

Self – Efficacy of People about Dengue in Kolkata, a Health Educational Study

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Abstract: The main goal of health education is to enable each individual and family within our community to exercise their right to develop and achieve their physical, mental and social potential. The method used was the 'Media Content Analysis', here the two leading newspaper 'Anandabazar Patrika' and 'The Telegraph Calcutta', was used to analyse the Dengue Fever news articles and how they cluster together to educate the Public Health messages to their audience through the press. A total of 10,763 articles were analysed over a survey period of two year seven month (January 2018 to July 2020), and they were searched according to the selected keywords. This research employed mixed methods of data collection, following a three-phase explanatory sequential design: 1) survey and Health literacy, 2) focus group interview, and 3) observational study. The articles were coded and framed according to their type. The data were then entered in 'Microsoft Excel 2007' and analysed. The results showed that a strong positive correlation was seen between the reported number of Dengue Death cases and Cleanliness (which include the articles comprising the picture of unhealthy and polluted environment around the death person's neighbourhood and house). Purpose of this study is to educate the health professionals about the epidemic and to form necessary policies and protocol to combat the situation.

Keywords: Cleanliness, Contagious, Dengue, eHealth, Lily Model, Public Health.

INTRODUCTION

Dengue is known tropical disease and is spreading like an epidemic in India and Brazil. In Brazil according to the Ministry of Health, the number of probable dengue cases increased to 94,149 in 2020. In 2019, about 2.3 million dengue cases were registered nationwide. Even in south regions of the country where the outbreak of dengue fever had never occurred, the number of dengue cases has been increasing at an alarming rate, with several deaths being recorded (Lorenz et al., 2020) even Singapore is also experiencing Dengue Outbreak (Yan et al., 2020) also include Bangladesh (Rahman et al., 2020).

Dengue in Kolkata has become an epidemic for the last few years. Thousands have already infected by this deadly virus and many died. In the year 2018 the results of the research showed that 42 people died of Dengue Virus infection (Mondal, 2020). The next year 2019 the number increased to 67. Even in this year 2020 Dengue affected patients count 573, which was 682 in the previous year according to KMC (Kolkata Municipal Corporation) in Kolkata itself it is 97 (published in ABP on 11th June 2020). This again increased till 580 Dengue affected patients (published in ABP on 25th June 2020). Several educational and digital literacy programmes launched by the KMC to combat and prevent the spread of Dengue, such as "drawing competition on the Dengue prevention" (published in ABP on 11th June 2020), "Ak din 10 minute, Saptahik" video tutorial on television, internet to all the fellow people living in West Bengal, with special importance to Kolkata (published in ABP on 28th June 2020). The award and prize also given to the Clubs organising 'Durga Puja' if they do a proper Dengue awareness campaigns in their locality or community. The current scenario creates an opportunity for Information and Communication Technologies (ICT) and methods such as e-learning into the field of Dengue prevention training to showcase its potential and advantages. Studies showed positive outcomes from e-learning utilization (Kadivar et al., 2016) but concerns arise regarding the readiness of the general people to engage in e-learning.

The purpose of this study is to educate and literate the Health Professional (which include the Doctors, Nurses, health workers in KMC (Kolkata Municipal Corporation), and the general mass of people) about Dengue epidemic in Kolkata, as the newspapers are the valid source of information which is available to the public and which can be utilised to educate and literate the audience about the outbreak of Dengue in Kolkata and the data can be utilized for a quick analysis of the problem. As most of the Dengue death report goes underreported and sometimes not reported at all. In this scenario the newspaper works as a medium to educate, literate and communicate the Public Health information to the public at large. Here in this study two leading newspaper 1) Local (Anandabazar Patrika) ABP which is published in the regional language (Bengali text) in Kolkata and another newspaper 2) National (The Telegraph Calcutta) which is published in (English text) in Kolkata are utilized for the content analysis to find out the recent scenario of Dengue in Kolkata and how this two paper educate and literate the masses on Dengue prevention and outbreak.

