those in the highest wealth index were not far behind at 56%. Wife beating in middle class homes stood at 55%. The survey found nuclear families were likely to record more widespread violence, with 63% women saying they were victims of domestic violence (NFHS-III, 2005).
So, the pre-existing technical (concerned with infrastructure and the ability to resist the impact of the disaster) and social vulnerability (concerned with literacy, poverty, health dimension) in the area compounded by the vulnerability to flooding has its huge impact in creating vulnerability among particular section of society, gender being one of them.

3.3.4 The Beginning of Vulnerability Theory

In the 1970s and 80s, anthropologists and cultural geographers criticized the essentially passive role prior investigators had assigned to society in risk etiology and the limited attention paid to local, national, and international factors in creating or exacerbating both risk and impact (Oliver Smith, 2009). Researchers from and in the third world called for a rethinking of disasters from a political economic perspective, based on the high correlation between disaster proneness, chronic malnutrition, low income, and famine potential, leading to the conclusion that the root causes of disasters lay more in society than in nature (Hewitt, 1983). This laid the beginning of the concept of vulnerability. The concept of vulnerability focused attention on those aspects of society that reduce or exacerbate the impact of a hazard. Although there is a popular view of disasters as “acts of God” or “fate” in which nobody is really responsible, researchers now see most natural disasters as more understandable in terms of the “normal” order of things, that is, the conditions of inequality and subordination in the society rather than the accidental geophysical features of a place (Oliver-Smith, 2009). A disaster is now generally understood as an event/process that overwhelms the capacity of a vulnerable social group, economic activity, or infrastructure to resist and recover (Wisner et al., 2004).

3.3.5 Defining Vulnerability

There has been many definition of vulnerability put forth by several researchers. Vulnerability, in its simplest form means being prone to or susceptible to damage or injury. Cannon provided an inclusive definition of vulnerability, “Vulnerability is the characteristics of individual and groups of people who inhabit a given natural, social and economic space, within which they are differentiated according to their varying
position in society into more or less vulnerable individuals and groups. It is a complex characteristics produced by a combination of factors derived especially (but not entirely) from class, gender and ethnicity. Differences in these socio-economic factors results in hazard having a different degree of impact” (Cannon, 1994:19)

Lavell (1994), discussed the type of vulnerability (economic, social, educational and informational, environmental) that might increase the effects of disaster on people and communities. By social vulnerability Lavell means, “The levels of social cohesion existing within communities and their willing and ability to organize collectively in order to confront common problems.”(Lavell, 1994:56) By this he means that those who are better organized can reduce their vulnerabilities.

Further, Wisner et al provides a descriptive definition of vulnerability as:

“By vulnerability we mean the characteristics of a person or group in terms of their capacity to anticipate, copes with, resist, and recover from the impact of a natural hazard (an extreme natural event or process). It involves a combination of factors that determine the degree to which someone’s life and livelihood is put at risk by a discrete and identifiable event (or series or “cascade” of such events) in nature or in society (Wisner et al., 2004:11)”

This definition is widely used among those interested in gender and disaster research. According to Oliver-Smith, vulnerability is generated through a causal chain of root causes embedded in ideological, social, and economic systems; the dynamic pressures of a demographic, socioeconomic, or ecological nature; and specific sets of unsafe conditions which, when combined with a natural hazard, produce a disaster. With this he emphasized on the political-economy view on vulnerability. In any environment with existing hazards, a disaster becomes inevitable in the context of a historically produced pattern of vulnerability, evidenced in the location, infrastructure, sociopolitical organization, production and distribution systems, and ideology of a society. A society’s pattern of vulnerability is a fundamental feature of a disaster. It conditions the behavior of individuals and organizations throughout the full unfolding of a disaster far more profoundly than will the physical force of the destructive agent (Oliver-Smith, 2009).

