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Feeling of Discrimination of Indigenous Students Studying in Dhaka: Their Mental Health Status and Non-Communicable Disease (NCD) Risk Factors.

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Abstract

As the Principal Investigator, I intend to investigate the experiences of discrimination among indigenous students in Dhaka, assessing its association with mental health outcomes and key NCD risk factors. The study falls within BMRC's priority research areas of Social 26 Behavioural Science, Non-Communicable Diseases, and Mental Health, and is designed to generate evidence to inform interventions aimed at improving equity and well-being among marginalized student populations.

This cross-sectional quantitative study aims to examine the association between perceived discrimination and mental health status, along with non-communicable disease (NCD) risk factors among indigenous students studying in Dhaka. Data will be collected through structured questionnaires using validated instruments, including the Perceived Ethnic Discrimination Questionnaire (PEDQ) to assess discrimination experiences, the Depression Anxiety Stress Scale-21 (DASS-21) to measure mental health status, and the WHO's Generic STEPS Instrument for evaluating NCD risk factors. Statistical analyses will identify the prevalence and strength of associations to inform targeted interventions and policy development.

Abstract for Ethical Review Committee

Project Title:
Feeling of Discrimination of Indigenous Students Studying in Dhaka: Their Mental Health Status and Non-Communicable Disease (NCD) Risk Factors

Background:
Indigenous students in Dhaka often face discrimination, which can negatively impact their mental health and contribute to non-communicable disease (NCD) risk factors. Despite this, limited data exists on these associations within this population.

Objective:
To examine the relationship between perceived discrimination and mental health status, alongside NCD risk factors, among indigenous students studying in Dhaka.

Methods:
This cross-sectional quantitative study will recruit indigenous students from selected universities in Dhaka. Data collection will use validated questionnaires: Perceived Ethnic Discrimination Questionnaire (PEDQ) to assess discrimination, Depression Anxiety Stress Scale-21 (DASS-21) for mental health evaluation, and the WHO's Generic STEPS Instrument for assessing NCD risk factors. Statistical analyses will explore the prevalence of discrimination, mental health outcomes, and their association with NCD risk factors.

Ethical Considerations:
Informed consent will be obtained from all participants. Confidentiality and anonymity will be strictly maintained. Participants will have the right to withdraw at any time without penalty.

Significance:

Findings will inform policies and interventions aimed at reducing discrimination and improving health outcomes among indigenous student populations in Bangladesh.

Materials

CHECK LIST FOR SUBMISSION OF PROJECT PROFORMA-01

01. Cover Letter addressing to Director by Principal Investigator.
02. Project Proforma-01
  Part-A
  Part-B
  Part-C
  Part-D
  Part-E
  Part-F
  Part-G
  Part-H
  Part-I
03. Procedure for maintaining confidentiality.
04. One (01) copy of Project Proposal (Master copy) including all mentioned documents and a soft copy in CD to be submitted along with A-4 size Data Bank File/Folder.

Facilities Available:

- Collaboration with indigenous and ethnic minority student associations in Dhaka universities and colleges to facilitate participant recruitment and community engagement.
- Access to universities and colleges in Dhaka city for recruiting indigenous student participants.
- Trained research assistants for data collection and anthropometric measurements.
- Office space and computers with statistical software (SPSS/Stata) for data entry and analysis.
- Standardized equipment for measuring blood pressure, height, and weight.
- Access to validated questionnaires: Perceived Ethnic Discrimination Questionnaire (PEDQ), DASS-21, and WHO Generic STEPS Instrument.

Additional Facilities Required:

- Funding for transportation and logistics to reach multiple educational institutions.
- Printing and photocopying of questionnaires and consent forms.
- Budget for participant incentives or refreshments (if applicable).
- Support for ethical approval processing fees.
- Additional training sessions for data collectors on cultural sensitivity and ethical conduct.

