



TOBACCO CONTROL RESEARCH
GRANT PROGRAM

Research Findings Dissemination Conference

December 10, 2018



Bangladesh
Center for
Communication
Programs



Bangladesh Tobacco Control
Research Network



JOHNS HOPKINS

BLOOMBERG SCHOOL
of PUBLIC HEALTH

Institute for Global Tobacco Control



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Ministry of Health and Family Welfare

Government of the People's Republic of Bangladesh



MESSAGE

At the South Asian Speakers' Summit in January 2016, our Honorable Prime Minister Sheikh Hasina expressed her intention to make Bangladesh tobacco-free by 2040. The Government of Bangladesh is striving relentlessly towards achieving this goal within the timeframe.

The Government has taken special measures for control of Tobacco use in the country and the prevention of Non-communicable Diseases (NCDs) where tobacco is considered as a common risk factor.

In July 2014, the Government imposed 1% "Health Development Surcharge" on all tobacco products which is being used for Tobacco Control and tobacco-related NCDs prevention programs under the guidance of the National Tobacco Control Cell (NTCC) of the Ministry of Health and Family Welfare.

In March 2016, we introduced pictorial health warnings on all tobacco packages (including cigarettes, *bidis*, smokeless tobacco and other tobacco products) covering at least 50% of the package surface area. Additionally, implementation of anti-tobacco campaigns in different media (television, radio, and print media) is in place.

The interventions administered to combat the harmful effects of tobacco use have started producing good results. The Global Adult Tobacco Survey (GATS) Bangladesh 2017 shows remarkable progress towards reduction of tobacco use, both smoked and smokeless, in the country. Tobacco use prevalence has significantly decreased from 43.3% in 2009 to 35.3% in 2017. Exposure to secondhand smoke in public places significantly declined from 79.7% to 49.7% in restaurants; from 62.2% to 42.7% in indoor areas of the work place; from 53.6% to 44.0% in public transportation, and from 23.8% to 12.7% in health care facilities between 2009 and 2017.

The overall percentages of current smokers/smokeless tobacco users who thought about quitting because of a health warning label on cigarette/smokeless tobacco packages raised to 75.6% in 2017 from 41.1% in 2009, showing a significant increase from 2009. The percentage of adults who noticed anti-cigarette smoking information during the last 30 days in any media/location increased significantly from 49.8% in 2009 to 55.9% in 2017 including significant increase on television (from 36.6% in 2009 to 45.8% in 2017).

In this respect, the Research Grant Program managed by the Bangladesh Center for Communication Programs with support from the Institute for Global Tobacco Control (IGTC) at the Johns Hopkins Bloomberg School of Public Health, USA is very useful to gather essential local data as well as build research capacity in tobacco control and this will contribute to planning successful programs and help in achieving a tobacco-free Bangladesh.

On behalf of the Ministry of Health and Family Welfare, I congratulate the research grantees of this round of Research Grant Program. Finally, I appreciate the support provided by the Johns Hopkins Bloomberg School of Public Health for continuing this program in Bangladesh.

Md. Habibur Rahman Khan

Additional Secretary (PH and WH)
Health Services Division
Ministry of Health and Family Welfare



MESSAGE


With the aim of reducing tobacco-caused death and disease in countries with a high burden of tobacco use, the Institute for Global Tobacco Control (IGTC) at the Johns Hopkins University, in collaboration with the Bangladesh Center for Communication Programs, initiated the Tobacco Control Research Grant Program in 2013 in Bangladesh. I am happy to note that the studies have been conducted by researchers under the program resulting in an immense repository of local evidence for planning and implementing effective tobacco control policy and programs in the country.

IGTC supports various research networks internationally, one of them is the Bangladesh Tobacco Control Research Network (BTCRN) which provides an important platform to develop and sustain a community of tobacco control researchers in the country. I urge all tobacco control activists and stakeholders to support the functioning of the Network for meaningful tobacco control research in Bangladesh.

The Global Adult Tobacco Survey (GATS) Bangladesh 2017 findings are encouraging. However, the survey also showed that the percentage of adults who noticed smoking/smokeless advertisements in any media was 53.4% for smoking tobacco and 20.3% for smokeless tobacco. Therefore, we need to put in more effort if we are to overcome the manifold challenges – from the tobacco companies targeting youth and women to the increasing addiction with e-cigarettes.

I am sure that through the collaborative efforts of the Government of Bangladesh, the partners from the Bloomberg Initiative to Reduce Tobacco Use, other stakeholders, tobacco control leaders and activists across the country, the local evidence base being created by the researchers will contribute to enacting effective policies and programs for tobacco control in Bangladesh.

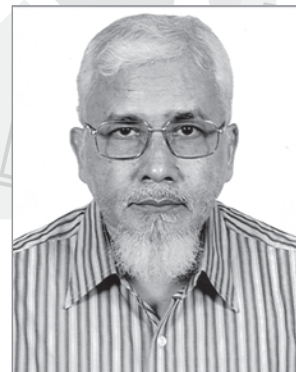
I congratulate the researchers for successful completion. The BCCP team has done well in guiding the grantees and providing mentorship to them in every step of the grant program implementation process. I wish all tobacco control stakeholders success in their endeavors and look forward to a tobacco-free Bangladesh.



Joanna Cohen, PHD, MHSC
Director, Institute for Global Tobacco Control
Bloomberg Professor of Disease Prevention
Department of Health, Behavior and Society
Johns Hopkins Bloomberg School of Public Health



Bangladesh
Center for
Communication
Programs



MESSAGE

The Research Grant Program, now in its sixth year, is a unique capacity building opportunity for aspiring researchers, including both established and graduate students, to undertake tobacco related research in Bangladesh. It is funded by the Bloomberg Initiative through the Institute for Global Tobacco Control (IGTC) at the Johns Hopkins Bloomberg School of Public Health, USA and administered by the Bangladesh Center for Communication Programs.

BCCP follows a meticulous process for selection of research proposals every year. The announcement for research proposals is made in the national dailies. The proposals received are evaluated by a Review Panel comprised of renowned researchers from home and abroad and the final selection is made based on collectively-approved criteria. The Research grantees are awarded seed grants and BCCP Research team provides methodological mentorship to build capacity through the whole research process from finalization of research proposal and data collection tools through collecting field data, analyzing the data and presenting the findings. Some of the research studies have been published in international journals.

Here, we share with you the summary findings of the nine research studies on tobacco control that were conducted in 2018. I congratulate the researchers for their hard work and excellent performance. I also appreciate the hard work of the BCCP Research team which provided technical guidance throughout the research studies. I am thankful to IGTC for their financial support to the program and for supporting the Bangladesh Tobacco Control Research Network (BTCRN) initiative as a forum for tobacco control researchers to exchange ideas, share research findings, generate new tobacco control research and utilize their findings to strengthen the implementation of existing tobacco control policies and advocate for more stringent tobacco control policies where needed.

Tobacco Control in Bangladesh is a collective effort of the Government, the Bloomberg Partners, World Health Organization, and many other NGOs, leaders and activists who have come together to develop and implement coordinated and effective tobacco control strategies and programs in Bangladesh. The research findings that are generated each year have important policy implications and contribute immensely to generating local evidence in the country.

