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A study on knowledge, attitude and practice regarding weather related illness in the general population of Andaman and Nicobar islands

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***Abstract*---**Aim - To evaluate the study on knowledge, attitude and practice regarding weather related illness in the general population of Andaman and nicobar islands. Material and Methods - The study is carried out with a sample size of 200 in the general population of Port Blair, A & N Islands. The sample size is calculated according to the formula. The study was carried out via online. The study is a web based cross –sectional study using E- Questionnaires. Before conducting the study, ethical approval was obtained from the Institutional Ethical committee (IEC).Results - In our study questionnaire was circulated to 200 clans in the public, all the 200 people in the general public have responded giving response rate of (100%) in Port Blair, A & N Islands. The statistical analysis was calculated based on review performed, the work was carried out in the Microsoft excel and the percentage calculation was done on the excel itself.Conclusion - The concern towards the study regarding the knowledge, attitude aand practice regarding weather related illness in the general population of A & N islands. The study comprises of 200 sample, where the knowledge, attitude and practice regarding weather related illness was GOOD everybody in the general public had good knowledge, attitude and practice about the signs, manifestation and causes of the diseases, as the public has gained some knowledge about the common diseases, which can be serious and can also be normal, these diseases can spread by droplets or by shaking hands and sharing any items or things, so we have to cover our mouth and

nose with the help of a mask and use sanitizer, whenever we come in contact with some infected persons.

***Keywords*---**knowledge, attitude, weather, general population.

Introduction

Changes in climate, along with other natural and man-made health stressors, has a wide range of effects on human health and illness. Some preexisting health concerns may worsen, while others will develop. Most of us are not equally vulnerable[1][2]. Age, financial resources, and geography are all important factors to consider. Disruptions to physical, biological, and ecological systems, both locally and globally, can have an impact on health[1]. The health impacts of these instabilities entail enhanced respiratory and cardiovascular disease, concussions and premature deaths related to severe weather events, modifications in the occurrence and geographical transmission of food- and water-borne ailment or other infectious diseases, and risks to psychological health[3][4]

Climate change is likely to impair human health in some areas through increasing ground-level ozone and/or particle matter air pollution. Ground-level ozone (a major component of smog) is linked to a variety of health issues, including decreased lung function, increased hospital admissions and emergency room visits for asthma, and an upsurge in deaths annually[1][2]. Heat, precursor chemical concentrations, and methane emissions are all factors that influence ozone production. Particulate matter concentrations are influenced by events such as wildfire emissions and air stagnation incidents, among others[2][3]. Climate change is expected to raise ozone and particulate matter concentrations in some areas by increasing these many causes. Rise in global temperatures may result in an increase in premature mortality due to worsening ozone and particle pollution[3][4][5][6].

Predictions based on no adjustment in regulatory restrictions or demographic characteristics vary from 1,000 to 4,300 more premature deaths per year in the United States by 2050 due to its possible ozone and particle health impacts. There is less assurance regarding the reactions of particles in the air to changing climate than there is about the response of ozone[7][8][9][10]. Health-related expenditures of the present consequences of ozone air pollution surpassing national norms have now been estimated at $6.5 billion (in 2008 U.S. dollars) nationally, based on a U.S. context of health impacts from ozone levels during 2000–2002[11][12][13].

Climate change may result in greater pollen concentrations as well as longer pollen seasons, leading more individuals to suffer from pollen and other allergies. Pollen is an allergy in the air that can harm our health. Pollen grains are microscopic "seeds" that are transported by blooming plants, trees, grass, and weeds[11][12]. The quantity and kind of pollen in the air vary according to the season and geographic area. Although pollen levels are normally greater during the warmer seasons, certain plants pollinate year-round[14][15].

How to Stay Healthy During the Winter ?

Winter's chilly weather and fewer days might sap your enthusiasm to exercise and keep healthy and active. This might lead to a weak immune system providing a larger chance of developing the illnesses. It is preferable to avoid them rather than seek therapy, and the best way to do so is to plan ahead of time and be cautious. Here are some suggestions to help you avoid cold-weather illnesses[16][17].

