Symposium on Medical Anthropology and Disaster Management organized as Plenary session in 2\textsuperscript{nd} Society for Indian Medical Anthropology Conference, Kannada University, Hampi, India

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P. Khattri
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P. C. Joshi
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About MICRODIS

MICRODIS is an Integrated Project funded under the EU Sixth Framework Programme – Thematic Priority 6.3 Global Change and Ecosystems (Contract number GOCE-CT-2007-036877).

Why create MICRODIS?

Disaster losses are increasing with great consequence to the survival, dignity and livelihoods of individuals and communities, particularly of the poor in developed and less developed countries. Disaster risk arises when hazards interact with physical, social, economic and environmental vulnerabilities. In the past two decades, more than 200 million people have been affected, on average, every year by these extreme events.

Environmentally unsound practices, global environmental changes, population growth, urbanisation, social injustice, poverty, conflicts, and short-term economic visions are producing these vulnerable societies. This takes on particular urgency in the face of long-term risks brought about by climate change, and goes beyond environmental degradation or the mismanagement of natural resources.

There is now international acknowledgment that efforts to reduce disaster risks must be systematically integrated into policies, plans and programmes for sustainable development and poverty reduction. The MICRODIS project locates itself within this above framework.

What are the Objectives and Goals of MICRODIS?

MICRODIS is a project with the overall goal to strengthen preparedness, mitigation and prevention strategies in order to reduce the health, social and economic impacts of extreme events on communities.

Broad Objectives

- To strengthen the scientific and empirical foundation on the relationship between extreme events and their health, social and economic impacts.
- To develop and integrate concepts, method, tools and databases towards a common global approach.
- To improve human resources and coping capacity in Asia and Europe though training and knowledge sharing.

For example, the MICRODIS project will, among others, specifically aim at:

- developing an integrated impact methodology,
- establishing an evidence-base of primary field research through surveys,
- increasing the coverage accuracy and resolution of global disaster data.
Where will MICRODIS operate?

The two regions which form the focus of the MICRODIS project are:

1. European Union, associated countries and new accession states: Belgium, France, Finland, Germany, the Netherlands, Norway, the United Kingdom.
2. South and Southeast Asia regions: India, Indonesia, the Philippines and Vietnam.

These regions have been selected based on their high frequency of extreme events and the impact on affected communities.

What Extreme Events will MICRODIS focus on?

There are twelve broad and twenty-three sub-groups of distinct extreme events, ranging from chronic slow onset phenomena to acute rapid onset ones. The health and socio-economic impact implications differ vastly between these twenty three types and addressing all of these would compromise the quality and applicability of the project results, risking over-generalisation.

In both Asia and the European Union, three types of extreme events, namely foods, earthquakes, and windstorms, account for nearly seventy-five percent of the occurrence of all extreme events. The MICRODIS project will concentrate on these three phenomena.

Partners

**European Union and Associated Countries**

- Belgium  
  Université catholique de Louvain
- Finland  
  Finnish Institute of Occupational Health
- France  
  University of Paris – Sorbonne (FERURBAT)
- Germany  
  EVAPLAN – University of Heidelberg
- Netherlands  
  HealthNet International
- Norway  
  SWECO GRONER
- U.K.  
  University of Greenwich
- U.K.  
  University of Northumbria
- U.S.A.  
  United Nations Office for the Coordination of Humanitarian Affairs

**South and Southeast Asian Partners**

- India  
  Jadavpur University
- India  
  Voluntary Health Association of India
- India  
  University of Delhi
- Indonesia  
  University of Indonesia
- Philippines  
  Citizens’ Disaster Response Center
- Philippines  
  Xavier University
- Vietnam Hanoi  
  School of Public Health
Medical anthropology is traditionally concerned with studying the health of the marginalized populations from social, cultural, biological and environmental perspectives. In the last decade, there has been addition of investigating the pain, trauma and sufferings of the war ravaged and conflict laden humanity. The subject matter of disasters would also fall with in the ambit of medical anthropology since disasters become disaster only when the capacity to influence human beings is adds to these, otherwise it will remain a hazard. In the current times, climate change has triggered the frequency of natural disasters manifold and one of the most obvious consequences of this change is on human health. Researchers are becoming more interested in knowing the potential mechanisms by which any natural disaster could influence health. The most obvious impact of disaster on human health are destruction of healthcare system, physical injury, increased exposure to disease pathogens, nutritional deficiencies caused by food shortages, effect on mental health due to loss, disruption and displacement (Hales et al., 2003; Warning and Brown, 2005; Street et al., 2005; Manuel, 2006). The adverse effect of disasters on human health is also dependent on the socio-economic status of the community and the effective adaptation measures.

Most of the studies (Noji, 1997; Menne and Bertollini, 2000; hales et al., 2003; Aheren et al., 2005; and Scultz et al., 2005) dealing with health impacts of disaster basically looked into disease from clinically perspective (McEllroy and Townsend, 1996). The biomedical concept of disease generally ignores the socio-cultural aspect of health. At the same time, sociologists and medical anthropologists place much emphasis on analyzing the individual and collective interpretations of health and ill health. Medical anthropology basically deals with social, cultural, biological and environment factors that contribute directly and indirectly to the well being and health. Here, emphasis is not given merely on clinically aspect but also on capacity
to deal with changes and challenges put forward by environment (McElroy and Townsend, 1996; Young, 2005). For medical anthropologists health can be best measured through population’s capacity to adapt to its environment. Medical anthropologist’s central concern is adaptation. In recent years this concept is used as both goal and process in relation to climate change and health (Few, 2006). Studies done by anthropologists on the relatively isolated populations, give insight into the traditional adaptive coping strategies to deal with disasters such as flood, drought, conflict, earthquake, and disease (Turton 1977, Torry 1978a, Zaman 1989, Tobin and Whiteford 2002). From medical anthropological perspective, environment both physical and social plays an important role in disposing the society to risk of disaster. Environmental changes severely impact the livelihood pattern and also force the social change. These disaster induced changes in economy and society in turn has effect on the disease pathogen distribution and coping capacity. In medical anthropology the main emphasis is given on how people adapt to the external pressures. The concept of adaptation to the health impacts of disasters lies in strengthening the coping capacity through training, education and planning to mitigate the disaster risks. There is a need to strengthen the public health in the wake of disaster as the most appropriate adaptive strategy. Besides, there is also a need to understand the social processes which contribute to the vulnerability and the means through which people or society as a whole cope and adapt to the environmental threat.

Anthropologists have also become interested in the disaster related socio-psychological trauma that could have effects on individual which gets expressed through cultural constructs (Maida et al. 1989; Bode 1989, Oliver-Smith 1992; Palinkas et al. 1993; Young 1997, Henry 2000a). For instance, 1985 landslide disaster in Puerto Rico revealed the popular illness category “ataque de nervios”. It is seen as a significant feature which highlights the importance of pre-disaster cultural knowledge for appropriate assistance responses during disasters (Oliver-Smith, 1996). The medical anthropologists’ main concern here is to understand the disaster related trauma through local and culturally defined idioms (Coker, 2004).
The perception of disaster and its impact on health, analysis of health behavior and process of decision making are factors which influences the coping or adaptive capacity. Therefore, the rich tradition of medical anthropological knowledge on cultural and cognitive dimensions that shape the health behaviour will be useful in examining how disasters influences health and ill health. In other words, the better understanding of health behaviour of any society and its limitations in relation to disaster and risk reduction should be taken into consideration for effective disaster management and mitigation.
References:


Paper No. 2

FLOOD IMPACT ON COUGH AND COLD AMONG UNDER FIVE CHILDREN IN BAHARAICH DISTRICT, UTTAR PRADESH, INDIA

P.C. Joshi¹, B.S. Aribam², S. Kaushal³, D. Guha-Sapir⁴

Abstract

Acute respiratory tract infection (ARI) accounts for 2 million deaths of the under-five children every year according to the World Health Organisation. According to National Family Health Survey, 6% of the under five children were sick with ARI in India. Cough and cold are symptoms of most ARIs including upper respiratory infections and the more serious lower respiratory infections such as pneumonia, bronchitis and bronchiolities. Therefore, the main objective of the present study is to examine and bring into light the effects of flood on the prevalence of cough and cold or upper respiratory tract infection as a form ARI among the children who are under five years of age. The present study was conducted in Fakharpur block which is the most flood affected block of Bahraich district of Eastern Uttar Pradesh. Questionnaire was used as a tool for collecting the data on prevalence of cold and cough among the under five children. Among the exposed group, around 60.6% of the children belonging to Muslim families showed the symptoms of ARI while 55.5% children from Hindu background had this symptom. Children belonging to middle income families have the highest percentage (62.2%) of ARI symptoms which is followed by children from very small family (54.9%) and poor family (54.9%). Around 75.1% of the children with diarrhea also showed the symptoms of cough and cold as compared to 14.5% of the children who did not have the symptoms of diarrhea. Majority of the children from the families (66.9%) that had taken or received loans or micro-credits showed higher incidence of cough and cold symptoms than families (38.7%) that had not received any loans. To conclude the impact of flood on health is more or less neutralized in case of gender distribution, caste groups and wasting or stunting. But long term impacts were more visible on the health of the children who were most vulnerable in this area concerning cough and cold and other water borne

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diseases and on the long term economic damage incurred which will need a long process of recovery.

**Key Words:** Cough and Cold, Flood, ARI, Impact, Under five children, Uttar Pradesh.
Introduction

Acute respiratory tract infection (ARI) accounts for 2 million deaths of the under-five children every year according to the World Health Organisation (World Health Statistics 2006). It is the major cause of mortality and morbidity among the children in developing countries. According to National Family Health Survey, 6% of the under five children were sick with ARI in India (NFHS-3). Cough and cold are symptoms of most ARIs including upper respiratory infections and the more serious lower respiratory infections such as pneumonia, bronchitis and bronchiolities (WHO, 2001).

In India, out of the total geographical area of 329 million hectare more than 40 million hectares is prone to flood and about 8 million hectares is annually affected by flood (NIDM, 2009). Floods are particularly important in public health terms as they are most common disaster and may have multiple health consequences. According to UNICEF report 2007, in the state of Uttar Pradesh, an overall of 1,436 villages in 19 districts (which includes Bahraich) with a population of 1.2 million people were affected by flood. Among many blocks in Bahraich district, Fakharpur (study site) was the most flood affected block.

Earlier studies have shown that the already existing global threat from ARI is more prominent in the aftermath of a disaster like flood as the spread of this airborne disease is faster due to overcrowding, poor sanitation and poor medical help (World Health Organization, 2006; Lala and Lala, 2006). The impact of flood is far more evident among the children as they are more vulnerable and prone to certain transmissible diseases. According to the WHO weekly morbidity and mortality report, in the flood affected district of Sindh, Pakistan, ARI turned out to be the leading cause of morbidity accounting for 22% (1,744) of the total consultations (Ministry of Health, Pakistan: WHO, 2008).

Therefore, the main objective of the present study is to examine and bring into light the effects of flood on the prevalence of cough and cold or upper respiratory tract infection as a form of ARI among the children who are under five years of age. This study also tries to find out the impact of recurrent flood on the morbidity pattern of ARI in this area, taking into account the social aspects like the economic, political and religious affiliation of the different groups.
Methodology

Site of Study

The present study was conducted in Fakharpur block which is the most flood affected block of Bahraich district of Eastern Uttar Pradesh. This particular site was selected, since this study on the nutritional status of the under five children forms the annex part of the main study conducted on the Integrated Health, Social and Economic Impacts of Extreme Events: Evidence, Methods and Tools, funded by European Commission 6th framework programme, in the same region. Also, Bahraich is one of the most flood affected districts in Uttar Pradesh. According to the Uttar Pradesh statistical report, Bahraich was the most flood affected district in the year 2007 with around 173 villages flooded. In the year 2008 around 183 villages got affected due to floods (period of floods in the district is from the end of July till mid September). It is in this background that the present study was carried out in first half of July (from July 5-15), 2009.

The Fakharpur block consists of 74 Gram Panchayats or GPs (administrative division of villages into village panchayats or gram panchayats). Out of these, 12 GPs were affected by floods in 2008 and the rest 62 GPs remained non-affected. The total population of the block is 194183. The total population of the children under six years of age, according to the district official record is 41201 out of which there are 20314 females and 20887 males.

Sampling procedure

A sample size of 800 under five children was calculated using the ENA (Essential Nutritional Assessment) software. It was then decided that half of the sample size will come from the exposed (flood affected) households and the other half would comprise of the unexposed (unaffected by floods) to enable the researchers to compare the two groups. Cluster sampling was used as a sampling method for the survey. There were forty clusters in all, twenty each in exposed and unexposed areas. The size of each cluster was twenty. The task of assigning clusters to the villages was also done using the ENA software, in which the name and total population of the village was entered and it calculated the number of clusters per village, thus assigning the clusters to the village according to the population of the village (probability proportion to size).

For deciding on which children will form the part of the study, a systematic procedure was followed. On arriving at the village where the cluster was assigned, the research team went to the center of the village (by asking the people of the area). From the center, a bottle was
rotated and the direction indicated by the mouth of the bottle was followed. After reaching the end of that direction, the bottle was again rotated and the direction which it indicated formed the area from which the research team took its sample. They visited the households of that direction and completed the survey on each child of the household till they completed twenty children of under five years of age. Following this procedure, 807 under five children (6-59 months) were examined, consisting of 401 exposed children and 406 unexposed children.

The tool

Questionnaire was used as a tool for collecting the data on prevalence of cold and cough among the under five children. However, in its entirety it was meant to capture the status of malnutrition in the exposed and unexposed areas of the region, prevalence of cough and cold as a dependent variable formed an important part of the questionnaire. The other socio-economic dimensions that were explored with the help of the questionnaire, were- annual income of the household, caste of the children, religion, household size etc. other indicators of malnutrition, that formed a part of the questionnaire were- height, weight, age in months, Vitamin A deficiency signs and presence/absence of bitot’s spot.

Analysis

The data collected through questionnaire was analysed using SPSS (Statistical Package for Social Science) software. At first only the exposed cases were selected and cross-tabulated the variables like caste, religion, gender, economic condition, education of the parents etc. with symptoms suggestive of ARI to see if there is any significant difference between the variables. Secondly, only the unexposed cases were again selected and cross-tabulated with the same variables used in the above analysis after which the results including the significance across the exposed and unexposed groups were compared. Chi-square test was used as a measure to establish the significance of the difference.
Result

Table 2.1 Prevalence of cough and cold among the whole population

<table>
<thead>
<tr>
<th>Variables</th>
<th>Children who shows symptoms of coughing, sneezing and cold in last 2 weeks n (%)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age group (in months)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-17</td>
<td>119(66.5)</td>
<td>.000**</td>
</tr>
<tr>
<td>18-29</td>
<td>100(61.3)</td>
<td></td>
</tr>
<tr>
<td>30-41</td>
<td>85(55.9)</td>
<td></td>
</tr>
<tr>
<td>42-53</td>
<td>97(49.7)</td>
<td></td>
</tr>
<tr>
<td>54-59</td>
<td>11(28.9)</td>
<td></td>
</tr>
<tr>
<td>Household size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small family</td>
<td>90(63.8)</td>
<td>.038*</td>
</tr>
<tr>
<td>Medium family</td>
<td>322(56.0)</td>
<td></td>
</tr>
<tr>
<td>Large family</td>
<td>34(15.7)</td>
<td></td>
</tr>
<tr>
<td>Very large family</td>
<td>8(34.8)</td>
<td></td>
</tr>
<tr>
<td>Economic status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very poor family</td>
<td>100(59.5)</td>
<td>.001**</td>
</tr>
<tr>
<td>Poor family</td>
<td>67(47.5)</td>
<td></td>
</tr>
<tr>
<td>Middle Income family</td>
<td>214(62.2)</td>
<td></td>
</tr>
<tr>
<td>Rich family</td>
<td>65(46.1)</td>
<td></td>
</tr>
<tr>
<td>Family received loan/credit/micro credit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>284(66.4)</td>
<td>.000**</td>
</tr>
<tr>
<td>No</td>
<td>162(44.4)</td>
<td></td>
</tr>
<tr>
<td>Child has 3 or more watery stools in the last 2 weeks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>336(74.8)</td>
<td>.000**</td>
</tr>
<tr>
<td>No</td>
<td>118(33.1)</td>
<td></td>
</tr>
</tbody>
</table>

* significant at < .05; **significant at < .001

The above table no.1, shows that children with a younger age were showing higher frequency of symptoms suggestive of acute respiratory tract infection (ARI) and goes on decreasing as they gets older. The difference here shows a high significance for the both the exposed and the unexposed groups. It is also observed that higher number of children belonging to the middle income family and very poor family show signs of coughing, sneezing and cold more than the rich families with a high significance for both the groups. Moreover, children belonging to the small and the medium size family show higher frequencies of ARI than those belonging to large and very large family. This is true for both the exposed and unexposed groups and is also significant.
Children from the families that have taken loan or credit show a higher percentage of showing the symptoms suggestive of ARI than the children of the families that have not taken loans or credits. The difference is also significant for both the study groups.

Higher number of children with severe stunting shows symptoms of ARI more than the children who were normal or with moderate stunting in both exposed and unexposed groups even though it could not reach a significant point.