This study assessed the self-efficacy of the Dengue infected patients family members and tries to highlight the belief of these people in dealing with the Dengue. As no other researcher attempted this type of work, so the researcher in this study took his own initiative to explore this area of research in Kolkata, India. Findings from this study also shed light on the feasibility and potential of initiating the e-learning modalities in the field of Dengue prevention to augment education, training and to literate the mass in an environment of high demands and decreased resources. In this study the researcher investigated following research questions -

1. To find out the self-efficacy of the people about the way the dengue is transmitted.
2. To find out the Dengue prevention strategy adopted in the household, the community and environment.
3. To find the traditional technique adopted by the Dengue infected patient's family, to cure the illness.
4. To find out whether there is a relationship between cleanliness and the occurrence of the disease Dengue, published in the articles.

LITERATURE REVIEW

eHealth Literacy (Lily Model)

eHealth literacy actually seeks to search for, understand, and appraise health information from electronic sources and apply that knowledge which is gained to address or solve a health problem. eHealth literacy actually combines facets of other different literacy skills and applies them to eHealth promotion and care. It has six core skills (or literacy's): traditional literacy, health literacy, information literacy, scientific literacy, media literacy, and computer literacy.

While using the beautiful metaphor of a lily, the petals resembles 'literacy' which on feed the pistil 'eHealth literacy', and yet we can see that the pistil overlaps the petals and tying them together (Norman & Skinner, 2006) [see Figure 1].

Well in this study we are more concern with the 'Analytic Model', and use this model to find solution to the problem in this research. Among the above mentioned six types, in this research we will specifically use the 'Traditional Literacy' to find out the traditional way of prevention, cure and transmission of the deadly Dengue Virus.

Traditional Literacy

Public is more familiar with the concept of Traditional Literacy and encompasses basic (or prose) literacy skills such as the ability to read text, understand written passages, and speak and write a language coherently. Technologies which include the World Wide Web are still text dominant, despite the potential use of sound and the visual images on websites. Basic reading and writing skills are most essential in order to make meaning from text-laden resources.

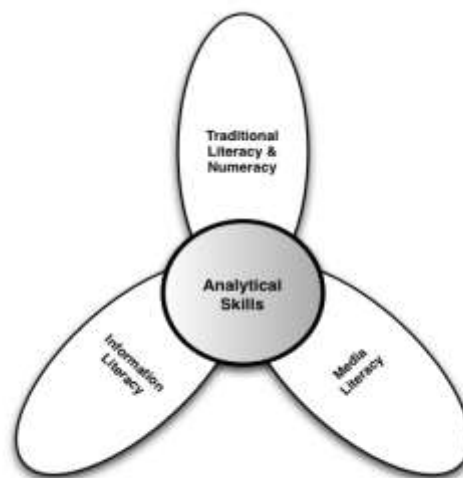


Figure 1: The eHealth Literacy analytic model

Media Literacy

The availability of the media sources has spawned an entire field of research in the area of media literacy and media studies. Media literacy can be defined as a means of critically thinking about media content and is defined as a process to develop meta-cognitive reflective strategies by means of study about media content and as well as context. Media literacy is a way of skills that enables people to place the information in a social and political context and to consider issues which include the marketplace, audience relations, and how media forms in them and shape the message that gets conveyed. These skills are generally viewed as a combination of both cognitive processes and critical thinking skills applied to media and the messages that media delivers.

This study explores the content of the newspapers articles as the communicating media and how this delivers the message on Dengue and educates and literates the general public at large.

Information Literacy

An information enabled and literate person always knows how knowledge is organized, how to find information and how to use information in such a way that others can learn from them (The American Library Association). Similar to the other literacy's, this definition also must be considered within the context of the social processes which involved in information production and not just its application. Information enabled as well as literate person always knows what potential resources to consult to and find information on a specific topic, can develop appropriate search strategies, and can filter results accordingly to extract relevant knowledge. In this study the information on Dengue made available to educate and literate the people at large.

