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A survey based study on seasonal diseases & treatment pattern during Winter in Narayanganj City

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Abstract

Most infectious diseases follow a seasonal cycle that allows germs to spread and infect humans. An abrupt climate change can promote infections in the winter. The study aims to determine winter disease prevalence in Narayanganj. To learn about seasonal illness risk factors, management, treatment, and other implications. People in Narayanganj city were interviewed using a self-designed English questionnaire. The questionnaire asked about demographics, education, socioeconomic level, winter sickness awareness, etc. Our of total 200 participant population male respondents were 59% and female 41%, among them the prevalence of diseases are allergy 59%, stomach flu 76%, common cold 345, influenza 17%, skin disease 11%, asthma 21%, croup 6% and sore throat 14% which is counted respectively of total surveyed participants number. The result of knowledge about common seasonal disease in winter shows that about 15% of participants knows a great deal whereas 66% people knows somewhat and about 19% of the total participants knows nothing about these common diseases. About 58% participants take treatment from an expert physician and rest of 42% participants didn't take any treatment for these diseases. This research shows that knowledge and awareness of winter illnesses are poor. Even among the young, knowledge is inadequate. Due to insufficient school exposure, individuals don't obtain enough knowledge. They'll develop complications. Even the medical system has issues preserving treatment quality. Doctors, nurses, and pharmacists must help patients. This study was done on randomly picked persons from Narayanganj, thus it doesn't represent the complete notion.

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Introduction

Due to age-related symptoms and disorders, mobility issues, and a dearth of geriatric services, primary care facilities in Bangladesh are likely to be the initial point of contact for the aged population. The Upazila Health Complex, Union Health & Family Welfare Center, and Community Clinics make up the major healthcare system in the country's rural areas (Uddin and Hamiduzzaman, 2010). Primary and secondary care for the country's 400k inhabitants is provided by the Upazila level's 460 health complexes, which include inpatient and outpatient facilities with a total of 31 beds (Islam & Biswas, 2014). Three thousand seven hundred union health and family welfare centers serve thirty thousand people in each union, while fourteen thousand community clinics serve six thousand individuals in each rural area (Hamiduzzaman, 2018). Two-thirds of Bangladesh's rural old women (REW) are affected by symptoms and illnesses, and they make up around 70% of the country's total elderly women (i.e., 7.4 million). They had the longest average duration of symptoms of any demographic group (Hamiduzzaman *et al.,* 2018) resulting to a disproportionately large number of early deaths that might have been avoided. According to the literature, seasonal outbreaks are the primary cause of the spread of symptoms and illnesses among the REW. Climate change [e.g., temperature, precipitation], abiotic environment [e.g., salt in water], co-infections, and vector seasonality are significant causes of seasonal symptoms and illnesses (Hamiduzzaman *et al.,* 2018).

Majority of infectious diseases follow a seasonal pattern appropriate to conductive situation that is accessible to the microorganisms to spread and transmit a disease to human beings. Winters are cool but a sudden change of climate may often trigger certain diseases. Because of its geographical position, Bangladesh is one of the most disaster-prone countries in the world (Smitha and Sahyadri, 2020). Situated in the subtropical region, the climate of Bangladesh is characterized by wide seasonal variations in rainfall, moderately warm temperatures, and high humidity (Rahman, 2018). Public health effect might be one of the most significant impacts of global climate change in Bangladesh (Shamsuddin, 2009). Bangladesh is a developing country. Between 2004 and 2014, the averaged GDP growth rate is 6%. Economic development of this country is depend on firstly on agriculture and secondly on industry. Although Bangladesh is not rich in industry, it has been enriched in Garment industries in the recent past years, which is a promising step. At present Bangladesh is the third largest garment manufacturer and exporter country in the world (Shaheen and Zahir, 2014). Bangladesh is one of the most severely afflicted victims of climate change, despite the fact that it is a low-income nation that contributes relatively little to the process of global warming itself. Bangladesh is home to the world's largest delta and second-largest river basin. 10% of the land is more than a meter above sea level, although the rest is mostly flat and low (Huq and Ayer, 2008). Extreme weather, such as flood and cyclone, is widespread due to the combination of monsoon weather and the proximity of the Bay of Bengal in the south (Kabir and Khan, 2016). According to reports, it is the most susceptible nation to the impacts of climate change because of its specific geographic and physical position. The issue is exacerbated by a lack of resilience and adaptive ability, a large population, and low income. There have been reports of certain illnesses rising randomly in different locations of Bangladesh (Kabir *et al.,* 2016), but unfortunately very little research have been conducted so far on the association between various environmental factors and trends of infectious disease incidence. Until far, most research on the effects of climate change on human health have come from industrialized nations (Akompab *et al.,* 2013). In addition, most studies that end up in print only address one illness.