Table 2.2 Comparison of factors related to cough and cold between the exposed and unexposed groups

<table>
<thead>
<tr>
<th>Variables</th>
<th>Children showing signs of coughing, sneezing or cold</th>
<th>p value</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exposed n(%)</td>
<td>Unexposed n(%)</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.314</td>
<td>.157</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>107(53.5)</td>
<td>128(60.1)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>117(58.5)</td>
<td>83(41.5)</td>
<td></td>
</tr>
<tr>
<td>Religion</td>
<td>.409</td>
<td>.414</td>
<td></td>
</tr>
<tr>
<td>Hindu</td>
<td>184(55.1)</td>
<td>161(57.9)</td>
<td></td>
</tr>
<tr>
<td>Muslim</td>
<td>40(60.6)</td>
<td>69(54.3)</td>
<td></td>
</tr>
<tr>
<td>Caste</td>
<td>.24</td>
<td>.01*</td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>33(54.1)</td>
<td>66(57.9)</td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td>37(45.7)</td>
<td>31(79.5)</td>
<td></td>
</tr>
<tr>
<td>OBC</td>
<td>111(59.0)</td>
<td>61(50.0)</td>
<td></td>
</tr>
<tr>
<td>ST</td>
<td>3(75.0)</td>
<td>3(100.0)</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>40(60.6)</td>
<td>69(53.9)</td>
<td></td>
</tr>
<tr>
<td>Age group</td>
<td>.05*</td>
<td>.001**</td>
<td></td>
</tr>
<tr>
<td>6-17</td>
<td>55(63.2)</td>
<td>64(69.6)</td>
<td></td>
</tr>
<tr>
<td>18-29</td>
<td>49(60.5)</td>
<td>51(62.2)</td>
<td></td>
</tr>
<tr>
<td>30-41</td>
<td>43(58.9)</td>
<td>42(53.2)</td>
<td></td>
</tr>
<tr>
<td>42-53</td>
<td>52(52.0)</td>
<td>45(47.4)</td>
<td></td>
</tr>
<tr>
<td>54-59</td>
<td>4(25.0)</td>
<td>7(31.8)</td>
<td></td>
</tr>
<tr>
<td>Household size</td>
<td>.06</td>
<td>.19</td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>49(62.0)</td>
<td>41(66.1)</td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>162(56.4)</td>
<td>160(55.6)</td>
<td></td>
</tr>
<tr>
<td>Large</td>
<td>13(41.9)</td>
<td>21(58.3)</td>
<td></td>
</tr>
<tr>
<td>Very large</td>
<td>8(40.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic Status</td>
<td>.116</td>
<td>.000**</td>
<td></td>
</tr>
<tr>
<td>Very poor</td>
<td>67(54.9)</td>
<td>33(71.7)</td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>33(51.6)</td>
<td>34(44.2)</td>
<td></td>
</tr>
<tr>
<td>Middle income</td>
<td>97(62.2)</td>
<td>117(62.2)</td>
<td></td>
</tr>
<tr>
<td>Rich</td>
<td>22(44.0)</td>
<td>43(47.3)</td>
<td></td>
</tr>
<tr>
<td>Per Capita income</td>
<td>.706</td>
<td>.10</td>
<td></td>
</tr>
<tr>
<td>Very poor</td>
<td>69(56.6)</td>
<td>50(56.8)</td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>82(52.9)</td>
<td>91(56.2)</td>
<td></td>
</tr>
<tr>
<td>Middle income</td>
<td>41(60.3)</td>
<td>61(55.5)</td>
<td></td>
</tr>
<tr>
<td>Rich</td>
<td>12(50.0)</td>
<td>18(56.2)</td>
<td></td>
</tr>
<tr>
<td>Educational Status</td>
<td>.06</td>
<td>.01*</td>
<td></td>
</tr>
</tbody>
</table>

19
## Of the father

<table>
<thead>
<tr>
<th>Educational Status</th>
<th>.730</th>
<th>.157</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literate</td>
<td>105(61.0)</td>
<td>112(50.7)</td>
</tr>
<tr>
<td>Illiterate</td>
<td>116(51.6)</td>
<td>115(63.2)</td>
</tr>
</tbody>
</table>

## Of the mother

<table>
<thead>
<tr>
<th>Family received Loan</th>
<th>.000**</th>
<th>.001**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>160(66.9)</td>
<td>124(65.6)</td>
</tr>
<tr>
<td>No</td>
<td>60(38.7)</td>
<td>102(48.6)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Child has 3 or more Watery stools</th>
<th>.000**</th>
<th>.000**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>166(75.1)</td>
<td>170(74.6)</td>
</tr>
<tr>
<td>No</td>
<td>58(14.5)</td>
<td>60(33.7)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Did child received any treatment?</th>
<th>.72</th>
<th>.05*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>168(80.8)</td>
<td>188(82.5)</td>
</tr>
<tr>
<td>No</td>
<td>56(78.9)</td>
<td>41(70.7)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Child has difficulty Seeing at night</th>
<th>.68</th>
<th>.04*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>27(58.7)</td>
<td>31(70.5)</td>
</tr>
<tr>
<td>No</td>
<td>172(55.5)</td>
<td>178(54.4)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stunting</th>
<th>.26</th>
<th>.08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>78(62.7)</td>
<td>66(50.4)</td>
</tr>
<tr>
<td>Moderate</td>
<td>55(54.5)</td>
<td>52(54.7)</td>
</tr>
<tr>
<td>Severe</td>
<td>87(53.0)</td>
<td>111(63.1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Presence or absence of Bitot's spot</th>
<th>.04*</th>
<th>.90</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>10(37.0)</td>
<td>10(55.6)</td>
</tr>
<tr>
<td>No</td>
<td>211(57.3)</td>
<td>219(57.0)</td>
</tr>
</tbody>
</table>

* significant at <.05; **significant at <.001

From Table 2, it could be observed that the percentage of females who showed the signs of ARI were slightly higher (58.5%) than the males (53.5) among the exposed group while among the unexposed group only 41.5% of the female showed the symptoms of ARI as compared to 60.1% male who were showing this symptoms. Among the exposed group, around 60.6% of the children belonging to Muslim families showed the symptoms of ARI while 55.5% children from Hindu background had this symptom. Whereas among the unexposed group, 57.9% children were from Hindu families and 54.3% were from Muslim families who had symptoms suggestive of ARI.

Among the exposed group, children who belonged to the ST category showed the highest percentage of children (75%) who showed the symptoms of ARI and is followed by OBC with 59% and General with (54.1%). But it has not attained any significant difference.
However, unexposed groups showed a high significance of .01 as all the children belonging to ST group showed the symptoms of ARI which is followed by the SC category with a percentage of 79.5% while General and OBC also followed with more than half of the children showing ARI symptoms.

When the age groups of the children showing symptoms of ARI among the exposed group were compared, a gradual increase in the percentage was observed from higher to the lower age groups with a significance difference of .05. This was true in case of children belonging to unexposed group also but with a higher significance difference of .001. Again, when both the groups were compared according to household size, exposed groups showed an association of the household size with the percentage of children showing symptoms of ARI with a high significance. Among this exposed group, it was observed that children belonging to small and middle income families were more prone to cough, cold and sneezing than children belonging to large and very large families. However, among the unexposed group, percentage of the children belonging to the small family and large family were higher than the medium and the very large family even though it could not attain the significance difference.

When the economic status was compared among the exposed group, children belonging to middle income families have the highest percentage (62.2%) of ARI symptoms which is followed by children from very small family (54.9%) and poor family (54.9%). Whereas, among the unexposed group, children belonging to very poor family (71.1%) were more prone to cough and cold which is again succeeded by children from middle income family (62.2%) and the difference among the categories is highly significant (p<.001).

Both the exposed and unexposed groups do not show any significant difference according to the per capita income of the families in relation to the cough and cold symptoms. Both groups show that an average of 56% the children belonging to low income group had cough and cold during the time of study.

In both the groups educational status of the father show a significant difference of .06 among the exposed and .01 among the unexposed groups. Among the exposed groups 61% of the children who have symptoms of cough and cold had literate fathers while 51.6% of the fathers were illiterate. However in case of the unexposed group, children of the illiterate fathers showed cough and cold symptoms more than the literate fathers. On the other hand the educational status of the mothers did not show any significant association with the prevalence of the cough and cold symptom in both the exposed and unexposed groups.
Majority of the children from the families (66.9%) that had taken or received loans or micro-credits showed higher incidence of cough and cold symptoms than families (38.7%) that had not received any loans. This is true in case of the unexposed groups also, with the children of 65.6% of the families showing symptoms of cough and cold as compared to 48.6% of the families that did not receive any loan. Moreover both the exposed and unexposed groups showed a high significance difference of .000 and .001 respectively.

Prevalence of the symptoms of cough and cold was observed to be highly associated with children who already have symptoms of diarrhea in both the exposed and unexposed groups. In other words, around 75.1% of the children with diarrhea also showed the symptoms of cough and cold as compared to 14.5% of the children who did not have the symptoms of diarrhea. This holds true among the unexposed groups as well with 74.6% of the children who already have diarrhea symptoms also showed the symptoms of cough and cold and only 33.7% of the children did not have diarrhea symptoms. The results of both the exposed and unexposed groups showed a high significance difference.

Among the exposed groups, 80.8% of the children had received treatment for cough and cold while 78.9% did not receive any treatment for cough and cold after getting sick. Whereas, among the unexposed groups, 82.5% of children who had symptoms of cough and cold has received treatment while 70.7% of the children did not receive any treatment. Here, the result of the unexposed group shows a difference of .05 while unexposed group does not show any difference.

The result among the unexposed group also implies that there was a high association between night blindness and cough and cold symptoms as around 70.5% of the children who had symptoms of cough and cold also had symptoms of night blindness more than those who did not have night blindness (54.4%). The difference also attained a significance of .04. However, among the exposed group, the difference was not so prominent between the percentage of children who were showing signs of cough and cold and night blindness at the same time or only one of the signs.

It was observed among the unexposed group that majority of the children (63.1%) who were severely stunted had symptoms of cough and cold more than children who were moderately stunted (54.7%) or normal (50.4%) with a significance difference of .08. However, among the exposed group, children who were normal (63.1%) were showing symptoms of cough and cold more than the moderate (54.7%) and severely stunted (50.4%) children but the difference has not reached any statistical significance.
Among the exposed group, only 37% of the children have bitot’s spot who has symptoms of cough and cold while the rest (57.3%) did not have bitot’s spot. Whereas in case of the unexposed group, around 55.6% has bitot’s spot along with the symptoms of cough and cold while 57% did not have bitot’s spot.

Table 2.3: Vaccination of the under-five children

<table>
<thead>
<tr>
<th>Vaccines</th>
<th>Children showing signs of cough, cold and sneezing</th>
<th>P value Exposed</th>
<th>P value Unexposed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BCG</td>
<td></td>
<td>.000**</td>
<td>.004*</td>
</tr>
<tr>
<td>Yes</td>
<td>127(67.9)</td>
<td></td>
<td>165(61.3)</td>
</tr>
<tr>
<td>No</td>
<td>91(47.4)</td>
<td></td>
<td>62(46.3)</td>
</tr>
<tr>
<td>Measles</td>
<td></td>
<td>.006*</td>
<td>.044*</td>
</tr>
<tr>
<td>Yes</td>
<td>108(64.3)</td>
<td></td>
<td>133(61.0)</td>
</tr>
<tr>
<td>No</td>
<td>106(50.2)</td>
<td></td>
<td>89(50.9)</td>
</tr>
<tr>
<td>Polio</td>
<td></td>
<td>.007*</td>
<td>.139</td>
</tr>
<tr>
<td>Yes</td>
<td>189(54.3)</td>
<td></td>
<td>218(56.3)</td>
</tr>
<tr>
<td>No</td>
<td>30(76.9)</td>
<td></td>
<td>12(75.0)</td>
</tr>
<tr>
<td>DTP</td>
<td></td>
<td>.006*</td>
<td>.986</td>
</tr>
<tr>
<td>Yes</td>
<td>88(66.7)</td>
<td></td>
<td>113(55.9)</td>
</tr>
<tr>
<td>No</td>
<td>123(51.9)</td>
<td></td>
<td>105(55.9)</td>
</tr>
<tr>
<td>Was Vaccination confirm by card</td>
<td></td>
<td>.006*</td>
<td>.080</td>
</tr>
<tr>
<td>Yes</td>
<td>32(76.2)</td>
<td></td>
<td>29(69.0)</td>
</tr>
<tr>
<td>No</td>
<td>187(53.7)</td>
<td></td>
<td>196(54.9)</td>
</tr>
</tbody>
</table>

*significant at < .05; **significant at < .001.

Among the exposed group, children who had already been vaccinated were showing the symptoms of cough and cold higher than the children who had not been given any vaccination. This was true in case of BCG, Measles and DTP vaccines with apparent significant difference except in the case of polio where children who did not get polio vaccines earlier were showing symptoms of cough and cold more than who had received this vaccine with a difference lesser than .05. Similar is the case with the unexposed groups even though the differences could not attain any significance statistically.

Discussion

According to this study prevalence of diarrhea is directly associated with the high incidence rate of cough and cold as children with diarrhea during the past two weeks were observed to be more prone to cough and cold. This was true in case of the flood affected (exposed) as well
as among the non-flood affected (unexposed) groups of population with a high significance difference. This was similar with previous findings from West Bengal and Bangladesh which reported that, in the flood affected areas where there was high incidence rate of diarrhea, the incidence rate of respiratory infection were also high (Biswas et al., 1999; Siddique et al., 1991). The association of high incidence rate of cough and cold and diarrhea could be due to crowding and subsequent fecal-oral spread of gastrointestinal pathogens which may contribute to the spread of diarrhea as well as cough and cold (Aghababian et al., 1992 and Kunni et al., 2002).

Economic conditions of the family seem to have a direct impact on the children’s health according to the present findings. Middle income and very poor families have higher incidence rate of cough and cold than the rich families thus showing that low income has a straight impact on the morbidity of cough and cold in this study. This is supported by the findings of Verma et al., where poor economic condition affect the maintenance of proper health and affording of good medical facilities in Varanasi District, Uttar Pradesh (Verma et al., 2008). Furthermore, families that had received loans showed high prevalence rate of cough and cold in both the exposed and unexposed groups which again confirm that economic status of a family has direct impact on the high morbidity of cough and cold. Getting loan is the same as not having enough income for the family to cover up the families’ need hence depended on loans. Research throughout Africa has also shown that parental poverty and low educational attainment were adversely associated with the survival of children (Population Council, New York, 2006).

Similar to many earlier findings, the present study also found out that children with lower age group were more vulnerable to cough and cold which were suggestive of ARI. The lower the age group of the child the higher the incidence rate of cough and cold (Zaman et al., 1997). This was also similar with the findings of Zhang, where children in 0-2 age group had higher incidence rate of ARI than the other age groups. (Zhang, 1990). Here the significance difference was higher in case of the unexposed group than the exposed group. This shows that flood was not the only factor which affect the vulnerability of the younger children but there could be other factors too as the incidence rate was high across both the groups. This also shows that children with lower age group should be given special care at the appropriate time otherwise it could prove fatal if the sickness progressed to lower respiratory tract infections like pneumonia, bronchitis, bronchiolities, etc. This could also be because parents in the exposed area were more adapted and had more coping capacity to the situation of flooding than the unexposed people as the flood prone people were familiar with the situation and well prepared for it.
The findings showed that the household size of the whole group was significantly associated with the prevalence of cough and cold among the children even though the difference was not significant when the variables were compared in the exposed and unexposed groups. This could be a confirmation of the previous findings that overcrowding plays a major role in the spread of ARI (Oliver, 2008 and MICRODIS, 2008). It is easier for the virus to spread in a close packed house and transmit from one person to another through droplets or aerosols where rooms are ill-ventilated (WHO, 1988; Cardoso et al., 2004).

Another major factor that is prominently brought into light through this study is the significant association of the father’s educational status with the high incidence rate of cough and cold among the children in both the exposed and the unexposed population. Earlier studies from Bangladesh have reported similar findings concerning the association of parent’s education and high incidence rate of symptoms suggestive of ARI (Azad, 2008) Among the unexposed group children with illiterate fathers and mothers were more susceptible to cough and cold while the impact of flood showed a reverse outcome among the exposed group where children of literate fathers and mothers show signs of cough and cold more than the illiterate parents.

Moreover in both the exposed and unexposed groups, a high percentage of parents do not seek for any medical treatment for both cough and cold and diarrhea. This was an alarming situation as delay in the treatment seeking or giving medical help could lead to the progression of the symptoms.

Among the unexposed group, it could be concluded that child with vitamin A deficiency syndrome were significantly associated with cough and cold while exposed group did not show any significant impact of flood in determining the association of vitamin A deficiency with cough and cold. Manifestation of symptoms of vitamin A deficiency showed a prominent variation when the group exposed to flood and the unexposed groups were compared. Among the exposed group, association of the presence of bitot’s spot with cough and cold among the children was significantly low while the difference was not significant at all among the unexposed group. However, among the unexposed group, night blindness was strongly associated with the higher incidence rate of cough and cold among the children. This shows that due to the impact of flood, the expression of vitamin A deficiency symptom was mainly in the form of bitot’s spot with high incidence of night blindness too. A study on vitamin A deficiency among children in Northeastern Thailand also showed that deficiency in vitamin A was highly associated with respiratory diseases (Bloem et al., 1990).
The rate of immunization was relatively high among the flood affected as well as non-flood affected areas even though the information was not confirmed by vaccination card and mainly relied on the parents’ recall. Flooding seemed to have an adverse impact on the children who had been immunized as cough and cold was significantly high among the immunized children except in the case of polio vaccine. This is contrasting to the previous findings where childhood vaccination has reduced the risk of certain infectious diseases (Girard, et al., 2005, Bawah, AA et al., 2006). In case of polio vaccine children, the negative impact of flooding was seen among the children who were not immunized as they were in higher risk of cough and cold (p = .007). The high coverage of immunization in this flood prone area is highly encouraging and immunization campaigns are recommended in future as to continue the chain.

