



## Physical and Psychological Outcome of Antenatal Mothers: A Phenomenological Study of Flood

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### ABSTRACT

*The purpose of our study was identifying the Physical and Psychological outcome of Antenatal mothers after exposure of flood. A qualitative design with hermeneutic phenomenology approach was selected to carry out the research. Semistructured in-depth interviews were conducted with 30 women who were as a victim. Two themes emerged from Antenatal mothers experience including Basic need & Growth need. We concluded that pregnancy is one of the hardest parts of realizing the dream of having a child, the findings of our study resulted in helpful implications for the health care professionals managing this type of critical situation.*

**KEYWORDS : ANTENATAL MOTHERS, PHENOMENOLOGY, FLOOD**

### 1. Introduction:

Flooding is extremely dangerous and has the potential to wipe away an entire city, coastline or area, and cause extensive damage to life and property. It also has great erosive power and can be extremely destructive, even if it is a foot high. It is a natural event or occurrence where a piece of land (or area) that is usually dry land, suddenly gets submerged under water. Some floods can occur suddenly and recede quickly. Others take days or even months to build and discharge.

As most people are well aware, the immediate impacts of flooding include loss of human life, damage to property, destruction of crops, loss of livestock, and deterioration of health conditions owing to waterborne diseases. As communication links and infrastructure such as power plants, roads and bridges are damaged and disrupted, some economic activities may come to a standstill, people are forced to leave their homes and normal life is disrupted.

From October to December each year, a very large area of South India, including Tamil Nadu, the coastal regions of Andhra Pradesh and the union territory of Puducherry, receives up to 30 percent of its annual rainfall from the northeast monsoon (or winter monsoon). The northeast monsoon is the result of the annual gradual retreat of monsoonal rains from northeastern India. Unlike during the regular monsoon, rainfall during the northeast monsoon is sporadic, but typically far exceeds the amount produced by the regular monsoon by up to 90 percent. This excessive rainfall can be exacerbated by an El Niño year, which 2015 was<sup>1</sup>

On 15–16 November, Chennai received 246.5 mm (9.70 in) of rainfall, the highest amount recorded since November 2005, flooding most areas of the city.<sup>2</sup> The flooding in Chennai city was worsened by years of illegal development and inadequate levels of flood preparedness.<sup>3</sup> Much of the city remained flooded on 17 November, though rainfall had largely ceased.<sup>4</sup> Chennai received 1,049 mm (41.3 in) of rainfall in November, the highest recorded since November 1918 when 1,088 mm (42.8 in) of rainfall was recorded.<sup>5,6</sup> The flooding in Chennai city was described as the worst in a century. Chennai was officially declared a disaster area on the evening of 2 December.<sup>7</sup>

Consequences of this flooding were enormous. Supplies of basic necessities, including milk, water and vegetables, were affected due to logistical difficulties. During the December floods in Chennai and the adjoining areas, milk packets sold for 100 rupees (US\$1.50), five times more than their usual cost. Water bottles and cans were sold at prices between 100 (US\$1.50) to 150 rupees (US\$2.20). Vegetables were sold

at least 10 (15¢ US) to 20 rupees (30¢ US) over and above their normal average cost at the wholesale level.<sup>8</sup>

A wide range of health impacts can result from flooding and the subsequent clean-up process; these include death (including deaths from drowning, hypothermia and carbon monoxide poisoning), injury (both serious and minor – such as cuts, scrapes and bruises), mental health symptoms and a range of possible infections.

The above effects were provoked researchers to do Qualitative-Phenomenological research on Physiological and Psychological outcome of Antenatal mothers.

### 2. Materials and Methods:

Qualitative research has been deemed as a valuable tool for collecting and analyzing data in complex health and social issues<sup>9</sup>. Hermeneutic phenomenological method as described by van Manen was employed for our study. This approach is the combination of descriptive and interpretive phenomenology<sup>10</sup>.

#### 2.1. Participants:

The participants were antenatal mothers. Using purposive sampling, 30 Antenatal mothers were recruited in three different community areas in the study. The inclusion criteria were the women who experienced flood and who were in last trimester of pregnancy. Exclusion criteria were the women who were not willing to participate.

