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## **Women's health in flood affected area: A case study in Loonmati village, Mayong in Morigaon**

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### **Abstract**

Floods are the most significant natural hazard causing immense suffering to a large number of people and damage to properties. Women are particularly vulnerable to natural disasters compared to men because of their involvement in household tasks and the socio-biological constraints. The present study looks at the persistence of the female vulnerabilities, livelihood patterns and the gendered experience of health in the context of a natural disaster especially the disadvantaged, poor, marginalised and destitute women during and after floods in Mayong, a village in Morigaon district. The health and hygiene issues of women are different to that of the men and even among the women it is different according to their age and physical status. The paper is based on Primary Data that have been collected through Non-Participant Observation, Case Study Method and Personal and Telephonic Interview. The results are then analysed and systematically concluded. The findings showed the deplorable and pathetic conditions of the women of different age groups with special reference to health issues and diseases, sanitation, hygiene and so on.

**Keywords-** Flood, Health, Sanitation, Vulnerabilities, Gendered Experience.

### **Introduction**

There is a growing global debate on climate change. According to the Intergovernmental Panel on Climate Change (IPCC) climate change is “a statistically significant variation in either the mean state of the climate change or in its variability, persisting for an extended period. According to the World Disaster Report 2005, there is a worldwide increasing trend in the number of disasters and their economic impacts. Many studies or research focus on social and economic vulnerability, structural vulnerability, climate change and its impact on women, children and minority groups, climate health related issues, food insecurity, etc. (Bohle, et. al. 1994, Akhtar & Kovats,2008, Kartiki, 2011, Denton,2010, Mustafa, 1998 & Jackson, 2012). The major events of climatic change are expected to have an adverse effect on human health. This study provides an interaction between climate change, gender with special reference to women and health. Disasters result from the interaction of social vulnerability and natural hazards, which combine to put certain groups of people at greater risk than others. Without addressing gender issues and issues relating to social vulnerabilities, there cannot be effective disaster risk reduction. Women and girls who account for over half of the two hundred million people are affected annually by natural disasters, are typically at greater risk from natural hazards than men particularly in low income countries and among the poor. Thus the impact of flood on women, children and women headed households are much vulnerable. Some of the impacts are as such: there is loss of homes and safety; sanitary problems; inaccessibility to hygienic water; their role as home-makers and caregivers becomes much harder. There is also an increased exposure to food insecurity, water- borne diseases, child malnutrition, violence and loss or reduction in income generating opportunities.

### **Research questions**

1. What is the nature of women's vulnerability during flood?

2. What are the differential experiences of women especially in context of their health and hygiene at the time of flood?

3. Why women's health is more vulnerable in a natural disaster context? What are the social correlates of that vulnerability in the study area?

4. How do they cope with the risk of flood?

#### **Research objectives**

1. To study the patterns of women's vulnerability during flood in the context of their health and hygiene.

2. To study the impact of flood on the health of different categories of women (age categories, pregnant women, lactating women, elderly women, class categories etc).

3. To study how women cope up with such problems of flood?

#### **Conceptual framework**

*Individual Social Position:* Social position is the position of an individual in a given society and culture. Lois A. Vitt defined "class" as a stratification system that divides a society into a hierarchy of social positions. Health can be related to adult socio-economic position, childhood socio-economic position or both. Individual social position varies with respect to their location of class, caste, religion, age, marital status, migrant status, etc. Understanding of health as well as health seeking behaviour largely depends on the individual social position.

*Health:* Health is actually the physical and mental well being which is not strictly confined to illness of people. In 1974, the World Health Organisation (WHO) defined health as "a state of complete physical, mental and social well being and not merely the absence of disease or infirmity". Health can be analysed under three key domains- Subjective, Functional, and Medical domain (Blaxter, 1989). These domains together enable a comprehensive view of for the examination of health inequalities and mortality (Graham, 2007). The health of an individual or community can be assured by keeping in mind three concepts of health; these are promotive, preventive and curative aspects.

*Patriarchy:* Patriarchy became so pervasive it suppressed women's physical and psychological freedoms. Manusmriti was the base for patriarchy in India. Sylvia Walby forwarded six patriarchal structures that restrict women and help to maintain male domination. These are: Paid Work; Household; Culture; Sexuality; Violence and State. Paid work where the men still dominate the best paid job and women still continued to pay less although they do more part time work. Men in relation to household also try to exploit women by gaining benefits from the women's unpaid works. The culture according to Walby is also important as it has brought a transition from the ancient to modernity. Here the women have access to freedom to almost all the domains of life. Violence is regarded as a power to dominate the women which restricts them from challenging patriarchy (Haralambos, 117).

