

Persistence of Dengue Fever in Kolkata: A Sociological Study

ABHISHEK MONDAL 

Phd Scholar ,
Department of Sociology,
Adamas University,
Kolkata in Barasat, W.B India,
Orcid ID - orcid.org/0000-0001-8682-5975.

Abstract: The Media Content Analysis was done to find out 1) the socio – demographic factors associated with Dengue during the year 2018 and 2019. 2) To find out the wards which were most affected by Dengue in the year 2018 and 2019. 3) To find out the preference of Hospital by the Dengue patients for the treatment of Dengue. 4) To find out if the family members of the Dengue patients also affected by Dengue at the same time. Here in this study two most important newspaper 1 ABP (Anandobazar Partrika) which is a Bengali version newspaper and another one i.e. The Telegraph Calcutta in English version newspaper 2 was taken into analysis. The results showed a statistically significant difference in age group between Male and Female. The result showed a statistically significant difference between the religious groups including Hindu, Muslim and Buddhist and lastly a statistically significant difference was found among the wards affected by Dengue during the year 2018 and 2019.

Keywords: Climate, Dengue, Hospital, Persistence, Socio – demographic factors.

INTRODUCTION

In India Dengue fever is one of the most important reasons for the hospitalization of people. The public health here in India is at stake because the disease Dengue is spreading like epidemic in many states of India including West Bengal and more specifically in Kolkata. The Dengue is quite prominent in the tropical and subtropical regions. Many people died of Dengue in India and during the monsoon season it becomes an epidemic in many provinces in India. The urban areas are mostly affected by Dengue, every 100 metres we can find a household where someone or the other was infected by Dengue in Kolkata, is one of the mega city in West Bengal country India.

During 2018 and 2019 many people died suffering from Dengue(Mondal, 2020b, 2020c) with no treatment in Kolkata(Nuryunarsih, 2015). The Dengue is increasing day by day due to lack of Knowledge on Dengue and even if one had knowledge but their attitude and practice was seen quite different as well as the climatic factors associated with the pre – monsoon, monsoon and post – monsoon period in Kolkata(Mondal, 2020a). Many people are still less serious about the problem of Dengue. In urban areas the throwing of garbage and household waste as well as substance which could hold water during rainy season are the major cause for Dengue outbreak year after year. Dengue still persists in many areas in West Bengal and is quite prominent in majority of the wards in urban Kolkata.

Study showed that the correlation between the higher SES (Socio – economic status) was associated with good knowledge on the prevention strategy adopted and the lower SES was associated with poor practice and attitude toward Dengue preventive practice. But whether or not the socio – demographic factors are associated with Dengue in kolkata is important to understand the spread of Dengue outbreak(Nuryunarsih, 2015).

Here a media content analysis was done with two most important newspaper 1 ABP (Anandobazar Partrika) which is a Bengali version newspaper and another one i.e. The Telegraph Calcutta in English version newspaper 2. This study describes the socio – demographic factors associated with Dengue outbreak in Kolkata, with a specific aim to understand and adopt the control measures which would help the health professionals as well as health workers to deal with public health about Dengue in Kolkata. As no other researchers attempted to study this topic in the selected areas in Kolkata, so the researcher in this study made an earnest effort to do the research in Kolkata on Dengue.

OBJECTIVE

- 1) To find out the socio – demographic factors associated with Dengue during the year 2018 and 2019.
- 2) To find out the wards which were most affected by Dengue in the year 2018 and 2019.
- 3) To find out the preference of Hospital by the Dengue patients for the treatment of Dengue.
- 4) To find out if the family members of the Dengue patients also affected by Dengue at the same time.

METHODOLOGY

The time taken to survey a total of 11,060 news articles including editorials and news stories were 2 years 7 month i.e. (January 2018 to July 2020). A media content analysis was done to descriptively analyse the socio – demographic factors associated with Dengue outbreak in Kolkata during the year 2018 and 2019.

QUANTITATIVE AND QUALITATIVE APPROACH

Here in this study frequency count using the quantitative method as well a more in - depth analysis was done with qualitative method to analyse all the news articles.

STRATEGY UTILIZED TO EXTRACT DATA

In the [Figure 1] articles which showed the exact keyword were selected for the study and all others were excluded from the study also the duplicating articles were removed from the study. The researcher prepared a code book in this study(Eckler et al., 2016).