In addition to Oliver-Smith, Cannon (2000) also provided a rich insight on political economic analysis of vulnerability. According to Cannon, it is vital to recognize that vulnerability should be treated as a condition of people that derives from their
political-economic position. Cannon put forward a detailed typology level of vulnerable conditions which is

a. **Initial well-being, strength and resilience**: According to Cannon, this evaluates the initial nutritional and health status (both physical and mental) of people in everyday life (or before the impact of a hazard). It is indicative of the capacity to cope with illness and some types of injury resulting from a hazard. It should include the potential for mental disturbance and recovery in the wake of a disaster, which might intensify existing stresses. A person's resilience may relate to having a faith or spiritual confidence, or a predisposition to self-reliance.

b. **Livelihood resilience**: Cannon defines this level of vulnerability as a measure of the capacity of an individual and/or their household to cope with the aftermath of a given hazard impact, and to reinstate their earning or livelihood pattern. This might include their likely continued employment, level of savings, loss of welfare benefits, loss or injury of supportive family members, hazard damage to their normal livelihood activity (for example in floods this might include damage to agricultural land by sediment deposits, sea-water incursion, toxic or sewage contamination).

c. **Self-protection**: Cannon describes self protection as the ability or willingness of an individual and/or household (with a given level of knowledge of apparent risks) to provide themselves with adequate protection, or to be able to avoid living or working in hazardous places. It will be influenced by the level of knowledge of physical measures, and the capacity of people to implement them.

d. **Societal protection**: It refers to the ability or willingness of social and political structures at political or social levels above the individual or household, to provide protection (especially structural and technical preparations) from particular hazards. This might include local government, national government, relevant organisations (e.g. fire department, civil defence), or community-based initiatives (Cannon, 2000)

e. **Social capital**: This category in Cannon’s typology involves the ‘soft’ security provided by group or community capacities to enhance (or reduce) a person's
resilience. This may include the degree of cohesion or rivalry that might affect rescue and recovery. There are various forms of social capital that may enhance or hinder recovery. These include support networks (belonging to a church or other group), some of which may provide mutual aid in times of hardship. The character and quality of social capital may depend to a large extent on the type of state power and the capacity for civil society to develop (Cannon, 2000).

Each of these components is crucially linked as well as each of these contains the possibility of both vulnerabilities and capabilities.

Thus, Vulnerability created the basis for a powerful model of causation for disaster research and practice and an orienting principle for the entire field of disaster studies and management. The concept of vulnerability challenges us to identify those social features and specify those linkages to processes that when coinciding with the onset of a hazard lead to damages and deaths. To the degree that vulnerability is socially constructed, the most salient features of social construction often represent entrenched arrangements of political and economic behavior and ideology. They are not “accidental.” They may or may not be intentional. In that sense, there is a need to recognize that the beginnings of disasters are deeply embedded in the history, ideology, and political economy of a society, or, more specifically, in the human-environment relations and human-human relations and the ideologies that inform them and are reinforced by them (Oliver-Smith, 2009).

Guided by the vulnerability theory, in this thesis the researcher has adopted the approach that focuses on the question of how the Kosi flood exposed deeply ingrained socio-cultural practices that perpetuate gender inequalities in the study area, resulting into adverse physical and mental health among women, exposed to domestic violence and hence making them more vulnerable during and after the disasters. There was also a consideration that the gendered vulnerability is deeply embedded in patriarchal values and the social production of gender within social structures and position women inferior to men. Considering this, in this study there is an attempt to study the affect of disaster on women’s health and domestic violence against women in post disaster context. For the purpose of the study various research methods and techniques were adapted which is discussed in the next section.
3.4 METHODS USED

In this study, mixed method approach has been used which combines both the qualitative as well as quantitative methods. The usefulness of the combined approach especially in the field of gender studies is widely acknowledged. Commenting upon the harmonizing nature of the qualitative and quantitative methods, Parker and Kozel elaborates:

As one component of a complementary approach, quantitative research is required to ensure reliability and representativeness, while the qualitative component can contribute to validity by ensuring that the questions being asked are appropriate to actual conditions on the ground and that the interpretation of results is accurate. Attempts to approach the “why” questions (“why did you withdraw your daughter from school?”) through survey questionnaires have proved disappointing for the most part. Surveys, by seeking uniformity of response, are generally not flexible enough to probe the motives that lead to behaviors (though the behaviors themselves may be quantifiable). Qualitative research, which is flexible, opportunistic and heuristic, provides more appropriate techniques for this purpose. Because qualitative researchers do not assume that they have advance awareness of the possible universe of responses, they are prepared to follow up any unexpected responses and pursue them using probing and improvisation as opportunities to gain new and previously unexpected information (Parker and Kozel, 2004).