Narayanganj is a city in central Bangladesh. It is located in the Narayanganj District, near the capital city of Dhaka and has a population of 29,48,217. The city area of Narayanganj is 760 km2. The city is on the bank of the Shitalakshya River. The river port of Narayanganj is one of the oldest in Bangladesh (Masud, 2016). Most human respiratory pathogens exhibit an annual increase in incidence each winter, although there are variations in the timing of onset and magnitude of the increases.

This is true for bacterial pathogens such as the pneumococcus as well as for viruses transmitted by respiratory routes, such as rubella and influenza. The Main idea can be determining the rate of disease during winter (Nelson, 2003). The study focuses on the geographical aspects to disease and their medication. Though the causes of outbreaks of diseases are quite complex and often do not have a simple relationship with decreasing temperature or change in precipitation, it is clear that climate change will present increased risks to human health in Bangladesh, especially in light of the poor state of the country's public health infrastructure (Nelson, 2003). Only few studies have been carried out so far to identify the impacts of climate change on human health in Bangladesh (Hossain, 2017).

The aim of the study is to find out the prevalence of common diseases in winter among the people of Narayanganj city. Also to gather knowledge about risk factors, their managements, treatment availability, and other consequences of these seasonal diseases. The main objective of the study is to build awareness so that participants can avoid or minimize the risk factors and take prevention. The objectives are-

To determine the rate of seasonal disease and their medication pattern in winter among the people lives in Narayanganj city.

1. To seek answer and data about the following
- Frequency of affected people
- Rate of awareness about medication
- Finding the Most common diseases during winter
2. To determine the general implications of the study
3. To present and share the gathered data
4. To check the medication that are offered

Material and methods

A method for collecting data was prepared. We collected data by examining test reports, prescription and by questioning following a preset format. We collected data from several hospitals and other institutions. The questionnaire was designed mainly based on the gestational age at birth, weight and gender of patients, Occupation, Area of residence, Education Level, underlying diseases, disease knowledge, awareness and medications etc. A qualitative study was carried out among 200 participants.

Methodology of the study

It was a survey-based study. In this study, People living in Narayanganj were the study population. The study was carried out on 200 people from different institution inside Narayanganj city. The study population was Narayanganj's people with common seasonal disease in winter. We were choosing purposive sampling as a tool of data collection this study. We have selected 212 students as sample of study by using purposive sampling and data was collected. Purposive sampling is a non-random sampling technique. The purposive sampling can use on survey-based research. In this type of sampling, sample know about the purpose of study and provide information about question from their knowledge. Purposive sampling was more appropriate than random sampling. Data was collected by direct interviewing method.

The duration of the study was about two months that started from December, 2021 up to January, 2022. This study was planned to show the Prevalence, knowledge and awareness regarding common seasonal diseases in winter among Narayanganj city, Bangladesh We made the questionnaire and visited the students for data. We visited different institution and general hospitals. We asked them some questions related to the seasonal diseases and preserved the data for further processing. The main goal of this study was to find out the prevalence of seasonal diseases in winter among the people of Narayanganj city. Data obtained were categorized according to qualitative and quantitative variables after interposing the data from excel. All test was carried out in the MS excel 2016 with respect to the respective parameters.

Result and discussion

Result

Demographic Analysis

In this survey include total number of samples was 200; among them 59% are male and 41% female. In this study that the range both male and female

participants were in the age range 19-24, 25- 30, 31-36, 37-42, 43-49 & in the age 50 above 50 years old. A total of 200 participants were interviewed with asking the question individually.

Knowledge of common seasonal disease

In this survey include total number of sample is 200, among these participants 15% participants have a great deal of knowledge, 66% participants have average knowledge and 19% participants have no idea about these common winter season disease.

Treatment pattern

During the study, total number of sample 200, Among them 68% participant take synthetic treatment, 7% participants take Ayurvedic, 19% participants take Homeopathic, 2% participant take Unani, 4% participant take Herbal for the treatment of winter seasonal disease.

Taking treatment from doctor

This survey include total number of sample 200, among them participants 58% participant took treatment from physician & 42% do not take any treatment.

Cold intake tendency

During the study, total number of sample 200, among them 18% participant take a great amount of cold product (ex: ice cream, cold drinks etc.), 34% of participants take a moderate amount and 48% participants take no cold product during winter season.

Awareness about the side effect and adverse symptom of the prescribed medicine

During the study, total number of sample 200, among them 29% participant are informed about the side effect and adverse symptom of the prescribed medicine and 71% participants are informed about the side effect and adverse symptom of the prescribed medicine.

Usefulness of toll free number and website for health support

During the study, total number of sample 200, among them 23% participant use or used toll free number and website for heath support and 77% participants don't use these health support process.