Table 1: Shows the operational definition of the categories

Categories	Description
Age	Age of the patients infected by Dengue
Marital Status	Marital status of the Dengue patient
Religion	Religion of the Dengue Patient
Wards	Wards where the Dengue patient lived
Hospital	Hospital preferred by the Dengue patient for the treatment of Dengue

Source: Author

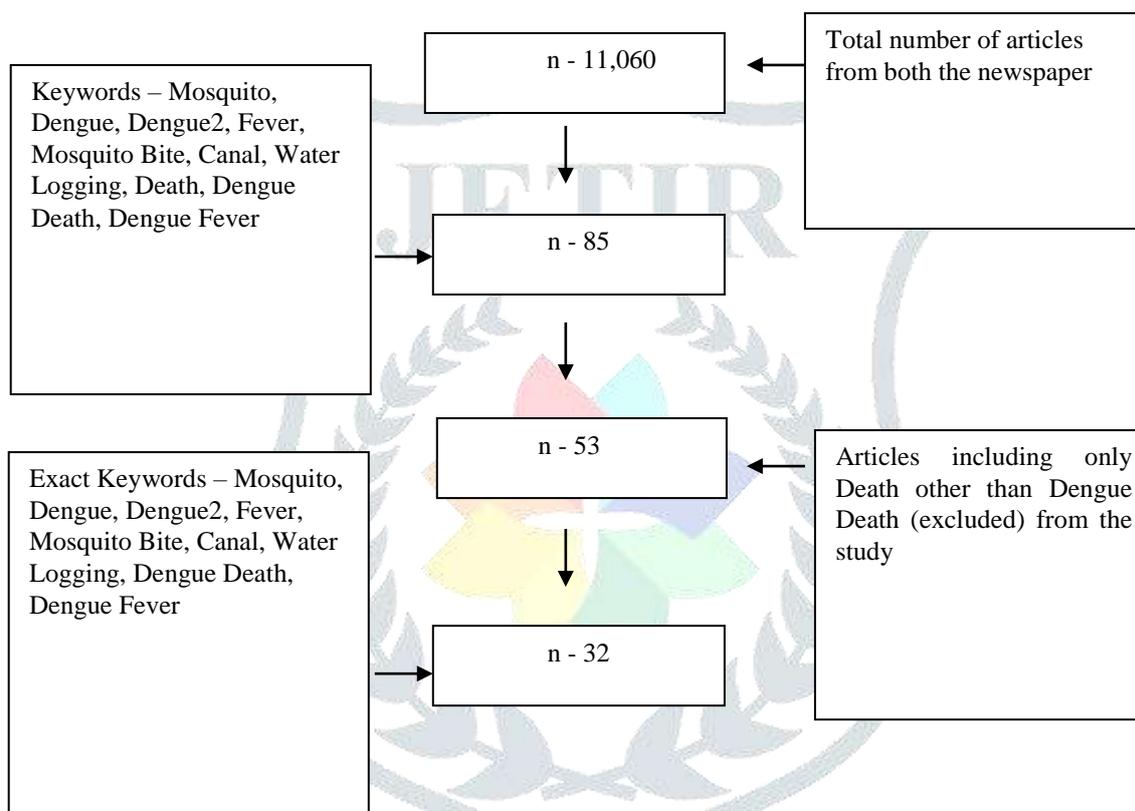


Figure 1: The flowchart represents the sample selection strategy adopted

Source: Author

STATISTICAL ANALYSIS

Using Microsoft Excel 2007 the regression test was done to find out the statistical significance between the age group of male and female. The religion of male and female and wards where the Dengue patient lived taken separately with (p<0.01) and (p<0.05) respectively.

RESULT

Table 2: Showing the Socio – Demographic variable

AGE	MALE n (%)	FEMALE n (%)	P
3 – 9	1(2.56)	7(12.07)	P<0.05*
10 – 19	10(25.56)	12(20.69)	
20 – 29	9(23.08)	8(13.79)	
30 – 39	5(12.82)	12(20.69)	
40 – 49	6(15.38)	9(15.52)	
50 – 59	7(17.95)	7(12.07)	
60 - 69	0(0)	1(1.72)	
70 - 79	1(2.56)	2(3.45)	
Total	39(100)	58(100)	

MARITAL STATUS	MALE n (%)	FEMALE n (%)
Married	11(100)	24(92.31)
Unmarried	0(0)	2(7.69)
Total	11(100)	26(100)

RELIGION	MALE n (%)	FEMALE n (%)	P
Hindu	31(79.49)	55(84.62)	P<0.01*
Muslim	7(17.95)	10(15.38)	
Buddhist	1(2.56)	0(0)	
Total	39(100)	65(100)	

Regression test done in Microsoft Excel version 2007, * statistically significant.