However early feminist scholar were relying only upon qualitative methods. Quantitative data has been viewed by some feminist researchers as positivistic and full of false claims of objectivity, having little to offer the field of social science (Smith, 1990; Oakley, 1998). According to Mills, quantitative data can be numerically and statistically accurate; it may not reflect the reality of a situation (Mills, 1959). Qualitative research may offer a more complete and salient perspective for a particular situation, especially in domestic violence where the quality and scope of record-keeping are varied (Bouma, 2000; Oakley, 1998). Now-a-days researchers in the field of gender are incorporating both the element in their studies to get a more holistic picture.
3.4.1 Fieldwork

Central to anthropological research is the method of fieldwork. During fieldwork investigator collects information by spending as much time as possible with the people under study, using principally the techniques of observation and interview, and combining them with methods and techniques of survey or any other discipline as he deems fit (Kloos, 2004). It is during the course of fieldwork that one can make many improvisations to its body of techniques and methods (Kloos, 2004). For the purpose of this study, fieldwork was conducted in the Kosi flood affected areas of Bihar in three phases.

The first phase of the fieldwork was conducted immediately after a month when Kosi flood came in the eastern part of Bihar. This phase of study was a kind of preliminary fieldwork conducted to select field area and to assess whether the field area and situation is appropriate for the objectives identified for the purpose of the research i.e. exploring the issue of ‘women’s health’ and ‘domestic violence against women’. Specifically it aims to:

1. Conduct a gender based situational analysis to identify the needs and problems of the affected population, with special attentions to health problems and,
2. Conduct a situational analysis on the scope, nature and prevalence of gender based violence.

During this phase the study was conducted in two different districts of Bihar i.e. Saharsa and Supaul. In Saharsa, fieldwork was carried out in ‘Kanp’ village among community population, whereas in Supaul ‘Thalhagarhiya’ panchayat in Tribeniganj block was selected to study the population living in relief camps and canal bunds. As the purpose of the study was to assess the immediate situation with respect to women’s health and safety related issue these two areas were selected. Moreover, the selected district also varied in terms of intensity of flood impacts. The former being less affected as compared to the latter. Study was conducted for 3 weeks (last week of Sept. to mid Oct, 2008.). During this phase information was mainly collected by qualitative methods using focus group discussions, case studies and direct observation. It was also supplemented by quantitative method specially designed to
collect information regarding health issues through interview schedule. Some key informants, member of women’s organization (NGOs) were also interviewed to find out their agenda to empower women and also to gain an insight into some major problems (like issue of violence) which women face in this period of crisis.

As mentioned earlier, fieldwork was conducted in the month of Sept./Oct, a month later when the flood struck, the situation was very chaotic. The post disaster situation/environment was not conducive to research. With both government and non government organizations working in the direction of relief work, almost no earlier support was received. Additionally, commuting from one place to another was a tough task, as it was difficult to get private vehicles and road condition was also worst. At some places it was almost scary to reach within the affected population by crossing temporary bamboo bridges or using boats and tractors. There were also very limited secondary sources available regarding the actual losses during the flood, as the process of collecting and assessing data was still in process. Moreover some of the databanks also got destroyed in flood (Minakshi et al., 2011).

As the relief operation was on its peak, people’s expectations were also getting high. They were at the receivers end and at several times they were reluctant to give information, as they could not get any benefit out of it. It was almost a challenging task to convince them. Further, many of the questions concerned with personal and sensitive issues were very difficult to ask as well as getting response from them, especially at such an emotional or tragic time. Taking one to one interview was also a difficult task to do as we could find ourselves surrounded by number of people, turning the discussion into group interview. At the end of this phase of fieldwork, Supaul district was identified as the field area as it was recognized that this district was the first one to be affected in the Kosi flood and was severely affected and the objectives of the research can be well contextualized in that area.