- Wash your hands regularly: This is both the most common and the most neglected illness prevention recommendation. Making it a practise to wash your hands often assures that you are getting rid of the disease-causing germs off your hands and also prevents spreading it[18][19].
- Increase your intake of vitamin C: Vitamin C helps the body fight the symptoms of colds, flu, and other typical winter diseases. Also, try adding to your diet the finest foods for winter to keep away from the flu.
- Practice meditation: Meditation can help you avoid the winter blues, worry, and tension. When you are less anxious and stressed, your body is better able to fight illnesses.
- Drink herbal teas: Herbal teas, such as chamomile, might help you relax and sleep better[19][20].

Objectives

1) Learn about the various weather related illnesses.
2) Understand the importance of the cause of the illnesses.
3) Discover how climate and weather influence the distribution of weather related illnesses.
4) Identify the common ailments of different weather illnesses.
5) To find out whether there is much understanding about the illnesses.

Materials and Methods

The study is carried out with a sample size of 200 in the general population of Port Blair, A & N Islands. The sample size is calculated according to the formula. The study was carried out via online. The study is a web based cross –sectional study using E- Questionnaires. Before conducting the study, ethical approval was obtained from the Institutional Ethical committee (IEC).

Data collection and procedures

A physician validated Questionnaire containing 25 questions is made into a Google form for which the link will be shared to the general public to evaluate knowledge, attitude and practice about weather related illness, to the general public of Port Blair, Andaman and Nicobar Islands, the link will be self-administered online questionnaires. The E-Questionnaires which is distributed among general public of Port Blair, Andaman and nicobar islands through Google forms, the link was created and used to circulate among the general public by social media such as WhatsApp, G-mail. The survey consists of demographic characteristics such as age, gender, education qualification, year of study and 3 sections contain question regarding knowledge, attitude, and practice about

weather related illness. The filled online questionnaires will be submitted to investigators mail. The inclusion criteria for selecting the participants in this study is only Pharmacy students above 18 years from general public included in the study. Only the age limit above 18 years to 50 years are included. People with serious health conditions are excluded.The statistical analysis was calculated based on review performed the data were entered into Microsoft excel and analyzed using the excel and the percentage calculation was performed.

Results

All the questions from the questionnaire provided the information needed to frame the results.

Table- 1
Demographic characteristics of the participants

Characteristic	NO. (%)
GENDER	
Male Female	139 (69.2%) 61 (30.3%)
AGE	
18-25 26-33 33-41 42-49 Above 50 years of age	102 (50.7%) 39 (19.4%) 21 (10.4%) 17 (8.5%) 17 (8.5%)
OCCUPATION	
Government servant Private servant Self employed Student	45 (22.4%) 55 (27.4%) - 98 (48.8%)
EDUCATION LEVEL	
Primary level High school Under graduate Post graduate	6 (3.0%) 48 (23.9%) 109 (54.2%) 35 (17.4%)
MARITAL STATUS	
Single Married	130 (64.7%) 70 (34.8%)
LOCALITY	
Urban Rural	135 (92.0%) 13 (6.5%)

Table – 2
Knowledge and understanding of subjects towards the weather related illness.

S.NO	QUESTION	NO.	PERCENTAGE
1.	Does change in weather cause illness		

	a) yes b) No c) don't know	182 9 6	90.5% 4.5% 30%
2.	Will there be any major health impact of weather or climate change. a) yes b) No c) don't know	 127 44 29	 63.2% 21.9% 14.4%
3.	Can the change in weather affect the pattern of infectious diseases. a) yes b) No c) don't know	 142 27 31	 70.6% 13.4% 15.4%
4.	Have you had any illness related to sudden change in weather. a) yes b) No c) don't know	 130 61 6	 64.7% 30.3% 3.0%
5.	The illnesses which are related to weather, does it cause any impact during rainy season which brings mosquito borne diseases like malaria, dengue, etc a)Yes b)No c)Don't know	 164 27 9	 81.6% 13.4% 4.5%
6.	Does taking good care of ourselves or not going outdoor in hot and cold weather, will it protect ourselves from major infectious diseases. a)yes b)No c)don't know	 130 39 31	 64.7% 19.4% 15.4%

Table – 3 Attitude of subject towards weather related illness.