Source: Author

To answer the research question 1, the [Table 2] showed a statistically significant difference in age group in both male and female where $R^2 = 0.55$ and the ANOVA result showed $[F(1, 6) = 7.501, p = 0.03]$ with 95% confidence. The result was statistically significant at $(p < 0.05)$.

In case of marital status about 92% females were married who suffered from Dengue, with only 7.69% females were unmarried while suffering from Dengue. Among men the results showed only 11 men were married¹. In case of religion² again a significant difference was found among the three religions i.e. Hindu, Muslim and Buddhist with $R^2 = 0.99$ and the ANOVA result showed $[F(1, 1) = 2883, p = 0.01]$ with 95% confidence. The result was statistically significant at $(p < 0.01)$. About 84.62% females belong to Hindu religion, only 15.38 belong to Muslim and there were none from the Buddhist. In case of men 79.49% belong to Hindu and 17.95 belong to Muslim religion. And only 2.56% men belong to Buddhist.

Table 3: Showing the Wards which are affected by Dengue

WARD NUMBER	MALE n (%)	FEMALE n (%)	P
Ward 4 North 24 Parganas	1(12.5)	1(6.66)	P<0.05*
Ward 5 North 24 Parganas	1(12.5)	2(13.42)	
Ward 8 North 24 Parganas	0(0)	1(6.66)	
Ward 11 North 24 Parganas	0(0)	1(6.66)	
Ward 12 North 24 Parganas	0(0)	1(6.66)	
Ward 14 North 24 Parganas	0(0)	1(6.66)	
Ward 15 North 24 Parganas	1(12.5)	0(0)	
Ward 14 North Kolkata	0(0)	1(6.66)	
Ward 17 North Kolkata	0(0)	1(6.66)	
Ward 40 North Kolkata	1(12.5)	0(0)	
Ward 17 Regent Colony	0(0)	1(6.66)	
Ward 75 South Kolkata	0(0)	1(6.66)	
Ward 93 South Kolkata	1(12.5)	1(6.66)	
Ward 113 South Kolkata	1(12.5)	0(0)	
Ward 128 South Kolkata	0(0)	1(6.66)	
Ward 42 Howrah	0(0)	1(6.66)	
Ward 56 Howrah	1(12.5)	0(0)	
Ward 60 Howrah	0(0)	1(6.66)	
Ward 22 Hooghly	1(12.5)	0(0)	
Total	8(100)	15(100)	

Regression test done in Microsoft Excel version 2007, * statistically significant.

Source: Author

To answer research question 2 in [Table 3] the result showed a statistically significant difference between male and female among all the wards with $R^2 = 0.22$ and the ANOVA result showed $[F(1, 17) = 4.921, P = 0.04]$ with 95% confidence. The result was statistically significant at $(p < 0.05)$.

Below in the [Figure 2] while answering the research question 3 about the Dengue patient's preference of hospital while they were suffering from Dengue for their treatment. Many of these Dengue patients found changing their hospital from government hospital to the private

¹ Marital status of an individual was identified in case of female by the picture in the article or sometimes the articles gave the detail of one of the spouses as husband or wife of the Dengue infected patient.

² Religion of an individual was identified by the first name as well as the surname; the researchers used his own experience and knowledge to recognise them.

hospitals for their better treatment and recovery from Dengue. Sometimes the lack of confidence in government hospitals the Dengue patients were transferred to other better and well facilitated private hospitals in Kolkata.