Budget:

- Principal Investigator (30%): Leading project, 30% time — 120,000 BDT
- Research Assistants (2 × 30%): Two assistants at 30% time each — 120,000 BDT
- Data Analyst (10%): Data analysis and management — 30,000 BDT
- Equipment and data collection materials — 50,000 BDT
- Printing questionnaires & stationery — 15,000 BDT
- Transport for data collection — 30,000 BDT
- Paper, ink, envelopes — 5,000 BDT

- Software license ▮ data entry — 25,000 BDT
- Final report printing — 5,000 BDT
- Transcription ▮ translation services — 10,000 BDT
- Administrative Overhead (15%): 67,500 BDT
- Miscellaneous (2.5%): Contingency fund — 12,500 BDT
- **Total Estimated Budget:** 500,000 BDT

Detailed Budget Table:

Budget Item	**Details**	**Amount (BDT)**
1. Personnel Cost		
- Principal Investigator (30%)	Leading project, 30% time	120,000
- Research Assistants (2 × 30%)	Two assistants at 30% time each	120,000
- Data Analyst (10%)	Data analysis and management	30,000
Subtotal Personnel Cost		270,000
2. Field Expenses/Lab Cost	Equipment and data collection materials	50,000
3. Supplies and Materials	Printing questionnaires ▮ stationery	15,000
4. Patient Cost	Not applicable	0
5. Travel Cost (Internal)	Transport for data collection	30,000
6. Transportation of Goods	Not applicable	0
7. Office Stationery	Paper, ink, envelopes	5,000
8. Data Processing/Computer Charges	Software license ▮ data entry	25,000
9. Printing and Reproduction	Final report printing	5,000
10. Contractual Services	Transcription ▮ translation services	10,000
11. Administrative Overhead (15%)	15% of total project cost	67,500
12. Miscellaneous (2.5%)	Contingency fund	12,500
Total Estimated Budget		500,000

Check documents being submitted herewith to the BMRC:

- Umbrella proposal
- Proposal Summary
- Abstract for Ethical Review Committee as per attachment (Obligatory)
- Informed consent form for subjects
- Informed consent form for parent or guardian
- Verbal consent form for subjects
- Procedure for maintaining confidentiality
- Questionnaire or interview schedule

If the final instrument/questionnaire is not completed prior to review, the following information should be included in the abstract:

1. A description of the areas to be covered in the questionnaire or interview which could be considered either sensitive or which would constitute an invasion of privacy.
2. Examples of the type of specific question to be asked in the sensitive areas.

3. An indication as to whom the questionnaire will be presented to the committee for review.

WHO Generic STEPS Instrument (NCD Risk Assessment) Materials:
- Structured questionnaire covering:
  - Tobacco use (smoking and smokeless)
  - Alcohol consumption
  - Dietary habits (fruit, vegetable, salt, fried food intake)
  - Physical activity (moderate and vigorous)
  - Physical measurements (weight, height, waist/hip circumference, blood pressure)
  - Medical history (hypertension, diabetes, chronic illness medication)

Additional Questionnaire Items (from this page):
- Current use of medication for chronic disease
- Preferred healthcare provider when ill (Registered Medical Doctor, Kabiraj/Traditional Healer, Homeopathic Practitioner, Other)
- Language barrier when seeking treatment in Dhaka
- Sources of health-related information (Facebook, YouTube, Neighbors, Friends, MBBS Doctors, Other Doctors, Others)
- Family history of cardiovascular disease
- Regular physical check-up

PART-F: Application for Ethical Clearance - Ethical Checklist

1 Circle the appropriate answer to each of the following (If not Applicable write NA):

2 1. Source of Population:
(a) Ill Subjects: Yes / No
(b) Non-ill Subjects: Yes / No
(c) Minors or persons under guardianship: Yes / No

3 2. Does the study involve:
(a) Physical risks to the subjects: Yes / No
(b) Social Risks: Yes / No
(c) Psychological risks to subjects: Yes / No
(d) Discomfort to subjects: Yes / No
(e) Invasion of the body: Yes / No
(f) Invasion of Privacy: Yes / No
(g) Disclosure of Information damaging to subject or others: Yes / No

4 3. Does the study involve:
(a) Use of records (hospital, medical, death, birth or other): Yes / No
(b) Use of fetal tissue or abortus: Yes / No
(c) Use of organs or body fluids: Yes / No

5 4. Are subjects clearly informed about:
(a) Nature and purposes of study: Yes / No
(b) Procedures to be followed including alternatives used: Yes / No
(c) Physical risks: Yes / No
(d) Private questions: Yes / No
(e) Invasion of the Body: Yes / No
(f) Benefits to be derived: Yes / No
(g) Right to refuse to participate or to withdraw from study: Yes / No
(h) Confidential handling of data: Yes / No
(i) Compensation where there are risks or loss of working time or privacy is involved in any particular procedure: Yes / No

6 5. Will signed consent form/verbal consent be required:
(a) From Subjects: Yes / No
(b) From parent or guardian (if subjects are minors): Yes / No

7 6. Will precautions be taken to protect anonymity of subjects: Yes / No

8 Check documents being submitted herewith to the BMRC:

- Umbrella proposal
- Proposal Summary
- Abstract for Ethical Review Committee as per attachment (Obligatory)
- Informed consent form for subjects
- Informed consent form for parent or guardian
- Verbal consent form for subjects
- Procedure for maintaining confidentiality
- Questionnaire or interview schedule*

If the final instrument/questionnaire is not completed prior to review, the following information should be included in the abstract.