Miasma Theory of Disease

Miasmatic theory of disease conveys us that diseases were caused by the presence of miasma. Miasmas are explained as (poisonous emanations, from putrefying carcasses, rotting vegetation or molds, and invisible dust particles inside dwellings). Miasmas could be identified by its foul smell. It was stated that from the time of the ancient Greece till the mid of 19th century, it was believed that the miasma would actually enter the body and cause diseases like mosquito borne diseases, and one of them is Dengue. We can see that in the medical world the miasma theory advanced over time to explain many important diseases(Kannadan, 2018).

In this study the miasma theory is applied on the vegetation, water logging, domestic waste disposal by the dwelling (like vegetable waste, cold drink cans which could hold water and become a breeding ground for *Aedes aegypti* mosquito which spreads Dengue Virus). These vegetables waste, plastic cups along with coconut shell hold water during the monsoon season in Kolkata. They also spread foul smell(Kannadan, 2018).

Well we can see that 'The Chambers 21st Century Dictionary' dates the word "miasma" to the 17th century. It is a Latin term derived from the Greek word for "pollution"(Sterner, 1948). The British Parliamentary statute during 1388 prohibited the deposition certain things such as dung, offal, entrails and other ordure into ditches, rivers, waters, or other places, because it resulted in the putrefaction and infection of the air, causing many illnesses and other intolerable diseases(Kannadan, 2018).

The miasma theory stated only the bad air or miasma was the main cause of every disease, but, but on the other hand according to germ theory, the diseases actually spread and caused by the presence and the actions of specific micro-organisms within the body, which enters through many mediums such as water, food, and contact. Therefore, miasma theory of disease was replaced by germ theory of disease by the end of 19th century(Kannadan, 2018).

In this study it is the pollution (includes vegetation, ponds, garbage, broken cold drink cans, tyres, bamboo stick, water tank, pits dug for construction, canal, drain) surrounding the dwelling of the Dengue patients households.

Wellbeing/Illness/Care

"Wellbeing/illness/care (w/i/c) is not only just a medical but also a cultural process. Menéndez explained the w/i/c processes and said that they are "social facts on which social groups need to build actions, techniques, and ideologies . . . collective social meanings". We now can jump to conclusion and recognize that collective knowledge is actually socially shared. This social representations theory provides us a theoretical framework to analyze the process of w/i/c surrounding Dengue. Actually the concept of social representation is a contribution made by the Serge Moscovici to the field of social psychology. In the year 1960s it used to refer "an organized body of knowledge and also a psychological activity through which people make the social and physical reality understandable," meaning, group interactions that make the unfamiliar familiar. This allows us to analyze the collective social thinking as a system of values, practices, and ideas that gives order and communication among people from a social group. This theory given by Moscovici also collates other concepts which include attitude, belief, image, stereotype, and perception, related to cognitive processes that create an elaborated and shared social knowledge"(Arellano et al., 2015)

"Moscovici said three basic elements of the social representation and which can be analyzed: (1) information, which can be explained as the quantity and quality of shared knowledge among social group members that actually helps them to interpret the reality; (2) the field of representation, which surely refers to the order and organization of the content of representation that integrates a social model and image of the representation; (3) attitude or behavioural elements which states and relates to the agreement or disagreement with the object of the social representation(Arellano et al., 2015) in this study its Dengue. In this study, we identified and studied knowledge and beliefs of six respondent of Dengue infected family members in the focus group interview (FGIs) and also studied and found the belief they hold for dengue transmission and also found the prevention practices among these respondent".(Arellano et al., 2015)

Common Sense Theory

In many ways we can say that social psychology is the study of social reality. As it deals with the explanations things which we automatically have recourse in order to explain and understand the world around us. Indeed each one amongst us desires to make sense of events, behaviours, ideas and exchanges with others and always seeks to find around them a certain coherence and stability. All of us want to explain and understand our environment in order to make it predictable and more controllable by us, as this environment is made up of innumerable situations and events, and a multiplicity of individuals and groups. So we are constantly required, during our everyday interactions, to make decisions, to give our opinion on this or that subject or to explain this or that behaviour. In other words we are being constantly plunged into an environment where we are always bombarded with information

