Journal of Global Public Health (JGPH)
Volume 2 Number 2, July- December 2020

Assessing the Selected Biopsychosocial Impacts Among Flood Survivors in Selected Flood Affected Area, Thrissur

Mulangattukara Remya Rajan[1], Resmi C R[2]

Author's Affiliation: [1]IInd Year MSc Nursing Student, [2]Associate Professor, Department of Community Health Nursing, Aswini College of Nursing, Kerala University of Health Sciences, Thrissur, Kerala 680652, India.

Corresponding Author: Resmi C R, Associate Professor, Department of Community Health Nursing, Aswini College of Nursing, Kerala University of Health Sciences, Thrissur, Kerala 680652, India.

E-mail: meeraresmicr@gmail.com

How to cite this article:

Mulangattukara Remya Rajan, Resmi C R / Assessing the Selected Biopsychosocial Impacts Among Flood Survivors in Selected Flood Affected Area, Thrissur. Journal of Global Public Health. 2020;2(2):57–61

Abstract

Flood accounts for about 40% of all natural disasters worldwide and half of all deaths from disasters. Asia, which is more prone to floods, accounted for roughly 93% of all flood-related deaths worldwide between 1987 and 1997. Between June 1 and August 18, 2018, Kerala experienced the worst ever floods in its history since 1924. In a span of 30 days, 339 human lives were lost, thousands of houses damaged, over a million and half people were moved to relief camps, large stretches of major roads got washed away and many bridges got damaged. The present study focuses on assessing the selected biopsychosocial impacts among flood survivors in selected flood affected area, Thrissur District. The objectives of the study were to assess the selected biopsychosocial impacts among flood survivors, to associate the selected biopsychosocial impacts among flood survivors with their selected demographic variables and to prepare and distribute information leaflet on disaster survival kit. The conceptual model was Sister Calista Roy's adaptation model. The design of the study was descriptive survey design, conducted on 100 households selected by convenience sampling. The tools used were demographic profile and biopsychosocial impacts assessment scale. Following that the researcher distributed an information leaflet regarding disaster survival kit. The findings revealed that majority 80 (80%) of flood survivors had mild biopsychosocial impact and 20 (20%) had moderate biopsychosocial impact and no one had severe impact after flood. The analysis showed that there is a significant association between biopsychosocial impacts among flood survivors with their variable 'educational status.'

Keywords: Biopsychosocial; Impact; Survivors; Disaster; Information leaf.

Introduction

Kerala is believed to be a gift of the Arabian Sea. The pride of Kerala are gorgeous and exotic beaches, breathtaking hill stations, enchanting waterfalls, beautiful lagoons, meandering rivers and amazing natural scenarios. These colours made Kerala a land of beauty and paradise on earth. Kerala is a land of rains and rivers. The state has mainly two rainy seasons viz. the Southwest monsoon that arrives towards the end of May or early June, which is known as "Edavapathi" and Northeast season which hits the State during mid-october which is known as "Thulam."[1]

The recent Kerala flood is once in a century event. However, what was most striking about the Kerala flood, is the dignity and discipline of the people of

© Red Flower Publication Pvt. Ltd.

Kerala to respond to the disaster. It was striking to see "community resources" of all types, being mobilized in such a large extent and a wide range of ways. The dignity of the people, whether when marooned, are living in camps or standing to get rations, is a demonstration of a dignified society. We did not have to witness a wide scale selfish behavior in individuals, as often seen following other disasters.[2]

The swirling, jostling, billowing monsoon rains was a part of the state every year; however, the southwest season of 2018 had a different impact as the monsoon resulted in a disastrous flood. Kerala, is highly vulnerable to natural disasters and the changing climatic dynamics given its location along the sea coast and with a steep gradient along the slopes of the western ghats. Kerala is also one of the most densely populated Indian states making it more, vulnerable to damages and losses on account of disasters. Floods are the most common of natural hazard in the state. Nearly 14.5% of the state's land area is prone to floods, and the proportion is as high as 50% for certain districts. Landslides are a major hazard along the western ghats in Wayanad, Kozhikode, Idukki and Kottayam districts.

Statement of the problem

A study to assess the selected biopsychosocial impacts among flood survivors in selected flood affected area, Thrissur District.

Objectives of the study

1. To assess the selected biopsychosocial impacts among flood survivors.
2. To associate the selected biopsychosocial impacts among flood survivors with their selected demographic variables.
3. To prepare and distribute information leaflet on disaster survival kit.

Methodology

- Research approach – Quantitative approach
- Research design – Descriptive survey design
- Setting of the study – Ward I of Meloor Gramapanchayath, Chalakudy, Thrissur Dt
- Population. – flood survivors residing in ward I of Meloor Gramapanchayath
- Sample size – 100 households
- Sampling technique – Convenience sampling
- Conceptual framework – Sister Calista Roy's adaptation model

Hypothesis

H1 : There is a significant association between biopsychosocial impacts among flood survivors with their selected demographic variables.

Inclusion criteria

Flood survivors

- only one person from one house hold.
- who are in age between 18- 60 years.
- who are willing to participate.
- who are able to read and speak Malayalam.