During first phase of study it was identified that Supaul is one of the hardest hit districts in the flood where blocks like Basantpur, Chatapur, and Pratapganj are completely washed off in the flood. People living in numerous such villages had no choice but to take shelter on these canal bunds where first phase of study was
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conducted. Based on that finding for the second and third (final) phase of study, Basantpur block of Supaul district was selected. Basantpur block was the first block in India to be hit by Kosi flood, where water enters through Baneli Patti Panchayat. Among the most affected areas were Baneli Patti, Parmanandpur, Kochgama, Balbhadrapur, Basantpur, Hridaynagar, Bishanpurshrivram, Nirmali, Dinbandhi and Birpur sub-division where Basmatia road reflected most devastation as these areas fall on the river course.\(^4\) Further, detail list of affected and unaffected areas were collected from block development office, based on which high flood affected areas and unaffected/ least affected\(^5\) areas were selected for the study. Suggestions from local NGOs working in those areas was also considered before selecting the study area. For the purpose of the study two high floods affected areas i.e. Hridyanagar and Bhawanipur including some part of Mansi Piprahi\(^6\) and two unaffected areas from village Fatehpur and Bhimnagar was selected.

Second phase of study was conducted for three months i.e. March to Mid of the May, 2009, during which questionnaire was pre tested and get acquainted with study area and local dialect. Considering the sensitivity of the research topic, special attention was on establishing contacts with office bearers, women’s organization and identifying key informants in form of women. Further, questionnaires were first translated into Hindi and then back translated; some cultural specific changes were incorporated in that.

Third and the final phase of the study was elaborated fieldwork, conducted from the month of June to September 2009. During the period, cross-sectional survey was conducted with the total sample size of 250. 125 from high flood affected areas where populations were displaced for longer period of time (at least more than a month) from their original homeland and the same from the unaffected/low-affected areas without displacement. It was not possible to conduct random sampling therefore purposive sampling was used with those respondents who were willing to be part of the study. Ever-married women aged 17-49 were eligible for the study that were recruited after informed consent. The criterion to establish family eligibility to

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4 The information cited here is based on the information provided by the BDO, Basantpur Block.
5 Unaffected area includes some part of the least affected areas without displacement, as number of respondent from unaffected areas were not sufficient, i.e. 125.
6 This area was severely affected by Kosi flood, 2008 and was devastated.
participate was that the family contains at least one ever-married woman between 17-49 years of age. The unit of analysis was the women respondent, who was selected randomly from all the eligible females within the household and also agreeable to participate in the interview. Details about the study area and people are provided in the next chapter.

3.4.2 Rapport Establishment and Problems Encountered

Rapport establishment simply means to create a feeling of trust and respect between the researcher and community which is studied. So it is in the best interest of the researcher to first and foremost establish a good rapport with the respondent so as to collect maximum data from which constructive information can be picked out. In my case the stay within the community was facilitated by a high school teacher who was teaching in government high school, Birpur. I was staying near one of the unaffected area selected for the study, from where I use to commute to different places, including the affected areas. Establishing rapport was not very difficult for me as I could find some of the local village girls who use to work for some NGOs during the relief operation. Some of them were still working. I was introduced to the villagers by them. Earlier they considered me to be from their group, working from some NGO, so they welcome me and discussed with me about their sufferings and pain during and after the disaster. They also told me that they are use to of this kind of survey and they thought that my work is also associated with some relief work and thus in lieu of getting compensation or any favour they welcome me generously within their community. Additionally, during pilot phase of study some key informants in form of women like Anganwadi Sevika, NGO worker were identified who also helped me in interacting and working with the villagers. So, initially the approach of the villagers was friendly with me.

After getting acquainted with the area and the respondent I started interacting particularly with women to discuss the concern topic and my real interest. I tried to convince them about my work and informed about my interest in details. Most of the women earlier was not able to understand why I am asking them about their personal

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7 Survey was the popular term within the community used for any kind of work conducted in the area.
relation and domestic violence issue, that to in connection of Disaster. For them survey after the disaster simply means getting some compensation or assessment of some tangible loss and in that connection personal relation, emotion found no place. As one of the respondent said “Why are you asking about husband beating wife or not, or he is taking care or not. Do you think in one year something will change which has not changed from centuries.”