and required to deal with it. Well in order to understand, to master our skills and make sense of this environment we have to simplify it, to make it more predictable and familiar. As if we have to reconstruct it in a way so that it suits our own fashion. But we will have to keep in mind that this process of reconstruction is a constantly repeated process. This actually begins from our youngest age starting from school, the family, institutions and the media, which actually instil in us a certain ways of seeing the world and offer us a particular kind of vision of the things around us, which presents us largely with a readymade construction of the world in which we grow up, also the values with which it is invested as well as the categories which govern it and the principles themselves by which we understand it. Next our perception of the environment is shaped by the groups, the associations, and the clubs that we actually become part of, largely in our exchanges and our way of communications with others that our reality of the world around is formed. The process of doing contacts which involve us with different social groups and in turn we ourselves acquire and transmit knowledge, beliefs, and values that eventually allows us to share a common conception of things and of others. In this sense, this reconstruction of reality along with this representation of reality is above all social. That is to say an elaboration according to the social characteristics of the individual and shared by a group of other individuals having the same characteristics. Whereas the last point is important as not all social groups share the same types of values, the same standards, the same ideologies, or the same concrete experiences. Well we can say again, all the construct representations that are closely based on these. This in turn follows that social representations actually bear on the one hand the mark of the social membership of the individuals who adhere to them and give them their identity, and on the other hand allow these same individuals to distinguish “others”, those who do not share the same representations and who appear to them at best as different, at worst as enemies. To add up, social representations can be defined as a system of opinions, knowledge and beliefs of a particular culture, a social category, or a group with regard to objects in the social environment. At this initial stage, it seems unnecessary to explain any further. We will notice that with regard to social representations the distinction between the notions of “opinions,” “knowledge,” and “beliefs” is unnecessary. Here the opinions are mostly concerned with the field of position taking, knowledge with the field of learning, and experience and beliefs with that of conviction. But in our everyday life experience shows us that for an individual, there is confusion between these three areas, especially when talking about a socially invested object. The result is that, we observe beliefs that have the status of established truths, or opinions that look peculiarly similar to that of beliefs, with the result that the lines between what “I think,” “I know,” and “I believe” often become blurred. Well the consequence follows that the contents of a representation may be indifferently classed as those of opinions, information or beliefs and we may choose that a social representation comes across concretely as a set of “cognitive elements” which actually is relative to a social object. The first characteristic of this set is that of organization. This is truly a structure, and not just a collection of cognitive elements. This eventually means that the elements that constitute a social representation interact with each other. More exactly, this means that the common people cooperate in establishing relationships between these diverse elements. We often see that a particular opinion is considered equivalent to others and particular belief are deemed incompatible with particular information, and so on.

Now the second specificity of a representation is that of being shared by the members of a particular social group. However, the consensus observed here is on the elements of a given representation which depends at the same time on the homogeneity of the group and on its members position towards the object, so that the consensual nature of a representation is generally partial, and which is localized to certain elements of the latter.

The third characteristic of this set resides in its very method of construction. Here it is collectively produced through a more global process of communication. Here the exchange between the individuals and also exposure to the mass communication allow the members of a group to share the elements that will constitute a social representation. Actually this sharing process favours the emergence of a consensus at the same time as conferring social validity on diverse opinions, information, and beliefs.

Finally, the fourth most specific role of a social representation concerns its purpose—it is socially useful. Here firstly, of course, in order to understand the object to which the social representation refers. Representations explained are above all systems allowing the understanding and interpreting of the social environment. But on the other hand they also intervene in interactions between groups, particularly when these interactions are engaged in around a social object. Every society, as explained by Adam Smith (1776) and Emile Durkheim (1893), revolves around the division of labour. Well this division is not only a condition of social cohesion, but also a permanent source of dependency and power relationships within the community. This actually leads to the differentiation of groups, roles, status, professions, castes, and so on. Thus, everyone is seen interdependent whilst being clear about their own separate identity. So we can see that complementarity and differentiation are two interdependent operations that are fully active within representations. Furthermore we can notice that social representations provide criteria for evaluating the social environment that enable the determination, justification or legitimization of certain behaviours (Rateau et al., 2012). Here in this study its Dengue and the surrounding environment which give rise to a particular kind of beliefs among the people in Kolkata.