S.NO	QUESTION	NO.	PERCENTAGE
1.	The seasonal hay fever or allergic rhinitis are common causes of allergic symptoms. What will cause non allergic rhinitis ? a) Due to low pressure. b) Sudden change in temperature c) Steady rain d) Don't know	 64 60 11 63	 31.8% 29.9% 5.5% 31.3%
2.	What precaution should we take to stay protected fom heat related illness ? a) Drinking plenty of fluids	 49	 24.4%

	b) Cold shower	13	6.5%
	c) Sit in a shadow	47	23.5%
	d) Being indoor	39	19.5%
	e) All the above	44	21.9%
	f) Don't know	9	4.5%
3.	Which types of diseases are more common in rainy weather ?		
	a) Malaria	48	24%
	b) Influenza	22	11%
	c) Dengue	10	5.0%
	d) Typhoid	28	14%
	e) All the above	61	30.3%
	f) Don't know	32	15.9%
4.	Which of the following will be a common symptom for hypothermia ?		
	a) Body temp. below 95 degree celcius	55	22.9%
	b) Confusion	22	11%
	c) Slurred speech	30	15%
	d) All the above	50	21.4%
	e) Don't know	44	22%
5.	Is influenza a cold weather related illness ?		
	a) Yes	81	40.8%
	b) No	29	13.4%
	c) May be	48	23.9%
	d) Don't know	41	20.4%
6.	Streptococcal bacteria is the main organism to cause sore throat		
	a) Yes	104	51.7%
	b) No	32	15.9%
	c)Don't know	46	22.9%
7.	Can common cold be caused by rhino viruses ?		
	a) Yes	114	56.7%
	b) No	26	12.9%
	c)Don't know	57	13.4%
8.	Bronchitis is the inflammation of the bronchial tube ?		
	a) Yes	139	69.2%
	b) No	30	14.9%
	c)Don't know	27	13.4%
9.	Is bronchitis a weather related illness ?		
	a) Yes	115	57.2%
	b) No	55	27.4%
	c)Don't know	28	13.9%
10.	Does drinking plenty of fluids help to get rid of weather related illnesses.		
	a) Yes	146	72.6%
	b) No	37	18.4%
	c)Don't know	16	18.0%

Table – 4 Practice of subjects towards weather related illness.

S.NO	QUESTION	NO.	PERCENTAGE
1.	Washing of hands and sanitizing is a good practice, when we have common cold and viral rhinitis. a) Yes b) No	 189 7	 94.0% 3.5%
2.	Have you visited any health camps for awareness about the illness causes due to weather changes and also knowing about how to cope with it. a) Yes b) No	 90 104	 44.8% 51.7%
3.	During rainy season mosquitoes breed in stagnant water in and around human dwellings. Are you doing anything to prevent mosquito breeding in and around your house. a) Yes b) No	 152 44	 75.6% 21.9%
4.	Do you cover your nose and mouth with tissue or handkerchief while sneezing because it can cause spread of infection to others. a) Yes b) No	 164 32	 82.1% 15.9%
5.	Are you well hydrated during hot climate. a) Yes b) No	 178 19	 88.6% 9.5%

Discussion

Changes in climate, along with other natural and man-made health stressors, has a wide range of effects on human health and illness. Some pre-existing health concerns may worsen, while others will develop. Most of us are not equally vulnerable. Age, financial resources, and geography are all important factors to consider. Disruptions to physical, biological, and ecological systems, both locally and globally, can have an impact on health. The health impacts of these instabilities entail enhanced respiratory and cardiovascular disease, concussions and premature deaths related to severe weather events, modifications in the occurrence and geographical transmission of food- and water-borne ailment or other infectious diseases, and risks to psychological health.

Climate change is likely to impair human health in some areas through increasing ground-level ozone and/or particle matter air pollution. Ground-level ozone (a major component of smog) is linked to a variety of health issues, including decreased lung function, increased hospital admissions and emergency room visits for asthma, and an upsurge in deaths annually.