*Social Determinants of Health:* Social determinants of health are conditions in the environments in which people are born, live, work, learn and age that affect a wide range of health functioning and quality of life outcomes and risks. It includes individual social position, intermediary factors, social norms, values and macro structural policies and programmes. The Commission for Social Determinants of Health (CSDH) tries to improve daily living conditions; tackle the inequitable distribution of the power, money and the resources. Women are seen that due to financial and socio-economic constraints they many a times ignore their health problems (An empirical research conducted in Nalbari, Assam showed that due lack of money and to educate their children they completely ignore their health).

*Socio Economic Status (SES) of Women:* SES is often measured as a combination of education, income and occupation. Research indicates that SES is a key factor in determining the quality of life of women with resulting effects on lives of children and families. A lower SES results a variety of negative health outcomes for every individual and especially women. Lower SES results in mortality rates of women with coronary heart disease (Hemingway, 2007); in lower SES community, 11 percent from among women suffering from breast cancer is found to be in death rate (Du, Fang, & Meyer, 2008).

### Methodology

The study is based on primary and secondary sources data. The Primary Data has been collected through field work using Non- Participant Observation (method whereby the researcher watches the subject of his/her study with their knowledge but without taking an active part in the situation); Case Study Method (method where an investigator studies an individual or small group of individual with an unusual condition for an indebt study); Interview (Personal and Telephonic). An in depth interview was conducted using an unstructured interview guide with open ended questions. The key informants were the women of the village: old, pregnant, lactating and also adolescent girls. They were randomly selected. Secondary Data were collected from books and articles and by using information from web-pages. The data collected is analyzed manually and is being outlined in the analysis section.

### Literature review

A study conducted by *Action Aid*, titled as *Women more vulnerable to violence during floods*, says that women become more vulnerable to violence during the period of natural disasters such as floods. The study revealed that 71 percent of women faced more torturing during flood. Based on the study made by the Action Aid it could be argued that the refugee camps during the floods are not safe and secured for women and girls. It can be seen that taking the advantage of the chaotic situation many ill-behaved people (male especially) try to mentally and physically assault the womenfolk. The article argued that the refugee camps which were established for the victims of flood are not always safe and secured especially for the women section. They have to go through immense state of difficulties such while using bathrooms, during the time of menstruation and also during the night time especially when everyone irrespective of being young, old, children and so on.

The article '*Flood-Induced Vulnerabilities and Problems Encountered by Women in Northern Bangladesh*' by *Abul Kalam Azad, Khondoker Mokaddem Hossain and Mahbuba Nasreen*, shows the problems faced by the women during the heavy flood in Bangladesh. The survey showed that there is scarcity of food during flood and women are the worst sufferers. The number of deaths also increases due to snake bites, water borne diseases, lack of medical facilities and so on. Women faced the problem of menstrual management as there is lack of proper disposal. The women also face the problem while using the bathrooms in refugee camps. These features will be common to the area of study where women heavily faces the problem of menstruation during the rise of water that is, flood. It's indeed really a matter of awe and apathy when women especially have to face the period of menstruation as in normal days only the situation of the women become very difficult and thus the situation get more deplorable when there is flood all over. Although the study focuses on the women in Northern Bangladesh but still such a situation is embraced by every women during the time of flood.

*Teresa Rehman* in her article '*Sanitation in the time of floods*' depicts the true story of Salma Begum's pathetic condition during the outbreak of flood. She is a frail woman in Kurukani village near Napaam, Sonitpur district. Through her statement it could be analysed that women especially faces the problem of defecation during flood. Many a time women had face dire health consequences. Instances like attachment of leech to their buttocks and also entering of leech into the body through private parts during defecating create serious health issues. Again the inability of the old people to move from places to places leads to the disposal of wastes in to water itself. The study also revealed that in order to control defecation the women are the primary group who starve themselves. These issues are common pictures which will be also found in every field where the women face a deplorable condition during flood.

In the chapter seven (7), '*Flood, Socio-Economic Impediments and Impacts on Gender Relations*' of the thesis '*Flood and Socio-Economic Vulnerability: New Challenges in Women's Lives in Northern Pakistan*', by *Sumaira Saleem*, focuses on the gendered vulnerabilities faced during flood of 2010. It shows that women's are more affected by flood, although the counter-part, that is, the menfolk is equally affected. His empirical study conducted among the Pathan group expressed different views regarding the vulnerable situation every individual faces during the period of flood. He articulated the responses of his different respondents in order to throw light upon the pitiful scenario of the problems which the flood brings along with it.