METHODOLOGY

Strategy Used to Extract Data

Here in this study a total of 10,763 news articles of both the newspaper 1 and newspaper 2 were collected, which represented the whole universe (news include stories/editorials) for the specified period of 2 year 7 month (January 2018 to July 2020). Duplicating articles were excluded from the study (articles found around the same time, with same number of words in the same publication and the duplicating text).

Only the articles in this study which include exact keywords words like Dengue, Dengue death, Dengue Fever, Fever, Mosquito Bite, Canal, water logging, Dengue 2, mosquito were included in the analysis [Figure 2]. A codebook was developed as an adaptation of (Eckler et al., 2016).

Quantitative Analysis

In this study the various variables were categorized and coded by the author. Here the frequency of appearance of every coding was analysed employing a frequency count. The unit of study was taken as the news article.

Qualitative Analysis

Here the headlines, subhead, and the text of all articles were analysed descriptively, the full text of each article was reviewed by the author again and again for the emerged study variables.

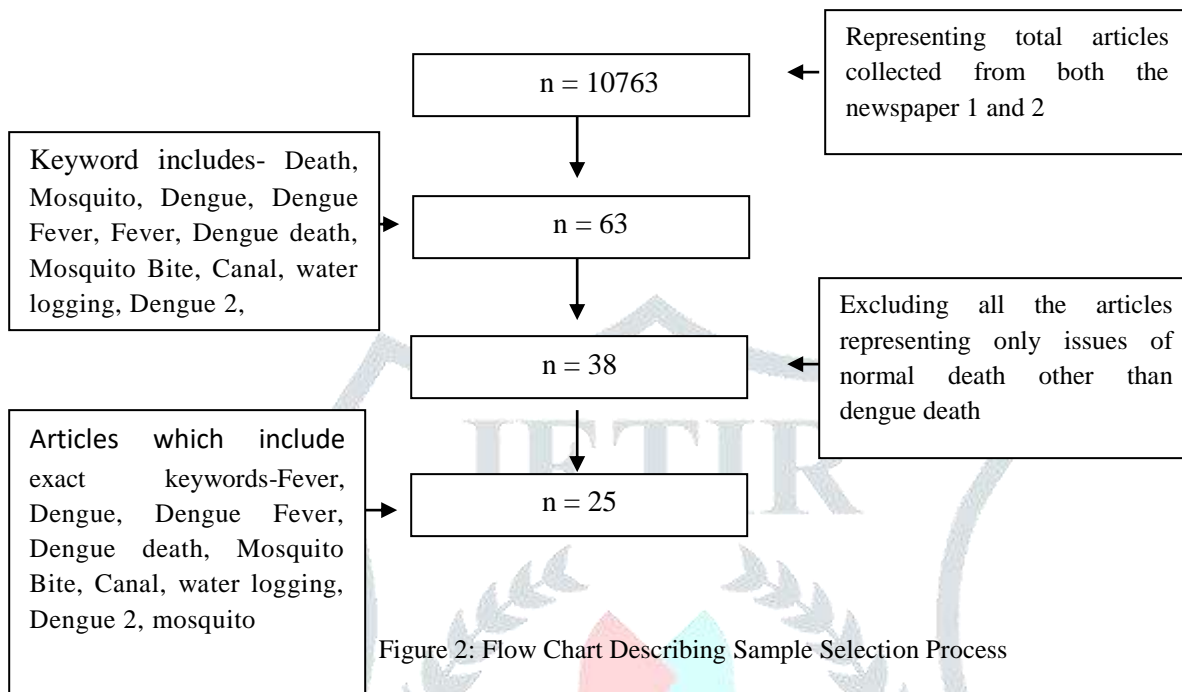


Figure 2: Flow Chart Describing Sample Selection Process

CODING AND OPERATIONALISATION

Table 1: Describes the operationalisation of the variables

Theme	Description
Cleanliness	Articles showing the Picture of pollution
Prevention Strategies	Picture in the article depicting the Dengue prevention strategies
Traditional Technique	Picture in the article depicting the traditional technique used to cure and treat Dengue patient at home
Dengue Death	Articles comprising Dengue death report
Self – efficacy	The belief of the Dengue infected family members