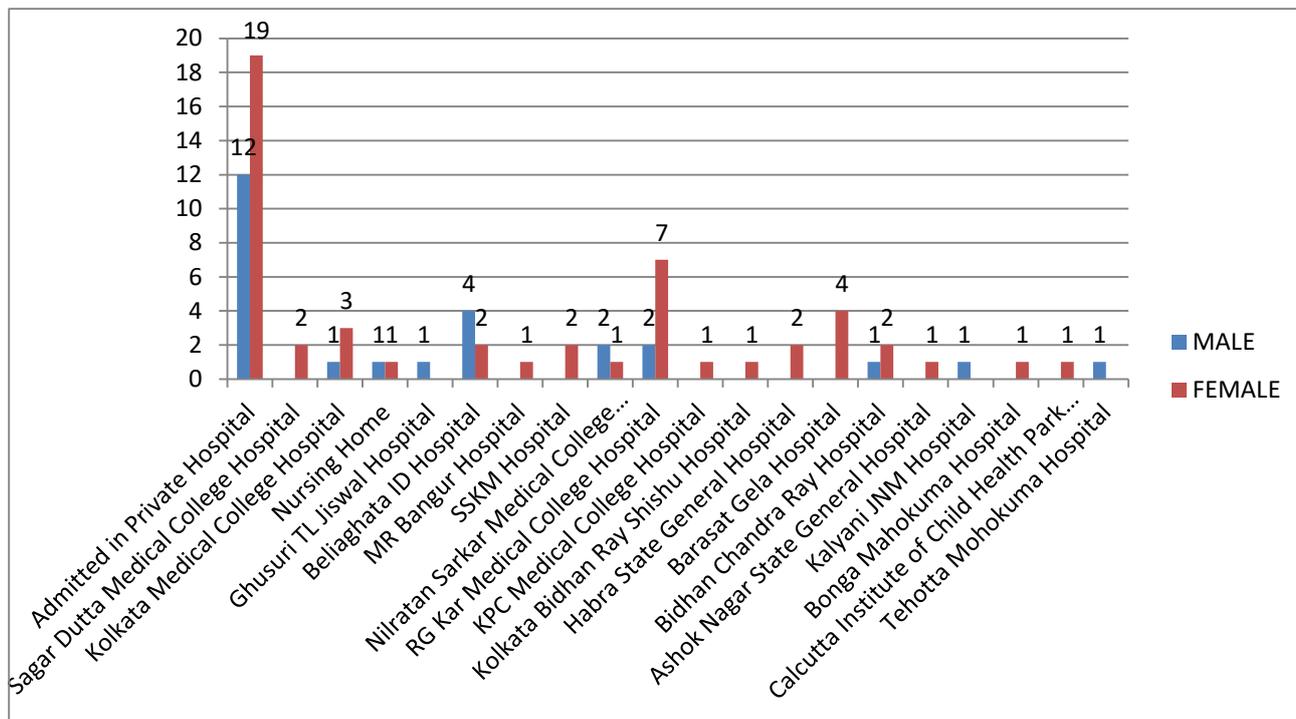


Figure 2: Showing the Dengue patients preference of hospital for the treatment of Dengue

Source: Author

In the [Figure 2] it is quite clear that whenever an individual whether male or female preferred to do their Dengue treatment in the private hospital. They believed that a better diagnosis and treatment will help them to recover faster and can save time and money. This was due to the poor infrastructure of the government hospital and their refusal to admit Dengue patient. Often concealment of the original fact of Dengue leads to patient's death. Lack of confidence in the government hospital showed that 19 male and 12 females considered the private hospital for their treatment of Dengue.

Next in the list was the RG Kar Medical College Hospital, where 7 female and 2 male got their admission for the treatment of Dengue. In Beliaghata ID Hospital 4 men and 2 female took admission, in the same 4 female suffering from Dengue took admission in Barasat Gela Hospital. 3 female and 1 male took admission in Kolkata Medical College. 2 female patients took admission in Sagar Dutta Medical College Hospital, in SSKM 2 female Dengue patient found. In Nilratan Sarkar Medical College there were 2 male 1 female, in Habra State General Hospital 2 female dengue patient found and in Bidhan Chandra Ray Hospital 2 female and 1 male took admission. Rest all other hospitals which include Ghusuri TL Jiswal Hospital admitted 1 male, MR Bangur Hospital admitted 1 female, KPC Medical College Hospital admitted 1 female Dengue patient, Kolkata Bidhan Ray Shishu Hospital admitted 1 female patient, Ashok Nagar State General Hospital admitted 1 female, Kalyani JNM Hospital admitted 1 male patient, Bonga Mahokuma Hospital admitted 1 female Dengue patient, Calcutta Institute of Child Health admitted 1 female Dengue patient and lastly Tehotta Mahokuma Hospital where 1 male Dengue patient found.

Below in [Figure 3] showing, while answering the research question 4, i.e. the family members of the Dengue patient who were also infected by Dengue side by side with the Dengue patient at the same time.