To conclude the impact of flood on health is more or less neutralized in case of gender distribution, caste groups and wasting or stunting. This could be because the field work was done after eight months of flooding so the negative impacts were lesser and showed improvement in certain areas. But long term impacts were more visible on the health of the children who were most vulnerable in this area concerning cough and cold and other water borne diseases and on the long term economic damage incurred which will need a long process of recovery. Thus flood has a long term acute impact on the health of the children and the household economy.
References


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HEALTH IMPACT OF FLOODS IN BAHARAICH DISTRICT OF UTTAR PRADESH

Sonia Kaushal, P. C. Joshi and Prashant Khattri

Abstract
Of all the major natural disasters floods occur every year and cause enormous damage. In India floods are the most common and devastating phenomenon, resulting into severe loss to livelihood, crops and health. This burden of flood impact increases more, when society is economically insecure.

The present study focuses on the health impact of floods and the efficacy of preventive measures taken by district administration to tackle the health related issues aroused due to floods. The study was conducted immediately after the September floods of 2008 in Baharaich district of Uttar Pradesh. The data was collected through both qualitative and quantitative methods.

Study indicates that after floods 57.7% people suffered from illnesses like fever, influenza, malaria, and diarrhea. Even the poor water and sanitation condition has harmful effect on the health of people. The study also revealed that women are worst sufferers as during flood they face problem due to lack of proper place for defecation. This is also a health hazard since most of the women had to defecate in the open and they are also not comfortable in doing so.

Although district administration has taken necessary steps to substantially address the impact of flooding in human health but there is a need to increase the effectiveness of flood coping strategies.

Key words: Floods, Natural Disaster, Health, Baharaich, Illness, Society
Introduction:
Floods are the most devastating phenomenon of all the natural disasters. It accounts for approximately 40% of the natural disasters. With the increase in global warming, the risk to hydrological disasters has increased many folds. The global warming induced changes in the environment make the population more vulnerable to natural disasters. This vulnerability increases more due to the factors like population density, economic development of the country (Corvalan et al, 2005), local environmental conditions, food availability, income, preexisting health status of the population, and accessibility to health care centers, etc. (McMichael et al, 2003). The other adverse effect could be displacement and its effect on mental health, effects on socio economic status and certain communicable diseases (Hales et al, 2003). The risk of climate change health hazards is more in developing countries than in the developed countries. The effects of floods in developing countries are mainly infectious diseases caused by contaminated water and malnutrition in children (Corvalan et al, 2005). Notably, the research on health effects of flooding is very few in developing countries, where the disease burden is likely to be more (Morgan et al., 2005).

Evidence indicates that the wide change in the climate has already started affecting the human health which could be more dangerous. The systematic literature review revealed that the epidemiological evidence of health effects of flooding are very limited. The systematic examination of impact of flood effects on health by Evans et al, 2004 indicates that people will be more at risk. The small qualitative studies in five English communities’ respondents reported to suffer from physical symptoms, ill health and psychological trauma (Tapsell et al. 1999; Tapstell and Tunstall 2001; Tapsell et al 2002; Tapsell et al. 2003). In a study in Lewis, East Sussex, UK examined the systematically compared the flood affected and non flood affected area. The study reported the gastro-intestinal and other illness and mental health in flood affected and non flood affected households (Reacher et al, 2004). The harsh effects of floods are very complex and include drowning, injury, exposure, acute asthma, skin rashes and clusters and outbreaks of gastroenteritis and respiratory infections. The effects of recurring floods can be enduring especially in terms of stress and trauma generated for months whenever floods again reappear to threaten. Furthermore, floods damage the property, crops and livelihood, public infrastructure such as health centers and hospitals which can produce significant stress on the affects people. Although, countries take necessary actions to cope with the flood situation, despite this, floods hazards continue to pose multiple health risks.

Background of the study area:
Baharaich is chosen for the study as it is the most prone area to recurring floods. Exposure to floods made the flood affected villages more vulnerable to land erosion. This fact is also substantiated by the Uttar Pradesh Statistical year Book, 2007, where Baharaich is stated as one of the most flood affected area as 137858 square kilometer areas got affected due to heavy rainfall and floods.

Baharaich is situated along the banks of one of these major rivers, the Ghaghra which as claimed by the local people has already changed its course by about 27 km. One of the major highlighted causes of the flooding of this river is the heavy inflow which its banks are ill equipped to hold due to sheer lack of capacity. Baharaich is situated in the eastern part of Uttar Pradesh and it shares international boundary with Nepal in its north. Floods affect agriculture, main source of livelihood, disrupt life and devastate property on a large scale hamper socio-economic life. Every flood leads to agricultural damages, damages to dwellings, food grains, education system, transportation, and health facility, etc. and during floods most of the affected people seek shelter on nearby embankments. In some cases, certain villages are completely displaced and now living on embankments. These floods also results into deaths, disease, infections, interruption of health facilities due to unavailability of transportation facilities and damage to health infrastructure.

Therefore, the aim of the present paper is to highlight the health impact of floods and the efficacy of preventive measures taken by district administration to tackle the health related issues aroused due to floods in the Baharaich district of Uttar Pradesh, India.

**Methodology:**
As one of the most flood affected district of Uttar Pradesh, Baharaich is selected for the presented study. According to Uttar Pradesh Statistical Year Book In the year Baharaich reported maximum floods. The study was basically conducted in the Fakharpur block of the Baharaich district. The reason behind to select Fakharpur block was that this block lies at the confluence of the three rivers- Ghaghra, Bhada and Sharda and hence it is the most flood affected block in the district. With this background the present study was carried out immediately after the September floods (1-15 October) in 2008.

The study design was case-control and the two stage sampling had followed simple random sampling method. The study had used a pre-tested questionnaire and focus group discussion methods for data collection. The sample was selected from four Gram Sabhas of Naubasta,
Baundi, Atodar and Silauta for flood affected group and four Gram Sabhas namely-Dharmapur, Kodahi, Biswan and Jaitapur for non flood affected group.

**Sampling Frame:**
The sample was selected with a simple random sampling method. The list of all the households (with the name of household head, age and caste) within the hamlets of 8 Gram Sabhas was procured. This resulted into 2064 households for the flood affected villages and 2269 household for non flood affected villages. The selection of study households was done through simple random sampling method.

The data was collected using both qualitative and quantitative methods. Qualitative data was collected through focus group discussion and quantitative data was collected with the help of pre-tested questionnaires. 304 questionnaires among control group and 318 questionnaires among experimental group were employed to collect data on household information and to capture social impact of floods.

**Focus Group Discussions:**
A total of six focus group discussions were conducted. There were six focused group discussions conducted among the NGOs, medical officers, village headmen, village men, marginalized women and upper caste women. This cross section of people was taken to get a holistic view of the impacts of floods. After welcoming note all the participants were briefed about the aims and objectives of the focus group discussions. All the focus group discussions were audio and video recorded with participants permission and later transcribed completely.

**Result and Discussion:**

**Health impact of floods: Victims perspective**
The recurring flood has severe consequences on the health of flood affected people. According to statistics, due to floods 57.7% of the people fell ill. Out of them 33% had fever, 18% suffered from influenza, 3% from influenza and 2% from malaria. This point was clearly come out in Focus Group Discussions with men two participants reported that diarrhea, headaches and fever are the common diseases to which people suffer after floods. Malaria is another flood induced disease and its outbreak is high after flood because of stagnating pools of water which act as breeding grounds for mosquitoes. Another two participants voiced out that children and women are worst sufferer during flood.

In Focus group Discussion with village heads one of them reported that people are aware of the heath program and camps organized by the government after floods. He said that
sometimes government doctors make visits to the villages which are very close to check dam or market place but medicines distributed by them are not very effective in curing the disease. Even the medicines distributed are not very effective in curing the disease. One of the respondent reported that the doctor at PHC are generally not able to do proper diagnosis of the disease. He said that either medicines are not available in the PHC or doctor at PHC suggest them to visit District hospital or consult any private doctor. The main concern of the village head was emergence of diseases after floods due to standing water pools.

Disasters like floods can cause severely affect the health facilities and also disrupt the transportation facilities. In the study area also this point was clearly raised in the Focus Group Discussion with marginalized women. Women health is one of the serious issues of concern during floods. One of the women reported that during floods pregnant women suffer more as the flood water makes it difficult to commute. Besides, there is no proper transportation facility like boats are available to mobilize the pregnant or any ill person from one place to another. Another issue of concern was lack of female doctors in the area. Women were not able to tell share their medical history with the male doctors during pregnancy and sometimes loose their child. One of the respondent reported that there is a provision made by government that if a delivers her child at health center she is entitled to receive Rs 1400 but due to floods and lack of vehicle facility pregnant women generally looses the money as well as child in most of the cases. This resulting impairment of health facilities not only affect those people with medical needs caused due to floods but also those with routine health problems. For instance, one woman revealed that many women suffer from reproductive health problems such as irregular menstruations or heavy flow and this problem aggravates during flooding period. In some cases after the death of the first child women menstruation cycle stopped and it resulted into the abondonment of the women or second marriage. Women also face problem due to lack of proper place for defecation. the flood water covers the whole village, thus they are compelled to defecate in the flood water and this could be an serious health hazard for women.

Economic factor is also seems to be major factor that affects the health of the flood affected people. To deal with flood situation almost one third of the household took loan in flood affected areas. The recurrence of floods every year, loss of land and crop, employment damage and borrowing of money form money lenders, all these conditions are vicious cycle and increase the vulnerability to health impact due to floods. For treatment purposes people take loan. Out of the seven participant of FGD with men, two participants voiced that as they do not get proper treatment and moreover many times free medicines are also not available in the PHC or if they are available, medicines are not very effective to cure the disease.
Therefore, they are not left with any choice but to consult the private doctor and borrow money from money lender for treatment purpose as Ram Sohan from Silauta (flood affected village) said—“during and after floods doctors visit the Boundi (one of the flood affected village) but due to large crowd we are not able to get the medicines. We can buy medicines from private doctor or pharmacist but we need money for that. Thus, we borrow money from money lender”. Therefore, it clearly indicates that economic factor and recurring floods has an impact on the health of the people.

Another severe impact of floods is on agricultural activity. Floods caused land erosion and crop destruction severely impacts the agricultural production. Land erosion and crop destruction invariably mean food shortage. The shortage of food leads to malnutrition and malnourished children are more likely to get ill very easily. The FGD with men indicates that children, old members and women become more vulnerable to illness due to lack of enough food. One of the participants voiced out that—“loss of livelihood and less job opportunities, they are unable to get food on time. Women always worry about children—are tensed about how to get food for them and sometimes they too live in hunger. But when they do not have food, how can they give food?” Therefore, recurrence of floods every year, loss of land and crop, employment damage and lack of food availability and lack of proper medication make them more vulnerable. The plight of this situation clearly comes out when SitaRam from Atodar said—“My daughter was sick during last floods for three months and had to be treated in hospital for several days. What can we do? Should we arrange for food or medicines?”

**Health impact of flooding: Administrative Coping Strategies**

The FGD with CMOs revealed that during floods Gastroenteritis, Pyrexia, different types of fever like viral and malarial fever and insect bite are very common, but the main problem starts after the flood. To tackle any flood related heath problem Government Health Department organizes health camp and also conducts health awareness plays. Besides, as during flood villagers are not able commute due to disruption of transportation and pathways, district health department distributes the medicines for common ailments, ORS packets and chlorine tablets to the village heads. The village heads are specifically told when they are supposed to give what and how? But it is important to note here that, FGD with men revealed that village heads generally do not distribute these medicines and apart from this villagers are some times not aware of this. One of the respondent even said that only those people are able to get medicines from village head that visit them or had good contacts. This particular problem was even raised by one of the doctors, he said—“may be it’s not reaching to all the people, but we cannot ensure this in the flood affected villages. We are not able to reach all the revenue villages affected by flood so we have to rely on the pradhans only”. One of the
doctor said they try to tackle with emergency situation but in most of cases there services are hampered by the lack of boats, inaccessibility to the remote villages due to flood water and shortage of health personals. Another doctor said-“the only issue is that we are not able to reach the outskirts areas which really need our attention and presence”.

Another issue raised by many flood affected people during FGD was ineffectiveness of the medicines given at PHCs. To this question two doctors responded and said that it is the matter of perception. The villagers think that care provided at district hospital is better. According to them, villagers want medicines which look good to them i.e. colorful strips of the tablets.

The one very important issue to which to which doctors agreed was lack of psychiatric care for flood victims. One of the participants of FGD said that after every flood, there are cases of anxiety, and depression. Whenever doctors visit the flood affected villages they counsel such victims. Another doctor voiced out the need for one psychiatrist in the district hospital or at PHC level as the incidence of anxiety and depression is rising with every flood.

**Conclusion:**
The recurrent floods in the study area pose many health problems. The main impacts of floods are in the area of disease, women health and less access to health facilities at the time of crisis. Another notable consequence of flooding is on livelihood activities which has a significant impact on the health care access. The crop destruction and land erosion can be a potential factor for malnutrition in the population. To cope with flood related health impacts district administration has taken many steps. But despite this, there are few weaknesses in the coping strategy such as lack of health personals, lack of transportation facilities during flood to reach the flood affected villages. Due to these weak institutional capacities the management of floods and their impact on human health is heightened.

**Acknowledgement**
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**Conflict of interest**
The authors declare that they have no conflict of interest.
References:


HEALTH AND VIOLENCE AGAINST WOMEN IN DISASTER: 
CASE STUDY OF KOSI FLOOD IN BIHAR

Minakshi\textsuperscript{8}, Joshi, P.C\textsuperscript{9}.

Abstract:

The principal objective of this paper is to provide a general overview of the problems experienced by people during recent flood disaster in Bihar, with special reference to the issues of health and violence against women. The findings are primarily based on the basis of the study conducted in the flood affected districts of Bihar i.e., Saharsa and Supaul where people were in temporary relief phase and struggling for longer term rehabilitation. Different types of disaster have differential impact on the population. Flood disaster in Bihar leads to displacement for longer period of time in many parts of the state where many villages are completely washed off making women more vulnerable to further sufferings. However, in this paper, the main attention was on women in disaster situation, it becomes important to differentiate the condition of women, in the situation that permits return to the original home, shortly after the flood and those that displace them for long periods of time. According to the findings, the former is associated with the situation where women are better placed than latter where women has to face more hardships and sufferings leading to poor health condition and making her vulnerable to victimization.

Key words: Disaster, Kosi flood, Women, Health, Violence.

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Introduction

On the fateful day of 18\textsuperscript{th} August, 2008, Bihar faced a major disaster which according to some is worst in last hundred years and many others claim it to be worst in the history (Roy, 2008). The incident was so devastating that it was declared as national calamity, in which millions of people were left homeless along with huge loss of lives and property in parts of Bihar that were already marginalized (Mishra, D.K). All these happened when river Kosi, known as “Sorrow of Bihar” was diverged from its regular path as it eroded its embankment in Nepal about 12km upstream of the barrage. As a result of breakage near Kushaha in Supaul district, river started flowing in an entirely new course (BGVS, 2008). Supaul which shares a boundary with Nepal was the first district to be flooded. Other than Supaul, Madhepura, Araria, Purnea and Saharsa were among the worst affected districts. As per the initial assessment, around 10,000 people are missing or dead (ibid). According to International Federation’s Disaster Relief Emergency Fund, 4.7 million people have been affected in 18 districts spread across 2,528 villages (Lambay, F. and Singh, M). Flood in Bihar is not a new phenomenon. The following statistics support the fact as 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). But this time, when river Kosi changed its course, it started flowing through areas that have not experienced major flooding in the last five decades, resulting into devastation of unthinkable magnitude.

Current statistics on effects of flood, 2008. (Report based on data collected in flood affected districts: Saharsa, Madhepura, Supaul, Purnea, and Araria.)

Table 4.1: Current statistics on effects of flood, 2008.

| Total No. of blocks affected | 35 |
| Total No. of panchayat affected | 412 |
| Total No. of villages affected | 993 |
| Total No. of population affected | 3329423 |
| Total No. of families affected | 839335 |
| Total No. of livestock affected | 997344 |
| Area affected (Lac. Ha.) | 3.68 |
| Total No. of persons evacuated | 993992 |
| Total No. of human death | 527 |
| Total No. of livestock death | 19323 |

**Purpose of the Research:**
This paper summarizes the findings based on the direct observation during the preliminary field work conducted in the flood affected districts of Bihar. The research is intended to delineate pertinent social and health issues existing among the people affected by the kosi flood in a gender sensitive manner. 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.