I am confident that working closely with all partners, stakeholders, leaders and activists in public and private sectors, we can achieve tobacco-free Bangladesh by 2040.

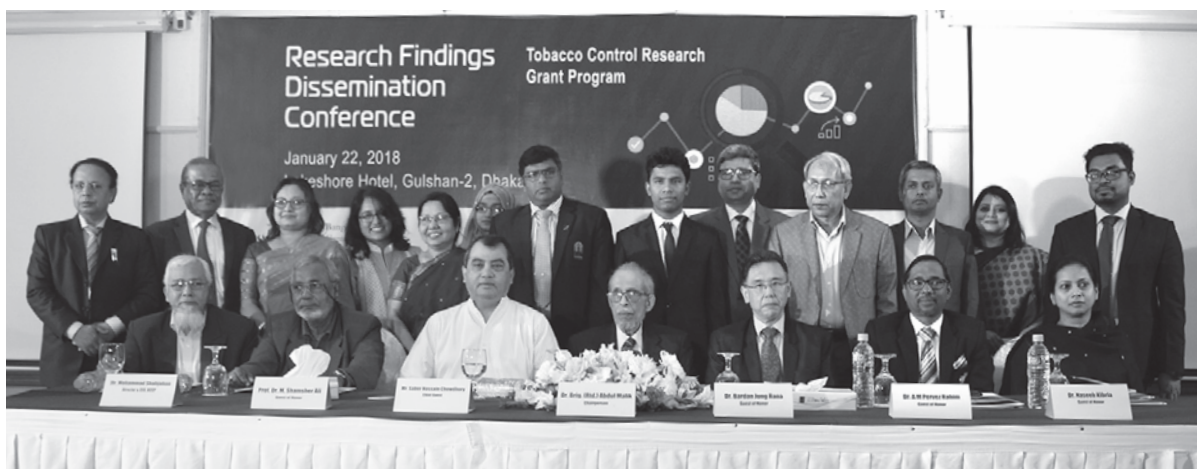
Mohammad Shahjahan

Director & CEO

Bangladesh Center for Communication Programs

Bangladesh Tobacco Control Research Network Program Progresses

Tobacco use constitutes a major health hazard causing more than four and half million deaths in the middle and low-income countries. It is also a leading risk factor for many Noncommunicable Diseases (NCDs) including cardiovascular disease, cancer and lung disease. A study from the World Health Organization reveals that NCDs are estimated to account for 59% of total deaths in low-income, urban population of Bangladesh and that premature mortality from 4 main NCDs among people aged 30 years and above is about 18%. Therefore, effective measures are required to control tobacco use and prevent NCDs.



According to the Global Adult Tobacco Survey (GATS) Bangladesh 2017, tobacco use prevalence has significantly decreased from 43.3% to 35.3% between 2009 to 2017. Exposure to secondhand smoke in public places declined from 79.7% to 49.7% in restaurants; from 62.2% to 42.7% in indoor areas of the work place; and from 53.6% to 44.0% in public transportation. The overall percentages of current smokers/smokeless tobacco users who thought about quitting because of a health warning label on cigarette/smokeless tobacco packages raised to 75.6% in 2017 from 41.1% in 2009, showing a significant increase from 2009.

Focus on tobacco control research and its capacity building programs are not sufficient to adequately meet the challenges. Tobacco control research has historically not been a popular topic within the academic community in Bangladesh. Therefore, there is a dearth of facts and figures needed to develop or strengthen tobacco control policy interventions in Bangladesh.

The Prime Minister of the Government of Bangladesh has made a commitment to make Bangladesh tobacco-free by 2040. In order to achieve the commitment, a roadmap must be developed with the tobacco control research component at the forefront to gather local evidence that contributes towards planning and implementing effective policies and programs in the country.

Bangladesh Center for Communication Programs (BCCP) in collaboration with the Institute for Global Tobacco Control at the Johns Hopkins Bloomberg School of Public Health, USA is giving much importance on increasing research capacity and generating local evidence for effective tobacco control policy measures. The Research Grant Program which is the first of its kind in Bangladesh was initiated in 2013 with 10 research grants. The outcomes of many studies since then were very encouraging with important policy implications. The overall objective of the Research Grant Program is to increase research capacity especially among young researchers, generate local evidence to support effective tobacco control measures in the country, and thus prevent death and disease from tobacco use.



The objectives of the Research Network Program are to:

- Build the research capacity especially of the young researchers of different universities and organizations;
- Enhance the local evidence-base on tobacco control in Bangladesh; and
- Take measures to make the Bangladesh Tobacco Control Research Network (BTCRN) sustainable and enable it to continue to serve as a forum for tobacco control researchers.

Tobacco Control Research Grant Program

The Tobacco Control Research Grant Program was introduced in 2013. Involving capacity building workshops covering the whole spectrum of the research process, the program is being implemented since the last six years with an emphasis on engaging graduate student researchers. All Bangladeshi postgraduate students and established researchers aspiring to contribute to tobacco control are eligible to apply for the grant.

Research Topic:

Researchers are encouraged to choose topics related to priority issues of the Bloomberg Initiative to Reduce Tobacco Use. Proposals generating local evidence that contribute to developing a new policy or strengthen an existing one in line with the components of the World Health Organization's MPOWER package are recommended.

Proposal Selection Process:

BCCP follows a rigorous process for selecting research proposals every year. A Proposal Review Panel comprising of renowned researchers and tobacco control experts from home and abroad reviews the proposals. The Panel considers the following while selecting the winning proposals:

- Priority issues of Bloomberg Initiative
- Competitiveness
- Expected policy implications



The review panel follows a three-step review process. The first step involves preliminary screening to see whether proposals follow the submission guideline. The second step involves reviewing proposals and providing technical scoring while in the third step, applicants present their proposals to the review panel.



Implementation of Research Grant Program:

BCCP has a highly experienced and dedicated team with both technical and managerial expertise to manage the grant program. The research team is led by a Senior Deputy Director (Research and Evaluation) and has members representing diverse backgrounds including statistician, anthropologist, epidemiologist, sociologist, and nutritionist. The team nurtures grantees by providing mentorship in every step of research work, including questionnaire development, data collection, data management and analysis, and report writing.

The following mentoring workshops are organized and facilitated for the research grantees:

- Research Capacity Building
- Research Method, Procedure and Data Collection
- Data Management, Analysis and Report Writing
- Effective Presentation Development and Facilitation Skills

The team also provides mentorship while the researchers develop manuscripts and recommends appropriate journals for publication. The team continues to provide mentorship even after the grant period is over.

Dissemination and Use of Research Findings:

As of 2017, seventy researchers including both established and graduate student researchers have been awarded research grants. Following each grant cycle, the research findings have been disseminated through scientific conferences. Representatives of Government, research community, Bloomberg Initiative partners and grantees, and media attended the conferences. Print and electronic media covered the news of the conferences and published special news/articles on the individual research studies.



Different organizations working on tobacco control have been utilizing the research findings to design and implement Social and Behavior Change Communication and advocacy programs. On the other hand, some research studies have been published in national and international journals. The findings of some research studies have also been presented at national and international conferences. The research findings are also available at www.btcn.org.



