

Original Article

ENVIRONMENTAL CHANGES AND GENERAL HEALTH CONDITION

Nabhira Aftabi Binte Islam¹, Nasir Uddin², Hafiza Sultana³

ABSTRACT

Background: The environment directly affects health status and plays a major role in quality of life, years of healthy life lived, and health disparities. Humans impact the physical environment in many ways, like overpopulation, pollution, burning fossil fuels, and deforestation. The study was conducted to assess environmental changes and the general health condition.

Methods: It was a cross-sectional study. To assess environmental changes and general health condition of dental second year student and data were collected by checklist. Respondents were selected purposively. Data were collected on 8th September 2019 at Marks medical college dental unit. Samples were second year dental students, who were presented in class on that date.

Results: Distribution of the respondents according to sex, 64.5% were female and 35.5% male. Majority of the student (51.6%) were come from outside of the Dhaka. 45.2% respondents were lived in Dhaka by born. 80.6% respondents lived with their family. It was alarming that 83.9% respondents never did physical exercise and only 16.1 % did sometimes physical exercise. 61.3% respondent admired that they have hair loss, 16.1 % has no problems in skin but others has problems. 51.6% has dust, 12.9% has food allergy. 6.5 % has frequently exposure of diarrheal diseases. Often 67.7% has been suffered by headache. Reason of seasonal changes 29% respondents suffered by itching. 77.4% and 83.9% respondents were affected by anxiety and depression. 77.4% respondent has knowledge about weather change in our country as well as whole world.

Conclusion: General health condition may be changed for multiple causes. Environment is one of the strong factors. The relation between environmental temperature and health has been known for a very long time.

JOPSOM 2020; 39(1): 73-77

<https://doi.org/10.3329/jopsom.v39i1.51865>

Key Words: Health, environmental change, knowledge, weather, relationship.

-
1. Assistant professor
B.D.S (D.U), MPH (NIPSOM)
Dental Public Health Department.
Marks Medical College (Dental Unit)
 2. Maj. Gen (EX). Professor
Principal
Marks Medical College (Dental Unit)
 3. Professor, Department of Health Promotion
and Education
National Institute of Preventive and Social
Medicine (NIPSOM),
Mohakhali, Dhaka-1212

Correspondence:

Dr. Nabhira Aftabi Binte Islam
e-mail: nabhira14@yahoo.com

INTRODUCTION

Humans interact with the environment constantly. These interactions affect quality of life, years of healthy life lived, and health disparities. The World Health Organization (WHO) defines environment, as it relates to health, as “all the physical, chemical, and biological factors external to a person, and all the related behaviors.”¹

The relation between environmental temperature and health has been known for a very long time. Various diseases and disorders such as heat stroke and hypothermia are directly linked with temperature extremes. A fairly well studied phenomenon has been the seasonal variation in mortality. In fact, the periodic changes in weather conditions are a fundamental factor in determining the seasonal behavior of some forms of illness.²

The environment affects our health in a variety of ways. The interaction between human health and the environment has been extensively studied and

environmental risks have been proven to significantly impact human health, either directly by exposing people to harmful agents, or indirectly, by disrupting life-sustaining ecosystems.³

BACKGROUND

Dhaka, the capital and megacity of Bangladesh, is exposed to multiple types of climate- induced hazards including variations in temperature, excessive and erratic rainfall, water logging, flooding, cyclones, and heat and cold waves.⁴

Growth has featured uncontrolled urbanization and industrialization in a context of inadequate pollution control and poor management of natural resources that provide critical ecosystem services. Encroachment of wetland areas, combined with inadequate waste management and maintenance of drainage canals, have increased cities’ vulnerability to flooding and reduced their climate resilience. These worrying trends have adverse implications for the livability and long-term sustainability of cities and the health and well-being of their inhabitants. In addition, environmental risks often affect women disproportionately. Reducing negative environmental externalities is a priority if Bangladesh is to continue to reduce poverty and achieve shared prosperity.⁵ one a research report warns that the erosion of ecosystems could lead to an increase in existing diseases such as malaria and cholera, as well as a rising risk of new diseases emerging.⁶

OBJECTIVE OF THE STUDY

To assess environmental change and the general health condition of the second year dental students of Marks medical college (Dental unit).

METHODS

A cross-sectional study was conducted to assess environmental change and the general health condition in Marks Medical College (Dental Unit), Mirpur-14, Dhaka. Verbal consent was taken from the Principal of Marks Medical College (Dental Unit). Data were collected through face to face interview. Data were collected on 8th September 2019. The study objects 31 respondents of second year dental students were selected purposively, who were presented in class on that date. A semi-structural questionnaire and check list was developing in English. Data were presented by simple frequency table.