**Area of study:**
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’ village was selected to study the population living in relief camps and canal bunds. As the purpose of the study was to compare the condition of women in two different settings, one which displaces population for shorter period of time and permits returns to their original homeland within few days and another which displaces population for long period of time, 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 duration:**
3 weeks (last week of Sept. to mid Oct, 2008.).

**Methodology:**
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 which women faces in this period of crisis.

**Limitations:**
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.

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.

**Issue of health and violence:**

As we know, health is not all about diseases and illnesses one suffers from. It is much more holistic as it incorporates so many elements within its fold. There are many socio-cultural factors or determinants, which influence health of a person, such as, socio-economic status, education, gender, disability, race, ethnicity, accessibility to health resources, profession/vocation and so on. Keeping these in mind, following parameters were examined while dealing with the issue of health among the flood victims.

- What are the major diseases people suffer from in the aftermath of the flood disaster?
- What are the specific health problems among the women?
- What factors are affecting women’s health adversely? And,
- How safe and secure women are within their community?

Study among village community: After interviewing and having separate focus group discussions with men and women of the village certain common and few specific diseases emerged which affected the population. Table 4.1 shows the number of male and female interviewed. Of 500 respondents, 51.2% were female and 48.8% were male.

Table 4.2 shows the most common health problems found among the flood victims in village. Stomach ailment (25.6%) is the main health problem mentioned followed by pain in different parts of the body (15.6%) and cough/cold (15.4%).
Table: 4.2
Most common health problems among the flood victims in village community:

<table>
<thead>
<tr>
<th>Disease type</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cough/cold</td>
<td>77</td>
<td>15.4</td>
</tr>
<tr>
<td>ENT</td>
<td>36</td>
<td>7.2</td>
</tr>
<tr>
<td>Fever</td>
<td>49</td>
<td>9.8</td>
</tr>
<tr>
<td>Pain</td>
<td>78</td>
<td>15.6</td>
</tr>
<tr>
<td>skin infection</td>
<td>51</td>
<td>10.2</td>
</tr>
<tr>
<td>stomach ailment</td>
<td>128</td>
<td>25.6</td>
</tr>
<tr>
<td>Weakness</td>
<td>48</td>
<td>9.6</td>
</tr>
<tr>
<td>wound/cut/abses</td>
<td>33</td>
<td>6.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>500</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Stomach ailment was found in maximum frequency in both male and female. In male it was found among 26% of the total respondents, whereas in female it was 25%. Following stomach ailment, women were suffering more from pain (19%) and male were suffering from cough/cold (20%). Large difference was found in case of weakness. While 15% women reported to suffer from weakness, in male the case of weakness was only 4%. Table: 3 shows gender differences in type of diseases one suffers from.

Table: 4.3

<table>
<thead>
<tr>
<th>Disease type</th>
<th><strong>FEMALE</strong></th>
<th></th>
<th><strong>MALE</strong></th>
<th></th>
<th><strong>TOTAL</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>cough/cold</td>
<td>28</td>
<td>10.94</td>
<td>49</td>
<td>20.08</td>
<td>77</td>
<td>15.4</td>
</tr>
<tr>
<td>ENT</td>
<td>26</td>
<td>10.16</td>
<td>10</td>
<td>4.10</td>
<td>36</td>
<td>7.2</td>
</tr>
<tr>
<td>fever</td>
<td>21</td>
<td>8.20</td>
<td>28</td>
<td>11.48</td>
<td>49</td>
<td>9.8</td>
</tr>
<tr>
<td>pain</td>
<td>48</td>
<td>18.75</td>
<td>30</td>
<td>12.29</td>
<td>78</td>
<td>15.6</td>
</tr>
<tr>
<td>skin infection</td>
<td>16</td>
<td>6.25</td>
<td>35</td>
<td>14.34</td>
<td>51</td>
<td>10.2</td>
</tr>
<tr>
<td>stomach ailment</td>
<td>64</td>
<td>25.00</td>
<td>64</td>
<td>26.23</td>
<td>128</td>
<td>25.6</td>
</tr>
<tr>
<td>weakness</td>
<td>38</td>
<td>14.84</td>
<td>10</td>
<td>4.10</td>
<td>48</td>
<td>9.6</td>
</tr>
<tr>
<td>wound/cut/abses</td>
<td>15</td>
<td>5.86</td>
<td>18</td>
<td>3.62</td>
<td>33</td>
<td>6.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>256</strong></td>
<td><strong>100</strong></td>
<td><strong>244</strong></td>
<td><strong>100</strong></td>
<td><strong>500</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Respondents were also asked about psychological symptoms, in order to assess the mental health of the community. ‘Risk factors for post-disaster mental health problems include previous mental health problems and high levels of exposure to disaster-related stresses, e.g., fear of death or serious injury, exposure to serious injury or death, separation from family, prolonged displacement.’ (Freedy and Simpson, 2007.)

In pre disaster context when water was about to enter their village, almost all respondents said that they suffered from severe headache and running stomach. In the aftermath of disaster, large number of respondents experienced changes in theirs as well as in others’ behavior. Some of the psychological problems reported by community members, in order of their frequency are listed below:

1. Fear
2. Insomnia  
3. Communication problem  
4. Worry (especially about their future)  

Reproductive Health of Women: In the wake of disaster reproductive health of women suffers a lot. Few women respondent complaint that their menstrual period shifted earlier and also it prolonged for 8-10 days, which in normal case was of 3-4 days. They also related this problem with the fear of water entering into their houses. Irregular period was also reported by some younger girls of the village (aged between 15-20). As women of the village shifted to their relatives in safer places many of their problems were minimized. However pregnant women suffer from weakness and anemia as they were not having proper diet, required for their good health. It is important to mention that in village set up women was not having protein rich diet even before the disaster struck and in the aftermath if disaster problem exaggerated especially among pregnant women. Although health facility was minimal even after a month of disaster, not a single incidence of women or babies dying during deliveries was reported in the village.

Sanitation:  
Although within a month people returned back to their homeland, water was not completely receded out of the village. Flood water was accumulated in the low land, thus providing ideal condition for mosquito breeding and growth of weeds. Rain water collected in ponds and lakes were used mainly by children for bathing and washing clothes, resulting into skin infection, eye soar and ear discharge among them. The only source of drinking water in the village was hand pump which got submerged during the flood and was later on treated with chlorine. Thus, drinking water was made somewhat pure. Adding to further problem, people were still using open areas for defecation. All these condition were favorable for vector borne and communicable diseases to spread. Lack of appropriate health facilities, poor sanitation in the village and lack of organizational support further aggravated the problems and had negative impact on women’s and children’s health in particular.

As mentioned earlier that behavioral changes was observed among the respondents in the aftermath of flood, but it does not lead to violence against women. Not a single case of domestic violence against women was reported. Rather men were found to be more protective and caring towards the female members of their family or village. Disaster situation created a sense of belongingness and togetherness among the community members. Women were accommodated at safe and secure places, while men were left out to take care
of their houses and belongings. Other forms of domestic violence, like, having disagreement on domestic issues especially if they take the form of physical violence or instances where women are forced into having sex with their husband against their will, was also absent. However, women were subordinated in case of decision making process. But this could not be treated as a form of domestic violence as the subordination was accepted by women in the society, even in normal circumstances.

**Studies among population living on canal bund:**

The previous section summarized the research findings on the issue of health and violence in village community, which was not severely affected by flood. However this section will provide a brief account of the condition of population staying on the canal bund, where emphasis would again be on the issue of health (especially women’s) and violence. Out of the affected population there are many people who were having their shelter on canal bunds or roadside camps. These are non-government relief camps where people are staying in small huts made out of bamboo and colorful polythene sheets supplied by government and international NGOs like PLAN International, UNICEF, and ACTION AID International. One such canal bunds where this research was conducted are situated in Thalhagarhiya panchayat in Tribeniganj block of Supaul district. Supaul is one of the hardest hit districts in the flood where blocks like Basanthpur, Chatapur, and pratapganj are completely washed off in the flood. People living in numerous such villages have no choice but to take shelter on these canal bunds. The bund was 5-6m wide where huts were made in two rows, stretching up to 15-20 km in length. The total population on the canal bund, as roughly estimated by the volunteers of different NGOs was around 10,000 to 15,000.

**Health and sanitation:**

People in the camps were mainly suffering from the diseases like skin infection, diarrhea and fever. Most of the government intervention reached people only after a month, till then situation was very grim. Lack of transport to access medical facilities was mentioned by pregnant women who were about to deliver. Almost all respondents reported about lack of nutrition especially pregnant women, young babies and women who had just delivered their babies. The puffed rice distributed initially among the flood victims was not sufficient enough to meet the nutritional need among pregnant women and new born children. Additionally, having shelter under the open sky exposed the population to the extreme heat and rain. This further aggravated the sufferings of the displaced population, particularly children, pregnant women and also the old as their movement is restricted due to their physical condition.
Effect on mental health was also reported by the respondents which included, excessive grief, sleep disorders, exaggeration of existing illness and death wish.

The sanitation system was very poor as the place itself was overpopulated. People were defecating in open, without any facility for human excreta disposal. The source of drinking water i.e. hand pump was surrounded by contaminated water, making it unhygienic. The problems of menstrual hygiene for women were there in the absence of proper place for the disposal of sanitary napkins. This further resulted into poor reproductive health among women. In poor sanitation and poor personal hygienic condition, water and vector borne disease transmission potential increases, as number of vector breeding sites and man-vector contact increases in that condition.(NICD, 2005). Further threat of transmission of communicable diseases like diarrhea cannot be denied in such condition.

Issue of violence: In camps the threat from diseases was coupled with the threat from violence and molestation against women due to number of reasons, such as sharing common place with stranger, using open area for defecation and bathing, non availability of proper light system especially during the nights. ‘Since such cases increases during the post disaster phase adding to the miseries of the women, already traumatized by loss of their property and near and dear ones (Singh,P.2008). Two cases of domestic against women were reported by the respondents. In both the cases, husband wife relations were already strained and violence increased, following the disaster. In one case however, woman managed to be courageous enough to take action against her perpetrator husband after bearing so many atrocities. A case of molestation was also reported in an instance where a teenager girl was sleeping along with her family at night. Suddenly two men came and tried to molest her and she hit hardly to her father sleeping beside her. Then the member of self help group came and rescued her with the help of her father. Molesters were from the same camp, and were sent to police later on.

“When resources are scarce, the selling of sex for money or for goods is also known to occur” (UNFPA, 2005). Three interviewees, including one man and two women, stated that they know of women who provide sex for men in return for money.

The alcohol connection to violence against women was also found. During evening, men used to consume alcohol in group of 20 to 30 and starts abusing their women companion in camps. Such type of incidence has adverse affect on women’s physical and psychological health.
Summary and Conclusions:

Every community has its own ideology, value pattern, rules of stratification, which govern all the institution of society, and study of any institution involves a holistic examination of all these factors. Therefore, a scientific enquiry of any social phenomenon i.e. health or domestic violence, even in the post-disaster situation demands an exhaustive study of all the above said social parameters, as these phenomenon are deeply embedded in socio-cultural matrix and also determined by it.

In both, pre and post disaster situation, community is guided by its own cultural values and respond to any external stimulus in its unique way. Thus, it is important to decipher the basic pattern of behavior or response, the community demonstrates in post disaster situation.

In this research, there was an attempt to study the phenomenon of health and domestic violence in post disaster situation with special emphasis on women and to observe the community’s response to such a situation i.e. flood. The study was conducted for a short duration, a kind of preliminary fieldwork; therefore, it was difficult to arrive at any conclusion. However, being a woman my self, it was very easy for me to gather a variety of data especially concerning women even in that limited time and from those data only, I have tried to provide certain explanation and also to some extent arrive at possible conclusion.

In both the population where the research was carried out, there was no major difference in types of diseases people were suffering from. Some of the common diseases were: stomach ailments, skin infection, fever, pain in different parts of the body and weakness especially among women. Extreme psychological problem like death wish was found among people living on the canal bund whereas such cases were not found among village community.

Some of the factors which influenced the overall health among the flood victims are overcrowded shelter with poor sanitation, lack of resources to spend on health, inadequate health facilities, contaminated water and this increased the threat of spreading communicable diseases. Children and especially women were most vulnerable in the context of disaster and comprised the largest percentage of those affected. In relief camps, women were exposed to various problems pertaining to health and domestic violence. Even the personal safety and security in camps for displaced women, for e.g. the lack of separate bathroom and toilet facilities, absence of adequate feminine hygiene, obstetrical and gynecological services was back seated.

As far as the issue of VAW is concerned, it is not an easy phenomenon to observe especially in short period of time. Only few incidents of increased Domestic violence were found in
camp settings, whereas it was almost absent in the village community. Therefore, from few cases of domestic violence against women, it is difficult to conclude that whether the incidence of domestic violence was low or whether it occurs but it is not reported. However, it may be possible that due to the short term fieldwork, observed frequency of domestic violence was low. Moreover, displaying domestic disagreements in front of the others is considered taboo in most parts of the world (UNFPA, 2005), and this could be one of the reason for non-reporting or underreporting of the incidence. Therefore, one needs to develop a standard methodology to examine the issue of domestic violence in disaster situation as the phenomenon itself is quite complex and deeply rooted in the structure of society, sometimes supported and given legitimacy by the prevailing society’s patriarchal ideology. Thus, anthropological method i.e. fieldwork may prove very helpful in getting an in depth insight in to the phenomenon. One has to live with the community to understand the people’s psyche, the attitude of people and then only one would come to know that why people’s behavior changes drastically when they are exposed to different environment or situation from their own as it happens in disaster situation. The government should involve social scientist especially social anthropologists to carry out Social Impact Assessment and also need based study in the aftermath of disaster as in the absence of this successful and long term rehabilitation can not be imagined.

In one case of Domestic Violence, women broke her silence and stood against her perpetrator husband, seeking help from the members of SHG. One probable explanation for such an act may be hidden in the dilution of the domestic boundary, with in which violence occurs. Once the boundary is diluted, there is an opportunity to familiarize one self with new faces, which is very possible in case of community living in the camps, which may not have been possible while living with her own community members, supporting violence through their patriarchal ideologies. But there are certain cultural conflicts and dilemma which women experiences when she has to live in camps, where her privacy is eroded and it also prevents her to access medical services especially when it comes to seek assistance from male health care professionals.

“Gender usually has not been a conscious criterion employed by relief agencies to effectively assist the so called vulnerable groups in their special needs when an emergency or disaster occurs” (Wiest, Mocellin and Motsisi, 1997). Thus, at the end I would submit that the government should follow a culturally sensitive and gender sensitive planning, preparedness, response and recovery efforts because only such interventions would be able to facilitate the betterment of community in general and women in particular in the aftermath of disaster.
Acknowledgement

The funding support for the present work was provided by the University Grant Commission, New Delhi’s JRF programme.
References


List of abbreviations

1. BGVS - Bharat Gyan Vigyan Samiti.
2. NGOs - Non Government Organizations.
3. N. Bihar - North Bihar.
4. NICD - National Institute of Communicable Diseases.
8. VAW - Violence against Women.
Trauma Suffering and Medical Anthropology: Some Reflections in the Context of Findings from Jammu and Kashmir

Dr. Urfat Anjem Mir and Prof. P.C. Joshi

Abstract:
This paper deals with the treatment of concept of trauma suffering in anthropological researches cross-culturally. The aspects of collective experiences of trauma and role of social and cultural factors that shape the life of an individual over time, are specifically, discussed; in reference to traumatic memory construction in the existing body of knowledge. An attempt is also being made to highlight contributions of anthropologists, towards the domain of social suffering, in terms of; recognition of trauma impact manifest through varied cultural modes.

In the Indian context, though, medical anthropologists have started to undertake research studies in the areas of trauma suffering, but not much work has been done so far; given the magnitude and frequency of traumatic situations. It becomes essential to carry out extensive research; and explore the socio-cultural dimensions of trauma suffering in order to make holistic contributions, towards not only, understanding various dimensions of health challenges, but also; help devise effective policies and programs to mitigate such suffering. The understanding of local contextualized meaning and impact of trauma is vital in this regard and here, medical anthropologists have a significant role to play.

As a case study, the findings of a study on prevailing trauma suffering in the context of Jammu and Kashmir conflict are discussed, in order to analyze, the local contextualized explanatory model of suffering, manifestation of trauma and its impact, besides; the trauma coping mechanisms. In short, the aspects of resilience, coping practices attributed to local cultural contexts, and how the inherent indigenous cultural knowledge, beliefs, practices act as trauma absorbents or coping mechanisms of collective / shared suffering?, are covered in this paper.

Key words: trauma suffering, medical anthropology, culture, coping mechanism.

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Introduction:

In fact, human social relationships have been marked by violence as a prominent characteristic in twentieth century. This spate of violence has affected the societies and communities as a whole and it would not be out of context, to mention that its impact on humanity has been severe, and with such a behavioural manifestation, even the very notion of being humane; about human race becomes questionable. Mishra (2009) terms 20th century as the ‘bloodiest century’ and reports that as a result of violence the loss of human lives has been more than 100 millions. Anthropology discipline by being distinct in its claim of studying the ‘man’ in ‘totality’ through the holistic perspective conventionally, has a relevant inclusive research mandate within its ambit specifically, regarding studying underlying factors of violence and consequences of its aftermath; on the societies rather than individuals. Violence undoubtedly, leads to human deaths, maims survivors physically, relocation and displacement of populations at large-scale, shatters social constructs and above all results in ‘traumatic memory’ (Schroder and Schmedit, 2001; Young, 1998).