The study focuses that women are the backbone of the house. They are the one who in the real sense manages and make the home a place to live although the financial support is provided the men folk. The women are the one who are more vulnerably affected by the flood waters. It is because it is seen that the flood water swipes away everything of the house. It is mainly the woman who beautifully arranges each and every small or big thing and they also very carefully store the necessities and are very much conscious and respect the properties. But when flood water undertakes everything then they are the one who faces the severe pain and they are heartbroken as they spend almost ample amount of time in managing and building the home as an abode of peace. It also argues that the men folk goes out to collect the necessary stuffs and are thus physically bold and strong. But this does not mean that the men are not vulnerable to flood rather they also experience a lot of difficulties. But the women are weak physically and their hearts are also weak so they are most vulnerable to flood. They are both physically and psychologically and get easily affected by infectious diseases. They face a major problem of shame and disrespectful as they have to sleep in public places. Thus it can be rightly argued that both men and women face the atrocities of devastating flood. They face vulnerability of climate change on the basis of powerlessness. Thus, the marginal social position of the women makes the women folk the vulnerable to the flood.

*Sepali Kottegoda*, in her paper '*In the Aftermath of the Tsunami Disaster: Gender Identities in Sri Lanka*', vividly depicts the impact of Tsunami with a special importance on gender roles on people's survival. She also observes the gender role from two aspects: Firstly, how gender is seen during the actual disaster and aftermath of rescue and relief activities. Secondly, she observes the incorporation of gender in policy and programme responses. Tsunami is such a disaster that engulfs within a minute everything. Starting from human lives to every minute property it mercilessly sweeps away. The population face the pathetic vulnerable situation of tsunami when there is an outbreak of it. There is a huge destruction of homes and livelihoods. There is a breakdown in delivering medical facilities, education and also shelters. Although it is re-achievable to overcome this destruction but the major and terrifying situation is the loss of the loved ones, friends and neighbours and many other closed kin and knit. This creates a loud human cry in the region which is silent in audio but can only be heard by the one who faces it. All these impacts is seen to be largely fall upon the women and thus leading the children and women to reserved a rate in case of victims to such a horrifying Tsunami. Loss of married and motherly women leaves behind her husband and the children. Thus the widower gets engaged to second marriage where the step-mother inflicts ill treatment upon her step-children. She also focused on the aspect that the deprivation of equal access to land ownership is another important factor why women remain vulnerable to eviction from the home and also to domestic violence. The over emphasis on male focused economic activities had lead to a negligence to age old economic activities upon which the women depended. Thus the analysis of this paper is that although the Government has made different gender based policies for the welfare of the women but still they are not on the track of all round development. They are lacking socio-economic equality and thus this marginality found in every parts of the world leads to a more vulnerable situation of the women during terrific and horrified natural disasters and calamities. It can be argued that if women especially do not receive timely warnings and other information about the risks or hazards and if their mobility is being restricted they become more prone to vulnerability.

In the chapter '*Nutrition and Discrimination*' of the book *Women and Kinship* by *Leela Dube*, the discrimination a girl child or a woman face especially in the context of the food. Thus, nutrition was regarded as the base of gender differentiation. *Leela Dube* expressed her own experience where her grandmother gave more sweets to her brother. The grandmother said to her that being a girl she should eat less and swallow sorrow. She discussed about the tradition of drinking milk from the udders of cows and buffaloes in Maharashtra where the boy gets the privilege of it. Women do not have an access to milk but in certain circumstances such as during lactation, illness or pregnancy they can afford it. It was also seen that a woman with a sound economic that is who earn wage and does productive work are not sufferers of deprivation of food. In South Asia the women cannot take their meals with their male counterparts. They have to serve the women and the men first. She beautifully shows the contrast between two regions that is South Asia and South East Asia. In South East Asia the kitchen is in

domain of the women. There is no discrimination in distributing food between their male and female children. The food is sometimes eaten and purchased outside the homes, that is, in road stalls and others. Here the woman is not being discriminated or dominated in reference to consumption of food. Thus, the men- women dichotomy in different regions is depicted through one of the basic necessities of life that is food. Food being the major aspect of a healthy life becomes a domain of women's vulnerability. This article would help the study to get insight on how women are being socialised to the prevailing nature of the society and where the woman accepted it as their duty. But they failed to identify their vulnerability and their domination which make them a marginalised section. This marginality can be seen in the disaster prone area also.

Thus, the reviews of the articles, depicts the different dimensions of how a women especially becomes the victim of disasters like flood. It shows the vulnerability of women in reference to food, clothes, sanitation and drinking water and so on. Both men and women are equally affected by the devastating impact of flood but due to the social marginality as constructed the women become the prone victim of it. Some of the major issues of the articles which can be focused on the study such as the food, sanitation and hygiene and the vulnerability and the related issues of deprivation and discrimination are of outmost important. It also focuses on the pre and post floods period; its impact and the responsibilities handled by the women. The socio-economic and the politico cultural domains are the decisive factors that play an important role in the aspect of women's vulnerability during flood.