Later, I tried to convince them by telling that it is not something directly related with the flood, it is simply the matter to share their personal experience, if they wish regarding this issue (referring to domestic violence), which they must have not done yet. It may be possible that by sharing their feeling they may feel lighter or even their experience may help other women suffering from similar trauma. I also assured them of strict confidentiality by not reproducing their name or their experiences directly anywhere and that the information provided them is meant for the academic purpose only and not meant for any commercial use. I also had contacted earlier with Block Development Officer and some NGO regarding the nature of my research and asked them for any kind of assistance, if required in extreme situation. So backed by their support, I also assured them with some kind of help if at all they want. All these interactions with the women in the village bore fruit and they became ready to divulge information. Additionally, status of the researcher as perceived by the respondent in this kind of sensitive research also matters a lot such as marital status, age and gender. When I asked especially about the sexual violence, the response was like “How could you know what happens after the marriage, you won’t understand” This kind of response was of relatively younger women. According to relatively older women, their experience can help or facilitate me in handling such situation in the life to come. They told that I am like their children, so they were willingly sharing their experiences with some ready tips for me.

After a week or two, I was being welcome by almost every family of the village. But this phase doesn’t run for long. Later I came to know that the men folk of the village after realizing the nature of my research became very hostile and even warned their wife not to entertain me. One evening even one my key informant informed me that if I enter the village next morning anything could happen, so I should better change my
field area. That time I dared to interact with some younger unmarried male, studying in inter or degree college, residing in that village and convinced them about my interest which was in no way to harm the villager or bring any differences between the husband and wife. To my surprise, it didn’t take long to convince them and they assured smooth working environment for me in their village. They could identify later on about some of the males of the village who were creating problem. Their families were excluded from participation. One thing I have to assure was that interview was conducted most of the time in the absence of male members of the family. Although these problems were overcome with time, but it leads to underreporting of domestic violence case in most of the situation. Although the response rate was good enough, with few women refusing for the interview after knowing the nature of the survey, but at the same time, cases of underreporting was high. Here, response rate is distinguished from reporting rate as participation for the interview was high (response rate) whereas actual reporting of violence is low (reporting rate). It is difficult to measure the exact reporting rate in survey situation but it was obvious from the women’s response and statement that underreporting is prevalent. Cases of underreporting were more among affected population as compared to unaffected one.

3.4.3 Quantitative Methods and Tools

In this study, quantitative method was used by administering the schedule, required for the purpose of health and violence related issues. For studying the mental health dimension, Hopkins Symptom Checklist-25 (HSCL-25) and Post Traumatic Stress Disorder Civilian Checklist (PCL-C) were used. Quality of life was assessed by using the Short Form-12 (a shortened version of the Medical Outcome Study 36 Item Short-Form Health Survey [SF-36]). For assessing women general and reproductive health issues, an individual health questionnaire developed by WHO on women’s health and life event, with a section specifically related to women’s general and reproductive health were used.

Quantitative tool were also used through structured questionnaire developed by world health organization (WHO, 2005) on women’s health and life events, in order to study Domestic Violence in post disaster context. The questionnaire was administered
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通过面对面采访。定量工具的细节在相应的健康和家庭暴力章节中讨论。

此外，还收集了与家庭和家庭成员信息、灾害损失和经验相关的信息。

3.4.4 定性方法

为了进一步验证和阐述从定量工具中获得的发现，采用了某些定性方法。定性研究中的自然主义 paradigm 认可存在多种现实、整体调查、研究者和受访者之间的相互影响，以及使用丰富的描述来形成理解的背景（Erlandson et al., 1993）。因为灾害以不可接受的方式挑战社区，并且带有不可预测的后果，定性灾害研究可以捕捉到人类行为在最开放、最现实的时刻（Phillips, 1997）。定性研究的一个积极定义是，它涉及用语言、口语或书面语，人们通过这些语言表达他们存在的事实、他们的思想和感受、他们对别人的评价、他们的需求和愿望，以及他们想要的改变（Joshi et al., 2010:480）。研究中使用的定性方法包括焦点小组讨论、案例研究、叙述和关键 informant 采访。

焦点小组讨论: 焦点小组是一个有指导但开放的讨论，由一个特殊选择的人组成（Krueger, 1988; Morgan, 1988）。讨论的主题是具体的。该技术基于社会群体和群体动力学的概念。讨论生成的数据的性质，Lefevre et al. 指出，焦点小组产生两种类型的数据：人们说的内容，以及参与者在讨论中观察到的行为和互动（笑声、微笑等）。因此，讨论者不仅要注意说什么，还要注意参与者的身体表现或其他反应（Lefevre et al., 2004）。

在本研究中，焦点小组被用来获得对研究有帮助的额外相关信息，并且通过增加研究结果的 validity，从而提高其有效性。
to identify some topics especially related with domestic violence issues that was further explored within the research framework. FGDs included women of age seventeen-fifty nine, educated as well as illiterate, working women as well as house wives. The major points of discussion in the FGDs were men’s behaviour including the controlling behaviour, men’s attitude towards women, special health problems among women and prevalence of domestic violence by identifying different forms of violence in the village. The FGDs as it included older women also, some of which were not part of the survey study, yielded some valuable insight on the focussed topic. It was found during the pilot phase of study that the older women have their say in the family and they are involved in the family decision making process. They were the one who took the initiative during the FGDs and came up with certain revealing dimensions on the concerned topic.