On the positive side, violent tendency is found to be exhibited by smaller numbers of individuals and majority of society members tend to behave in socially-acceptable peaceful manner. The adverse effects of violence include devastating impact on, not only the physical; but also the social and cultural constructs of human society at large scale. Such a scale of its impact demands for comprehension of the perceived causes of distortion or disturbance in the extant socio-cultural domains, which make the individuals or groups to adopt violence as a potent method to propagate a specific ideology. Whilst, any discourse upon distortions and disturbances in the socio-cultural domains leading to violence cannot be complete without highlighting, the brutal and equally appalling consequences of such a violent behavior. The consequences of violence, though severely horrendous in scope and devastating in scale, are not merely a matter of short lived memory, but have been found to show long term psychological effects; mainly by the scientists from the psychiatry and psychology fields.
In the academic and research fields, the impact of such violent situations has generally been dealt within the concept of trauma, especially, by practitioner’s of medical psychiatric and psychological disciplines - by drawing some parallels from the history of physical origins of trauma. Similarly, anthropologists too made attempts to understand and explain holistically the dynamics of trauma suffering cross-culturally. But there has been no uniformity, in so far, the scope and consequences of trauma suffering is concerned, rather divergent views have emerged regarding the meaning, manifestation and scale of impact of trauma cross culturally, unlike the diagnosis and prognosis of physical ailments; on the analogy of which the trauma suffering is recognized and further classified by the medical psychiatric and psychological practitioner’s. This divergence of findings stems from the simple fact that the anthropologists have generally contested universal prognosis of trauma suffering, owing to prevalent variation in social, cultural beliefs and practices across globe, and the underlying role of such factors in health illness beliefs and practices.

It is, in this background that here an attempt, is being made to explore the treatment of concept of trauma suffering in anthropological researches cross-culturally. While doing so, firstly, the origins of the concept of trauma and traumatic memory construction are traced in the existing body of knowledge and secondly, findings of a relevant study from the contemporary context (e.g. Jammu and Kashmir) are discussed, as an illustration to import and further augment the pivotal role of socio-cultural factors in the comprehension of complex trauma suffering domain.

**Origin of word ‘Trauma’**

The word ‘traumatic’ found its first mention in the *Oxford English Dictionary* in 1656 meaning “belonging to wounds or the cure of wounds”. ‘Trauma’ a term for physical wounds causing pain and suffering was extended to include, via analogy, cognitive–emotional states that cause psychological and existential pain and suffering (Young, 1998:246). Until the nineteenth century, the word traumatic was used only for the physical wounds. Historical
accounts trace the shift in the use of traumatic terminology to include the mental injury to the publication of John Erichsen’s book “On railway and other Injuries of the Nervous System” in 1866. Erichsen being a professor of surgery was responsible for assessing injuries and symptoms primarily attributed to railway accidents. He classified these railway accident patients into three categories: cases that had originated in powerful blows or ‘shocks’ that damaged neural tissue in the spinal cord visible to postmortem examination only; the cases resulting from shock that originated from blows or from shaking and jarring and produced damage that was invisible; and the cases in which people fabricated their symptoms in order to get compensated (Erichsen, 1866). But whether “these jars, shakes and shocks” as put forth by Erichsen directly influence and affect the cases from second group, it demands further explanation (Young, 1995).

Morris (1867) who too, being a surgeon, had special interest, in accidental injuries and defined shock as an effect “produced by violent injuries for any cause or from violent emotions”. The import of element of fear as having a derivative role in certain cases of shock (Jordon, 1880; Page, 1883) is also attributed to Morris. Freud (1895) in his book “Studies on Hysteria” developed the ideas on the traumatic origins of neurosis. His interest in the traumatic events was limited to the period between 1892 and 1896, when he examined the causes of hysterical attacks and the aftermath of world war-I. He is assumed to have focused on the etiologies of war neurosis. With the publication of his work on “Psychological Automatism” in 1889, Pierre Janet is considered to have made attempts to reveal the internal dynamics of trauma and the process that turn trauma into illness. He stated that “traumas produce their disintegrating effects in proportion to their intensity, duration, and repetition” (quoted in Van der kolk and Van der Hart, 1989:1536). The initial response combines what he termed “vehement emotion” and a cognitive interpretation resulting in dissociation of memory or identity processes and attachment to the trauma such that the person has difficulty proceeding with his / her life.
WHR River who was a distinguished anthropologist and a keen ethnographer to show interest in the forms or reasoning underlying medical beliefs and practices, put forward the psychogenic origins of war neurosis (Rivers, 1920). He is considered as a standard bearer for psychiatric recognition of the traumatic memory in the conventional accounts of posttraumatic stress disorder (PTSD) (Herman, 1992; Lead, 1979; Showalter, 1987).

Like Rivers, Abraham Kardiner, who too was inclined towards the anthropological approach and thought, also played an important part in the ‘culture and personality’ school of thought from 1930’s to 1950’s in the American cultural anthropology. He gave the systematic account of symptomatology and psycho-dynamics of war neurosis in his book “The Traumatic Neurosis of War” in 1941. Trauma is at times a “horrendous experience” (Vander der Kolk, McFarlane, and Weisaeth, 1996, p.xviii) that debilitates and fragments a person irreparably (Ulman and Brothers, 1988). The psychological trauma results from traumatic events which are severe and hit at the psychic integrity of the individual more than the physique. Commonly, these events include natural disasters such as earthquakes, floods, cyclones, military combat, kidnapping complicated violence, conflict situations and unexpected bereavements. Although, the trauma and suffering is manifest in individual psychic suffering, it is more appropriate to speak of psycho-social trauma or “the traumatic crystallization in persons and groups of inhuman social relations” (Martin Baro, 1988:138). Psycho-social trauma is particularly evident in the collective experience of anxiety, fear, paranoia, terror, and above- all denial of reality. Martin Baro (1990) interpreted the constellation of state constructed affects, ills, and defenses as a potent means of psychological warfare. Moreover, this process affects all members of society, either directly or indirectly. For example, to a greater or lesser extent, all members of society may experience the war, conflict situations,
movements of separation, etc. The point is that no one remains untouched or unchanged, by these situations which according to Jenkins, (1991) constitute la situacion\textsuperscript{12}

In fact, the early 1980’s, saw the marked change in the scientific field of the research with the anthropological claim on the study of emotion (Kleinman and Good, 1985; Lutze and white, 1986; Rosaldo, 1980; Schcder and Levine, 1984). The anthropological approach in the studies of the emotion primarily established the pivotal role of the culture in constructing the experience and expression of emotion. This contemporary anthropological approach was actually influenced by the deep rooted traditions of psychological anthropology (Benedict, 1946; Bateson, 1958; Mead, 1963; Sapir, 1961) and shaped by the more recent approaches seeking to collapse classical mind body dualisms (Frank, 1986; Good and Good, 1982; Kleinman, 1988; Scheper-Hughes and Lock, 1987). This intellectual conceptual framework shapes the anthropological realization that psycho-biological theories of emotion have advanced little than the European and North American Psychologies of thought and emotion as somehow, separate cultural objects (Jenkins, 1991).

Understanding the human meaning of trauma, especially, as it affects, the survivors of political violence, specifically; conflict situations, is clouded by failure to distinguish between a relatively enduring traumatic situation and relatively discrete traumatic events. This distinction is relevant in two critical dimensions, namely, the state construction of affect and the phenomenology of affect. In the first of these dimensions, the conditions of trauma established by the state and resistance to it come under the distinction between the situation of terror and events of torture. In the second, the modes in which those conditions are taken up into human lives come under the distinction between the situation of distress and events of disease.

\textsuperscript{12}la situacion is the most common way of referring to the intolerable conditions within El Salvador, including civil warfare, psychological terror, and poverty.
Despite, the profound differences in degree and self reference, the essence that terror and torture, disease and distress retain in common is their fundamental dependence on the problem of meaning, sense and representation (Jenkins, 1991). The same essential dependence on representation is true of distress and disease. Persons in a situation of terror are not necessarily in a situation of distress unless the terror is represented as such: distress is a particular stance toward the traumatic situation, a consequence of the construal of terror as terror, a perception and realization of terror as frightening and threatening to the well being of the individual. Disease is a bodily representation, a constellation of symptoms constituting a clinical entity that may occur in episodes and with respect to survivors of political violence / conflict situations what counts as a disease is a rhetorical and political issue. A recent study of Latin American refugees in Toronto and Mexico city and of families of desparecidos (disappeared) in Santiago and Buenos Aires found that “victims of torture and refugees from violent political persecution within a period of ten years following the traumatic experience are impaired by psychosomatic and mental symptoms”( Allodi and Rojas, 1983:246). Moreover, families of desparecidos experienced more symptoms than refugees, not only because of the stress of uncertainty but perhaps because they still lived in the mode of terror that stifles resistance and expression of distress.

In brief, trauma concept conceived within a frame work of individual psychopathology, cannot account for the global affective consequences of terror and distress – the perspective of Janet must be synthesized with that of Martin Baro. At the same time, through-out the most of the twentieth century, emergency interventions with children and adolescents affected by political violence have reflected the pre- eminence given to the bio-medical model in studies and measures dealing with human suffering. In this model, the origin of illness and disease is held to be in the physically bounded body, which in turn is understood to function as the receptacle of mind. Thus, physical and mental health’s are separated and illness is thought to either reside in the body or in the mind with physical health receiving overall priority (Gibbs
and Boydens, 1995). Psychological and emotional well being has generally been understood to play a secondary and derivative role, psychological measures being of peripheral concern given pressing survival needs (Myer, 1992).

Within the biomedical model, academic and policy attention has been increasingly on the psychiatric category, Posttraumatic Stress Disorder (PTSD), which despite its profound cultural origin many claim to be the condition that most affectively embodies the global human response to overwhelming traumatic events (Keinzie, et al., 1986; Magwaza, et al., 1993; Nader and Pynoos, 1993). Recent conflicts (especially from Rwanda, Bosnia, Kosovo etc.) have however, produced a different research response, in which the study of psychosocial impacts has become a source of immense interest and interventions abound (Bracken and Petty, 1998). In these measures, the effects on children/adolescents of violence, separation and loss of life have been explained largely through medical models using a mix of stage, cognitive, psycho-dynamics and attachment theories, and therapy based either on talking through the experience of stressful events, or medications (Levine, 1999; Bracken, 1998). The individual as victim and patient has in the main been the focal point for intervention, with just a few agencies working at the community level to restore social structures and a sense of normalcy. In fact in such conflict situations it is a kind of societal/community suffering more than the individual suffering, so this component is of vital importance.

**Stress related disorders**

In the medical anthropology field, the concept of stress finds its mention by Hans Selye in 1936. In Selye’s model, stress represents the generalized response of an individual or organism to the environmental demands. Those environmental demands, whether physical, psychological or socio-cultural – that produce stress are defined as ‘stressors’. The ambit of the stressors can be wide and of course varies like, manmade disasters, natural disasters,
accidental situations, and or personal problems. The same stressor could prove to be traumatic for one organism but not for other (Helman, 2000).

Although the Selye model which from a physiological point of view involves a wide range of physical changes (Bridges, 1982), is still accepted as basis for stress related research. It has also been critically analyzed for several of its shortcomings, especially, for its mechanistic approach and physiological dimension orientation in terms of ignoring psychological response / coping (Wienman, 1981), description of stressors as abstract ‘things’ separate from social and political context (Young, 1980), overemphasis on physiology and external origin of stress (Pollock, 1988) and finally for challenging the assumption that stress is always negative in the effect on individual / organism (Mc Elory and Townsend, 1996).

Despite all this, Selye’s model of stressors and stress response is a good starting point in understanding how human beings cope with the adversities of life? Simultaneously, it is essential that the context of psychological, social, cultural and economic factors is given due consideration while understanding the stressful events across cultures (Helman, 2000).

At the same time, the stress can be experienced at two levels i.e. individual and community/collective level. The source of stress or stressor can be the same as well as varying. In the case of collective suffering where the whole population can be under stress, such as, in case of political conflict, wars, natural disasters etc., the affect of stress can be represented as collective suffering rather than individual suffering. The late twentieth century has witnessed this collective or social suffering across the globe. Be it individual suffering or collective suffering, the aftermath of the traumatic events represents stress related psychological disorders, like, PTSD, depression, anxiety, psychosomatic disorders and social dysfunction (Desjarlias, et. al., 1995; Swartz, 1998).
The pertinent questions however, are how these organic and psychological trauma consequences are found across cultures and how its representations have been recognized over the period of time, of which PTSD is a recognized diagnostic entity? Allan Young (1998) postulates that the organic and psychological / existential traumas are connected through genealogy and not analogy. The representation of trauma in the form of physical and psychological symptomology gains importance from the public health perspective and its understanding becomes inevitable in such circumstances, where policy framing for the betterment of health standards is required for large populations affected by traumatic events.

**PTSD as a disorder and related questions**

Post-traumatic stress disorder (PTSD) recognition as a health problem, in the aftermath of experience of an untoward happening or severe stressful traumatic event is well established in the medical and psychological literature. The history of PTSD recognition and diagnoses dates back to 1980, when for the first time, American Psychiatric Association mentioned diagnostic criteria for PTSD in their official diagnostic manual i.e. Diagnostic and Statistical Manual of Mental Disorders (DSM-III). No doubt, these conflict situations qualify as the sources of severe stressors and cause debilitating effects to the psyche of the individuals. American Psychiatric Associations officials manual (DSM IV) describes even learning about severe stressful event may be a cause for onset of PTSD, if the victim involved is family member or close associate.

The prevalence of major depressive disorders and posttraumatic stress disorder (PTSD) symptomatology is apparently common among refugee populations from political violence and conflict situations (Jenkins, Kleinman and Good, 1990; Kienzie et al., 1984; Mollica et al., 1987; Westermeyer, 1988). The language of loss of close kith and kins and mourning, however, is usually communicated and manifest through somatic means, such as insomnia, lack of appetite, fatigue, or psychomotor agitation or retardation (Jenkins, 1991). Kleinman (1986, 1988), too has demonstrated that somatized expression of depressive disorders is very
common for most of the world’s population. At the same time, the problem of understanding the pathogenic consequences of trauma and the character of the resulting disorder is, thus, compounded by variations in the psycho-cultural bases of emotional life (Jenkins, ibid). Allan Young (1995) argues that stressors / traumatic events producing stress are often described as ‘abstract things’, as entities separate from a particular social, cultural and political context, and a particular time and place. At times, this gives an impression as if these stressors are invisible pathogens or forces that cause illness or unhappiness to certain individuals. But such an impression of focus on de-contextualized stressors and their physiological effects leads to ignoring the influence of the economic and social forces on the individual/organism which may also have an effect on individual health.

Derek Summerfield (2001), too, has raised few pertinent questions regarding the validity of traumatogenic effects and medicalisation of distress and that whether such a phenomena was happening merely because of the compensation advantages linked to diagnostic entity recognition of PTSD in the wake of Vietnam war. He further links the role of society and politics in the process of invention rather than discovery of PTSD as psychiatric illness or disorder. Andreasen (1995) reports that rarely anyone would like to have a psychiatric diagnosis but PTSD was one. Does that hint towards the era when seeking compensation benefits on account of trauma suffering especially, in the wake of Vietnam War and First World War gained momentum and further supplemented the diagnostic recognition of PTSD? Interestingly, the diagnosis of psychiatric disorders would entail attachment of social stigma in the society, usually found across cultures. But, does it have any validity to draw even a remotest conclusion that seeking compensatory benefits was the prime concern for the war veterans than their state of suffering and subsequent fear of the stigmatization of psychiatric diagnosis? Amid this discourse it gains importance that further cross-cultural exploration is essential to explain whether medicalisation of experience of extreme distress and trauma is only a cultural trend of western world, or its prevalence across cultures is evidenced. The factors of concept of personhood in relation to resilience, the extent to which any event can be
defined and accepted as severely traumatic and stressful in nature, and whether such responses of individual state of mind can be universal, can hardly be analyzed without fair consideration to the element of social and cultural beliefs and practices of the affected subjects under study. Eisenbruch (1991) also brings to fore that complex human experiences cannot be defined and measured without correcting for culture.

Here, in our cultural and governance system we have no guarantee of such monetary compensation, unlike especially, USA. No doubt, in our context, the family structure and social support mechanisms are traditionally different, the belief systems and ritualistic practices are dominant in the domain of life. But still, would it be fair to simply think that greater morbidity prevalence reporting due to the medicalization of distress and trauma can be the reality, if the element of monetary compensation is guaranteed at any point in time in our context as well. On the other hand, Ben Shephard (2002) tried to highlight that psychiatrists, journalists, lawyers etc, have medicalised human distress and created ‘a new culture of trauma’. Citing from his analysis of the experiences and the socio-cultural circumstances surrounding the Second World War in Europe, he postulates the idea that greater consciousness of trauma has lead to weakening of most people’s capacity to resist trauma, than in strengthening it. Joshi and Mir (2002) too coined the term ‘trauma culture’ to describe how these traumatic situations result in experience of repetitive suffering which in turn by shaping and structuring everyday life and social relationships becomes a shared repertoire of culture. Thus, given the prevailing circumstances of rising rate of events, which qualify as traumatic, it may be a valid argument and hypothesis yet to be tested cross culturally; that the social and cultural support mechanisms alone have the capacity to mitigate health costs of mental trauma, than the less effective trauma pills of medical filed.