#### **Data analysis and interpretation**

The study on Women's Health in Flood Affected Area was conducted to have an insight of the situations the women face during heavy downpour leading to massive destructive flood. All the objectives of the study are analyzed and interpreted. A detailed discussion supported with empirical facts about the research objectives around which the whole study revolves is presented. The data was collected through few data collection methods where the primary way was visiting the field and then building up a rapport with people of the village. Later, case study method was used to get an in depth grasp of the study. There were certain objectives which worked as the yardstick for carrying out the entire research. It tried to inquire into the vulnerability a women faces due to the climate change and the related differences they face in context of being a 'WOMAN'. The study tried to focus on the aspect of relief and support from both government and non-government agents during one of the most horrifying natural calamities known as Flood. Marigaon experienced devastating floods in 1988. A widespread damage was caused to agriculture, cattle population, residential property and several human lives were lost. Virtually all the roads went under water for several days, communication between Guwahati and Morigaon was totally disrupted. Many wooden bridges and built roads were washed away by the turbulent current of floods and also the bungalows were in knee deep water. Tin sheds and country boats were provided to flood affected people for their refuge and mobility.

##### *1. Women's vulnerability during flood*

The study examines flood induced vulnerabilities in Loonmati village of the Mayong in Morigaon district. Poor and disadvantaged women are more vulnerable to disaster than men. Difficulties are experienced in finding adequate food, shelter; clean water and fuel for cooking as well as problems in maintain personal hygiene and sanitation prevent women from performing their usual roles at home. The women of the village and also the key informant emphasized that in the pre flood stage the women perform more than the men in terms of time spending and type of work. A woman of age 30 said:

'Flood overburdened us with responsibilities, starting from food security, management of clothes and also folding off all such properties which we could protect. And our husbands only try to keep us in a safe place so they shift us to a safe hill rocks and then goes out in search of food and other stuffs'.

Many girls and women responded that they suffered from physical injuries and are often evicted from their place of dwelling due to flood. A girl of 14 years of age during flood slipped near their tube well and she injured her leg seriously. But as there was lack of medical facilities she was treated at home with traditional practises. Later when she went to Primary Health Centre she was given two months bed rest as she got a fracture.

During flood the mobility of the women are restricted. Women stay back at home and take care of the family and young children. Women of 35 years of age working an Angaanwadi worker pointed out that the period of rainy season and the period of flood is almost the same but the difference is that the flood brings with it too much of danger and devastating effect. They could not reach to their place of destination at time or even at some time they have to cancel their works and activities. This is because they have to look after their family, elderly in-laws and children. Women are also affected by flood due to their psychological stresses such as the worries of their members being drowning, getting sick, or being bitten by poisonous snakes or insects. It is to note the words of every woman who said:

‘When flood water breaks down the burden heavily falls upon us. We have to carry out all the works especially the household chores. But the same responsibilities with more burden falls upon us when the flood water begins to dry up. The dry water leaves behind a very foul and stinking smell which becomes very difficult for us to rearrange everything and make it a place to live in’.

Thus, from the table (A), we can observe that although during the flood the men are heads more responsibilities than the women, but during the pre and post flood women are burdened with more responsibilities starting from looking after family, children, cattle and other properties and after the flood recedes they are again entrusted with the responsibility of arranging everything which were destructed by the flood.

The table (B) shows the different workloads a woman has to carry out before the outbreak of flood, during and after the flood. There is high and low level of concern in different aspects of lives during the different stages of flood. Thus, both the tables (A) and (B) show that women’s are the vulnerable section who faces the major problems during flood.

## *2. Women are mainly vulnerable to disaster like flood on the basis of the following dimensions*

### *2.1 Food*

A woman of 27 years said:

‘We women are the one who should first see whether our family members’ hunger is satisfied or not. Whatever is the amount is cooked we first served it to our husband and children. Only after that if there is any leftover then we try to satisfy our hunger. But many a time I had gone off to bed with a hungry stomach’.

The insecurity of food related to climate change is likely to increase the risk for women’s nutrition. It is to be noted that the women’s diet is not only crucial to their own health and hygiene but also for the foetus developing during pregnancy and also the infant developing during breast-feeding. A lactating woman an age of 26 said that there is always a human cry for the lack of unavailability of food especially during the time of disaster that is flood. Proper nutritional food is absent and whatever was available in small amount was needed to share with the family members. The eatables in the backyard also get eroded away with flood water.