1. A description of the areas to be covered in the questionnaire or interview which could be considered either sensitive or which would constitute an invasion of privacy.
2. Examples of the type of specific question to be asked in the sensitive areas.
3. An indication as to whom the questionnaire will be presented to the committee for review.

We agree to obtain approval of the National Research Ethics Committee for any changes involving the rights and welfare of subjects or any changes of the Methodology before making any such changes.

PART-G Write an Abstract for National Research Ethics Committee (NREC)

9 1. Subject Population and Rationale:
This study will include indigenous students studying in selected universities in Dhaka. Indigenous students are a vulnerable group who may face social discrimination and mental health challenges. The rationale for focusing on this population is to better understand how perceived discrimination impacts their mental well-being and non-communicable disease (NCD) risk factors. All participants will be adults (aged 18 years and above), ensuring their capacity to provide voluntary informed consent.

10 2. Potential Risks:
Potential risks include psychological discomfort arising from sensitive questions on discrimination and mental health. Social risks may include breach of confidentiality leading to stigma. Physical risks are minimal as the study involves questionnaire-based data collection only. Alternative methods such as anonymous surveys were considered but direct interviews and validated questionnaires are necessary to obtain reliable data.

11 3. Risk Minimization Procedures:
To minimize risks, interviews will be conducted in private settings to protect confidentiality. Trained researchers will administer questionnaires sensitively. Participants can skip questions or withdraw at any time without penalty.

12 4. Confidentiality and Anonymity:
All data will be anonymized and coded to protect participant identity. Data storage will be secure with access limited to authorized personnel only. Published findings will not

contain identifiable information.

13 5. Consent Procedures:
Signed informed consent will be obtained from all participants prior to data collection in a private setting on university premises or other agreed locations. Participants will receive clear information on study aims, procedures, potential risks, and their rights. No minors are involved; hence parental consent is not required.

(a) Verbal consent is not planned, as written consent is feasible and preferred.

(b) No information will be withheld from participants.

(c) Participation is voluntary; no compensation will be provided, but the study may benefit participants indirectly through advocacy for improved policies.

14 6. Interview Procedures:
Interviews/questionnaires will take place in a quiet, private room within university campuses or a mutually convenient location. Each session will last approximately 30–45 minutes.

15 7. Potential Benefits:
Participants may benefit from increased awareness of their mental health and discrimination issues. The broader society will benefit from evidence-based recommendations to reduce health inequalities among indigenous populations. Benefits are expected to outweigh minimal risks.

16 8-11. Experimental Drugs:
Not applicable.

17 12. Use of Records or Biological Samples:
No use of medical records, biological samples, or tissues is planned.

PART-H INFORMED CONSENT FORM

18 Title of the Study:
Feeling of Discrimination of Indigenous Students Studying in Dhaka: Their Mental Health Status and Non-Communicable Disease (NCD) Risk Factors
Interviewer's Details:
Name: _____
Designation:
Contact: _____

19 Purpose of the Study / গবেষণার উদ্দেশ্য:
You are invited to participate in a research study that aims to understand how discrimination affects the mental health and risk of chronic diseases among indigenous

students studying in Dhaka.
আপনাকে ঢাকায় অধ্যয়নরত আদিবাসী শিক্ষার্থীদের বর্ণবৈষম্য অনুভূতি, মানসিক স্বাস্থ্য এবং দীর্ঘস্থায়ী অসুখের ঝুঁকি সম্পর্কিত গবেষণায় অংশগ্রহণের জন্য আমন্ত্রণ জানানো হচ্ছে।

20 Participation / অংশগ্রহণ:
Your participation will involve answering a structured questionnaire about your experiences of discrimination, mental health status, and health-related behaviors.
আপনি একটি গঠনতান্ত্রিক প্রশ্নমালার প্রাসঙ্গিক মাধ্যমে আপনার গবেষণার অভিজ্ঞতা, মানসিক স্বাস্থ্য এবং স্বাস্থ্য সম্পর্কিত আচরণের সম্পর্কে তথ্য প্রদান করবেন।