Participants Description

The study adopted a purposeful sampling method to obtain rich data. Purposeful sampling refers to intentionally selecting a sample that explores the main concept being studied here. Hence a sample of six participants was included in this study and inclusion criterion was all of these six participants had a similar experience of Dengue transmission in their household. These six participants were selected to be a part of qualitative data collection including care practices and treatment seeking behaviours.

Instruments Used

Focus Group Interview is one of the instruments used to collect data. The objective was to collect a shared understanding that focused on the current study and to generate data from the group. The reporter here in this study asked the question to the respondent and the researcher qualitatively used this data to describe the research question. Common topics were explored among the entire respondent to determine distinct perspectives and to identify areas of agreement and disagreement amongst them.

Data Collection Procedure

Only the response given by the respondents were collected and translated to English Language Script as the data in the original form was in the native regional language of Kolkata which was in Bengali Language Script. The researcher took his own initiative to translate the Script to English.

Statistical Analysis

Here in this study a 'Regression' test was conducted to draw the comparisons between the two newspapers ($P < 0.05$). And the statistical analyses were performed using Microsoft Excel version 2007 software.

Results

In this study the main empirical findings basically centered on four major themes: (1) beliefs of the people about the way dengue is transmitted, (2) dengue prevention strategies adopted in household and the community environments, (3) Traditional technique used to cure and treat Dengue and lastly (4) Cleanliness is the prevention strategy used to prohibit the spread of Dengue in the community environment. The data described are gained from FGI and annotations made by the researcher qualitatively in this study. Now to answer the research question 1-

Beliefs Respondents Have about the Transmission of Dengue

"Several sources can be explained from where the participants belief about the transmission of Dengue arise such as some previous experiences with dengue itself, second, messages transmitted by the media, and third preventive campaigns implemented by health institutions. Generally speaking, the participants were confused about the way dengue was transmitted. Despite several identification of the mosquito as a source of transmission, but here the alternative routes of transmission were also speculated, including person-to-person transmission as well"(Arellano et al., 2015).

"Here it is important to notice that this idea of person-to-person transmission played out in the collective imagination due to the participants' own recollection that often more than two people fell ill in the same household during the simultaneous or consecutive periods. Here things to come to our notice that the direct experience with several sick people led participants to question that if the transmission was due to a mosquito bite or by person-to-person contact, as is shown in the below testimony"(Arellano et al., 2015)-

পরামর্শদাতা বলেছিলেন
(গারুলিয়া উত্তর ২৪ পরগনা ওয়ার্ড ৪)
“প্রথম আমার স্ত্রী, তারপরে একদিন পরে আমার বাচ্চা... স্বর হয়েছে।
পরীক্ষার ফলাফল ডেঙ্গু দেখিয়েছে দুজনেই হাসপাতালে ভর্তি।”

Figure 3: Respondent 1 belief about Dengue transmission in Bengali Language

Translated to English Language-

"The councillor of Garulia North 24 parganas Ward number 4 said that his wife and only after one day their child also got affected by dengue virus. Both of them admitted to hospital". (Published on 03-09-2018 in ABP)

"Actually the above statement suggests whole lot of confusion regarding the transmission of dengue. It was unclear to participants if the actual transmission was due to a mosquito bite or through the direct contact with sick persons. They were confused about the mechanism of dengue transmission with the transmission mechanism of other familiar viral diseases. This confusion was reinforced by knowing and acknowledgement of multiple sick people within the same space-time. This idea was also shared in the collective perceptions of participants from other neighbourhoods and even among those who had direct experience with dengue."(Arellano et al., 2015)