### *2.2 Clothes*

Flood is such a disaster which sweeps away with it everything even the shyness of the womenfolk especially. There is lack of clothes through which one can hide their bodies. The women of the village argued that sometime they have to spend two three days with the same attire and sometime with wet clothes. This further leads to different illness and infections. The infants and also the weak and bed-ridden elderly people do their defecation in their clothes. This creates a very stinking smell as they do not get enough clothes to change nor place to soak them. Thus this creates a dishabile place where living becomes quite impossible but still they have to only for the sustenance. The adolescents also reported that during flood the menstruation day come like a curse upon them. There are no sufficient clothes to be used and the repeated use of the same dirty and torn clothes creates immense stinking and infection within their delicate body organs. Sometimes the stains get stick to their clothes and then it become a great problem for them as they have to stay communally with their male counterparts. This seriously affects the dignity and the self respect of the womenfolk. The key respondent shared a small incident which he encountered in a flood refugee camp.

A small girl of 15 years of age was wearing an inner garment and a 'gamusha'<sup>1</sup>, to cover her upper part of the body. Her entire house got destructed by the flood water and nothing could be saved nor her mother. Her father was alive but the only thing he could save was only a 'dhoti'. When the relief camp was distributing food and other relief then they had nothing to accept the help so the father stretched out his hands towards his daughter. The daughter got confused but to satisfy their needs she just took off the gamusha and handed to her father. Out of shy and shame she went to an extreme corner and tried to hide herself with her hands.

### 2.3. Shelter

When protection gets destroyed by the flood water every individual become open to be attacked by danger. A woman of age 27 of the village who lost her son during flood narrated a story:

'I along with my two years old baby and my husband was sleeping in the rooftops at night. There was a huge breakout of flood water and everywhere there certain aquatic animals such as turtles and big fishes and insects and so on. During night it's really not safe. At midnight hour my husband heard some sound in water, as if some big animal has been crippling and crawling in water. My husband thought it to be something dangerous he took a pointed bamboo stick and just stroke it into the water. At a few second the sound vanished. He again stroked the bamboo stick in and pulled out the animal but unfortunately, it was our child which was stroke off by the bamboo. Our child was dead'.

The victims of flood are given shelter in refugee camps. Refugee camps are place where everyone lives unanimously with everyone. Cattles and other domesticated animals also live together with human beings in the camps. The male counterparts try to take advantage of the situation but still such responses were not found in the field. There were no separate rooms for women and men. One of an elderly lady of age 75 said that at home they never eat or sleep with their daughter-in – laws. Not even they sit together. But in refugee camp all have to sleep together. There is no proper place for the people to cook. Cooking was to be done through the help of woods and fuels but due to water the woods and fuels become damp, but still they manage to cook. They prepare food in Chulha<sup>2</sup>. Chulla creates serious health problems especially respiratory problems.

### 2.4 Water and sanitation

Disasters are considered as a public health hazard, because they may create unexpected infections, illness and the most dangerous is the death, in the community in which it occurs. The women in the village resorted to tube wells and wells for collecting water, but during flood these wells become over flooded and hence source of water collection becomes very difficult. There is no pure water to consume. But in order to quest their thirst they drink this unsafe and unhygienic water. The refugee camps provide the village with safe and purified water but it is not enough for the entire population to quest their thirst. It can also be observed that defecation during flood is also an important issue. There is lack of proper sanitation. Men used to defecate freely in jungles or restricted areas but it was difficult for the women folk. The women of the villages said that it is very difficult for them to defecate during daytime as they are all surrounded by men and other elderly people. And night itself is the enemy of everyone, so defecation at night also becomes difficult. But at last keeping aside their veil of shame, they defecate either in water or in jungles. Sometimes a 'kuccha latrine'<sup>3</sup> is used by it makes the environment more unsanitary in nature. While defecating litches and other insects get stuck to their bodies and also to their personal organs. Thus, to control their defecation the women tries to skip their meals. By controlling their defecation it leads to back pain and other infections. Another major problem which

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<sup>1</sup> Gamusha is a symbol of Assamese culture which is similar to a towel. 'Ga' means body and 'musha' means to wipe. It is also known as Bihuwaan.

<sup>2</sup> Chulha is a cooking stove mainly used by women in rural areas to cook food.

<sup>3</sup> Kuccha latrine also known as pit toilets are those where a hole is dug and then bounded by either clothes or other materials such as bamboos and then people use it for defecation. Such a toilet is unhygienic and not eco friendly.

the women face is the period of menstruation. The women unable to find a proper place to dispose, they just use the same stinking cloth for more than one day.