**Case Study:** Case study is an empirical inquiry which investigates a contemporary phenomenon within its real life context, especially when the boundaries between phenomenon and context are not clearly evident (Yin, 2009). Case studies allow the researcher to explore in depth a programme, an event, an activity, a process or one or more individuals (Creswell, 2009; Yin, 2009). Case studies are known as the most relevant strategy to understand complex social phenomena and to address research questions in forms of ‘how’ and ‘why’, which are categorised as more explanatory natured (Creswell, 2009; Yin, 2009). Further, as Yin (2009) states, case studies have a distinct advantage over other strategies when ‘how’ and ‘why’ questions are being asked about a contemporary set of events, over which the investigator has little or no control. This emphasizes the appropriateness of case studies to this particular study since the core research questions to be answered are: “why are women vulnerable in and after disaster situation making them more exposed to health related problems and also to violence and how these vulnerabilities are strengthened within the given socio-cultural context?”

In this study, case-study was taken from the women respondents suffering from domestic violence and also particular health problem after the disaster. Due to the commitment on the part of the researcher to the respondents to not produce the name or cases provided by them directly, the content of the cases was analyzed and later on
themes emerging out of the case studies are discussed. It is the indirect way of producing the case with some useful insight into it. In this context, short narratives were used to support the themes discussed.

**Narratives:** Narrative form of inquiry studies the lives of individuals and provides stories about their lives combined with the views of the researcher in a collaborative narrative (Creswell, 2009). “Narrative is inherently multidisciplinary, and is an extension of the interpretive approaches in social sciences. Narrative lends itself to a qualitative enquiry in order to capture the rich data within stories. Surveys, questionnaires and quantitative analyses of behaviour are not sufficient to capture the complexity of meaning embodied within stories. By using the story metaphor, people create order and construct texts within particular contexts” (Mitchell and Egudo, 2003:2)

Here narratives were used to strengthen the findings obtained from the quantitative data as well as corroborate the cases provided by the respondents on particular issues. Thus the focus was on how individuals or groups make sense of events and actions in their lives through examining the story, and the linguistic and structural properties (Riessman, 1993).

**Key Informant Interviews:** Tapping the key informant is a significant step to ease and accelerate the learning process in the field.

Key informants interviews were conducted with Aanganwadi sevika of the village, primary school teacher working in Aangadwadi, women working with local NGO and a village boy studying in Degree College. All of them had some knowledge about the research objectives, willing to give interview and were able to communicate with me about their own experience during the disaster situation very easily. Key informant interview with the Sevika of Aanganwadi was very fruitful as she was working with the community since fifteen years. She was aware of every minute detail of almost each and every household. Moreover she was the active member and villagers had good faith on her. Her information was really valuable as she was working mainly in the field of health and hygiene, women’s reproductive health, family planning measures and infant and child welfare. She was the witness of the community and even sometimes used to play the role of negotiator between the fighting couples.
Interviews were used in previous studies on domestic violence and disasters (Wilson, Phillips & Neal, 1998; Enarson, 1999; Fothergill, 1999; Jenkins & Phillips, 2008) and provided the benefit of allowing readers to hear the voices of those affected by disasters, rather than relying on the researchers’ interpretations (Houghton, 2010).

Both the quantitative as well as qualitative method was found to be in harmony, substantiating and complementing each others findings while researching the health issues. Women were disclosing their health status without much difficulty. But exploring the issue of domestic violence and its related component was found to be bit difficult with quantitative method, with qualitative method was having a clear edge. The next section will discuss the efficiency of the quantitative method in the process of data collection. In this connection, themes which were more highlighted during the survey, as well as the unexpressed or underreported domain, will be discussed. Further, the more discussed themes through qualitative tools and its advantages over the quantitative one will be highlighted.