প্রণববাবু বলেছিলেন
“সুস্থ হয়ে উঠার পর মা হাসপাতাল থেকে ফিরে আসেন, ডেঙ্গুতে আক্রান্ত
হয়ে স্ত্রী হাসপাতালে যান, পুত্র এবং
পুত্রবধূও ডেঙ্গুতে আক্রান্ত, দুশ্চিন্তায় ভুগছি”।

Figure 4: Respondent 2 belief about Dengue transmission in Bengali Language

Translated to English Language-

Pranab Babu said, "Mother came back from hospital after being cured from Dengue, now my wife went to hospital, even my son and daughter in law in also affected by Dengue". (Published on 14-09-2018 in ABP)

“As I have mentioned above in this study, disease perceptions can also go beyond the medical model and into a system of the social representation integrated by the meanings and beliefs around the w/i/c process explained earlier in this study. Despite these participants have direct experience with the biological process of getting sick, but some of these beliefs about the contagious nature of dengue are supported by the fellow participants because there is a lack of key information and is not presented in a clear and simple way. Well this has been noted in other disease systems as well. Again this perception may also impact the prevention/care practices further down the pathway of w/i/c. Here the confusion about the vector–host relationship was also expressed. Here the mosquito was identified as the major vector however it was also implicated in transmitting the non-vector borne diseases”.(Arellano et al., 2015)

ভবানী মাকাল বলেছিলেন
 “বাড়িতে পাঁচ জন ডেঙ্গু আক্রান্ত । সন্ধ্যায় মশা প্রবেশ করে...
 এমনকি গরম গ্রীষ্মে আমাদের জানলা.....বন্ধ বাড়ি”।

Figure 5: Respondent 3 belief about Dengue transmission in Bengali Language

Translated to English Language-

Bhavani Makal said, “Five member of the house got affected by Dengue, in the evening all the mosquito enters, even during the hot summer the windows remain closed”. (Published on 14-09-2018 in ABP)

Now to answer the research question 2, the idea of isolation can be described as “to avoid contact between those who are ill and other people to prevent direct transmission. Another way it can be possible is to points out the need to avoid contact between the sick person, the mosquito, and other people to whom the disease could be transmitted. Well this perception of the need for isolation is expressed in the pictures as follows”(Arellano et al., 2015)



Picture 1



Picture 2

Figure 6: Picture 1 showing the home isolation two children in mosquito net and Picture 2 showing community hospital isolation in mosquito net (published in ABP on 14-09-2018, in Telegraph Calcutta on 13-08-2019)

Here it is noticed that “this belief was mentioned throughout the neighbourhoods with both high- and low-dengue occurrence areas. Actually here the concept of isolating the ill people was a part of social representations of Dengue as a contagious disease. Again to say that Dengue is not transmissible person-to-person, this concept was actually a part of the local knowledge and belief of the people and they use it to prevent disease and also they believe in isolating the sick person may, in fact, reduces the number of mosquitoes that can be infected in a household”(Arellano et al., 2015) in those areas.

মৃত ব্যক্তির পরিবারের সদস্য বলেছিলেন
 “আনিশ (মৃত ব্যক্তি)এবং তার মা গত বছর আক্রান্ত হয়েছিলেন”।
 মৃত ব্যক্তির জেঠু বলেছিলেন
 “আমি তিন মাস আগে ডেঙ্গু থেকে বেঁচে এসেছি”।

Figure 7: Respondent 4 belief about Dengue transmission in Bengali Language

Translated to English Language-

Member of the death family said, “Anish (deceased person) and his mother suffered dengue last year”. Uncle of the deceased person (Anish) said, “I survived from dengue three month ago”. (Published on 10-10-2018 in ABP)

Here it is important to understand that “there is a need to broaden the discussion about stigma and transmittable disease, because even though the participant condemns the act of distancing oneself, they themselves make reference to the need to protect oneself. Then the question arises, what does protecting oneself against the Dengue imply? Actually this confusion about the mode of transmission of Dengue is likely what has led to this type of community reaction”. (Arellano et al., 2015)

