

Statement of Purpose

The COVID-19 pandemic is a global health crisis that happened in 2019. As an undergraduate student in Bangladesh, I became horrified by the level of healthcare management in the country. So, I decided to work towards improving the country's healthcare system. While thinking about improving the country's healthcare system, I founded a non-profit organization to integrate data-driven decisions into our policymaking. My goal is to achieve an academic degree(i.e., MPH) from a renowned institution with world-class academic researchers and outstanding learning opportunities, something the School of Public Health at Boston University offers.

My previous education in Microbiology equipped me with fundamental knowledge of public health and biostatistics. As a result, I am learning meticulously about appropriate concepts and skills in biostatistics. Alongside, I have training in the theory and practice of statistics. Furthermore, I am a confident user of Python and R. Biostatistics is a field that has plenty of applications in the study of human health. As a result, it has become a sought-after field in the healthcare industry. I intend to use statistical methods and techniques to improve the efficiency of healthcare. I work with renowned academics to implement effective healthcare management. I plan to use statistical methods and data science to improve public health.

During my undergraduate research, I worked on the project titled 'Perception on Antibiotic Resistance and Prevention: An Online, Community-Based Case Study from Dhaka, Bangladesh' under the supervision of Dr. Syeda Tasneem Towhid in the Department of Microbiology, Jagannath University, which is under review to be published in a peer-reviewed journal. Throughout the investigation, I analyzed the current perception and the knowledge level of antibiotic use and misuse of Bangladeshi students from different backgrounds. Currently, I am involved in the literature review, study design, questionnaire development, and data analysis of several projects. For example, 'Quality of life of Bangladeshi Patients with Thalassemia' and 'Knowledge and Attitudes of Thalassemia among Public University Students in Bangladesh' are ongoing under the supervision of Dr. Mohammad Ariful Islam in the Department of Microbiology, Jagannath University, Dhaka, Bangladesh. Another two regarding diabetes titled 'General Concept of Diabetes among Villagers in Bangladesh' are under the supervision of Dr. Md. Kamrujjaman in the Department of Mathematics, University of Dhaka, and Dr. Syeda Tasneem Towhid in the Department of Microbiology, Jagannath University, Dhaka, Bangladesh. As a founder of the Center for Health Innovation, Research, Action, and Learning -Bangladesh(CHIRAL Bangladesh), I have been trying to introduce modern health data science into our national healthcare system to help them make data-driven decisions as well as to establish collaboration with different research organizations, notably Bangladesh Thalassemia Foundation. We have launched a project on the effects of distance learning during COVID-19 on the quality of life of students of different ages in Bangladesh under Sabia Sultana, Undergrad Research Coordinator, CHIRAL Bangladesh.

Throughout my journey as an undergraduate student, I have developed a strong passion for Public Health and Biomedical Research as plenty of data are being generated in this sector daily, and biostatistical methods are the ones that can be applied for these growing number of studies related to human health to draw practical conclusions. I am especially intrigued by infectious disease and control, mental health and mental disorders, disabilities, physical activity, and environmental health in terms of my research interests because these are important to improve the quality of life. I have found that the types of research interests I have to correspond with the vast resources of the School of Public Health, University of Boston.