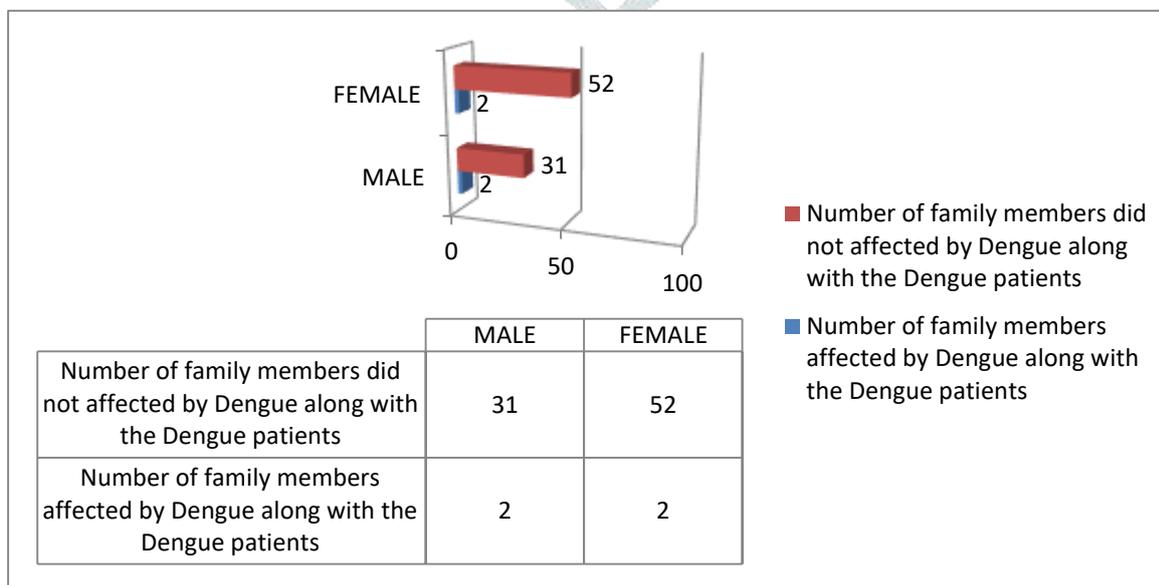


Figure 3: Showing the Dengue patients family members infected by Dengue along with the patient

Source: Author

In [Figure 3] where 31 male and 52 female Dengue patient's family members were not infected by Dengue, only 2 male and 2 female Dengue patient's family members found infected with Dengue in the same household. Sometimes it was seen several members were admitted to hospital for Dengue at the same time.

CONCLUSION

In this study the researcher showed the socio – demographic factors which were associated with the Dengue [Table 2]. The infected wards which were affected by Dengue and where the Dengue persists [Table 3] even after repeated alarm by the KMC (Kolkata Municipal Corporation) workers and the health professionals. The study also showed the number of private and government hospitals where the Dengue patients prefer to get them admitted for the Treatment and diagnose of Dengue. The [Figure 2] showed the pictorial and graphical representation of the preferred hospital by the Dengue patients for their treatment.

Again this study showed the family members who were also infected by the disease Dengue side by side with the Dengue patient [Figure 3]. Here the poor practice and lack of adequate knowledge and attitude about Dengue was seen. Only alone KMC (Kolkata Municipal Corporation) workers and health professional cannot stop the spread of Dengue but the general people will have to adopt and change their attitude and increase knowledge about Dengue is necessary. The storage of water for daily use should be covered but in practice many house hold in Kolkata was seen storing water with out any covering, this lead to the spread of Dengue in Kolkata. Often during the rainy season the water gets accumulated in small lanes and the pass way between two houses. This was seen in bastes with densely populated areas and slums.

ACKNOWLEDGEMENT

The author would thank the supervisor Dr. Saheli Guha Neogi Ghatak for her kind attention. She is the Assistant Professor of Sociology Department in Adamas University Kolkata.

REFERENCES

- Eckler, P., Rodgers, S., & Everett, K. (2016). Characteristics of Community Newspaper Coverage of Tobacco Control and Its Relationship to the Passage of Tobacco Ordinances. *Journal of Community Health, 41*(5), 953–961. <https://doi.org/10.1007/s10900-016-0176-8>
- Mondal, A. (2020a). *Dengue False Positive Corona Patients Labelled and Stigmatized As Untouchable : A Sociological Study*. 7(9), 834–838.
- Mondal, A. (2020b). *Dengue Menace Posing A Threat To The Civic Body In Kolkata : A Sociological Inquiry*. 7(9), 466–473.
- Mondal, A. (2020c). *Dengue Mortality Rate challenges the Public Health System in Kolkata : A Sociological Investigation*. 7(6).
- Nuryunarsih, D. (2015). Sociodemographic Factors to Dengue Hemorrhagic Fever Case in Indonesia. *Kesmas: National Public Health Journal, 10*(1), 10. <https://doi.org/10.21109/kesmas.v10i1.813>