Exclusion criteria

Flood survivors who are :

- mentally or chronically ill.
- not present at the time of data collection.

Tool and Techniques

- Demographic profile: consist of 20 questions, data elicited were age, gender, religion, marital status, educational status, occupation, types of family, family income, number of family members, type of house, present stay, area of property, number of days water was stagnant in the house, financial assistance received, financial assistance received from social agencies, attendance of counseling sessions after flood, families ability to meet day to day expenses, any losses during flood, suffered from communicable diseases and prophylactic treatment.
- Biopsychosocial impacts assessment scale: The researcher prepared a Likert scale containing 30 questions with three categories - physical, psychological and social impacts. There were four choices and the score assigned were never - 0, sometimes - 1, often - 2, always - 3. The analysis of the score is

Degree of Impact	Scoring range
Mild impact	0-22
Moderate impact	23-45
Severe impact	46-90

Ethical clearance was obtained from ethical committee of Aswini College of Nursing, Thrissur and pilot study was conducted for 10 families for a period of 2 weeks. The investigator proceeded with the main study with the feasibility and practicability of the pilot study.

Data collection process

Data was collected within a period of four weeks. Formal permission was obtained from the Panchayath. According to convenience sampling, the investigator visited each household, collected the data using unstructured interview schedule. Researcher spent nearly 20-30 minutes to complete data. After the collection of data, the investigator provided an information leaflet on disaster survival kit consisted of articles to be kept in survival kit to the samples in regional language, Malayalam.

Results

Section A: Demographic profile of the flood survivors

On the basis of age, 30% of the samples were in the age group of 46 - 55 years. With regard to gender, 62% samples were females and 38 % were males. With reference to religion, 55% were Christians, 41% were Hindus and only 4% were Muslims. According to the marital status, 71% samples were married, 6% were unmarried, remaining 23% were widow/widowers.

On the basis of educational status, 34% of the samples were educated upto tenth class, 23% upto plus two, 22 % upto primary school, 14% completed their graduation and 7% completed their post-graduation. Regarding the employment of the head of the family, 58% were private employees, 28% were self-employees, 11% government employees and the least 7% were semi government employees.

Regarding the income, 42% of samples had income between Rs. 10001- Rs 20000/-.

According to the family type, 64% samples belong to nuclear families, 34% were from joint families and only 2% belonged to extended family.

On the basis of type of house, majority 86% had concrete houses and the remaining 14% had tiled houses. Regarding the present stay, 89% were staying in their own house, 5% were staying in their rented/leased house and the remaining 6% were staying with their relatives.

With regard to the water stagnation in the houses during flood, 1% house had water stagnation for 4 days, 3% houses had 5 days, 29% houses had 6 days, 61 houses had 7 days and the remaining 6% houses had 8 days after flood.

On account of financial assistance received after flood, all (100%) families have received an amount of cash like Rs.10000/-, Rs.60000/- and 1 lakh rupees from government. Regarding financial assistance received from social agencies, around 22% of families have received financial assistance from agencies like church groups and many other formal and informal groups.

On account of the ability to meet the day to day expenses, 83% of the families were able to meet the day to day expenses and the remaining 17% families had difficulty to meet their daily expenses because of loss of job, financial constraints and debts.

All (100%) the families suffered from many losses like damage to houses, electronic devices, vehicles, furnitures, loss of clothes, vessels, agricultural losses and death of cattles.

Regarding the communicable diseases, majority 83% families were free from communicable diseases, only 17% suffered from diseases like skin problems, allergic issues, fever, cough and respiratory illness.

On account of the prophylactic treatment, 91 % families had taken Tab Doxycycline and Injection Tetanus Toxoid that was provided in disaster relief camps by health professionals. Remaining 9% were devoid of any prophylactic treatment.

Section: B Assessment of degree of biopsychosocial impact among flood survivors.

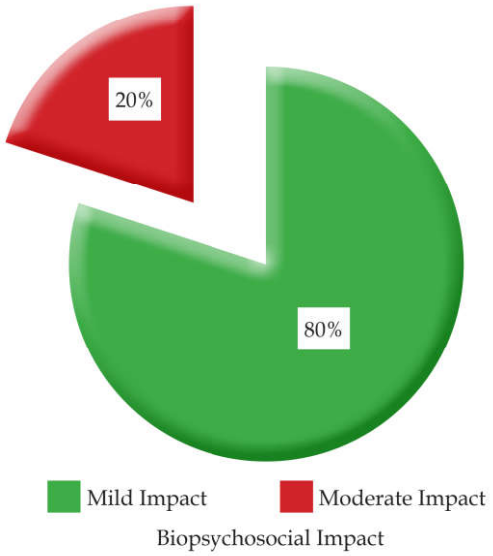

Fig. 1: Percentage distribution of degree of biopsychosocial impact

Section: C Association between biopsychosocial impacts among flood survivors with their selected demographic variables

Chi-Square test was used to find out the association between biopsychosocial impacts among flood survivors with their selected demographic variables. The study concluded that variable educational status had significant association and other selected demographic variables had no significant association with biopsychosocial impact among flood survivors.