An abstract titled "Systematic research capacity building program makes a big difference" was accepted by the 17th World Conference on Tobacco or Health to make a presentation. The conference was held in Cape Town, South Africa in March 2018. The conference authority has provided full scholarship to attend and present the program at the conference.

Emergence of Bangladesh Tobacco Control Research Network (BTCRN)

With the aim to provide a platform and support and guide the potential tobacco control researchers in Bangladesh, the Bangladesh Tobacco Control Research Network (BTCRN) was launched in 2013 under the auspices of the JHSPH-BCCP Tobacco Control Project. BTCRN was established so that it can carry out systematic capacity building programs even after the donor funded project is over in order to ensure sustainability of the research grant program. The Network is registered under the Joint Stock Companies and Firms.

The goal of the Network is to promote and nurture a tobacco control research culture in Bangladesh, developing a local evidence-based research repository to enhance tobacco control policy development and implementation in the country.

The specific objectives of the Network are to:

- Review Bangladesh-specific tobacco control related research activities and identify gaps;
- Document and disseminate tobacco control research findings that can be used to enhance support for tobacco control policy development and implementation; and,
- Serve as a resource for partners, implementers, activists and the Government with respect to tobacco control research.

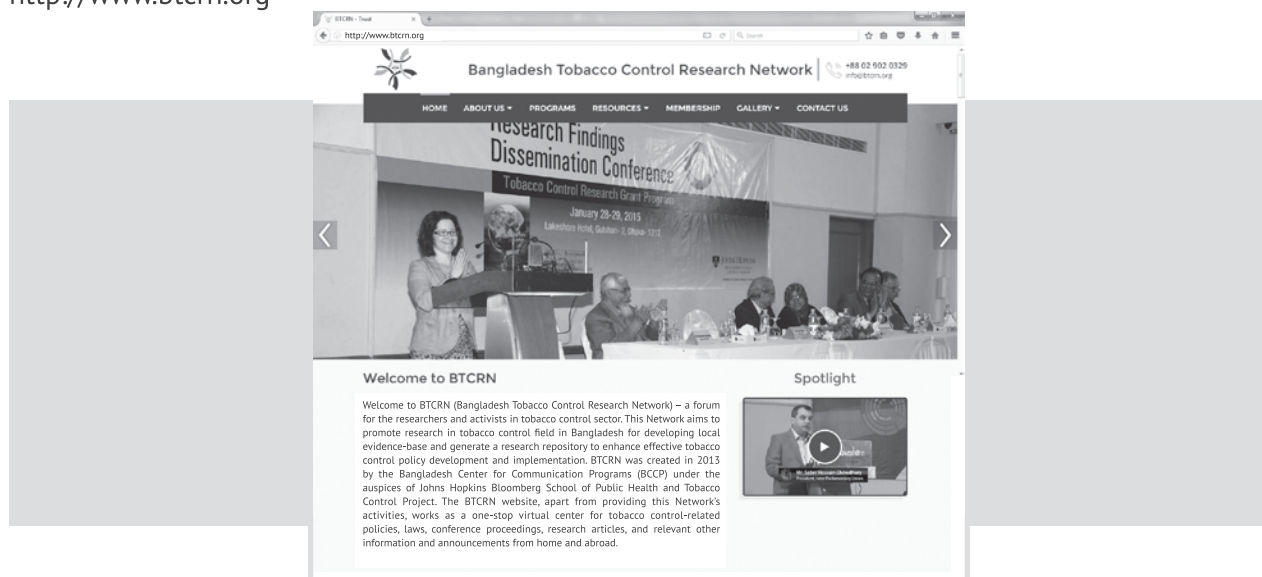


Membership

BTCRN offers both institutional and individual membership, including student membership. Any Bangladeshi university, institution, national and local NGO, government, and individual who is interested in tobacco control and signs a declaration that they are in no way affiliated with the tobacco industry, including engaging in advertising or distribution of tobacco or tobacco-related products, can be a member of the Network.

BTCRN Website:

BTCRN has developed a resourceful website to act as a research hub for tobacco control in Bangladesh. The key findings of the research studies conducted under the Tobacco Control Research Grant Program are made available on the website. The website also posts links to other research studies on tobacco control to be conducted by in-country partners in Bangladesh. The website link is <http://www.btcn.org>



Executive Committee of BTCRN:

President

Prof. Dr. Nawzia Yasmin

Professor and Head, Department of Public Health, State University of Bangladesh

Vice-President

Dr. Shahida Haque

Senior Deputy Director (Research and Evaluation), BCCP

Treasurer

Dr. Mahfuzur Rahman Bhuiyan

Project Manager, National Heart Foundation Hospital and Research Institute

General Secretary

Mr. Mohammad Shamimul Islam

Assistant Director, BCCP and Team Leader, JHSPH-BCCP Tobacco Control Project

Members

Prof. Dr. Sohel Reza Choudhury

Professor and Head, Department of Epidemiology and Research, National Heart Foundation Hospital and Research Institute

Mr. Md. Shamsul Alam Mian

Consultant, Alliance for Cooperation and Legal Aid Bangladesh (ACLAB)

Ms. Farzana Rahman

Senior Research Officer, BCCP

Consultative Workshop: Identifying the Future Tobacco Control Research Needs in Bangladesh

BCCP and BTCRN organized a Consultative Workshop to Identify the Future Tobacco Control Research Needs in Bangladesh in collaboration with the National Tobacco Control Cell in November 2018. Around forty professionals from the Ministry of Health and Family Welfare, public and private universities, Bloomberg Initiative (BI) partners and grantees and other organizations working on tobacco control attended the workshop. The participants worked in groups and identified some research themes that may be included in the Call for Proposal for 2019 Tobacco Control Research Grant Program.



Building Institutional Capacity on Tobacco Control Continues

A six-day Bangladesh Tobacco Control Leadership Program began in Cox's Bazar on July 28, 2018. As part of the Bloomberg Initiative to Reduce Tobacco Use, the program aimed to develop and enhance leadership in countries experiencing the greatest burden of disease and death from tobacco use by building capacity to develop, implement and enforce effective tobacco control policy interventions. The Johns Hopkins Bloomberg School of Public Health organized the program in collaboration with the National Tobacco Control Cell, Ministry of Health and Family Welfare, Bloomberg Initiative partners and BCCP. A total of seventy-six participants representing officials from the Government of Bangladesh, faculties of different public and private universities, non-government organizations and media agencies attended the program. Twenty-eight Faculties including five from outside Bangladesh were involved in conducting sessions.



After concluding the Bangladesh Tobacco Control Leadership Program, a High-Level Leadership Seminar was held in Dhaka on August 2, 2018 to share the major events of the Leadership Program and highlight future directions to curb the menace of tobacco related health hazards.



**RESEARCH GRANT RECIPIENTS 2018
AND THEIR ABSTRACTS**

Researcher Category



Adnan M. S. Fakir

Research Title:

Impactful Advocacy Strategies for Tobacco Consumption Prevention in the Char Regions of Northern Bangladesh

Adnan M. S. Fakir completed his MSc in Economics from University of Sussex with a concentration in Econometrics. He is presently holding the position of a senior lecturer at BRAC University and works as a consultant for the Mind, Behavior and Development Unit for The World Bank Group. His research interests are primarily on policy impact evaluations in health, intimate partner violence and inequality, and has published articles in health economics, world development perspectives, and economic analysis and policy. Recently, Mr. Adnan also received the Research Training Program Scholarships from the Australian Government and is set to pursue his PhD in Economics at the University of Western Australia focusing on migration, women empowerment and domestic violence.