3.5 QUALITATIVE VS. QUANTITATIVE ANALYSIS

During the quantitative phase of study, the most discussed and predominantly reflected issues were that which falls in the domain of financial autonomy and attitude towards gender roles. Women were more vocal and readily disclose the information without any hesitation. The reason being, questions related with attitude towards gender roles were not personal in nature rather it was general. They were readily giving their opinion regarding prescriptive and proscriptive behaviour of men and women. Some of the behaviour related to women includes obeying her husband in all circumstances, having sex with her husband even she is not willing to. Women were responding in terms of agree or disagree. In questions concerning men’s attitude towards women like, circumstances under which a husband can hit his wife, husband showing his masculine power and proving that he is supreme; women were not only responding to such questions but also giving their suggestions regarding what is right and wrong. Similarly questions related with financial autonomy were also easily expressed. When one of the respondents was asked that had her husband ever refuses to give her money or taken your earnings against your will, she replied:
‘Whatever we had, now been washed off in the flood. What is left with us is now known to everyone. There is nothing to hide and government has the record of our losses and remaining asset. What anyone will give or take (referring to her husband), when he only has nothing left with him. When he had, he never refused’.

Flood has caused enormous damage and therefore, respondents used to divulge the information and share their grief. With exception of few women, almost all were financially dependent upon their husband or other male members of their family.

Contrary to this, enquiring about respondents’ husband and his controlling behaviour, forms of violence especially sexual was difficult to explore. Although these are very personal and intimate issues and should be expressed in the private setting, in the absence of other family members; it remain hidden. Respondent were either keeping silent, smiling in some cases or giving very ideal answer especially issues related with their husband. Even they vouchsafe for the good conduct of their husbands. Most of the women at first instant were reluctant to accept that their husbands consume alcohol or smoke. Later on reality were revealed on a condition that it shouldn’t be mentioned on the paper. They were more apprehensive regarding their personal relation and issues concerning their family as in case of Indian family, it is more governed by tradition, values and cultural ideology which never permits any one to go against it and member accept this traditional guideline without reacting or contesting against it. Therefore, the equation of role relationship between spouses and their status and associated behaviour is given legitimacy within the cultural domain. Therefore, when asked about the spouses controlling behaviour and their habits of drinking and smoking, women used to legitimize it through their socio-cultural condition. Similar kind of response was obtained, while questioning about the sexual behaviour and sexual violence. Respondents were giving the ideal response rather than the actual.

The contradiction between the ideal, the normative versus the actual, were reflected more in survey method as it provide less space for women to open up (Minakshi and Joshi, 2012a). The response was limited to the given range, which ceases the freedom of the individual. Although respondents were assured of the strict confidential nature of the research, there were few who may not be convinced. So there is always a
chance of *individual bias* while administering the questionnaire. As a result they do not respond individually especially in case of private matter like violence, sex or alcoholism, but were vocal during the FGDs, in the presence of other members of the group. The unfavourable reaction of the individual is intensified when the questionnaire is long and subject trivial (Best and Kahn, 2008). Sometimes sensitive questions, in the questionnaire form like those of sex, methods used for preventing child birth, HIV/AIDS, homosexuality fails to get answers (Ahuja, 2006). This is defined as *social desirability bias* by Bailey (Bailey, 1982:121). The prescriptive norms, telling what one should do as well as the proscriptive norm, telling what one shouldn’t do, prevent a person from giving true responses (Bailey, 1982:121).

Further there is also a possibility of *potential bias* as respondents’ willingness to disclose their violence experiences vary across different socio economic group (Babu and Kar, 2009). In the present study, the educated and working women discloses their violence episode, whereas the uneducated women found it rather hard to be vocal in personal context. During the survey, maximum responses were obtained where more generalised and idealistic answers can be framed. Rest of the issue remained underreported. According to Panda, reported rates of violence may be underestimated mainly due to sensitivity and stigma surrounding DV and the consequent unwillingness on the part of the respondents to divulge the information (Panda, 2008).