21 Duration and Procedures / সময়কাল এবং পদ্ধতি:
The interview will take approximately 30 to 45 minutes and will be conducted in a private setting for your comfort and confidentiality.
সাক্ষাৎকারটি প্রায় ৩০ থেকে ৪৫ মিনিট সময় নিয়ে এবং আপনার গোপনীয়তা বজায় রেখে একটি ব্যক্তিগত পরিবেশে নেওয়া হবে।

22 Potential Benefits / সম্ভাব্য সুফল:
Though you may not directly benefit from this study, your participation will help develop policies to improve health and social well-being for indigenous students.
আপনি সরাসরি উপকৃত নাও হতে পারেন, তবে আপনার অংশগ্রহণ আদিবাসী শিক্ষার্থীদের স্বাস্থ্য ও সামাজিক উন্নয়নে নীতি তৈরিতে সাহায্য করবে।

23 Use of Samples / নমুনার ব্যবহার:
No biological samples (blood, urine, saliva, tissue) will be collected in this study.
এই গবেষণায় কোনো জীববৈজ্ঞানিক নমুনা (রক্ত, মূত্র, লালা, টিস্যু) সংগ্রহ করা হবে না।

24 Risks, Hazards and Discomforts / ঝুঁকি ও অসুবিধা:
There is minimal risk. Some questions may cause discomfort as they relate to sensitive personal experiences. You may choose to skip any question or stop participation at any time.
ঝুঁকি নগণ্য। কিছু প্রশ্ন ব্যক্তিগত সংবেদনশীল অভিজ্ঞতার জন্য অসুবিধা সৃষ্টি করতে পারে। আপনি ইচ্ছা করলে কোনো প্রশ্ন এড়িয়ে যেতে পারেন বা যেকোনো সময় অংশগ্রহণ বন্ধ করতে পারেন।

25 Reimbursements / ব্যয় পূরণ:
No financial compensation or reimbursement will be provided for participation.
অংশগ্রহণের জন্য কোনো আর্থিক প্রতিদান বা ব্যয় পূরণ প্রদান করা হবে না।

26 Confidentiality / গোপনীয়তা:
All your information will be kept confidential and used only for research purposes. Your identity will not be disclosed in any reports or publications.
আপনার সকল তথ্য গোপন রাখা হবে এবং শুধুমাত্র গবেষণার জন্য ব্যবহার করা হবে। রিপোর্ট বা প্রকাশনায় আপনার পরিচয় প্রকাশ করা হবে না।

27 Right to Withdraw / প্রত্যাহারের অধিকার:
Your participation is voluntary. You have the right to withdraw from the study at any time without any penalty or loss of benefits.

আপনার অংশগ্রহণ স্বেচ্ছাসেবী। আপনি যেকোনো সময় বিনা শর্তে অংশগ্রহণ থেকে সরে আসার অধিকার রাখেন।

28 Participant Details / অংশগ্রহণকারীর বিবরণ:
Name of Participant / অংশগ্রহণকারীর নাম: _____
Signature / Thumbprint / স্বাক্ষর / অঙ্গুলীভি: _____
Date / তারিখ:

29 Witness Details / সাক্ষীর বিবরণ:
Name of Witness / সাক্ষীর নাম: _____
Signature of Witness / সাক্ষীর স্বাক্ষর: _____
Date / তারিখ:

30 Interviewer Details / সাক্ষাতকার গ্রহণকারীর বিবরণ:
Name of Interviewer / সাক্ষাতকার গ্রহণকারীর নাম: _____
Signature of Interviewer / সাক্ষাতকার গ্রহণকারীর স্বাক্ষর: _____
Date / তারিখ:

31 Contact for Queries / যোগাযোগের জন্য: For any questions or concerns about the study or your rights, please contact: (কোনোপ্রকার প্রশ্ন বা উদ্বেগের জন্য অনুগ্রহ করে যোগাযোগ করুন:)
Dr. Rajan Talukder
Email: rajan.dghs@gmail.com Phone: +8801554317886

32 **Contact for Queries / যোগাযোগের জন্য: For any questions or conc**erns about the study or your rights, please contact:(কোনোপ্রকার প্রশ্ন বা উদ্বেগের জন্য অনুগ্রহ করে যোগাযোগ করুন:)
Dr. Rajan Talukder
Email: rajan.dghs@gmail.com Phone: +8801554317886