Impactful Advocacy Strategies for Tobacco Consumption Prevention in the Char Regions of Northern Bangladesh

Author: **Adnan M. S. Fakir**

Background: Bangladesh has aimed to reduce tobacco consumption in alignment with its goals of improving public health as part of the Sustainable Development Goals (SDGs). To this end, the scope of government action was expanded with the 2013 amendment to the Tobacco Control Act. However, assessing the efficacy of the Government's intervention remains difficult due to the lack of empirical data on smoking and tobacco consumption behaviors. The reach of the law remains weak in poorer rural areas due to poor enforcement of regulations and the limited reach of awareness campaigns through television, radio, and newspapers. Therefore, the study was conducted in a rural setting in Bangladesh to identify whether the different forms of advocacy campaigns have any differential impact on the reduction of tobacco consumption. **Objective:** This study aimed to address the shortfall by collecting primary data on smoking and tobacco consumption patterns in the char regions (riverine islands) of Gaibandha in Northern Bangladesh. In addition, this study looks at the effectiveness of different rural advocacy campaigns to reduce tobacco consumption through simple behavioral nudges. **Methods:** The study was conducted following a Randomized Control Trial (RCT) research design based on two-stage random clustered sampling approach. A total of 985 households were selected for collecting primary data from 24 *chars*, where each control (317) and treatment groups (668) had 8 *chars*. Two different treatments were assessed: (1) Repeated nudges through visual warning posters on tobacco consumption, and (2) Record keeping of daily tobacco consumption to counter non-rational discounting of individual tobacco consumption events. To reduce recall bias in tobacco intake measurement, smoking status of the participants were assessed through blood carbon monoxide readings for more accurate measures vis-à-vis self-reported tobacco intake. **Results:** The study results indicate that about 83% respondents were smokers while the average consumption of cigarettes and *bidis* were 9.28 and 23.32 respectively. Almost 77% of the sample was involved in agriculture, and 71% of the respondents was found to have received employer-provided *bidis* during work. Over 65% of the respondents noticed promotions of smoking tobacco on local stores while about 30% saw sales promotions. The visual advocacy campaign was found to have an insignificant impact ($p=0.163$) in reducing tobacco expenditure whereas the logbook intervention had a significant impact ($p=0.040$) in reducing daily tobacco expenditure by 14% for the treatment group. The visual advocacy treatment was found to only elicit negligible to moderate emotional responses from the respondents, casting doubt on the effectiveness of existing policy measures which look to create awareness through TV or billboard messages in the study area. **Conclusion:** The study suggests that policies designed to inspire mindfulness behavioral change, such as record keeping of daily tobacco consumption, are relatively more successful in motivating individuals to curb tobacco consumption than simply visual advocacies. The logbook treatment was also highly cost effective, compared to the visual advocacy treatment and could easily be incorporated with existing measures like graphic health warning, no smoking signage, anti-tobacco TVC, etc. in order to effectively reduce tobacco consumption in *char* regions of Bangladesh.



Dr. ABM Alauddin Chowdhury

Research Title:

Compliance Level of Tobacco Control Law in Public Transportation

Dr. ABM Alauddin Chowdhury is working as an Assistant Professor in the Department of Public Health under the Faculty of Allied Health Sciences of Daffodil International University. He accomplished Bachelor of Social Science and Master of Social Science in Sociology from the University of Chittagong, Bangladesh and obtained PhD degree from the Department of Global Health and Epidemiology under Social Medicine Cluster of Hokkaido University Graduate School of Medicine, Hokkaido University, Japan. He was a Research Fellow in the Department of Health for Senior Citizens at the same university in Japan. Dr. Chowdhury is also serving as an 'Associate Managing Editor' in the Editorial Board of the Daffodil International University Journal of Allied Health Sciences. He is a 'Research Coordinator' of the Department of Public Health as well. Dr. Chowdhury has published more than 30 scientific articles in peer reviewed national and international journals. He has participated in many scientific seminars, workshops and conferences in-country and abroad. His research interests are in public health, nutrition, medical sociology and anthropology.

Compliance Level of Tobacco Control Law in Public Transportation

Author: **Dr. ABM Alauddin Chowdhury**

Background: Tobacco consumption is one of the leading preventable causes of premature deaths. Bangladesh enacted Smoking and Tobacco Products Usage Control Act in 2005 and amended the Act in 2013. The Act prohibited smoking in public transportation and provided guidelines as to how to keep the transports smoke-free. However, there have been a number of challenges regarding implementation of the Law including sensitizing people to comply with the Law, establishing and strengthening support services for those who want to quit using tobacco products. In this regard, exploring compliance with the existing Tobacco Control Law in major public transports is important in order to assess the extent to which the Law is being implemented in this sector. **Objective:** The purpose of the study was to determine the level of compliance with the Tobacco Control Law in public transportation in Bangladesh. **Methods:** This study used a mixed method approach. A total of 405 passengers from various routes of bus, water and train in Bangladesh responded to the survey. In addition, 12 key informant interviews were conducted, and observation checklists were used. For the quantitative part, the association between dependent and independent variables was described. For the qualitative part, in- depth description about various factors was discussed using various themes and sub themes. **Results:** About 38% passengers who responded to the survey were tobacco users. Among them, 39% passengers smoked in vehicles. Slightly higher than one-third of them had knowledge of public places and public transport as defined by the Tobacco Control Law. About 95% passengers did not have any knowledge about any type of punishment or fine for violating the Law. More than 80% of the participants witnessed the buying or selling of tobacco products from and to minors in public transports which is prohibited by the Law. About 81% passengers thought that poor implementation of the Law by enforcement agencies was one of the reasons behind frequent violation of the Law. The study also documented that awareness on Tobacco Control Laws is one of the ways of effective implementation of the same law. Almost all of the observers mentioned that there was no monitoring system in place in these public transports. **Conclusion:** Despite the respondents' positive attitude towards smoke-free public transportation, the level of compliance was found to be low. Passengers' poor knowledge and practice suggest that measures to inform the passengers about smoke-free public transportation may be useful. Appropriate monitoring and enforcement strategy are needed to administer the Law strictly and continuously.



Dr. Md. Azharul Islam

Research Title:

**Toxicants Release from Different Tobacco Products:
Alarming for Environmental Pollution and Health Hazards in Bangladesh**

Dr. Md. Azharul Islam is working as Associate Professor at the Department of Environmental Science, Bangladesh Agricultural University, Mymensingh. He has completed his PhD in Environmental Chemistry from Tokyo University of Agriculture and Technology, Tokyo, Japan and postdoctoral research activities at University of Arizona, Tucson, AZ, USA and Tokyo University of Agriculture and Technology, Japan. He has contributed to a number of research work on chemical ecology, environmental pollution and management, environmental toxicology, analytical analysis of natural products, environmental impact assessment, etc. He participated in various national and international scientific meetings, seminars, workshops and conferences for sharing his research results. He has published 34 scientific research articles in peer-reviewed national and international journals. He is working as an expert reviewer and section editor of a number of peer-reviewed national and international journals.