Nursing implications

Nursing Service

- The results of the present study highlights the necessity of the screening for physical and psychiatric morbidities of flood affected people.
- Financial problems assessed in this study urge the need for claims and monetary reimbursements, so the nurses can advocate and guide people to approach authorities for claims and reimbursements.
- The present study results adds to knowledge of nurses working in community and flood relief camps about importance of concentrating on biopsychosocial issues and its early intervention among flood survivors.
- The present research findings highlights the importance of providing prophylactic treatment in flood relief camps to reduce communicable diseases during flood.
- Community Health Nurse can refer the affected individuals to primary health centre for necessary treatment.
- The biopsychosocial impacts assessed in this study points out the need to give advice to afflicted people to solve mental and physical health problems.

Nurse Education

- The results of the study reinforced that nurse educators should provide health information and prepare common man through the medium of IEC, on individual safety, flood management and its mitigation to the people residing in flood prone and coastal areas.
- Nurse educator can encourage students to teach and demonstrate how to prepare and use disaster survival kit in the community.
- Nurse educator can use this present data during inservice education and include the importance of prevention of biological or psychological or social impacts during flood.
- Based on this study findings, the nurse educators can encourage students to educate the community how to be safe from electric shocks, snake bites, drowning and other hazards that may occur during flood.

Nursing Administration

- Based on the research data, inform the local health authorities the need to conduct social, physical and occupational rehabilitation as 80% of the samples had mild and 20 % had moderate biopsychosocial impact.
- The study implicates that nurses can serve as a leader and motivate the people to adopt various measures of managing flood situation.
- The research finding highlights the importance of discussions to solve the physical, psychological, sociological, financial and occupational issues with the collaboration of district disaster management cell.

Nursing Research

- Further research in this area will help the nurses in finding underlying problems within flood survivors and take actions to prevent or to control it.
- Longitudinal research studies help to find out various behavioural changes among flood affected community.
- Biopsychosocial impact assessment scale used in this study can be used as a guide for developing newer research tools to conduct more research in this area.

Limitations

- The study was limited to 100 samples in a selected ward.
- The study was limited to 4 weeks.
- The study being limited to one setting may limit the generalization of the study result.
- The researcher had found difficulty in collecting review of literature as there were limited number of nursing studies on biopsychosocial impacts among flood survivors.

Recommendations

- The study can be replicated in a large group of flood survivors for wider generalisation.

- Qualitative study can be conducted to assess the quality of life of flood survivors before and after flood.
- Case study can be conducted to find out the model adopted by District administration to manage the flood situation.
- A comparative study can be carried out to assess the biopsychosocial impacts between flood survivors of rural and urban areas.
- Cross sectional study can be conducted to assess flood related stressors among flood survivors.
- A comparative study may be undertaken to elicit the impact of flood on physical and mental health of adults versus elderly citizens.
- An epidemiological review can be conducted to assess health impacts of flood.

Conclusion

Flooding is now the most recurrent type of natural and major disaster. People who live in flood prone areas are always at risk of flooding. Hence the study identified the need for education regarding how to manage the flood situation. Thus, the investigator discuss the importance to teach the community about the methods of disaster survival and coping strategies to overcome the situation.

References

1. Kerala Tourism. Available from : https://www.keralatourism.org/monsoon
2. Murthy RS. Disaster mental health and social psychiatry: Challenges and opportunities. Indian J Soc Psychiatry 2018; Vol(34).p 323-7.
3. Ashok V, Premarajan KC, Rajkumar RP, Naik BN. Mental health status of flood-affected adults in rural Tamil Nadu: A cross-sectional study. CHRISMED J Health Res 2019;6:97-101.
4. Post Disaster Needs Assessment floods and slides. August 2018. Available from https://sdma.kerala.gov.in/wp-content/uploads/2019/03/PDNA-report FINAL-FEB-2019
5. Kerala State Disaster Management Authority. Available from https://sdma.kerala.gov.in/about-ksdma/
6. Jean Joy, Kanga Sruthi, Kumar Singh suraj, Kerala Flood 2018: Flood Mapping by Participatory GIS approach, Meloor panchayat; International Journal on Emerging Technologies 10(1): 2019:p.197-205
7. Report on flood in Meloor panchayath.
8. World Health Organisationhttps://www.who.int/hac/about/definitions/en/
9. Louis T Preethi. An overview of psychosocial Impacts of Disaster. Indian journal of Continuing Nursing Education; 2018; Jul-Dec Vol.19 (2) : p.12-22.
10. Fernandez A, Black J, Jones M, Wilson L,Salvador-Carulla L, Astell-Burt T, et al. Flooding and Mental Health: A Systematic MappingReview. PLOS ONE : 2015 10(4): e 0119929.
11. Pooja VK, Dr Nagalakshami K.Stress, Anxiety & Depression among flood affected people in Kerala. IJEPR, 2018; Vol 7, Dec 4:p.78-80.