“ডেঙ্গু দ্বারা আক্রান্ত সুমিত.....সুমিত্রার (মৃত ব্যক্তি) পুত্র
আক্রান্ত হওয়ার পরে ও বেলেঘাটা আইডি হাসপাতালে ভর্তি হন।

Figure 8: Respondent 5 belief about Dengue transmission in Bengali Language

Translated to English Language-

Sumit the son of the deceased person Sumitra also got infected by dengue and admitted to Belegghata ID Hospital. (Published on 05-08-2019 in ABP)

Well again “these ideas about the alternative mechanisms of Dengue transmission come from previous experiences of the respondent and socially shared images about the disease. They are based on practical experiences of the respondent and how they are dealing with other diseases and using that experience to interpret the actual reality”. (Arellano et al., 2015)

রিপোর্টার বলেছিল যে
“সপ্তমীর স্বামীও ডেঙ্গুতে আক্রান্ত হয়েছিল”।

Figure 9: Respondent 6 belief about Dengue transmission in Bengali Language

Translated to English Language-

Reporter of ABP reported that husband of the deceased person Saptami also got infected by dengue. (Published on 16-10-2019 in ABP)

Well here in this study the mosquito was identified as the carrier of the disease, but the ways through which dengue can be spread leads to utter confusion among the respondent. In the FGI, the participants discussed ideas and beliefs they conceive related to modes of transmission of Dengue.

To answer the research question 3, the traditional way of treatment at home by the members of the Dengue affected patients, following picture illustrates below-



Figure 10: Showing the traditional technique of running mug full of cold water on the forehead of the Dengue infected patients to reduce the body temperature and fever (published in ABP on 11-08-2019)

Lastly answering research question 4, in this study a strong positive correlation (Pearson $r = 0.98$) was found between the cleanliness and the Dengue. $R^2 = 0.97$ [$F = 1, 4$ (132.23, $P = 0.000326$)]. So it concludes that cleanliness is correlated with the disease Dengue. ANOVA results showed statistically significant with confidence level of 95%. Study performed by (Arellano et al., 2015) is similar to this study where the researcher while describing the prevention strategy explained that preventive measures are not always localized only at the household level but the Cleanliness of the community environment was also considered important.

Here in this study most of the premises of the household found polluted either by water logging in tyres, ponds, vegetation, garbage, dirty and clogged canals, clogged drains. Even though most of the individuals showed grievance towards the local governmental authority to keep the neighbourhood clean and said that the health workers are only seen when ever there was a Dengue

death. Well many individuals were also reluctant to keep their household clean; they store water in their homes as lack of piped water in their neighbourhood also makes a good breeding ground for the *Aedes aegypti* mosquito. In the terrace garden water gets stored in the flower pots is also a good breeding ground for the mosquito and many times the health workers who goes door to door to clean the larvae of *Aedes aegypti* mosquito finds it difficult to reach those places such a terrace gardens because the owner of the household do not allow them to enter. For this reason now the KMC is slamming a fine on the owner of the household or the factory and even the land to keeping it unclean and not allowing the KMC workers to clean them up.

CONCLUSION

The study found one Dengue death (published in ABP on 24-06-2020). And three Death (published in ABP on 12-06-2020 and 11-07-2020) which involve both Dengue and Corona means that the patients suffering from Dengue also had the symptoms of Corona (Yan et al., 2020) also found the same thing as to this study.

So we can say that if the patients found suffering from both Dengue and Corona, it can be a contagious one and can infect other person whoever comes into contact with the ill people. Here comes the notion of isolation and social – distancing. Future information and/or educational campaigns as well as educational messages about the storage of water, especially in those communities where the access to piped water is scarce and inappropriate storage practices may increase Dengue risk in those areas. Also, dengue prevention should also be approached using an environmental health model, promoting the active participation of the whole community, while improving access to public services.

In this study an effort was made by the researcher to find out the level of health literacy and education gained by the general public at large by reading the newspaper and logically analysing and understanding the fact of the Dengue reported articles which actually communicates public health information at every instance in Kolkata. And how these public health reporting of the Dengue articles shapes the belief of the people in Kolkata.

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