RESULTS:

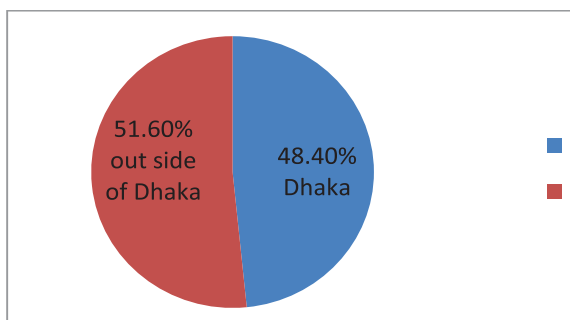
Distributions of the respondents according to their sex, 64.5% were female and rest of male (**table-1**)

Table 1: Sex of the respondents (n =31)

Sex	Frequency	Percent
Male	11	35.5
Female	20	64.5
Total	31	100.0

51.6% respondents came from outside of the Dhaka (**figure-1**).

Figure 1: Respondent come outside of Dhaka. (n =31)



16.1% respondents lived in hostel, 80.6% lived with family and rest of the respondent stayed in sublet (**table-2**).

Table 2: Present residence of the respondents (n =31)

Present residence	Frequency	Percent
Hostel	5	16.1
With family	25	80.6

12.9% respondent lived in Dhaka more than five years, 45.2% lived in Dhaka by born, and 25.8% respondents lived only last two to three year for their education purposes (**table-3**).

Table 3: Duration on stay in Dhaka (n =31)

Duration	Frequency	Percent
2to 3year	8	25.8
4 to 5 year	5	16.1
More than 5 year	4	12.9
By born	14	45.2
Total	31	100.0

83.9% respondents never did physical exercise and rest of them did sometimes (table-4).

Table 4: Physical Exercise (n =31)

Everyday physical exercise	Frequency	Percent
No	26	83.9
Sometimes	5	16.1
Total	31	100.0

Asked respondents about their health status according to the rapidly changes weather, climate and environment (table-5) and most of them answered was 61.3% thought that, their hair loss is more, 35.5% suffered pimple on their facial skin, 51.6% suffered for the dust allergy, sometimes 29% has diarrhea, 6.5% newly diagnosed for asthma, often 67.7% felled headache, 38.7% complained for running nose, 16.1% suffered for rash, 29% has seasonal sneezing and cough, 77.4% suffered in anxiety, 83.9% was in depression, in last two to three years. In (table-6) showed that 77.4% respondent has knowledge about weather changes in world as well as our country.

Table 5: Environmental Change and health (n =31)

Attributes		f (%)
Hair	Loss	19 (61.3)
	No	12 (38.7)
Skin	No change	5 (16)
	Pimple	11 (36)
	Spot	7(23)

	Dryness	5(16)
	Skin diseases	3 (9.7)
Diarrhea	No	20 (64.5)
	Frequently	2 (6.5)
	Sometimes	9 (29)
Asthma	No	29 (93.5)
	Yes	2 (6.5)
Running nose	No	16 (51.6)
	Almost every time	3 (9.7)
	Sometimes	12 (38.7)
Headache	No	7 (22.6)
	Often	21 (67.7)
	Migraine pain	3 (9.7)
Rash	No	26 (83.9)
	Yes	5 (16.1)
Sneezing	No	22 (71)
	Seasonal	9 (29)
Anxiety	No	7 (22.6)
	Yes	24 (77.4)
Depression	No	5 (16.1)
	Yes	26 (83.9)

Table 6. Knowledge about weather change in country and world (n =31)

Knowledge of weather change	Frequency	Percent
No	7	22.6
Yes	24	77.4
Total	31	100.0

DISCUSSION

A total of 31 subjects were studied. The findings of the study were discussed following: Distributions of the respondents according to their sex, 64.5% were female and rest of male. Another study showed that the gender ratio of entire medical students at Chattagram Maa-O-Shishu Hospital Medical College was 68.30% female to 31.69% male⁷. 51.6%