#### 2.2. Data Collection:

The study was conducted in Vadapalani, Pulianthope, Perumalpet community areas since those areas had an affected much by flood. Data were collected by in-depth interviews with approximate duration of 15 to 20 minutes. Participants were asked to talk about their experience with flood. The interviewer summarized participants' speaking at the end of sessions for data confirmation. Participants were encouraged to provide new information. Participants were free to ask questions or leave the rest of interview at any time. We wrote field notes after each interview and all interviews were recorded and transcribed verbatim immediately.

#### 2.3. Data Analysis:

Data were analyzed using van Manen interpretative phenomenological strategies. According to van Manen, the selective and detailed or line-by-line approach was used to isolate thematic statements. van Manen has suggested the following 6 inseparable steps for researchers which are used in our study:

1)Focusing on the phenomenon that deeply interests us and makes our minds engaged: in this regard, the researcher’s mind was constantly engaged with this question: what is the impact of flood on Antenatal mothers health?(2)Exploring the phenomenon as something alive rather than what we conceptualize: to make the researcher interact with the main experience, Antenatal mothers who actually had experience with this phenomenon were invited to our research. (3)Reflecting on the themes that reveal inherent characteristics of the phenomenon: researchers must constantly ask themselves what the nature of experience of Antenatal mothers after flood is. In answering this question, inherent themes will be understood.(4)Describing the phenomenon with the art of writing and rewriting: phenomenological analysis is primarily an exercise in writing and thereby the researchers can achieve the meaning of experience through the practice. The researcher should try to reflect experience in such a way that the reader feels that he/she has experienced the phenomenon under study and is able to have the same result about its meaning. (5)Establishing and maintaining a conscious connection with the phenomenon: the researcher should be preoccupied with the Antenatal mothers lived experience of flood. Creating a strong connection between the text and the phenomenon and using rich and in-depth descriptions of the findings reduce the likelihood of deviation from the main path.(6)Balancing the research context by considering the parts and the whole: in the last step, both the whole and contextual data are considered and the relationship of each part in the formation of phenomenon is examined<sup>10</sup>.

**2.4. Trustworthiness**

Lincoln and Guba explained that credibility, confirmability, dependability, and transferability ensure the rigor in qualitative research. In order to achieve credibility in our research, maximum variation sampling, immersion and long engagement of researcher in the field, persistent observation, data triangulation, peer-checking, and member-checking were done. The data analysis process has been approved by all members of the team. All interviews were recorded and transcribed immediately by the first author to ensure dependability. The first author wrote her preunderstanding regarding impact of flood on Antenatal mothers’ health prior to study and made efforts to bracket them in data analysis process. So as to meet transferability, the context of information collection is fully described.

**3.Results:**

**3.1.Emergent themes:**

**Themes arising from Antenatal mother’s perceptions of flood:**

Themes were divided with the help of Maslow’s (1943, 1954) hierarchy of needs includes five motivational needs. This five stage model can be divided into basic (or deficiency) needs (e.g. physiological, safety, love, and esteem) and growth needs (self-actualization)

| Theme                      | Category   | Subcategory  |
|----------------------------|--|--|
| Basic need                 | 1.Physiological need   | a.Identifying food and Water   |
|                            |  | b.Finding shelter  |
|                            |  | c.Lack of sleep  |
|                            |  | d.Communication failure  |
|                            | 2.Psychological need   | a.Finding peace in life<br>b.Finding difficult to come for regular antenatal visit |
| 3.Safety and Security need | a.Paradoxical feelings<br>b.Doubt about the baby’s health and safety |  |
|                            | 4.Love and Belonging   | a.Doubt about the relatives and Neighbours health and safety                       |
| Growth need                | 5.Esteem needs   | b.Uncertainty to continue pregnancy to the end of the third trimester              |
|                            | 6.Self Actualization need  | a.Struggle to realize a dream  |
|                            |  | b.realizing personal potential   |
| c.self-fulfillment         |  |  |

**3.2. Basic need:**

Antenatal mother became stress by this new experience. Category with this theme were Physiological need, Psychological need , Safe-

ty and Security need , Love and Belonging & Esteem needs .Participants were more concern about Physiological need during flood. They struggled to identify food and water, Finding Shelter, get a adequate sleep. One of the participants described “My house is filled with rain water, for which we were starved. Finally we were getting food through government.”Some narratives, such as

“I got afraid .we were stayed at Government school for two days. And then we had gone to our mother’s house for 10 days, because of which I could not come for regular antenatal checkup” were common in all the interviews.