Knowledge and understanding of subjects towards the weather related illness

The data were collected by self administered questionnaire of 20 items into 4 domains, The knowledge of participants towards melanoma is assessed and the results are following, The majority of the respondents in does change in weather cause illness were yes (90.5%), don't know (30%) and lowest were no (4.5%), in the second question will there be any major health impact of weather or climate change were yes (63.2%), no (21.9%) and don't know was (14.4%), can the change in weather affect the pattern of infectious diseases, respondents were yes (70.6%), no (13.4%) and don't know were (15.4%), have you had any illness related to sudden change in the temperature, yes (64.7%), no (30.3%) and don't know were (3.0%), the illness which are related to weather, does it cause any impact during rainy season which brings mosquito borne diseases like malaria, dengue etc, yes (81.6%), no (13.4%) and don't know was (4.5%), does taking good care of ourselves or not going outdoor in hot and cold weather, will help us to protect from major infectious diseases, yes (64.7%), no (19.4%) and don't know was (15.4%).

Attitude of subject towards weather related illness

The attitude of participants towards melanoma is assessed and the results are following, Which types of diseases are more common in rainy weather were due to low pressure (31.8%), don't know (31.3%) and (29.3%) , the lowest responses were steady rain (5.5%), What precaution should we take to stay protected fom heat related illness, most respondents were of drinking plenty of fluids (24.4%) , all the above (21.9%) and being indoor which was (19.5%), the lowest responses were cold shower (6.5%) and don't know (4.5%), which types of diseases are common in rainy weather, the highest responses were from, all the above (30.3%), malaria (24%) and typhoid (14%) and the lowest responses were dengue (5.0%).,which of the following will be a common symptom for hypothermia, the majority of the responses were, body temp. below 95 degree Celsius (22.9%), all the above (21.4%) and don't know were (22.1%), the lowest responses were of confusion (11%), is influenza a cold weather related illness, the highest responses were from yes (40.8%), may be (23.9%) and don't know (20.4%), the lowest responses were from no (13.4%), streptococcal bacteria is the main organism to cause sore throat, major responses were from yes (51.7%), don't know (22.9%) and the lowest were no (15.9%), can common cold be caused by rhino viruses, the majority of the responses were from, yes (56.7%), no (13.9%) and don't know (28.4%), bronchitis is the inflammation of the bronchial tube, the highest response were from yes (69.2%), don't know (13.4%) and the lowest were (14.9%), is bronchitis a weather related illness, the majority of response were from yes (57.2%), don't know (13.9%) and no (27.4%), does drinking plenty of fluids help to get rid of weather related illnesses, the majority of the responses were from, yes (72.6%), no (18.4%) and no (18.4%).

Practice of subjects towards weather related illness

the majority of responsers from, washing our hands and sanitizing is a good practice, when we have common cold and viral rhinitis, the highest responses

were yes (94.0%) and no (3.5%), have you visited any health camps for awareness about the illness caused due to weather changes and also knowing about how how to cope with it, the responsers were high for no (51.7%) and yes (44.8%), during rainy season mosquitoes breed in stagnant water in and around human dwellings. Are you doing anything to prevent mosquito breeding in and around your house, major responses were, yes (75.6%) and no (21.9%), do you cover your mouth with tissue or handkerchief while sneezing because it can cause spread of infection to others, major responsers are yes (82.1%) and no (15.9%), are you well hydrated during hot climate, most number of responsers were yes (88.6%) and no (9.5%).

Conclusion

The concern towards the study regarding the knowledge, attitude aand practice regarding weather related illness in the general population of A & N islands. The study comprises of 200 sample, where the knowledge, attitude and practice regarding weather related illness was GOOD everybody in the general public had good knowledge, attitude and practice about the signs, manifestation and causes of the diseases, as the public has gained some knowledge about the common diseases, which can be serious and can also be normal, these diseases can spread by droplets or by shaking hands and sharing any items or things, so we have to cover our mouth and nose with the help of a mask and use sanitizer, whenever we come in contact with some infected persons.

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