Sufferings of patients during check-up

During the study, total number of sample 200, among them 14% participant has claimed that they have to wait at least 15 minutes to see the doctor, 33% participant has claimed 30 minutes and approximately 53% participants has claimed that they have to wait more than One hour to see the doctor for consultation.

Disease prevalence

The survey was conducted among 200 Participants, and it has been found that 118 Participants have Allergy, which is 59% of total surveyed Participants number. Among 200 Participants, total 152 of the Participants are found with Stomach flu, total 68 of them are found with common cold, total 34 of them are found with Influenza, Total 22 of them are found with skin disease, total 42 of them are found with asthma, total 12 of them are found with croup, total 28 of them are found with sore throat which is 76%, 34%, 17%, 11%, 21%, 6% and 14% respectively of total surveyed Participants number, so these diseases are common winter season disease.

Table 1. Knowledge of common seasonal disease among the participants.

Parameters	Number of participants (n= 200)	Percentage (%)
A great deal	30	15%
Somewhat	132	66%
Not at all	38	19%

Table 2. Treatment pattern among the participants.

Parameters	Number of participants (n= 200)	Percentage (%)
Synthetic	136	68%
Ayurvedic	14	7%
Unani	4	2%
Homeopathic	38	19%
Herbal	8	4%

Table 3. Taking treatment from doctor among the participants.

Parameters	Number of participants (n= 200)	Percentage (%)
Yes	116	58%
No	84	42%

Table 4. Usefulness of toll free number and website for health support.

Parameters	Number of participants (n= 200)	Percentage (%)
Yes	46	23%
No	154	77%

Table 5. Disease prevalence among the participants.

Parameters	Number of participants (n= 200)
Allergy	118
Stomach Flu	152
Common cold	68
Influenza	34
Skin Disease	22
Asthma	42
Croup	12
Sore throat	28

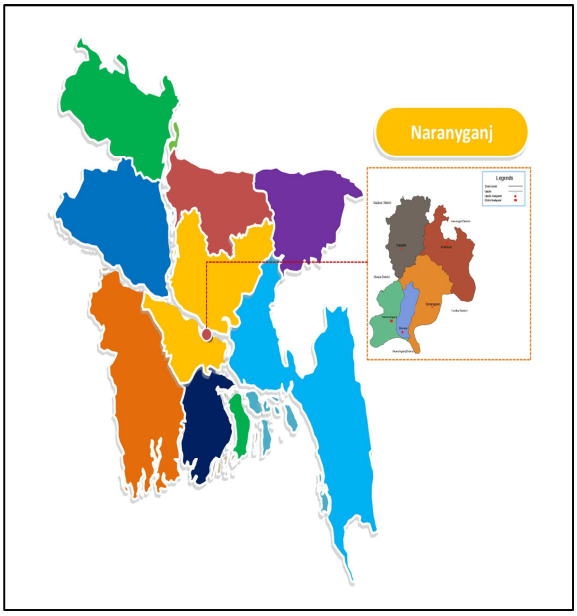

Fig. 1. Map of Bangladesh with Naranyganj district.

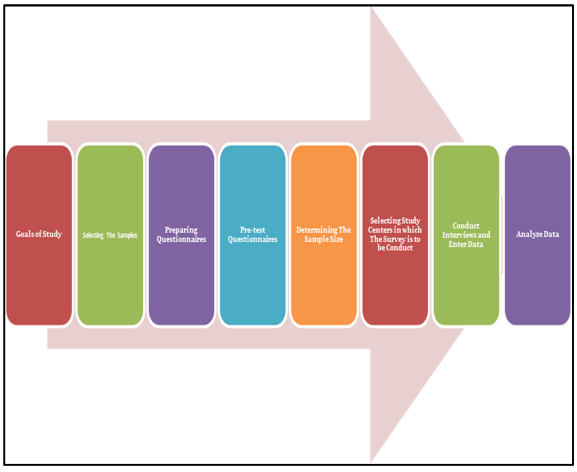

Fig. 2. Steps of the Study Design.

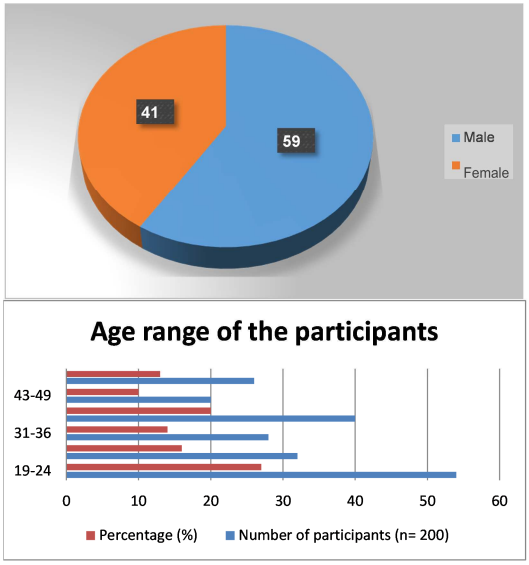

Fig. 3. Demographic analysis among the participants.