Toxicants Release from Different Tobacco Products: Alarming for Environmental Pollution and Health Hazards in Bangladesh

Author: **Dr. Md. Azharul Islam**

Background: Worldwide, tobacco is one of the leading causes of disability and death. Over a million pounds of toxic chemicals are released by tobacco products. Nicotine, tar and metals are major contents among the identified chemicals in different tobacco products. Metals are essential for several physiological processes in the human body but can also be detrimental to human health when the concentration is not within the recommended permissible limits. But no such research in our country exists except limited information on the metal content in tobacco products. **Objective:** This study aimed to explore the toxicant status and their effects on human health and environmental pollution. **Methods:** Four major tobacco products (*zarda*, loose leaf, cigarette and *bidi*) were collected from 4 selected districts (Dhaka, Kushtia, Chattogram & Rangpur) to analyze the contents of different chemicals. The samples were cleaned, extracted and analyzed in the laboratory of Bangladesh Agriculture University using Gas Chromatography (GC), High Performance Liquid Chromatography (HPLC) and Atomic Absorption Spectrophotometer (AAS). In addition, 469 respondents were interviewed face-to-face using a structured questionnaire to assess the knowledge about toxicant content in tobacco and health & environmental hazards of tobacco use. Moreover, twelve in-depth interviews were conducted with experts and researchers from the health and environmental sectors. **Results:** The laboratory analysis revealed there was higher content of nicotine and metals [Lead (Pb), Cadmium (Cd) and Nickel (Ni)] in loose leaf tobacco compared to *bidi*, *zarda* and cigarette samples. Tar content was found to be higher in *bidi* than other products studied. Average Pb content of tobacco products ranged from 4.71 to 18.67 parts per million (ppm). Average Zn content of the study area was higher in *zarda* sample than in others. The average amount of Pb, Ni, Zn and Cd in tobacco products were found higher than the recommended permissible limits. Survey results revealed that about half of tobacco users suffered from chronic diseases (respiratory problems, cancer, heart diseases, stroke, high blood pressure etc.). It was also found that the long-term use of tobacco products had significant negative effect on human health ($P < 0.05$). Majority of tobacco users knew about the link between tobacco use and various health conditions and that it also was an environmental pollutant. Interestingly, majority of the respondents were not aware of the presence of toxicants (i.e. nicotine, tar and metals) in tobacco products. The environmental researchers indicated that curing tobacco leaves pollute air, water and soil that ultimately affect biodiversity and the ecosystem. On the other hand, health sector specialists reported that nicotine and toxic metals intensified the risk of cancers, eye diseases, heart and other cardiovascular diseases. **Conclusion:** The average amount of toxicants in tobacco products exceed the recommended permissible limits. There is a lack of knowledge among the survey respondents about toxicants present in tobacco products that are linked to health hazards and environmental pollution. These results are important in strengthening existing policy considering adverse health effects of toxicants examined.



Mohammad Nazim ud Dowlah

Research Title:

Relationship between Income Elasticity and Tobacco Product Use in Bangladesh

Mohammad Nazim ud Dowlah has commendable socio-economic research experience in last seven years focusing value chain analysis, market analysis, and budget analysis especially research works in the areas like Maternal and Neonatal Health, Water Sanitation and Hygiene, and Tobacco Control with around 30 studies conducted for UN agencies, international and national NGOs, and government and autonomous agencies in Bangladesh. He is skilled to analyze large scale quantitative data and qualitative information. Nazim has participated in different types of national and international workshops and conferences. He has at his credit a few numbers of research-based books and publications in national and international journals also. He has completed his Graduation and Post-graduation from Department of Economics, Jagannath University Dhaka, Bangladesh and Post-graduation Diploma in Enterprise Development from the University of Dhaka, with outstanding result. He has also successfully completed Diploma in Computer Science and Application from Bangladesh Open University. Now, he is pursuing his PhD program under Centre for Higher Studies and Research of Bangladesh University of Professionals and profoundly involved with research work as a Research Consultant. He is the president of Entrepreneurial Economists Club of Dhaka School of Economics and the Life Member of Bangladesh Economic Association. Nazim is involved with different types of social well-being activities in his locality especially with poor and deprived group.

Relationship between Income Elasticity and Tobacco Product Use in Bangladesh

Author: **Mohammad Nazim ud Dowlah**

Background: Millions of deaths are caused by tobacco each year, which can cause an alarming situation in near future. Tobacco products affect the health of people particularly with low socio-economic status (SES). Tobacco consumption is a main cause of many preventable diseases which leads to premature deaths, and accounts for a significant proportion of many health inequalities. The responsiveness of tobacco consumption to price and income increases is measured by the price and income elasticity of demand respectively. So, the study explores the link between tobacco use and income of the users, as well as the broader relationship between income, tobacco use, and tobacco-related health consequences. **Objective:** The study aimed to explore the socioeconomic difference in tobacco use and to assess the relationship between income elasticity and tobacco products use. **Methods:** The study was designed using a mixed method approach and 600 households (HHs) surveys using semi-structured questionnaire and 25 Key Informant Interviews and 5 Focus Group Discussions through guidelines were conducted to address the specific objectives of the study. A two-stage cluster sampling approach with equal size was adopted for sample selection in five districts. Quantitative data analysis techniques included uni-variate, bi-variate, and multivariate analysis. Income elasticity and benefit-cost ratio analysis were done to see the relationship with tobacco consumption expenditure. The qualitative data analysis was done through content analysis. **Results:** Monthly average household income of the respondents was Taka 16,569. In the previous year, the amount was Taka 14,619. About 37% members of the households consumed tobacco products mainly *bidi*, cigarette, *sada pata*, *gul* and *zarda*. Average monthly expenditure on tobacco consumption of the households was Taka 640 and it was Taka 511 last year which is Taka 129 higher than the previous year. Numerically it has increased by 25% than the last year. Income elasticity was 0.59 and income increased by 12%, so it is estimated that we can expect that consumption could go up by 7%. Average monthly health care cost for the disease caused by tobacco use was Taka 2,719. The calculated benefit-cost ratio of the health-related output was 9.62. Study revealed that about Taka 30,417 crore was spent for tobacco consumption in Bangladesh which is 1.4% of the country's GDP in FY 2017/18. Besides, per capita income was Taka 1,36,786 whereas per person tobacco consumption cost was Taka 1892 which is 1.4% of per capita income. **Conclusion:** The study concluded that the direct costs and external costs of smoking outweighs any benefits that might be accruable at least when considered from the perspective of socially desirable outcomes. Greater efforts to reduce tobacco use among those from low SES and with limited income are needed. Government may consider further raising taxes which ultimately increases the price of tobacco products as well as should develop health benefit awareness program.



Dr. Khandaker Mursheda Farhana

Research Title:

**Compliance with Tobacco Control Law in Uttara Model Town:
A Way Forward to a Smoke-free City**

Dr. Khandaker Mursheda Farhana is presently working as Assistant Professor and Acting Head of the Department of Sociology and Anthropology, Shanto-Mariam University of Creative Technology, Uttara, Dhaka, Bangladesh. She has conducted a number of research projects funded by national and international organizations. Recently, she has completed a research project on obesity. She was also awarded postdoctoral research scholarship by the University of Padova, Italy funded by the European Union. She has published articles in a number of peer reviewed national and international journals. She has presented her research in different scientific academic conferences at home and abroad. She is also an Editor in Chief of two scientific international research journals namely Asian Journal of Indigenous Studies and International Journal of Migration Research and Development.