**Trauma coping: Cross-culturally**

Psychiatric and psychological literature is full of discussions on how disclosure and avoidance represent two opposing poles of appropriation and distentiation after the traumatic
event during the phase of trauma coping which can have both positive as well as negative outcomes (Rousseau, *et al.*, 2001).

The first pole, disclosure is often considered the basis of trauma treatment, both in psychological and cognitive approaches (Cohen, 1998). Debriefing is also based on this, which is a most widely used collective intervention for different type of trauma. Apart from its therapeutic applications, disclosures as a testimony is also seen as a moral obligation, which necessitates the restoration of social order and justice a pre-requisite to the “never again” feeling of reoccurring of the traumatic event (Levi, 1995; Leys, 1996). Thus, this disclosure on the part of the actors, i.e. perpetrators of violence and victims of violence helps in restoring faith, lost trust among the community members. The other pole, avoidance is usually associated with silence and secrets which in turn is considered as a pathological or at least as a psychological defense. If disclosure is associated with positive health measures, it cannot be ascribed to a group of persons whom, Pannebaker (1985), refers to as “super repressors” who can be exceptionally healthy in spite of persistent avoidance of traumatic memories (Pannebaker, 1989 and Sigal, 1998).

Semprun (1994) who after spending some time in concentration camps, puts forth that even after 40 years of experience, his attempts to escape from trauma memories, would at times; lead him to suicidal ideation and tendency. This is what, that, even in the present study context, demands utmost caution while interpreting the findings. Memory as Kiramyer (1996) suggest is not a reflection of objective reality, rather it sketches a variety of “landscapes” structured around cultural models of remembering and forgetting. Society is generally portrayed as an integrated, self equilibrium system, in which normally political violence and other such phenomena of mass destruction are an exception, and in fact outside the normal human experience (Allen, 1989; Boyden, 1994; Davis, 1992’ Levine, 1999).
Trauma suffering in Jammu and Kashmir

Background:

The state of Jammu and Kashmir experienced the Buddhist, Hindu and Muslim influences in its cultural evolution and resulted in creating a harmonized blend of cultures. Out of this blending, the result was present Jammu and Kashmir which inherited kashmiriat\textsuperscript{13}. Linguistically Kashmir began with Sanskrit and then became a centre of Persian. According to Grierson\textsuperscript{14}, researchers have shown that in addition to the indo-Aryan or Sanskrit group and Iranian group / Persian group a third one in the Aryan branch of the Indo-European, the Dardic is in intermediate to the Indo-Aryan and Iranian and that Kashmiri is intimately connected with it. Despite foreign domination and consequent religious conversions, which the state had witnessed, it gave rise to a very tolerant variety of Islam, Buddhism and Hinduism (Bamzai, 1962; Lamb, 1992; Kapoor, 1992). This in a way may imply that, the cultural and ethnic ties were always superior to the people of this region - than the religious affiliations that emerged in the state.

The mark of turbulence in the valley of Kashmir and its spread to other parts of Jammu and Kashmir in the present context has had something to do with the history of political instability and the discordant means of forces operating from within and outside the Kashmir. How the pestilence of violence and intolerance affected this tolerant society remains to be examined and understood in this politico- historical context from an anthropological perspective? What lies behind the controversies relating to Kashmir is not merely the dissatisfaction of Kashmiri with the political arrangement after its accession to Indian dominion but it goes back to pre-partition era? In terms, of the statistics produced by various sources and agencies, both governmental and independent non-governmental, the figures of loss of human lives due to violence exceed more than 50,000, and equally displacement of more than two lakh population has occurred. Regardless of the factors which caused this spate of turbulence

\textsuperscript{13} the local rich heritage of vibrant and tolerant culture- of harmony and peace
\textsuperscript{14} Grierson, Linguistic survey of India, vol. VIII part II
through violence in the state of Jammu and Kashmir, the appalling matter of the fact is that, the loss of human lives and property has been huge, nonetheless; the continuity of violence for more than two decades is bound to exert immense stress on the individual repertoire of coping stress. Undoubtedly, the surviving population of the whole state has been experiencing situation of this trauma culture on day to day basis, especially, in Kashmir valley part of the state.

**Methodology:**

The selective findings discussed in this paper here are a part of the doctoral research study of first author conducted through department of Anthropology, University of Delhi during 2001-2004. The special focus of the research study, some findings of which are, under discussion here, primarily was Posttraumatic stress disorder (PTSD), its social and cultural correlates within the broader context of trauma suffering, besides, the emergence of PTSD and impact of traumatic events on the role performance of adolescents. So in this study, the primary objective was to explore and understand the adolescent’s point of view as well as behavior in the aftermath of prevailing traumatic circumstances. Use of quantitative psychological tools considered to be appropriate was made for eliciting the domain of clinical features, such as, general health, impact of traumatic events and PTSD. The qualitative research tools were also used for understanding the explanatory model and coping mechanism of trauma suffering of the subjects under study. Data collection methodology includes use of The Clinician Administered PTSD Scale (CAPS), Revised Impact of Event Scale (RIES), PTSD Primary Screen Checklist and CMI Health Questionnaire, the Case study and Interview techniques.

**Nature of traumatic events:**

Traumatic events including incidences of militancy only were taken in this study and those adolescents who had directly or indirectly experienced these events were screened for trauma symptoms, especially - posttraumatic stress disorder. The details of the trauma experience are given in the table 1. The traumatic event and the trauma experience were classified into
various groups at the time of data analysis. After grouping it came to fore that in case of trauma experience. 50 percent (N=34 adolescents) of the experimental group comprised of those adolescents who were themselves involved in the traumatic events and 50 percent (N=34 adolescents) those whose family members were involved in the traumatic events. Likewise, the details of the nature of traumatic events are given in the table 2. But the grouping of the traumatic events showed that 52.9 percent (N=36 adolescents) of the experimental group adolescents had experienced events involving gunfire, 32.4 percent (N=22) of the adolescents had experienced events involving bomb-blasts and 14.7 (N=10) percent had experienced events involving physical torture.

This shows that these adolescents and their caregivers are not only the victims of incidences of encounters between armed militants and security forces but also the modes of physical torture and revenge mass killings carried out by both the groups. These killings and atrocities usually go under the garb of killing by unknown men, but are in fact, always well defined targets, leaving behind enough evidence to suggest the motive was revenge killing.
Table 5.1: Trauma experience details of experimental group

<table>
<thead>
<tr>
<th>Loss of family members</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe injury physical torture</td>
<td>8</td>
<td>11.8</td>
</tr>
<tr>
<td>Witness to the traumatic event</td>
<td>23</td>
<td>33.8</td>
</tr>
<tr>
<td>Sever injury or torture of the family member</td>
<td>5</td>
<td>7.4</td>
</tr>
<tr>
<td>Loss of family member and witness to the traumatic event.</td>
<td>3</td>
<td>4.4</td>
</tr>
</tbody>
</table>

Table 5.2: Nature of the traumatic events:

<table>
<thead>
<tr>
<th>Events</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bomb-blasts</td>
<td>19</td>
<td>27.9</td>
</tr>
<tr>
<td>Cross firing</td>
<td>14</td>
<td>20.6</td>
</tr>
<tr>
<td>Brutal massacre/ mass killing</td>
<td>24</td>
<td>35.3</td>
</tr>
<tr>
<td>Interrogation/ physical torture</td>
<td>10</td>
<td>14.7</td>
</tr>
<tr>
<td>Bomb-blast and cross firing</td>
<td>1</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Impact of trauma on health:

The consequences of daily basis trauma experiencing on the experimental as well as on those adolescents who had not been directly affected by this wave of violence was assessed by administering Cornell Medical Index (CMI) Health Questionnaire (Indian adaptation) to both the group adolescents. This was done to study the impact of trauma on health of these adolescents as well as to find out, if any differences between the experimental and control, separately sex wise. The scoring of the CMI questionnaire was done according to the standard criteria of the questionnaire given in the manual.
After matching the scores of the participants in the CMI questionnaire with the standard scoring cut-off criteria, it came to fore that there was no total significant distress level either among the experimental group or control group.

Table 5.3: CMI Health Questionnaire scores comparison between experimental and control groups:

<table>
<thead>
<tr>
<th></th>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>S.E.M</th>
<th>‘t’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical distress</td>
<td>E.G.</td>
<td>68</td>
<td>12.45</td>
<td>10.54</td>
<td>1.278</td>
<td>1.18</td>
</tr>
<tr>
<td></td>
<td>C.G.</td>
<td>70</td>
<td>10.57</td>
<td>7.92</td>
<td>.947</td>
<td></td>
</tr>
<tr>
<td>Psychological distress</td>
<td>E.G.</td>
<td>68</td>
<td>9.29</td>
<td>5.92</td>
<td>.717</td>
<td>2.06 *</td>
</tr>
<tr>
<td></td>
<td>C.G.</td>
<td>70</td>
<td>7.28</td>
<td>5.48</td>
<td>.656</td>
<td>(p&lt;.05)</td>
</tr>
<tr>
<td>Total distress</td>
<td>E.G.</td>
<td>68</td>
<td>21.75</td>
<td>15.06</td>
<td>1.826</td>
<td>1.63</td>
</tr>
<tr>
<td></td>
<td>C.G.</td>
<td>70</td>
<td>17.85</td>
<td>12.86</td>
<td>1.537</td>
<td></td>
</tr>
</tbody>
</table>

E.G.= experimental group,  C.G. = Control group

The table 3 shows that there were significant differences among the experimental group and control adolescents in the psychological distress with the experimental group having higher means which was significant (p<.05).

The analysis of the experimental group and control group separately, showed that within the experimental group according to the scoring cut–off criteria adolescents had significant distress levels in various psychological categories warranting medical intervention. The findings reflect that 35.1 percent adolescents of experimental group had significant distress level in the Inadequacy category, 19 percent had significant Depression scoring above cut off mark, 16.2 percent had significant distress in Sensitivity, 13.3 had significant distress in Anger category and 12 percent had significant distress in Tension category.
On the other hand, the analysis of the control group adolescents separately showed that 4 percent had significant problem in Inadequacy, 4 percent had significant distress in Depression, 12 percent had significant distress in Sensitivity, 2 percent in Anger and 4 percent in Tension.

These findings bring to fore that even though the experimental group adolescents had higher significant distress levels. The control group adolescents too had significant distress levels in few psychological categories.

Table 5.4: Sex wise comparison of CMI Health Questionnaire scores of control group:

<table>
<thead>
<tr>
<th></th>
<th>Sex</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>S.E.M</th>
<th>'t'</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical distress</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>42</td>
<td>28</td>
<td>6.66</td>
<td>6.15</td>
<td>.950</td>
<td>6.30**</td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td></td>
<td>16.42</td>
<td>6.61</td>
<td>1.249</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(p&lt;.01)</td>
</tr>
<tr>
<td><strong>Psychological distress</strong></td>
<td></td>
<td></td>
<td>4.97</td>
<td>4.55</td>
<td>.703</td>
<td>5.00**</td>
</tr>
<tr>
<td>Boys</td>
<td>42</td>
<td>28</td>
<td>10.75</td>
<td>4.97</td>
<td>.939</td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(p&lt;.01)</td>
</tr>
<tr>
<td><strong>Total distress</strong></td>
<td></td>
<td></td>
<td>11.64</td>
<td>10.31</td>
<td>1.591</td>
<td>6.11**</td>
</tr>
<tr>
<td>Boys</td>
<td>42</td>
<td>28</td>
<td>27.17</td>
<td>10.54</td>
<td>1.993</td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(p&lt;.01)</td>
</tr>
</tbody>
</table>

The finding in the table 4 show that there were significant differences in the control group adolescents sex-wise in the physical, psychological and total distress. But here again, these differences were not significant according to the scoring cut-off criteria. According to the scoring criteria there were significant distress levels in few psychological categories only. 2 percent boys and 3.6 percent girls had significant distress levels in the anger category. 4.8 percent boys and 6 percent girls and significant distress levels in Sensitivity category. 2.4 percent boys and 7.2 percent girls had significant distress levels in the Depression category. 4.8 percent boys and 3.6 percent girls had significant distress in Inadequacy category. 3.6 percent girls and significant distress in Tension category while as boys showed no significant distress in this category.
Table 5.5: Sex wise comparison of scores of CMI Health Questionnaire of experimental group

<table>
<thead>
<tr>
<th></th>
<th>Sex</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>S.E.M</th>
<th>'t'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical distress</td>
<td>Boys</td>
<td>35</td>
<td>7.77</td>
<td>7.59</td>
<td>1.28</td>
<td>4.22* (p&lt;.01)</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>33</td>
<td>17.42</td>
<td>11.00</td>
<td>1.92</td>
<td></td>
</tr>
<tr>
<td>Psychological distress</td>
<td>Boys</td>
<td>35</td>
<td>6.94</td>
<td>3.86</td>
<td>.653</td>
<td>3.67* (p&lt;.01)</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>33</td>
<td>11.78</td>
<td>6.71</td>
<td>1.168</td>
<td></td>
</tr>
<tr>
<td>Total distress</td>
<td>Boys</td>
<td>35</td>
<td>14.7</td>
<td>10.59</td>
<td>1.791</td>
<td>4.50* (p&lt;.01)</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>33</td>
<td>29.21</td>
<td>15.6</td>
<td>2.719</td>
<td></td>
</tr>
</tbody>
</table>

Here again, the table 5 shows differences among boys and girls of the experimental group in physical and psychological and total distress levels. But the further analysis shows that the experimental group adolescents show significant distress according to the scoring cut-off criteria in some physical as well as psychological categories of the CMI health questionnaire pointing towards the prevalence of various health costs of the trauma experiencing. Whether this trend can be attributed to increasing somatization emerging among the exposed adolescents in the state of Jammu and Kashmir, it needs to be further explored only then can some generalization be made in this context. The findings showed those 27.3 percent girls and 2.9 percent boys had significant distress in Genito-urinary tract system category. 6.1 percent girls and 8.7 percent boys had significant distress in miscellaneous disease habits. 30 percent girls alone had significant distress in Fatigability category. 51.6 percent girls and 34.3 percent boys had significant distress in Inadequacy category. 8.6 percent boys and 30.3 percent girls had significant distress in Depression category. 12 percent girls and 8.6 percent boys had significant in Sensitivity category. 15 percent girls and 10 percent boys had significant distress in Anger category. 9 percent girls and 5.7 percent boys had significant distress in Tension category.

Overall, the impact of trauma on the health of the adolescents shows that adolescents who were affected by the militancy related traumatic events show more psychological distress than their counterparts who have not been affected by the militancy directly. While at the same
time, even though there were signs of physical distress levels in few categories like Genito-urinary tract and miscellaneous habits among the experimental group but a strong link of somatoform cannot be established since adolescence being developmentally crucial stage involves rapid body developmental changes and this difference could be because of various factors. But the finding of girls subjects showing more distress level than boys in both the control and experimental groups point that girls are more prone to distress than boys.

**Emergence of PTSD**

A total of 189 adolescents were screened for PTSD symptoms after initial mapping of the traumatic incidents having occurred in different villages and towns. Among these 189 adolescents only 68 adolescents conformed to the inclusion criteria of the study. This shows a prevalence rate of 35.9% of PTSD in the affected population of adolescents.

The Clinician Administered PTSD Scale (CAPS) and Revised Impact of Event Scale (RIES) were administered to the adolescents of experimental group only. The minimum period of having experienced the traumatic event was two months and maximum on the date of interview and administration of other tools was eight months. Those adolescents who scored a score of two or more on the PTSD primary screen checklist were administered CMI health questionnaire according to the Sex of the respondent followed by Revised Impact of Event Scale and CAPS. The analysis of the PTSD symptoms showed that 7.4 percent (N= 5) of the experimental adolescents were having these symptoms less than three months showing they were actually contacted within three months of the traumatic event having occurred. While as 92.6 percent (N= 63) of the adolescents of the experimental group were having these symptoms for more than three months. The case studies and interviews were taken in the following days according the choice and comfort of the respondent and caregiver.

The analysis of the trauma symptoms assessed through the administration of RIES and CAPS was done by applying the standard analytic criteria and approach of these tools. Both the tools have independent criteria of calculating symptom severity. The CAPS score analysis to find
out the PTSD symptom severity was calculated by applying the F (1)/I (2) rule of the CAPS analysis.