### *2.5 Rituals and beliefs*

Starting from birth till death, every activity is attached to some beliefs and practice. The people tried to follow them in any of the circumstances and situations. In case a birth of a child the mother is not allowed to perform any of the works in the house neither she is touched by anyone. There are also certain practices practised when menstruation happens. As they are treated to be separated so when in roof tops they take shelter in order to safe own selves from the water, people at that moment also practice those beliefs. There in one side of the roof resides the whole family and on the other side the menstruated woman. The adolescent girls said that at night they get scared as they are all alone. Again when someone dies certain rituals are to be carried out but due flood water such rituals has to be delayed. Later on all this had to be beheaded by the woman. One of the respondents narrated the story of her pitiful state when she happened to lose her child due to her mother in law's superstitious beliefs:

'I was feeling a labour pain but as there was too much of water so I was trying to keep the pain only to me without sharing with anyone. But when the pain became more serious I shared with my husband. At that time we had the facility of boat ambulance so my husband went out to bring the ambulance. But my mother in law did not allow her son to go. She believed that going out in such a bad weather is not a good sign and also she did not believed in modern medicine and treatment so she rather advised him to call the elderly lady of the village to look into the matter. As the immediate treatment was not been given to me the pain became severe and the situation was getting deteriorated. After hours of waiting the old lady came and examined me. The lady said that due delay in getting the treatment the child died in the mother's womb'

### *2.6 Education*

During flood schools are declared closed as going to schools in such a condition is next to impossible. Sometime temporary boats are provided but those are not secured. There have been reports of death of child while coming from schools in such a boat. The girls are the worst sufferers of flood in case of education. In order to assist their mothers they had to stay back and struggle to get rid of the pathetic and deplorable situation created by the devastating flood. This leads to higher rates of dropouts among the girl child the women or the girls who are more vulnerable. It was reported by respondent that due to lack of education the girl child in their later future face different threats posed by this modern competition world.

### *3. Impact of flood upon different categories of people*

Poor living conditions and institutional responses during floods causes immense sufferings for women especially to their sexual and reproductive health. The respondents responded that the disaster refugee camps lack separate rooms for male and women, cooking place and also separate toilets for women. Some remote interior areas women are in a more deplorable condition where the medical could not reach out the victims of disaster. In the absence of proper health care facilities they resort to traditional unhygienic practices for instance using of torn and dirty clothes during menstruation. Thus the women in a flood affected area suffer from menstruation problems, urinary infections, waist pain, complications related to pregnancy, and also malnutrition during disaster. A 25 years pregnant lady said:

'As soon as flood water enters the area, it becomes difficult to walk in roads as till half of the knee is under water and in such condition no vehicles could be easily moved from one place to another. A cycle is to some extent easy to traverse a small distance but for me travelling in a cycle was quite risky and was also not possible. As such I had to miss my third trimester'. To have a detail analysis of the impact of flood upon different categories or stages of women are supported by few case studies.

### *3.1. Case studies*

#### *(a). Adolescent girls*

Adolescent is the process of developing from a child into an adult. It is the period of transitional stage of physical and psychological human development that generally occurs during the period from puberty to legal adulthood. Twelve (12) adolescents were interviewed.

The girls that were interviewed were between the 13 to 19 years of age. They opined that right from their birth the only major disastrous calamity which they have experienced is flood. Flood for them is like a nightmare. Many a time they saw that flood water swept away everything and only left the memories of horrifying impacts upon their social as well as individual life. Regarding drinking water they opined that it is very scarce and gets contaminated which become impossible to drink. During flood the wells also become a home for reptiles and amphibians such as snakes, frogs and others. It becomes a diseases-prone atmosphere.

Adolescents mainly faced the major problem during menstruation. During flood they face the dual atrocities inflicted upon them by nature. Starting from lack of food, cloths, lack of proper shelter and others, makes the life of an adolescent a total mess. Since they are unaware of sanitary pads so they use clothes during those days but due to lack of disposal area and lack of water to wash and soak so they just used it more than one day. There is scare of wearing clothes but when stains get attached to their clothes then it becomes a very awkward situation leading to a shameful moment. Thus, in this context, they said that being a girl they have a veil of shyness but this veil gets blown up due to their disadvantaged position during flood.

They said that they go to jungle for defecation. While going there sometimes certain insects like leeches get attacked to their back. After defecation they use mud to clean their hands although soaps are provided, it is in lesser quantity. This although creates an unhygienic atmosphere but still they have to resort to it. They also agreed unanimously although in lesser degree that sometimes the boy gets more facilities than a girl. For instance, the boys are first served food.

Again, during the post-flood phase the girls are again the highest in the scale of handling all the responsibilities. Their education gets disturbed, there are drop outs in order to stay back and help their mothers in reconstructing and arranging the mess which the flood water had created.

From the analysis of the adolescents' response it is found that it is mainly the biological construct of the women which only differentiated them from the male but it is mainly the social construct which discriminate them and make them a marginal section of the society. Many people believe in the maxim 'kam khao, gham khao', which means that a girl should learn to eat less and to swallow suffering.

#### *(b). Pregnant women*

After completing her adolescent stage the girl enters into the stage of womanhood. That is they get married. In Vedic text it is said that a woman can attain moksha or purification only by giving birth to a child. All her sweetness turns into bitterness when her pregnancy period is raged with flood. The experience of eight (8) pregnant women was being studied. The study was conducted among the women of round 22-30 years of age.