Compliance with Tobacco Control Law in Uttara Model Town: A Way Forward to a Smoke-free City

Author: **Dr. Khandaker Mursheda Farhana**

Background: Smoking is the leading preventable cause of death all over the world and it increases the risk of developing more than 50 serious health conditions. Implementation of Tobacco Control Law has not been able to take leading role to create smoke-free public places. Each community in Dhaka city has a committee which is involved in social, religious and other development activities within the community. However, rarely any neighborhood community has been found to be completely compliant with tobacco rules and regulations. **Objective:** The objective of this study was to observe compliance with the Tobacco Control Law in Uttara Model Town of Dhaka City and move forward with steps to make it a smoke-free city. **Methods:** A cross-sectional study was conducted among residents and community leaders of Uttara Model Town and policy makers of Bangladesh. Data were collected from a representative sample of 435 respondents and from a direct observation of 40 public places in the said area to assess the compliance with the Tobacco Control Law. Ten Focus Group Discussions (FGDs) were conducted with the community leaders of each of the 14 sectors of Uttara Model Town who have been managing welfare and social activities in their respective sectors. In addition, 28 key informant interviews (KII) were conducted among the enforcement authorities of Tobacco Control Law. For survey research, a descriptive analysis was done, and content analysis was conducted for qualitative data. **Results:** The mean age of survey respondents was 37 years, about two-fifth of them were graduates or had higher level of education. Majority of the respondents (70%) were living in the study area for 5-10 years. More than half of the respondents (52%) were current smokers and majority (66%) of them purchased single cigarettes. The study also found that more than two-thirds of the respondents had no knowledge about the Tobacco Control Law related to smoking in public places. Even, about 50% of current smokers mentioned that they usually smoked in different public places like educational institutions, restaurants, children's parks, etc. However, very few of them faced any action for violating the Law by the enforcement agencies. The study further documented that though no-smoking signages were located within these areas, those were not clearly visible. Tobacco buying and selling activities in certain public places including to and by minors were found to be very common. Respondents from KII and FGDs mentioned that the Tobacco Control Law was not properly implemented in the study areas due to the lack of public awareness. According to them, the existing Law is enough to make the city smoke-free but for the establishment of this Law, strict implementation and public awareness activities need to increase. **Conclusion:** The compliance with the Tobacco Control Law was not found to be satisfactory in the study area due to lack of public awareness and proper implementation of the law. To make a smoke-free environment, the authoritative bodies need to strengthen the process of implementing Tobacco Control Law as well as increase public awareness towards the law. Involvement of sector-wise stakeholders could be an important measure to make smoke-free Uttara Model Town in specific and Dhaka in general.



**RESEARCH GRANT RECIPIENTS 2018
AND THEIR ABSTRACTS**

Student Category



Sahadat Hossain

Research Title:

Adoption of Tobacco Retail License in Bangladesh: Exploring Possible Outcomes and Implementation Challenges

Sahadat Hossain, a novice public health researcher, completed his Bachelor of Science (BSc) and Master of Science (MS) in Public Health and Informatics from Jahangirnagar University, Savar, Dhaka. He also successfully completed an online certificate course on “JPAL350x: Measuring Health Outcomes in Field Surveys” from the Abdul Latif Jameel Poverty Action Lab (J-PAL) at the Massachusetts Institute of Technology (MIT) securing 98% of the total score. Recently, one of his research articles titled “Risk modeling of non-communicable diseases using socio-demographic characteristics, lifestyle and family disease history among university students in Bangladesh” has been published in the Journal of Public Health, Springer. Furthermore, he has published eight research articles of which four are peer-reviewed journals. Along with these, he is also involved in leadership activities and was the 11th President of Jahangirnagar University Science Club (JUSC). He aims to build up a dedicated, honest and efficient career in the public health academia and research with a view to serving humanity. His areas of interest include tobacco control, adolescent and youth psychological health, NCDs risk factors, and health promotion.

Adoption of Tobacco Retail License in Bangladesh: Exploring Possible Outcomes and Implementation Challenges

Author: **Sahadat Hossain**

Background: Tobacco products are ubiquitously available in Bangladesh as the distribution of tobacco retail outlets is extremely widespread. There are currently no restrictions on which outlets can sell tobacco products and where it is allowed to sell them. The lack of adequate tobacco retail regulations poses a challenge for effective tobacco control measures throughout the country. **Objective:** The objective of this study was to explore the possible outcomes of adopting tobacco retail licensing (TRL) in Bangladesh and the likely challenges in implementing this measure. **Methods:** A cross-sectional study, following mixed method approach, was conducted among the tobacco retailers, policy makers and tobacco control advocates. Quantitative data were collected from a representative sample of 472 tobacco retailers in Dhaka city through face-to-face interview by using a semi-structured questionnaire. In addition, 24 Key Informant Interviews (KII) were conducted among the policy makers and tobacco control advocates. **Results:** The study found that general stores, departmental stores and super shops were the most common types of retailers selling tobacco products. Smoking tobacco was the top selling product in majority of the retail outlets, and loose cigarette selling was high. About half of the retailers reported that selling tobacco products was an important part of their business. About 80% of the retailers reported that they would support TRL scheme and it was found significantly associated with their educational qualification ($p < 0.05$). Majority of the retailers indicated they would apply to obtain tobacco retail licensing if it was adopted in Bangladesh. Majority of the retailers (85%) agreed that TRL would secure their business. The key informants were supportive of the mandatory TRL; however, they believed that the government would face some challenges such as proper legislation and implementation strategies and political will, while implementing this licensing. Almost all respondents/participants agreed that it would prevent illegal tobacco sales, selling of tobacco products to minors, restrict the location for tobacco retailing, and help to effectively monitor compliance of tobacco selling. **Conclusion:** The study findings indicate that introducing TRL could be an effective initiative in comprehensive tobacco control. Regulating the tobacco retail outlets is required to strengthen tobacco control measures in the country. Incorporating a tobacco retail licensing provision within the framework of a comprehensive tobacco control policy is necessary to restrict the widespread availability of tobacco products.



Md. Shofiul Alam Shafi

Research Title:

Graphic Health Warnings on Cigarette Packs: Exploration of its Effectiveness in Deterring the Youth of Bangladesh

Md. Shofiul Alam Shafi is an executive at the Youth Platform for Sustainable Development (YPSD) which works for ensuring effective participation and active engagement of the youth for promoting sustainable development. He contributed as a field researcher in a survey to measure the sound level in Dhaka City under the integrated and participatory program to control noise pollution conducted by the Work for a Better Bangladesh Trust (WBB) with support from the Ministry of Forest and Environment, Government of Bangladesh. He has successfully completed Bachelor of Social Science and Master of Social Science in Public Administration from the University of Dhaka. He is a member of Active Citizen under British Council which works for developing leadership skills in people and organizations around the world and wants to make a contribution to community development. He is highly interested in human resource management, governance, performance management, public policy, local government, new public management and other contemporary issues of governance and development.