“I’ve never seen anything like it before. Cars and bridges and trees floated past”

“We were paid more to get one cup of milk and Bread”

“I did not get even Bread and milk”

“I was genuinely terrified. We were moved to the third floor of the home after it started to flood”

“It was a total breakdown of telecommunication in our area after floods. I was panic about my unborn child”

“There is no power supply for 2 weeks. It was horrible. I’d say mosquito bites on the face more painful than feet though I covered by bed sheet”

“We had not gone out for one week. Since my husband did not go for work, we were struggled for food”

Antenatal mothers experienced mood swings and irritability during flood. The joy, fear, hope, and uncertainty are some paradoxical feelings. Women were excited and scared after the shock and disbelief. One woman described the paradox of joy and fear as follows: “I was joy about my pregnancy. I am having fear about outcome of pregnancy due to flood”. “I am really worried whether something happens until the day of childbirth... ”

The majority of Antenatal mothers confessed that

“What if something happens to that or a problem occurs? I am a little bit stressed out.”

“As I have a bed I could manage to sleep above the water.”

And also everyone added that they were having doubt about the relative’s health and safety.

**3.3. Growth need:**

They are called self-actualization needs. Subcategories of this were Struggle to realize a dream, realizing personal potential, Self-fulfillment. Pregnant women who struggled to realize a dream which includes going through all difficulties, change in life style, and spirituality.

The results illustrated that thanks giving and trust in God, reading holy books, and praying for their fetus and others are the most cited sources of spiritual experiences.

One participant declared the trust in God as follows: “When I became desperate, there was a feeling that told me to move on and not to be frustrated. There is always the one who can help you from the above. I was hopeful. I said oh God I just rely on you, do not send me back empty-handed from here.”

One participant mentioned: “Many times I thought about those people who have the same problem as mine need to develop self confidence after praying god”

**4. Discussion:**

Results showed that women experienced an increase in self-confidence after flood. Physiological need and Growth need are playing important role in Pregnancy outcome. The emotional pain antenatal mothers experienced when going through this situation was hard.

Lower level of self-esteem and the feeling of personal deficiency have been reported after flood among Antenatal mothers. The Antenatal mother's emotions were often unstable. This is also in accordance with other studies stating the experience of joy, fear, uncertainty, ambiguity, and confusion during critical situation.

Women had to go through the change in their life style and spirituality which had been also reported in similar studies<sup>11</sup>. Regardless of the fact that women's daily life had been strongly affected by pregnancy, they were not complaining about change in life style, resting at home, isolation during pregnancy, or elimination of all their freedom. These results were inconsistent with findings of other studies in which women were inconvenient about physical changes<sup>11</sup>. Participants noted that spirituality helped them struggle with their challenges. Many of them were willing to help those having similar problems. Some studies have also looked at the role of spirituality as a protective factor during pregnancy<sup>12</sup>. As a result, we can support the Antenatal mother's spirituality to enhance the patient care during this critical situation.

## 5. Conclusion:

The findings of the present study lead to a preliminary understanding of Antenatal mother's experiences during flood. This concept may be of much value to health care providers supporting women during critical situation like this. Health care providers should be well aware of the unavoidable effects of health on the experience of flood. Developing new midwife roles and continued research in different contexts would enable health workers to provide a good care in this critical situation.

### 5.1 Limitations of the Study:

The two main limitations of the qualitative research methods are related to the issues of generalizability and replicability of the study. In this respect we followed the purposive sampling approach and we also provide information about the context in which we were collecting the data to address some of these concerns. Anyhow all Antenatal mothers were recruited from three community area and their experiences might differ from those who became pregnant in other Community areas.

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