The women opined that the major problem was the period of delivery. One of the respondents said that as it was not possible to have an easy access to medical facilities during flood. Thus, in a boat, which was like a raft made of bamboo, she gave a birth to her child. They argued that the roads become so muddy that the ambulances cannot move from one place to another. The delivery in refugee camp was also not appreciable. There was no privacy. The woman set laid out in the camp bounded in a circular form by the other woman in the camp and in the absence proper precautions the delivery was been conducted. Thus as a result many of them could not visit the ante natal trimesters.

During this time a pregnant mother should eat nutritional food, must undergo the necessary treatment and maintain all the hygiene and the necessary things to be done. But all these facilities are absent during flood. And in many a time the pregnant mother also had to look after her child if she had been pregnant for the second time.

During this time the whole atmosphere becomes very unhygienic and also unsanitary which is not suitable for breathing. They used to defecate in open jungles or sometime in the running flood water. The same water is being used for washing and doing other household chores and sometime even used for drinking facilities. All these lack of proper pure, secure hygienic condition leads to a delivery of a very unhealthy child. One of the respondents argued that due to the lack of proper care and necessities she gave birth to very weak and fragile baby. From the analysis it can be argued that the flood brings with it a lot of curses for the entire population but it heavily falls upon the womenfolk. This creates a wide distinction and marks vulnerability of the women.

*(c) Lactating women*

Lactation is the stage during the latter part of pregnancy when the breast produces colostrum which produces a thick yellowish fluid. It is an important duty of a mother. Adequate consumption of pulses, vegetables and milk must be ensured for proper lactation. A proportion of five (5) out of the total population was taken into account. The respondents were from the age group of 22-26 years. Some of them were widow.

The lactating mother does not get enough nutritional food as a result the child's health gets affected. There is scarcity of food and safe drinking water. There is also no proper place for the mother to sleep and take rest. The mothers argued that they feel tired and a huge workload makes them weak so they need a sound sleep but in refugee camp a sound sleep is replaced by sleepless nights. It always keeps on arising a fear of being drowned or losing of their dear ones.

She also could not avail the necessary medical treatment that is needed. One of the respondent reported that due to lack of nutrition food the mother became very weak and as a result sufficient milk was not been able to lactated from the mother's breast as such the child had to be fed with cow's milk in a lesser amount so that the child's health does not get affected. The women also suffered from proper defecation process and as a result certain internal complications were raised in their latter life.

Thus, from the report it can be analysed that flood brings with the tools of oppression through which severe pain is inflicted upon the women. During the period of breast feeding the women need to have good diet. But everything gets destroyed due to the over rising of flood water. The women could not get enough protein and as a result the child that is born happened to be weak and sometimes gets prone to diseases.

*(d) Elderly old women*

The last stage of human life is the old age. During this period an old person becomes helpless so they needed to be taken care as a child at their infancy is being taken care. The elderly people become very weak to move from one place to another. Five (5) women in this category were under the age group of between 60-85 years. The women opined that during their stage they required some nutritional and healthy diet. But such facility is a myth during flood. The oldest woman of 75 years said that they had a vegetable garden at their backyard but due to flood everything got destroyed.

During flood they face a serious threat. Many old people unable to rescue themselves from the water when enter into their homes they get drowned. One such instance was the death of an old woman who was brought from her home by the neighbours and was placed in a school classroom where water did not entered. After keeping the old lady there the people went to rescue others. Very soon the flood water engulfed the whole school premise and the old woman also got drowned.

Again the old people could not go out for defecation as they become very weak so they defecate in beds or within the room where they are provided shelter. As they become physically weak they easily get struck with different diseases. The old people although is not a burden in normal situation but during flood it becomes a burden in the family. An old lady of age 83 said:

'I am now at the door of death. Being a widow and also being too old and weak I feel like I am a burden in my family but this feeling gets intensified when the village gets ridden with flood. So I prefer to die in such a situation rather being a

burden to my family'. This study on old woman definitely shows the deplorable condition and the mental trauma which every old woman especially goes through.

### **Findings**

From the analysis and interpretation of data, the following findings on the women's health in flood affected area.