Graphic Health Warnings on Cigarette Packs: Exploration of its Effectiveness in Deterring the Youth of Bangladesh

Author: **Md. Shofiul Alam Shafi**

Background: Throughout the world, graphic health warnings (GHW) are seen as one of the more effective methods of discouraging the use of tobacco products. GHWs on cigarette packs are able to provide information on specific disease risks, and also known to increase quit attempts and reduce smoking initiation among youth. Graphic health warnings is one of the measures that have been adopted by countries around the globe to discourage people from smoking. Bangladesh has also implemented GHWs recently to curtail the growing number of smokers. **Objective:** The objective of this study was to explore the effectiveness of graphic health warnings on cigarette pack as a deterrent for youth from taking up the habit of smoking or from continuing to smoke. **Methods:** A cross-sectional study was conducted among representative sample of 397 respondents aged 18-35 years from three districts in Bangladesh. Face-to-face interviews were conducted to collect information using a semi structured questionnaire. Descriptive analysis was performed to explore the respondents' awareness and perception and comparative analysis was done to understand the effectiveness of the GHWs. **Results:** More than half of the respondents started smoking before the age of 18 years while majority of them were daily smokers and were influenced by their friends to take up smoking. It was also found that about half of the respondents preferred to purchase loose cigarettes, whereas the remaining purchased both packs and loose cigarettes. An overwhelming majority of respondents knew that smoking was harmful for health. More than half (54%) of the respondents noticed GHWs, 83% of the respondents intended to quit smoking because they were concerned about the GHWs. Irrespective of respondents' categories, the most frequently observed GHW was 'smoking causes cancer'. A good proportion of job holders and day laborers quit smoking after believing on GHWs, whilst majority of the students did not. Yet, majority of respondents thought that images used for GHWs gave a clear message to the smokers, but they felt it was not useful in deterring smokers from continuing that habit. The respondents felt loose cigarettes was a barrier to the GHW measure as most younger adults do not buy cigarette pack and ignore the GHWs. **Conclusion:** The findings of the study reveal that the implementation of graphic health warnings has effect in increasing thoughts about health hazards and quitting of smoking. Further efforts are needed to develop more effective graphic warnings including the regulation of selling loose cigarettes which could deter youth from smoking.



Shumaya Aziz Anee

Research Title:

**Health Hazards among Women Involved in Tobacco Curing
in Selected Rural Areas of Bangladesh**

Shumaya Aziz Anee completed her Diploma in Medical Faculty from the Bangladesh Medical and Dental Council. She joined the Government of Bangladesh as a Sub Assistant Community Medical Officer, Upazila Health Complex, Bheramara, Kushtia. Currently, Shumaya is pursuing her Master of Public Health (MPH) in the North South University. She has achieved Masters of Nutritional Science and Food Technology (MSc) degree from Islamic University, Bangladesh in 2016. Prior to this, she acquired Bachelor of Social Science (BSS) and completed Diploma in Medical Faculty. Shumaya Aziz's research interest include areas like NCDs, tobacco control, infertility, pregnancy nutrition and maternal and child health. She wants to work in a challenging environment, has a strong desire to dedicate herself to a position where extensive research, study, analysis and innovation are mandatory. To achieve this aim, she is determined to work with honesty, efficiency and sincerity to the optimum level.

Health Hazards among Women Involved in Tobacco Curing in Selected Rural Areas of Bangladesh

Author: **Shumaya Aziz Anee**

Background: The tobacco epidemic is one of the biggest public health threats and leading causes of preventable mortality worldwide. Like cigarette smoking and other forms of tobacco use, working with tobacco during the curing process also leads to the uptake of many hazardous compounds and their metabolites. Direct exposure to tobacco plants, green leaves and fumes generated during processing takes place during curing. A significant number of people, especially women, of rural Bangladesh work on tobacco curing in tobacco growing areas, but very limited published data is available related to health hazards of tobacco curing. **Objective:** This study assessed the range of health hazards among women who are engaged in tobacco curing in selected rural areas of Bangladesh. **Methods:** The study was a cross-sectional one with a quantitative approach which included women from two areas (one tobacco curing and the other non-curing) from two sub-districts of Kushtia in Bangladesh. A survey was conducted among 600 (300 in each area) respondents using systematic sampling with a semi-structured questionnaire. Descriptive and inferential statistics were done to find out the proportion and association for health hazards among women between tobacco curing and non-curing areas. **Results:** The mean age of the respondents of both areas was 37 years, most of the respondents had some formal education and about 50% of them had the monthly family income of less than Taka 10,000. In the tobacco curing area, respondents were involved with the process on an average for 16 years, where more than half were working for over 13 years, and almost all of them were working more than 8 hours per day. The proportion of self-reported health problems was found to be higher among the respondents in the tobacco curing area compared to the non-curing area (99% and 72% respectively). Shortness of breath, palpitation, fluctuation in blood pressure, sleeping disorder, eye irritation, redness and back pain were significantly higher among the respondents in tobacco curing area than the non-curing area. The proportion of respondents' visits to any physician for any health problem in last 6 months was pronounced in tobacco curing area compared to non-curing area. However, the top five reasons for visiting the physicians in tobacco curing area were shortness of breath, cough, back pain, burning urination and irritation/ redness of eye. **Conclusion:** The findings could be used as baseline information to have a clearer understanding about the health needs of women who are involved with tobacco curing. Further planning and intervention is needed to protect the health of women who work in the tobacco curing process in Bangladesh.



Md. Imrul Kayes

Research Title:

Barriers to Implementing the Tobacco Control Law in Bangladesh

Md. Imrul Kayes is working as an Assistant Revenue Officer at the National Board of Revenue (NBR), Government of Bangladesh. He is an MPhil Research Fellow at the Institute of Bangladesh Studies (IBS), University of Rajshahi. Previously, he worked as a Commercial Assistant at Biman Bangladesh Airlines. He also worked in different research agencies and organizations as a Field Research Supervisor. He has keen interest in social and public health research. He conducted studies on the accountability of City Corporations' officials and marketing strategy of E-cigarette in Bangladesh. He has completed his graduation degree on Anthropology from University of Rajshahi and later on, he obtained Master of Public Health degree from ASA University Bangladesh.