respondents came from outside of the Dhaka and 16.1% respondents lived in hostel, 80.6% lived with family and rest of the respondent stayed in sublet. 12.9% respondent lived in Dhaka more than five years, 45.2% lived in Dhaka by born, and 25.8% respondents lived only last two to three year for their education purposes. 83.9% respondents never did physical exercise and rest of them did sometimes. One of the present study found that four out of five young adults in Dhaka City, Bangladesh, did not meet the WHO recommendations of at least 150 min per week of moderate to vigorous physical activity (MVPA) with more females (94%) than males (73%) not meeting recommendations⁸. Most of the respondents answered about their health was, 61.3% thought that their hair loss is more and 46.1% of subjects have hair loss showed another study⁹, 35.5% suffered pimple on their facial skin another study showed that Its prevalence among medical students varies from 56% to 62% among a group of Portuguese medical students¹⁰, 51.6% suffered for the dust allergy, sometimes 29% has diarrhea, 6.5% newly diagnosed for asthma, often 67.7% felled headache another study showed that the rate of headache during recent academic years of medical students of Zahedan faculty of Medicine during an academic year (2005 to 2006) was 90.5% in males and 88.8 % in females¹¹. , 38.7% complained for running nose, 16.1% suffered for rash, 29% has seasonal sneezing and cough, 77.4% suffered in anxiety, 83.9% was in depression in last two to three years. Other hand another study showed that 66% felt unhappy and depressed¹². Actually many causes are responsible for the effect of health condition among them environmental change is one of very important reason. Health effects and environments are not yet fully understood. Research to better understand how these exposures may impact health is ongoing for promoting health for all through a healthy environment.

CONCLUSION

Poor environmental quality has its greatest impact on people health status and who are already at risk. Therefore, environmental health must address the societal and environmental factors that increase the likelihood of exposure and disease.

one of the worst affected countries, an estimated 316 healthy years of life are lost per 1000 inhabitants due to preventable environmental factors compared with only 14 healthy years of life lost per 1000 in Iceland. Worldwide an estimated 13 million deaths could be prevented each year in a healthier environment¹³.

LIMITATION OF THE STUDY

Data collection timing and participated respondents were too short. So, further study of same topics is recommended.

REFERENCES

1. World Health Organization. Preventing disease through healthy environments. Geneva, Switzerland: WHO; 2006.
2. Brandt KD, Lohmander LS, Doherty M. Pathogenesis of osteoarthritis: the concept of osteoarthritis as failure for the diarthrodial joint. In: Brandt KD, Lohmander LS, Doherty M, eds. Osteoarthritis. Oxford: Oxford University Press, 1998:70–4.
3. World Health Organization. Preventing disease through healthy environments: Towards an estimate of the environmental burden of disease. Available online: http://www.who.int/quantifying_chimpacts/publications/preventingdisease/en/index.html (accessed 23 June 2009).
4. Climate Change Implications for Dhaka City: A Need for Immediate Measures to Reduce Vulnerability. Golam Rabbani, A. Atiq Rahman, Nazria Islam. Article · January 2011 DOI: 10.1007/978-94-007-0785-6_52.
5. World bank report, 2015. www.worldbank.org/environment. 1818 H Street, NW Washington, D.C. 20433 USA.
6. Millennium Ecosystem Assessment. Ecosystems and Human Well-Being: Synthesis; Island Press: Millennium Ecosystem Assessment Series: Washington, DC, USA, 2005.
7. Empathy in Undergraduate Medical Students of Bangladesh: Psychometric Analysis and Differences by Gender, Academic Year, and Specialty Preferences, Asma Mostafa,1 Rozina Hoque,2 Mohammad Mostafa,3 Md. Mashud Rana, Hindawi Publishing Corporation ISRN Psychiatry Volume 2014:7.
8. The World Fact book, South Asia: Bangladesh. [<https://www.cia.gov/library/publications/resources/the-world-fact-book/geos/bg.html>]. Accessed 15 Apr 2015.
9. Prevalence and evaluation of hair loss and irritable bowel syndrome among medical students and its effect on their lifestyle and educational attainment, in taibah university, al-madinah al-munawarah, M. A. Makkawi, H.M. Ahmed, A.M. Alattas, Int. J. Adv. Res.

- 4(12), 326-334, ISSN: 2320-5407, December 2016.
10. Prevalence of Migraine Among Medical Students in Zahedan Faculty of Medicine (Southeast of Iran), Basic and clinical neuroscience, Winter 2011, Volume 2, Number 2, M. R. Shahrakai¹, H. Mirshekari², A. T. Ghanbari³,
 11. Goncalves G. The prevalence of acne among a group of Portuguese medical students. J of European Academy of Dermatology and Venereology. 2012; 26(4): 514-17.
 12. Prevalence of stress among medical students: a comparative study between public and private medical schools in Bangladesh, BMC Res Notes. 2015; 8: 327. Published online 2015 Jul 30.
 13. The Lancet, The environment's impact on health, Vol 369 June 23, 2007.