**Table 5.6: Revised Impact of Event Scale symptom severity**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate</td>
<td>24</td>
<td>35.3</td>
</tr>
<tr>
<td>Severe</td>
<td>39</td>
<td>57.4</td>
</tr>
<tr>
<td>Extreme</td>
<td>5</td>
<td>7.4</td>
</tr>
</tbody>
</table>

**Table 5.7: Sex wise comparison of Revised Impact of Event Scale symptom subset scores**

<table>
<thead>
<tr>
<th></th>
<th>Sex</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SEM</th>
<th>‘t’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrusive symptom subset</td>
<td>G</td>
<td>33</td>
<td>16.00</td>
<td>3.50</td>
<td>.609</td>
<td>.76</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>35</td>
<td>15.42</td>
<td>2.58</td>
<td>.436</td>
<td>(NS)</td>
</tr>
<tr>
<td>Avoidance symptom subset</td>
<td>G</td>
<td>33</td>
<td>17.57</td>
<td>3.33</td>
<td>.580</td>
<td>2.13* (p&lt;.01)</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>35</td>
<td>16.11</td>
<td>2.21</td>
<td>.375</td>
<td></td>
</tr>
<tr>
<td>Total symptom score</td>
<td>G</td>
<td>33</td>
<td>33.57</td>
<td>5.31</td>
<td>.925</td>
<td>1.87 (NS)</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>35</td>
<td>31.54</td>
<td>3.49</td>
<td>.590</td>
<td></td>
</tr>
</tbody>
</table>

**Table 5.8: CAPS symptom severity**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>4</td>
<td>5.9</td>
</tr>
<tr>
<td>Moderate</td>
<td>4</td>
<td>5.9</td>
</tr>
<tr>
<td>Severe</td>
<td>9</td>
<td>13.2</td>
</tr>
<tr>
<td>Extreme</td>
<td>51</td>
<td>75</td>
</tr>
</tbody>
</table>

The Revised Impact of Event Scale and Clinician Administered PTSD Scale were administered, especially, to assess the impact of trauma and the post-traumatic stress disorder symptoms. Even though RIES also covers the PTSD symptom subsets but CAPS is a more
detailed structured interviewing tool which elicits both frequency and intensity of the symptoms in accordance with the criteria of PTSD symptom classification as laid in DSM IV. The analysis of the Revised Impact of Event Scale symptom severity (refer table 6) shows that 35.3 percent adolescents (N= 24) had moderate PTSD symptoms, 57.4 percent (N = 39) had severe PTSD 7.4 percent had extreme PTSD (N=5). While as the analysis of the CAPS symptom severity (refer table 8) shows that 5.9 percent (N =4) adolescents had mild PTSD symptoms, 5.9 percent (N=4) had moderate PTSD symptoms, 13.2 percent (N = 9) had severe PTSD symptoms and 75 percent (N =51) had extreme PTSD symptoms. A closer look at these frequencies reveals that maximum number of adolescents had severe to extreme PTSD symptoms according to the symptom criteria of both the tools.

When the comparisons between boys and girls of experimental group were done with respect to their residence viz. urban and rural boys and girls, it showed that there were significant differences between boys and girls with the girls having higher means in certain CAPS symptom subsets besides, CMI physical, psychological and total distress levels in case of rural adolescents. While in case of urban adolescents the results showed insignificant differences. In case of rural adolescents there were significant differences between boys and girls in the re-experiencing symptom subset (‘t’ = 2.56, p<.05, df=46) and CAPS associated symptom subset (‘t’ = 2.36, p <.05,df=46).

Explanatory model of trauma
How these adolescents perceive and attribute to the cause of militancy is directly linked to their limited personal experiences and learning from elders. To majority of them this conflict and grey violence is not only from within their society, but is also fuelled by the external powers and is unending. To those also who have suffered in terms of the loss of their relatives and dear ones, this violence has no ideological appeal as well as approval which could attract these young minds or influence their behavior in taking to arms and support en mass or individually on any basis viz. religious, communal or geographical. What actually goes inside
the minds of theses adolescents can be illustrated by the narration of Maqbool one of the respondent, who says:

‘ yeh mujahid aur army wale humare liya kiya bhala kar rahay hien, in ki iss rozana kay lardna say huamy to kuch faida nahi ho raha hai sif Mushkilan hi ho rahi hian.’

i.e. what good these army men or Mujahids( referring to the gunmen responsible for spearheading the armed conflict movement) will do for us, their daily fighting has brought in miseries and difficulties only and no benefit for us.

On further exploration and questioning it became evident that at least every adolescent, viz. from both experimental and control group had a hidden feeling and perception of the continuing violence as a problem which has more to do with the relations of India and Pakistan rather than being a mere problem of Jammu and Kashmir residents.

As Samina and shakil also echoed the same feelings, ‘yath asa jihad wanaow yah ath asa kia wanow par tim chaa mujhahid ( by using the word mujhaid they refer to very bold energetic and dare devil individuals fighting selflessly for a common cause) . Asalas manz cha yi ladia Hindustan ta pakistanz manz sarr ia chi yi wanana (By Saab laog they meant family members and friends). Yith ta china as azadf hi agar zan yi laddi khatam gasy’. Samina and Shakil say what word should we use to describe this violence but they are Mujhails who are fighting (here they refer to militants). But everyone says this is actually a fight between India and Pakistan (by everyone they meant family members and friends. we would be free from any sort of problem if this gun moves out of our lives’.

But Zaheer another adolescent who had lost his brother in a retaliatory fire had something else to share. He was like, full of feelings of revenge, trying to mix up his these feelings with the philosophy of Jihad and giving vent to his inner sentiments, after losing his brother in front of his eyes for no fault of theirs.
‘But we have to suffer just because of being residents of this unfortunate state.

Otherwise, nothing would have happened to his brother’ says one of his friends.

Overall, the narrations of these adolescent respondents depict that they have not been able to understand the *emics* of this ‘trauma culture’, even though, most of them have their entire lives against the backdrop of this wave of violence, have not seen or experienced the peaceful calm times, but still, the traumatic events have shattered their lives and made them to think, ponder and get confused over this issue and over the innumerable miseries which this situation has brought. This shows the inner side of human beings vulnerable to emotional and behavioral consequences, when being exposed to severe life threatening traumatic events, confronting either them or their near and dear ones.

**Coping strategies and mechanisms**

There is no doubt that this wave of violence has ruined every aspect of the life of the adolescents as well as their caregivers in the state of Jammu and Kashmir. But there is no denial of this fact also that life is going on amid the atmosphere of violence and ‘trauma culture’. There are mechanisms and modes of absorbing the daily stressful shocks and jerks, which have been helping these adolescents and their care givers carry on life and share their suffering. On one hand where such kind of violence has been inflicting a kind of collective suffering, similarly, we find the collective social sharing and the strong cultural stress absorbents playing a key role in lessening the sufferings of not only these adolescents but also their caregivers and neighbors.

An analysis of the case studies and interviews give us an impression that those who have been bearing this outburst of violence for more than one decade have now sort of become immune to this tragic atmosphere and are concerned about their daily lives. These adolescents as well as their caregivers make attempts to escape from the brunt of violence, especially, from those perpetrating it and those out there to wipe it out, or suppress the wave of militancy. These
innocent civilians have no choice of their own but to adapt themselves according to the daily untoward happenings, amid continuous fear of losing anything from relatives, friends, household’s belongings to even one’s own life at any moment.

In such a disturbed and tense situation what coping means and how coping is done are very crucial questions for a researcher but for the study subjects, an intrinsic part of daily life. At individual level of the adolescents, coping with; means to live their life in an atmosphere of loss of life and injuries, dislocation from their ancestral homes to either cities or towns or out of state. But for the majority, it means facing the situation daily as it comes. The case studies present a panoramic view of how the adolescents negotiate this overwhelming grief and fear in their daily lives.

To cope up with this violence is not just a problem of only those adolescents in the state of Jammu and Kashmir who have suffered on account of militancy by losing their relatives or witnessed the traumatic event, or even suffered the injuries. But this concerns all - the adolescents and adult caregivers as well. It is not that that this militancy related violence is occurring in any specified part only rather it has engulfed the whole state. There exists uncertainty of any untoward event happening anywhere, be it a crowded city, village or bus stand besides, the usually the army installations and militant hideouts. The incidences of *fidyaan* i.e. suicide attacks and bomb-blasts are the concern of the parents as well as the adolescents, who remain worrying about the safety of each other. Shazia one of the respondents echoed that even though she is out of her ancestral village but wherever she listens about incidences of any attack or cross firing near or within her village she becomes very restless about the safety of her parents and other relatives and that this is something which is a daily affair. The restlessness and agonizing fear comes with thought of brutal tortures, and humiliation beside severe physical injuries which are generally perpetrated on these innocent civilians by these gunmen for extracting information about the hideouts and
movement of rival group of gunmen. It is a common phenomenon, which has hit the psyche of the common civilians including these budding flowers, who have been rendered to lead a life of misery and devoid of peace. These adolescents have not even seen the times of total peaceful existence but have only listened from their parents about existence of such times in the past. For these adolescents, to derive the meaning of peaceful times is hard to perceive and visualize. The quite often remarks of their parents and elders caregivers regarding the peaceful times earlier often make these adolescents distressed regarding the existing state of affairs.

**Family and community**

It was found that family and community level support in the form of collective sharing was prevalent there, with the adolescents getting a means of making their lives meaning-full and worth living in the company of their family and community members. The family level and community or village level support systems have been in operation automatically in response to this prevailing situation of violent turmoil. It is this component of social support, which may actually be, playing a very important role in helping mitigate the adverse effects of trauma in the lives of these adolescents.

In one of the regions (inhabited by a distinctive cultural group in the Jammu zone) affected by violence a mode of collective sharing was noticed. In this phenomenon, during daytime each family in the close vicinity or neighborhood would carry out activities vital to their subsistence pursuits. But during night hours four to five families would assemble at one place and spend dark night hours together, partly in conversation and partly in sleep, just to escape from any encountering untoward happening or mischievous torture from either group of gun-wielding men (be it security forces or militants). At the same time, getting together as a collectivity may be helping them through exchange of emotional and social support, to have the feel of ease and negate the feelings of persistent fear momentarily. This mounting of fear in dark hours could be because of fact that, usually, anti-state gun-wielding actors move from
one place to another under the darkness of night and the state law enforcement agencies also do conduct operations under dark hours to take on those, posing threat to state sovereignty. It has become a unique phenomenon of sharing grief, suffering and de-stressing in societal level rather than on individual level. But obviously, this seems to have been playing a positive role in helping an individual cope the fearful stressful environment. The unique feature about this organization is that it doesn’t take place on any specific criteria. In some places, where close relatives live in the neighborhood or close vicinity it involves them. While where there are no relatives living nearby it takes involves the neighbors, especially in the highly militancy infested areas. This organization or assembly is formed for multiple reasons like, to avoid being whisked away (by either group of gunmen at night, since gunmen would not resort to coercive means when there are multiple number of individuals staying together). Apart from this, to avoid being trapped in between the cross firing incidents in areas where militants roam around freely and there is a high risk of army chasing them. In one specific area of fieldwork, there is a very renowned shrine of one Sufi saint ‘Baba Ghulam Shah Badshah’. This is very famous among the devotees cutting religious affiliations and from every nook and corner of the state. The residents of its adjoining hilly area stretching to at least three kilometers were found to have spent some their nights there.

Moreover, this shrine attracts devotees from across religious affiliations, with large numbers visiting on the Thursdays, Fridays and Sundays. The collection of donation, which goes to \textit{wakf board}, runs into millions.

‘ziaratan tay dargha di hazriu ina salan which kafi zada barrad gai’ i.e. the frequency of visiting local shrines and Dargha’s i.e. shrines has gone up’ said one of the employees working at the shrine.

It is here, where devotees seek that eternal peace of mind by offering prayers and also pray for the peace and prosperity in the state. Mass exodus of people from their native places and

\footnote{A locally revered shrine, of a Sufi saint, Baba Ghulam Shah Badshah (who is believed to have migrated from Pakistan) and is located in district Rajouri.}
moving to the cities, buying land plots in the groups closely related or like they are in the villages (i.e. one preferring to buy a piece of land near the other neighbor) too was evidenced from the field areas. This shows that not only the minority community i.e. Kashmiri pandits had been forced to leave their homes and hearths but even the majority community has been uprooted from their native places for the sake of safety and survival. Only those who could afford have chosen this option but other with less means of economic wealth too were found to have considered the option to sell their lands in far off places, and move to buy land in towns and cities.

The migration towards towns / cities is considered safer. It is a common joke over there that one has to face the brunt of militants at night, when they move from one place to another and of the security forces during the day time, for no fault of his or her but for just being a resident of this trouble-torn state. Both experimental as well as control group adolescent reflected the sense of helplessness which is getting transmitted to them from their elders. This sense stems from the perceived notion that prevailing circumstances ought to be faced on day to day basis, in the absence of any immediate possible end to this situation. The researcher came across no case where the adolescent suffering from traumatic memory would have been taken to the hospital for any kind of treatment. But what came to fore was that in case of few severe suffering adolescents; the help of religious healer was sought to help adolescents overcome the trauma symptom suffering and lead a normal life.

The perceived notion of possibility that trauma events are likely to be repeated is a persistent source of uncertainty, and distress for these adolescents. But by resorting to talking about the trauma in their discussions and the modes of inflicting injury, torture, etc., it helps them express grief and distress through a social mode and share through a mechanism at social community level. The phenomenon of organization of families during night hours at one place has provided the adolescents staying with their families with an opportunity,
particularly in rural areas, to mingle free at least for some time with their peers. Suffering is construed as an inevitable part of life and the learned helplessness, which transcends from the parents and elder community members to these adolescents reflects that suffering is not only an experience that must be recognized as part of daily life; but is also like a thread which stretches from past to present and is woven around the lives of these adolescents and their parents. Furthermore, it has taken the form of a collective suffering rather than an individual ordeal. What is worth significance here is that, how by and large these adolescents have been made by their parents and caregivers to seek the solace and healing of their psychological wounds through religious practices? This phenomenon of visiting shrines, seeking health aid from saints and religious healers, especially, in rural areas may be acting as a strong deterrent to any kind of large-scale social and psychological suffering, which obviously, needs further corroboration through extensive research.

**Conclusion:**

The concept of trauma suffering within the discipline of medical anthropology, with regard to due focus on the cultural distinctiveness in deriving meaning, manifestation of impact and its other correlates, still demands further understanding. At the same time, in the Indian context, it demands for extensive exploration of this concept in varied cultural settings and in diversified traumatic contexts – which undoubtedly are prevalent in the contemporary Indian society. The exploration of social and cultural correlates is very vital for design of effective culturally acceptable mechanisms of addressing health issues and relevant concerns. Similarly, holistic anthropological exploration is highly required to help find out the appropriate scale and magnitude of impact of such collective and shared traumatic situations. Such anthropological studies also need to put to real test the universal-impact hypothesis of the psychiatric and psychology fields in Indian context and come up with local culture specific findings regarding this field of trauma suffering. The contemporary scenario of rising threats from terrorism, low intensity conflict problems of naxalism, insurgency, etc., besides,
natural and technological disasters— which qualify as traumatic situations present a classic example of trauma culture prevalence. Thus, we need to explore within our context, how the society is responding to such situations in terms of the impact and consequences of such situations on the physical and psychological heath of the societies rather than individuals? Equally important, is the highlight of those social and cultural beliefs and practices which do help in coping with or mitigation of the effects of trauma suffering and more importantly, the ways through which it helps societies to live with such traumatic memory. Indian anthropologists generally and medical anthropology fraternity specifically, will have to undertake extensive in-depth research studies in this field. Such a research endeavour should not only explore the causative factors of perceived sense of alienation and deprivation which tend to urge individuals or groups to adopt violent modes as potent means of propagating a certain ideology or raising their concerns, but also the health costs of such devastating circumstances and how the societies continue to survive such onslaught of violence in their cultural context.

The findings of this study show that the symptom severity and frequency as per the psychiatric field practice was on higher side which in pure psychiatric discipline considerations ought to demand more psychiatric attention. But, the findings also concurrently show that collective experience of such a situation on regular basis has resulted in some form of collective social sharing and consequent indigenous development of coping mechanisms; deriving meaning and relevance from the local cultural beliefs and practices. The findings of this study also do reflect that healing the psychological wounds and coping with trauma suffering, even though, are intensely personal process; but the affected individuals seek to mitigate their sufferings through socially mediated, culturally shared, collective and locally adaptable means. This is also what has been earlier evidenced by the empirical studies of Reynolds, and White (1998); Kleinmen and Kleinmen (1991) and Bracken (1998). But at the same time these assumptions do not essentially tend to be fixed or shared by all the members of community. The anthropologists given their valid orientation towards application of ethnographic methodology need to carry out analysis and help better
understand, sources of suffering, meaning of suffering and obviously; help design effective culturally acceptable interventions required to mitigate suffering in different contexts. Changing population dynamics, social structure models and emerging threats to peaceful human existence demand that anthropologists in Indian context must come forward and play a very vital role; and take up issues of contemporary relevance with special focus on areas of health concerns.

Acknowledgement:

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Note:
The findings discussed herein-above are primarily based on the study conducted from 2001-2004. How the situation was prevailing at that time has undergone a change now, with lesser incidents of violence and a sigh of relief in terms of only fewer incidents of the perpetration of human rights violations by various actors - but the conflict is still on. Some of the social sharing phenomena, like, assembling at one place during night hours may not be commonly noticed, with a sense of security, having been restored to some extent.
References:


MICROFINANCE, WOMEN HEALTH AND EMPOWERMENT; A CASE STUDY OF SELF-EMPLOYED WOMEN ASSOCIATION (SEWA), BIKANER, RAJASTHAN

Sandip kumar\textsuperscript{16}, P.C.joshi\textsuperscript{17}

Abstract

The patriarchal social apparatus and poverty affect women health; sex based discrimination, less resource in family, lack of awareness about health and hygiene, affordability and flexibility determine the health seeking behavior. Microfinance provides; access to resource, knowledge, and institution, helping women for better use of public health care system, and pave the way for empowerment.