Firstly, in case of food and water, there is inaccessibility of safe and nutritional food. Being in constant contact with the flood water as women have to carry out more responsibilities before and after flood [according to Table (A)] so women are more prone to water borne diseases. The women every time first try to satisfy the hunger of other members in the family and only after that they think about themselves. The pregnant women are also devoid of the nutritional food they needed during their pregnancy stage of life. There is lack of proper clothes and as a result they have to use the same clothes and there are insufficient sources to wash and soak their clothes so that they can further use for their purpose. During their menstruation the women are in a very deplorable state with lack of every necessary need. Again in a refugee camp shelter, women are like an open treasury where they can be under the vulture's eye that is under the crooked grasp of the men. Although such instances were not reported because they said that flood is such a period when everyone is in a state of tension, fear and distress. Everyone lives together whether it is domesticated cattle or people. Although certain young youths (boys) just try to tease or bully their counterpart out of fun but at times of need everyone stand together in hand in hand. The diseases and psychological distress at the time of different phases of flood is also more among the womenfolk. They are always in constant fear of losing their dear ones, their kins and knits and others.

Secondly, the respondents agreed that it is the health of the women which is mainly prone to the disaster. They try to protect their health but they ultimately fall prey to the dangers of the disaster. This is because they head most of the responsibilities before and after flood. The women are less conscious towards their health. They always put themselves at back and look into the interest of their male members. This is reflected when the women remains hungry and satisfy the hunger of the other members especially of the males.

Thirdly, one of the findings of the study revolves around the injuries and of growth diseases in flood prone area. Flood related injuries may occur as the individuals try to remove themselves, their family or valued possessions from danger. Injuries also occur when they clean up their homes after the flood water gets dried up. It is found that during flood there is an oral transmission of diseases especially where there is inaccessibility to clean and safe drinking water and also there is lack of proper sanitation system.

Fourthly, the study found out that the women were tried to give prior knowledge regarding their safety and security during flood. It seems that the women are very ignorant and unaware of the prevailing situation and hence they could not cope up with the problems. They are given awareness programme and focused group discussions are held by different NGOs working for the welfare the women folk.

Fifthly, the study also focused on the role of governmental and non-governmental agencies that came forward to help the victims flood ridden society. There is a difference between the relief provided by the governmental and non-governmental agencies. The governmental agencies provide low quality of rice and some provide water to them. It is found that the real amount which is being sanctioned to association for the people of the village do not reach to them. There are some middle men or brokers who appropriate the fund leading to a corruption within the association. But the NGOs who come forward are genuine in their effort. They provide good quality of rice, pulses, biscuits, mineral water bottles, clothes and others. There is no corruption within.

Thus, in crux the findings of the study are:

- I. The flood is a natural disaster that brings down huge losses to the entire human race. But from the findings of the study it is seen that women are more vulnerable especially in context to health and hygiene. The women mainly face problem in their access to nutritional and hygienic food, clean and safe water and sanitation.

- II. The findings also depicted that the impact of flood felt upon women of different categories with different degree. That is, the experience of an adolescent girl is different from that of an old woman. For instance, the intake of food and defecation of a pregnant woman is different from that of an adolescent.
- III. The study also found that flood creates both physical and psychological threat to women in special. Injuries, diseases and fear were common among every victims of the flood.
- IV. The study partly focusing on the relief provided by the Governmental and Non-Governmental Organisations presented that the NGOs were mainly working hard to uplift the victims of the people.

### Conclusion

The study conducted in the Loonmati village under the topic women's health in flood affected area tried to have a holistic approach of the study, although such a study was not possible due to certain limitations. The study highlighted some of the important aspects of women's health and their related problems with special reference to flood. During flood the women faces the problem due to scarce of food, clothes, shelter, and safe drinking water and due to lack of proper sanitation system. After the flood water dries up it is not easy for the depressed flood victims to decide from where they could start and also could not identify how they could cope up with the devastating impacts inflicted upon the entire population and especially upon the women. The relief provided to them were also not sufficient. The findings from the case studies are more honest in the sense there is less contradiction within their response. The patterns of a patriarchal setup reveal itself through the different case studies. This is a hierarchical structure where the male is all in all and the female tries her heart and soul to satisfy the males irrespective of the prevailing disadvantageous position of their soul, body and mind. Hence, to conclude, this is reflective of a society that has a homogenous model of gender identity and that considers different gender practices as "deviance resulting from inadequate or aberrant socialization" (Connell, 2003).

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**Tables***Table (A). Tabular representation of women's responsibilities, concern and work loads during the phases of flood*

Flooding phase	Responsibilities of women (w) vs men (m)
Pre	W>M
During	W<M
Post	W>M

*Note:* < or > is used in terms of more times spent for each activity and many activities done in a day or a month by man and woman but not by income.

*Table (B). Key concerns and work loads of women*

Pre-flood	level	During flood	level	Post-flood	level
Food security		Life saving skills		Food security	
Assets and belongings		Health and hygiene		Household debts	
Energy		Safety and security		Psychological stresses	
Early warning system		Privacy		More intensive work	
More intensive works (including productive works)		Difficult to travel		Including productive works	

*Note:* "H" for High and "L" for Low level of concern and workload of woman.

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