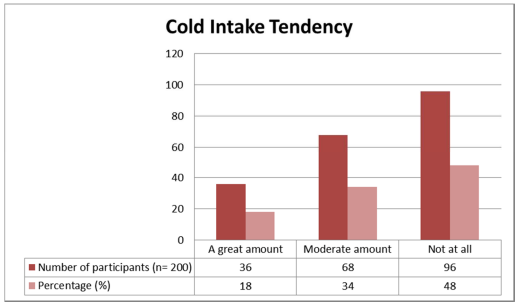

Fig. 4. Behaviour pattern - cold intake tendency.

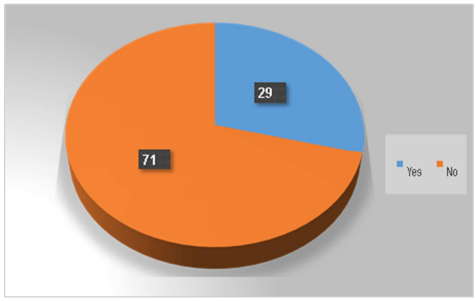

Fig. 5. Awareness about the side effect and adverse symptom of the prescribed medicine.

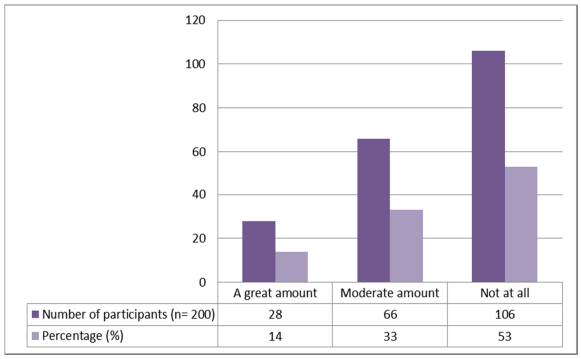

Fig. 6. Sufferings of patients during check-up.

Discussion

Bangladesh is one of the nations is most susceptible to the effects of climate change in the globe. Malaria, diarrheal disease, enteric fever, encephalitis, pneumonia, and bacterial meningitis were the six climate-sensitive infectious diseases that were examined in an observational study that was conducted in northeastern Bangladesh. The study looked at the association between temperature, humidity, and rainfall with these conditions (Chowdhury *et al.,* 2018).

Two hundred residents of Narayanganj's various neighborhoods participated in the survey. There were 59% male responders and 41% female respondents. Younger than 28-year-olds made up the bulk of the survey's sample. Allergies affect 59% of respondents, the stomach flu 76%, the common cold 345, influenza 17%, skin illnesses 11%, asthma 21%, croup 6%, and sore throats affect 14%. We found that around 68% of individuals use synthetic medication, 7% use Ayurvedic medicine, 2% use Unani medicine, 19% use homeopathic medicine, and 4% use herbal medicine. Eighteen percent of respondents consume a lot of cold items throughout the winter, whereas sixty-eight percent eat an average amount, and almost forty-eight percent don't take any cold products at all. About 15% of participants know a great deal roughly typical seasonal ailments in the winter, while 66% know something, and about 19% of the total participants know nothing at all about these diseases. Approximately 58% of participants are treated by a medical professional, whereas 42% are not. Regarding 71% of individuals did not get information about the potential for harmful effects from the medication they were administered, whereas 29% did. Among the most intriguing findings is the fact that nearly half (43%) of patients report waiting more than an hour (past their appointment time) to see a doctor, while a third (33%) of respondents say they never have to wait longer than 30 minutes, and nearly a quarter (24%) of those who identify as part of the upper socioeconomic bracket say they never wait more than 15 minutes. About 77% of participants in the study reported never calling the government's toll-free health and medical help line**.**

Conclusion

After this study it is visible that knowledge and awareness about these common diseases during winter are not at good state at all. Even in the young generation the knowledge is lacking and not up to the level as it is supposed to be. However due to the minimal exposure in the education system, they don't get as much information as they were supposed to be. Consequently, they will suffer from different complications. Even the medical system has some serious flaws maintaining the quality of treatment. Medical personnel including pharmacist must fulfil their duty toward the patients. It is however need to mention that this research was conducted on randomly chosen general people from Narayanganj city and in a very small scale so it doesn't reflect the whole idea. Therefore, it is suggested that if a conclusive result about the awareness of these common diseases is desired, further large-scale researches should be conducted

Recommendation(S)

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