**Key words:** Microfinance,Empowerment,SEWA.

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**Introduction:**

Demographic attributes of countries, such as age sex pyramids, maternal, infant and child mortality rate, and percentage of dependent population, etc, are deeply associated with development. This parameter is essentially linked with socio-economic status, technological inventiveness, and health seeking behavior of the society. To improve these indices, various efforts both at the national as well international level have been formulated. But the problem of poverty, discrimination between castes, class ethnicity, affects the equal distribution of national resources in general and women in particular.

Gender relation frameworks, which differentiate between men and women, influences men and women, over the determinants of health, including their economic position and social status, access to resources and treatment in society, (WHO, 2000). Since the United Nation’s Cairo conference (1994) identified that population and development is intricately related. To improve the quality of population resources, various policies have been formulated. However, vast section of population not getting primary health services throughout the country is a general phenomenon. As Andre Betteille(2000,265), pointed out that,” hierarchical structure of Indian society and the kind of substantial inequalities of income and wealth compelled the vast portion of population to remain below poverty line both in rural as well in urban areas.” poor people might not have sufficient economic capacity to treat a disease in the initial stage of identification, and may create the cycle of intra- generational malnutrition. This affects the health seeking behavior, capacity to use advance medical infrastructure, awareness among people to identify disease at early stage which in turn increases the un-productivity of men and women.

Women also differ from men in the way they are exposed to disease and the way they are treated. So, women are exploited in the name of culture, which give very little freedom to express their desire in the familial and societal domain. The cultural practice, such as; keeping fast, having food after serving all the members, prevalence of giving more attention towards male child, also affect women health status in general. These factors act as a precursor for many diseases and malnutrition. Thus, women are denied of basic rights in their life cycle, which is product of patriarchal arrangement of society.

Poverty is also a major barrier in accessing health services by the poor people. This leads to material, psychological and social deprivation. The phenomena of poverty affects women differently from men, because women has to manage all the household activity with limited resource coupled with neglect of women’s need put extra ‘stress’ on them which in turn affects their health in long term. After the Beijing conference on women (1995), the world community recognized that women and men experience poverty differently, and agreed that, if this difference is not taken into consideration the cause of poverty cannot be understood
properly. “Women empowerment as a strategy to fight poverty among women” was the platform of action adopted during Beijing conference. As Keysers pointed out “reproductive health and justice…..has to do with contraceptive services, with eradication of hunger, with education, with health, with income, with clean water, etc. All of which can be achieved by overhauled system”. In case of extreme poverty and malnutrition, infection of disease results in high rate of mortality, (Nayyar, 1991). In India about 27 percent of population are living below poverty line, which means people are facing the problem of low dietary intake, malnutrition, lack of health security and poor standard of living. Due to this, in many developing countries including India, the demographic variables are still lagging in comparison to developed and most of the south-east Asian countries. India’s rank slipped from 128 to 132 in the HDI report (2008). Along with India there are several countries which share the medium Human Development categories: such as Ghana, Kenya, Nepal, Bangladesh, etc. HDI being indicator of a long and healthy life, access to knowledge, and a decent standard of living, its low rank reflect that people are not able to utilize the existing public health system. India’s demographic indicator is as follows (table; 6.1).

**Table: 6.1 shows the India’s Selected Health indicator:**

<table>
<thead>
<tr>
<th>S.no.</th>
<th>Parameter</th>
<th>1991</th>
<th>Current level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Crude death rate (CDR), per1000 population.</td>
<td>29.5</td>
<td>22.22</td>
</tr>
<tr>
<td>2</td>
<td>Maternal mortality rate (MMR)</td>
<td>437</td>
<td>301</td>
</tr>
<tr>
<td>3</td>
<td>Infant mortality rate(IMR)</td>
<td>80</td>
<td>57</td>
</tr>
<tr>
<td>4</td>
<td>Life expectancy at Birth(Years) Male</td>
<td>59</td>
<td>66.2</td>
</tr>
<tr>
<td></td>
<td>Life expectancy at Birth(Years) Female</td>
<td>59.7</td>
<td>77.17</td>
</tr>
</tbody>
</table>

Taking women health is a major concern, National Health Policy, and National policy of empowerment of women (2001) also adopted several strategy to address the issue related to women health. Various Programmes such as DWCRA, ICDS, RCH-1, RCH-2, National Rural Health Mission (NRHM), Janani suraksha Yojna (JSY) etc, were implemented to improve the general health condition of women. However the problems of affordability, accessibility, lack of information etc, were identified as a major challenge in achieving the national goal of providing “Health for all”. India is also lagging in achieving the Millennium Development Goal (MDG) which was adopted during UN millennium summit 2001, to make society free from poverty and hunger, promote gender equality, improve maternal health, reduce child mortality, etc. Therefore empowerment of women is identified as major intervention to improve the health status of women.
The empowerment has arisen from the theoretical debates as well as practical debates especially from the experience of women working at the grassroots level in many parts of the world. The hallmark of women empowerment in development is a social transformation through collective action upon their consciousness of the dominance of patriarchy that underlines the day to day subordination of those women both in the home and the work place (Hill, 2001; Kabeer, 1994). Empowerment is seen as a process and a product, as a process it create new opportunity for participation and decision making as a active member in family as well as in society, as a product it pave the way towards equality.

Taking the economic approach into consideration, Microfinance, recently emerged as a very effective strategy to empower women. It promotes the self-reliance, self-employment activity, knowledge sharing among women. This necessarily helps them to come out from the hardship of poverty, and poor health condition. Microfinance works with women because women are more reliable in terms of payments of loan amount. From one of the impact assessments study “Credits for Alleviation of “The Rural Poverty: The Grameen Bank of Bangladesh,” (1988) Hossain found grameen members average household income to be 43 percent higher than target non-participants in comparison village, (particularly among landless villagers).”Credit Programs of Poor and Health Status of Children in Rural Bangladesh” (2003) by pitt, khandkar, Choudhary and Millimet, found substantial impact on children’s health (as measured by height and arm circumference) from women borrowing, but not from male borrowing, which had an insignificant or negative effects. From various other impacts study it was found that ‘Microfinance’ as agent which successfully change the women subjugation in society. In the study of “The impact of an Integrated Micro-credit program on Women Empowerment and Fertility Behavior in Rural Bangladesh,” (1998), by Steele, Amin, and Naved, estimated that, even after statistically controlling for prior contraceptive use, borrower were 1.8 times more likely to use contraceptive than comparison group.

Selection of area:
Rajasthan is one of the geographically largest state in India, which has desert climate, shifting sand dunes, extreme temperature variation, scarcity of water, rich cultural tradition, People belongs to different caste, class and religion, etc gives unique identity among all states of India. Other than geographical determinants, factor like; socio-cultural background, religion, policy of state, accountability in existing institution, etc, affect the women health. In Rajasthan gender inequalities is deeply rooted, and found cutting across different strata of society (Mathur, K.). National Family Health Survey-3 (NFHS-3), reports revealed the poor performance in health sector of state. The state level Health sector reform workshop was held on June 19, 2008, jaipur, to identify the policy measures need to improve the health indicators and implementation gap identified in the NFHS-3 survey’s findings. District like Sirohi, Sawai Maddhopur, Barmer, Udaipur, are poorly performed in terms of HDI, and IMR.
Government of Rajasthan report (2008) found that the incidence of malnutrition is high despite of increase in food production. Some of the finding of NFHS-3 is as follows: (table:6.2).

**Table No. 6.2: NFHS Findings**

<table>
<thead>
<tr>
<th>S.No</th>
<th>KEY INDICATOR</th>
<th>NFHS-3,findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total fertility rate (TFR).</td>
<td>3.2</td>
</tr>
<tr>
<td>2</td>
<td>Infant mortality rate (IMR).</td>
<td>65</td>
</tr>
<tr>
<td>3</td>
<td>Maternal mortality rate(MMR)</td>
<td>445</td>
</tr>
<tr>
<td>4</td>
<td>Children under3 year,(under wt)</td>
<td>44.0</td>
</tr>
<tr>
<td>5</td>
<td>Mother received post natal care from health staff&lt;2 Ds</td>
<td>28.9</td>
</tr>
<tr>
<td>6</td>
<td>Institutional birth</td>
<td>32.2</td>
</tr>
<tr>
<td>7</td>
<td>Children (12-13 yrs.)fully immunized</td>
<td>26.5</td>
</tr>
</tbody>
</table>

Source: Ministry of Health and Family welfare, Gov. of Rajasthan.

**Methodology and objectives:**

During my field work of PhD, I was encountered with many women who are associated with SHG and health insurance policy has better knowledge of health and hygiene in comparison to women who are not associated with any organization. In present paper, I am using case study to see the difference in health seeking behavior and practice of health and hygiene,

Role of NGO:

Self- Employed women Association (SEWA), is a Gujarat based NGO, working in various parts of countries including the Bikaner, Jaipur, Jodhpur, Udaipur district of Rajasthan. The main motto of SEWA is to bring women into mainstream through participation in every sphere of life. In Bikaner, SEWA is acting as facilitating agency to link women into the banking services through SHG initiative. Other work of SEWA is to provide training such as; ideology, SHG, minute writing, etc. The main purpose of meeting is to motivate women, locate their problem, discuss the benefit of SHG, inculcate habit of saving, linking with nationalized bank (SBI,Bikaner and Jaipur),and separately conducting health meeting(represented by parvatee, and Asha). The health meeting include issues related women health and hygiene practice, importance of breast feeding, seasonal disease their identification and remedy, problem related to pregnant women, timing of vaccination, etc.

Health insurance scheme of SEWA:

Most of the Women are working in Informal sector, semi-informal sector; makes more prone to various types of diseases, poor wage structure, less flexibility and high cost of health insurance policy are not suitable for them. Problem like untimely death, accident, deficiency of vitamins makes women life more vulnerable. To come out with these challenges, SEWA VIMO (in hindi simply means; sewa vimo dwara surakshit bano,i.e,Health security through SEWA VIMO), provide health insurance to women (bahan,i.e, sister),
husband (Bhai), between the age group of 18-55 years, and their children. The premium of insurance is available at rupees 100,325 (sister 125, husband 175, and 100 for child), and 500 (sister 225, husband 175, 100 child). Women and family member can reimburse claim amount which is limited for every categories. This small premium is suitable to large number of poor women. The essential documents to reimburse the claim amount is to submit the entire medical bill, date and time of discharge from hospital, identity card, etc. enclosed with emergency health form (EHF).

**Case study which shows the health and hygiene practice by women:**

**Case-Study-1.**

Bavri (35yrs), a meghwali women (SC), living in a hardship of poverty, has very limited financial resources to fulfill daily need of family. Her day starts from early morning at 5 A.M., after cooking her meal, she is to work as a house maid and the total income from this work is about 700-800 rupees per month. The major share of her income goes into traveling to work place, and she used to come back around 10 A.M. After taking lunch, she sometime works in agricultural field (if work available), because agricultural activity is a seasonal affair. When I visited her house in afternoon she was busy making papad, along with her two children. When I asked her what is the rate? …….then her answer was 16 rupees per hundred, (rate is also varied between 14-22 rupees per hundred), she is able to prepared about 700-800 papad in one day. So, by calculating her total income varies between 112-128 rupees a day, but in this process she has to contribute her own wheat flour and mustered oil, after deducting the cost of two items her net income was around 80 to 90 rupees a day, in which the contribution of children is included. Her husband is a wage laborer, but he did not able to contribute his income in the family, due to addiction of liquor and chewing tobacco, sometimes, her husband demand money, and abused her. Due to the high price of pulses, green vegetables, milk; are occasionally included in food basket.

Due to over extended busy life, she is unable to give attention to personnel health, hygiene, and nutrition. Chewing pan masala (gutka), make her more prone to other disease. When I asked; this will affects your teeth, and other organ of body? Then, her answer was, pata nahi, I don’t know), the state of ignorance is a part and parcel of her daily life. She is also not aware of government welfare scheme for women.

Other problems like, Joint pain, headache, nutritional deficiency, reduce the productivity of Bavri. She is living in stressful environment, job insecurity, state of fear, etc, makes her life and other family member more insecure and vulnerable to diseases. In Model; 1, I tried to correlate determinant which affect the health of Bavri. The life reality of Bavri, can be found across the length and breadth of country.
Model: 6.1

Fig:6.1: the relation between poor socio-economic condition and health

Due to poverty, broadly women are facing problem of less access of resources, very limited choice to treat disease, less freedom to take decision, and poor hygiene practice. This makes women more vulnerable to different communicable, non-communicable disease and lesser use of public health system. Which further leads to more psychological stress, poor immune system, and high IMR, MMR.(Model;1)

Case study: 2
Zamila(38,year),Muslim women, have very little freedom in her house, her husband is working in local factory. The total income of family was rupees 3000 per month, which is insufficient to manage the family of five member. Sometimes her husband borrows money from money lender to fulfill household needs. Therefore, Zamila, decided to use her little knowledge of embroidery, but she is unable to do so…, One day she came in contact with SEWA worker, after initial hesitation and doubt, she became a member of SHG group,
initially her husband resisted and opposed her in strong word(*Apne ko mat joro, paisa lekar bhag Jaienge*, i.e, don’t associate, run away with your money), but, citing the example of others, she has taken permission from husband and participated in meeting conducted by SEWA, and also contributing her share in SHG, gradually, her family income increases, by this, she is able to save some amounts, and invested her savings in establishing the embroidery and tailoring shop.

She suddenly fall ill (pain in lower abdomen,…*Badi Bimari*), after initial reluctance, she was admitted in nearby hospital, after 2-3 days she was released from hospital, gradually she recover from the disease. For the payment of all the dues, She borrow money from group, and after few days, when she is able to work, she collected all the medical expenses bill, and attached it with EHF form of SEWA VIMO, and forwarded it to SEWA worker, and in few days she got the entire amount.

Beside this, she also know the practice of cutting nail regularly, cleaning hand with soap, and using the handled pot to take out water from pitcher...Which is popularly called as, *NASADO*, which signify, (*N*-nail,*S*-soap,*D*-dandi wala lotta), this habit reduce the chance to get contaminated with water born diseases. She has better idea about hygiene practice, and she is also following it in a daily life. Some general information like breast feeding, the importance of colostrums (first milk), and other knowledge like family planning, different type of disease which is related to reproductive tract infection, child nutrition, etc. provides confidence in her, and she is also share this knowledge to other women, which raise her status among women.

From this case study I derived that, microfinance which provides supplementary income, while SEWA VIMO; health insurance cover prevented the extra burden on family income, leads to successfully recovery from trauma, during the time of crisis, SHG member provide psychological strength to Zamila, that, strengthen her to fight disease. Thus, by this initiative she is able to access more resources, information, and easily access to health infrastructure, which, leads to diversification of food basket, better knowledge and practice of health and hygiene, utilization of health services. This ultimately enhances the productivity, more autonomy, dignity, etc, makes women contribution visible. (As shown in Model: 2).
Microfinance provides access to information, resources, and institution. As information create new opportunities, which enlarge the potential to access resources and these farther enhances the consciousness and which in turn help in better practice of health and hygiene. More availability of resources leads to diversification of food basket, autonomy to think freely and access to institution leads to capacity building, linkage with income generation project, and more community participation. (Model; 2).

Fig 6.2: micro finance and better health practices
Conclusion:
Women health is intricately related to factors like; caste, class, socio-economic condition of family, attitude, etc. broadly determine the status of women health in general. In India, about 27 percent of people living below poverty line, this leads to social, material, and psychological deprivation of people. The impact of poverty on women is greater than men, because women has to manage household with limited resources, this leads to ‘psychological stress’ and sex selective discrimination make women more vulnerable to diseases, beside this, lack of information, awareness, compel women to live in a state of ignorance. We can say poor women have greater mobility, higher risk, and lesser attention on health issues. (Case study; 1)

The process of economic development is determined by the health status of people. The current health scenario in India is often described as “dismal “or disturbing (Bose2008), the survey reports of NFHS-3, and NSSO report (60th round), revealed the differences between health seeking behavior of male and female. The cost of health care services also reduces the chance for poor people to utilize the public health system. Planning commission paper (MAY-2009), says that healthcare expenses was responsible for over half the case of decline in poverty.

To, improve the health indices of women, strategies of women empowerment recently emerged as most successful initiative to counter the problem of seclusion of women from patriarchal manifested social apparatus. ‘Microfinance’ provides small credit especially to women and inculcating saving habit, striving for sustainable small enterprise, which provides self-sufficiency, autonomy, financial stability, definitely help in better health and hygiene practice.(case study2). Women are facing high disease risks and malnutrition at infancy, childhood, adolescent, and reproductive stage. With the increase in family income, problem of each stage can be minimized to the great extent. Different group meeting, sharing of knowledge, makes women more dynamic and also pave the way for greater participation in developmental process. The international as well as national commitment may prove futile, if women issues properly not incorporated with great sensitivity.

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References:


6. www.gufsa.org

Figure 7.1: Asia Coordinator MICRODIS Prof. P. C. Joshi delivering key note address

Figure 7.2: Speakers of the symposium entitled “Medical Anthropology and Disaster Management”. Hampi, Karnataka, India
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