Many of such biases and unfavourable reactions were minimized in a group setting during the FGDs and the key informant interviews. In depth interview in presence of the key personality of the village was fruitful as respondent were more open in the presence of someone whom they can trust upon. During FGDs individuality and individual identity both takes a backseat. There is more space for the individual to open up. Within the social space available in group setting, respondents become more confident and even intimate issues are easily discussed. Women involved in the FGDs are not merely a participant; rather they are the social witnesses, which reflect the reality of the society. Individual gains or losses do not count in such situation; instead some important social trends are outlined and analyzed during the FGDs. During the FGDs ways of disclosing the views and opinions by elder women acts as a kind of *social encouragement* for the younger women who later on started to divulge the
information. There was also a kind of *social support* that is feeling of oneness or ‘we’ feeling in group setting. Realisation on the part of women, that they have support of other women of their own community, helped in discussing the issue freely. Further, during the informal group interview, since the elders were not hesitating in disclosing their personal issues, the younger and still younger got a path to follow them in expressing their agonies. So in the group setting *social agreement/consensus* plays a pivotal role in minimizing the cases of underreporting.

Thus, it was found that risk of individual bias; social desirability bias and potential bias were minimized during the qualitative methods of data collection. The social encouragement, social support and social agreement obtained within the social space provided by the qualitative methods have clearly an edge in minimizing the biases and unfavourable reactions emerging during the survey context.

### 3.6 ETHICAL ISSUES IN THE RESEARCH

Ethical issues involve the consequences of researchers’ action during as well as after the disaster and during the research process as well as after the research is formally conducted (Khattri and Joshi, 2011:149). During the crisis time period i.e. disaster researchers’ are intruding into people’s life at one of the worst possible moments when people are deprived of their normal routine life, devoid of their employment, land and other resources that they had earlier (Khattri and Joshi, 2011). During this research, WHO guidelines were followed while conducting research on domestic violence and the study on mental health issues has been performed in accordance to the ethical guidelines of the Declaration of Helsinki 1997.

The WHO guidelines emphasize the importance of ensuring confidentiality and privacy, both as a means to protect the safety of respondents and field staff, and to improve the quality of the data. Researchers have a responsibility to ensure that the research does not lead to the participant suffering further harm and does not further traumatize the participant. Furthermore, interviewers must respect the respondent’s decisions and choices (WHO, 2005). One of such choices encountered during this research was not to reproduce the cases provided by the respondents directly on paper anywhere. So, as mentioned earlier in this thesis, case-studies were not directly
quoted rather than dominant themes and major issues were analyzed. Further, following the WHO guideline for violence research, interviews were held in privacy, in the respondents’ homes, especially in the absence of the male members.

The ethical clearance for the study was obtained from the ethical committee of the Department of Anthropology, University of Delhi.

3.7 SIGNIFICANCE OF THE STUDY

Men and Women reveal vulnerabilities peculiar to their sex when confronted by disaster situation. Dealing with gender issue will have following implications:

i). Documenting the incidence and circumstances of disaster induced violence against women and women’s personal and organizational responses to it, will support better assessment of community capacity and vulnerability.

ii). Addressing health issue from a gender perspective and also research investigating domestic violence will be helpful in addressing the issue of public health in disaster situation.

iii). Promoting gender and social equality to prevent violence.

3.8 LIMITATIONS

The findings of this study should be interpreted in light of certain limitations.

• No data was available regarding the health status and particularly the mental health status of women in the affected area. Previous database was destroyed during the flood.

• Further, in the affected group, only those populations were selected who was displaced for longer period of time from their original home, so findings are localized in nature and cannot be generalized to other affected population too. Population was also heterogeneous in nature.

• Health problems discussed in this study refer to specific condition, which is a ‘disaster’.
• Prevalence of health problems in the affected population may be somewhat overestimated by the respondents, in lieu of getting compensation.

• In cross-section design the evaluative study or follow up study required particularly in the case of mental health was not possible. So possible caseness of PTSD could not be established in that situation.

• Underreporting and non-participation may be high especially in the situation of domestic violence, due to the stigma and the sensitivity of the issue. It may also possible that the issues were personal and trivial for the respondents to discuss with the outsider.

However, these limitations should not overshadow the strengths of the study, which include the use of mixed method approach which ensures the validity and reliability of the data and the assessment of health and violence status by using standard instrument which has cross-cultural adaptability and validity. The strength and role of fieldwork is also a positive aspect of this study.

The next chapter describes in detail about the study area and people.