Barriers to Implementing the Tobacco Control Law in Bangladesh

Author: **Md. Imrul Kayes**

Background: Tobacco is one of the main risk factors for non-communicable diseases. In order to reduce tobacco use, Bangladesh signed the Framework Convention on Tobacco Control (FCTC) in 2003 and ratified it in 2004. Subsequently, it has passed Tobacco Products Usage (Control) Act 2005 in line with FCTC and established the National Tobacco Control Cell (NTCC). In Bangladesh, compliance of Tobacco Control Law is not up to the desired level due to lack of its proper implementation. After two decades of adopting this law, it has become essential to explore the barriers for implementation of Tobacco Control Law in Bangladesh. **Objective:** The aim of the study was to investigate the barriers to implementation of the Tobacco Control Law in Bangladesh. **Methods:** The study was cross-sectional in nature and followed a qualitative method. Respondents were selected purposively from four divisions (Dhaka, Rajshahi, Khulna and Chattogram) of Bangladesh. Data were collected by approaching 74 key informants from Government agencies and policy makers and 39 in-depth interviews were conducted among other stakeholders by using pre-tested guidelines. An additional 7 focus group discussions with tobacco farmers and smokers were conducted along with 56 observations in different public places using a checklist to see the compliance. Data were analyzed through thematic and textual descriptive mode. **Results:** The results reveal that smoking is happening in several public places i.e., compliance of Tobacco Control Law was found to be very low. In-depth interview participants opined that smoking in public places is not reducing yet, but people do not smoke in the public transport except drivers and their helpers. They also mentioned that people are smoking in public places even after having no-smoking signs/messages. They again mentioned that there is a lack of collaboration among stakeholders. Since police has no magistracy power, they cannot take immediate action against those who violate the laws. They need to depend on a Magistrate, who are not instantly available for action. Key informants said that there is a lack of publicity for tobacco control laws on a regular basis. Many members of Task Force who work for tobacco control in various districts are not aware about the laws in details. There is also a lack of monitoring the implementation of Tobacco control law and the mobile court actions are not frequent in public places. Tobacco companies give some incentives including loan to farmers and the concerned authority have also influence in implementation of law as they have connection to tobacco industries. **Conclusion:** In general, there is a lack of initiatives to ensure proper enforcement of the Tobacco Control Law. The law enforcing agencies should give special focus to implement the Law. A robust system should be needed with strict application of precautionary measures where regular and systematic publicity must be ensured. The study further suggests strengthening the existing Law to make it fully compliant with the FCTC.



TOBACCO CONTROL RESEARCH
GRANT PROGRAM

List of Research Studies



| Sl. | Research Studies Conducted in 2018 |
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| 01. | Impactful Advocacy Strategies for Tobacco Consumption Prevention in the Char Regions of Northern Bangladesh |
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| 04. | Business of Loose Cigarettes and Losing of Tobacco Control: Current Situation in Urban Areas of Bangladesh |
| 05. | Smoking Behavior among TB Relapse Cases at Tertiary Level Hospitals in Dhaka City of Bangladesh |
| 06. | The Relationship between Tobacco Consumption Habits and Road Traffic Accidents: A Study among the Heavy Vehicle Drivers in Bangladesh |
| 07. | Implementing Tobacco Control Law in Bangladesh: Challenges and Way Forward |
| 08. | Effectiveness of Tobacco Control Measures at Public and Private University Campuses in Bangladesh |
| 09. | Exploring Institutional Mechanisms for Economically Sustainable Alternatives for Tobacco Farmers |
| 10. | Socioeconomic Inequalities in Secondhand Smoke Exposure at Home in the Context of Mother-child Pairs in Bangladesh |



| Sl. | Research Studies Conducted in 2016 |
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| 01. | Relationship between Sale of Tobacco Products by Children and Their Attitude and Practice Regarding Tobacco Intake |
| 02. | Impact of Taxation on the Consumption of Cigarettes: A Study on Smoking Behavior among the Undergraduate Students |
| 03. | Socio-Economic Impact of Tobacco Cultivation in Bangladesh: A Study in Kushtia District |
| 04. | Marketing Strategy of E-cigarettes in Bangladesh |
| 05. | Prevailing Social Obstacles in Keeping Homes Tobacco-free in Urban Areas: Realizing Ways to Overcome the Challenges |
| 06. | Insight of Plain Packaging among the Adult General Population in Dhaka City |
| 07. | Status of Graphic Health Warning on Tobacco Packs: A Study among a Low Socio-economic Group in Bangladesh |
| 08. | Health and Environmental Impacts of Tobacco Farming in Selected Districts of Bangladesh |
| 09. | Price Elasticity, Social Norms, Tobacco Control Policies and Smoking Behavior among Students in the South-west Region of Bangladesh |
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| Sl. | Research Studies Conducted in 2015 |
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| 01. | Heavy metals (Cr, Cd and Pb) in chewing and other categories of tobacco consumed in Bangladesh and their effects on health |
| 02. | Secondhand smoke in public places: Awareness, attitudes and exposure among university students |
| 03. | Smokeless tobacco consumption and diabetic foot ulcer |
| 04. | Factors associated with female smoking at selected universities in Dhaka |
| 05. | A comparison of avoidance behavior to secondhand smoke (SHS) among male and female residential students of Dhaka University |
| 06. | Smokeless tobacco use among floating people in Dhaka city |
| 07. | The prevalence of tobacco consumption and its determinants among university students in Sylhet division: A cross-sectional study |
| 08. | Adult smokers' views about tobacco warning labels on cigarette packages: A study in Dhaka city |
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| 10. | Emotional, behavioral problems and cigarette smoking behavior: A survey among Bangladeshi adolescents |
| 11. | Factors influencing farmers to turn to tobacco cultivation in khulna division of Bangladesh |
| 12. | Effects of maternal smokeless tobacco use on birth weight and gestational age: A case control study in rural Dhaka, Bangladesh |
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| 16. | Knowledge and attitudes regarding the National Tobacco Control Law and smoking behaviors among Bangladesh police |
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| 01. | Smoking Behavior among Undergraduate Students Living at Hostel and their Homes in Dhaka City |
| 02. | Relationship between Oral Diseases and Tobacco Chewing among Slum-Dwellers in Dhaka City |
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| 04. | Knowledge, Attitude and Practices of Youths towards the Use and Control of Tobacco: A Survey among University Students |
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| 06. | Realizing the Ways to Keep Teenagers Smoke-Free |
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| 08. | Expenditure and Knowledge about Tobacco use among the Rickshaw Pullers in Dhaka City |
| 09. | Changing Marketing Paradigm of Tobacco Industry in the Regulated Environment in Bangladesh: Lessons and Challenges for Tobacco Control Policy Advocates |
| 10. | Tobacco Consumption through Flavored Shisha among University Students in Dhaka City of Bangladesh |
| 11. | Use of Smokeless Tobacco by Low Socio-economic Populations and Risk Factors Associated with It |
| 12. | Knowledge, Attitude and Practices (KAP) of Tobacco Users among Garment Workers in Dhaka City in Bangladesh |
| 13. | Magnitude of Cross Border Tobacco Trade and its Implications on the National Tobacco Control Program of Bangladesh |
| 14. | Disability and Economic Burden of Tobacco Related Illnesses: Experience from Rural Bangladesh |
| 15. | Smoking among Medical Interns and Their Perceptions towards Training about Tobacco Smoking in the Medical Curriculum |
| 16. | Dynamics of Smoking Behavior among Urban Adolescents and Young Adults of Bangladesh: Peer Effect and Family Influences |
| 17. | Presence of Tobacco Sales and Advertisement within 100 Yards of Schools in Dhaka, Bangladesh |
| 18. | Perception about Health Effects of Passive Smoking among Young Adults in Dhaka |
| 19. | Tobacco Growers and Incentives from Tobacco Companies in Selected Districts of Bangladesh |
| 20. | The Tobacco Consumption Practice of Female Day Labourers at Brick Kilns in Dhaka |



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| 01. | Pattern and Awareness about Smokeless Tobacco in a Rural Area of Bangladesh |
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| 04. | Tobacco use among Rickshaw Pullers of Dhaka City: Behavior, Awareness and Prevention |
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| 08. | The Practice and Consequences of Corporate Social Responsibility (CSR) by Tobacco Companies in Bangladesh |
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