PART-I প্রশ্নপত্র (Questionnaire)

33 Section A: Socio-demographic Information
1. নাম (Name):
2. বয়স (Age in years):
3. লিঙ্গ (Gender): পুরুষ (Male)/ মহিলা (Female)/ অন্যান্য (Other)
4. উপজাতি (Indigenous Group):
5. পড়াশোনার বর্ষ (Year of Study): _____
6. প্রতিষ্ঠানের নাম (Name of Institution):
7. ঢাকায় থাকার ধরন (Type of Residence in Dhaka):
   হোস্টেল (Hostel)
   ভাড়া বাসা (Rented House)
   পরিবারের বাড়ি (Family House)
   অন্যান্য (Other): _____

34 Section B: Perceived Ethnic Discrimination Questionnaire (PEDQ)

Instructions for answering the following questions: For each question, please answer using the following scale: কখনই (Never), প্রায় কখনো না (Rarely), মাঝে মাঝে (Sometimes), প্রায়ই (Often), সর্বদা (Always)

Economic Discrimination
1. Have you ever been treated unfairly in getting a job because of your ethnic background?
2. Have you ever been denied a promotion at work due to your ethnicity?
3. Have you been treated unfairly when trying to rent or buy a home because of your ethnic group?
4. Have you ever experienced discrimination in financial matters (e.g., loans, credit) due to your ethnicity?

Social Discrimination
5. Have you ever been excluded from social activities because of your ethnic background?
6. Have you been treated with less respect than others because of your ethnicity?
7. Have people acted as if they were afraid of you because of your ethnic group?
8. Have you experienced discrimination when seeking medical care because of your ethnicity?

35 Responsiveness / Distance
9. Have people avoided interacting with you because of your ethnicity?
আপনার জাতিগত পরিচয়ের কারণে কি কখনো মানুষ আপনার সাথে যোগাযোগ এড়িয়েছে?
10. Have you been ignored or avoided in social or professional settings due to your ethnic background?
আপনার জাতিগত কারণে কি কখনো সামাজিক বা কর্মক্ষেত্রে আপনাকে উপেক্ষা বা এড়ানো হয়েছে?
11. Have others acted cold or distant toward you because of your ethnicity?
আপনার জাতিগত কারণে কি কখনো অন্যরা আপনার প্রতি ঠান্ডা বা দূরত্বপূর্ণ আচরণ করেছে?
12. Have you experienced being treated as if you don't belong due to your ethnicity?
আপনি কি কখনো জাতিগত কারণে নিজেকে অপরজনের থেকে আলাদা বা অনুপযুক্ত মনে করেছেন?

36 Harassment
13. Have you been called names or insulted because of your ethnicity?
আপনার জাতিগত পরিচয়ের কারণে কি কখনো আপনাকে অপমানজনক নামে ডাকা হয়েছে?
14. Have you been threatened or harassed due to your ethnic background?
জাতিগত কারণে কি কখনো আপনাকে হুমকি দেয়া বা হয়রানির শিকার হতে হয়েছে?
15. Have you been physically attacked or assaulted because of your ethnicity?
আপনি কি কখনো জাতিগত কারণে শারীরিক হামলার শিকার হয়েছেন?
16. Have you been subjected to ethnic slurs or offensive jokes?
আপনার জাতিগত পরিচয়ের কারণে কি কখনো অপমানজনক কটুক্তি বা রসিকতার শিকার হয়েছেন?
17. Have you been treated unfairly by law enforcement or other authorities because of your ethnicity?

জাতিগত কারণে কি কখনো আইন প্রয়োগকারী বা অন্যান্য কর্তৃপক্ষের কাছে থেকে অবিচারবোধক আচরণ পেয়েছেন?

37 Section C: মানসিক স্বাস্থ্য যাচাই প্রশ্নমালা (Depression Anxiety Stress Scale - DASS-21)

নির্দেশিকা: প্রতিটি প্রশ্নের জন্য নিচের স্কেল থেকে উত্তর দিতে হবে:
0 = কখনই না (Did not apply to me at all)
1 = মাঝে মাঝে (Applied to me to some degree or some of the time)
2 = বেশিরভাগ সময় (Applied to me to a considerable degree or a good part of time)
3 = সর্বদা (Applied to me very much or most of the time)
Depression (ডিপ্রেশন)
1. I felt down-hearted and blue.
আমি মন খারাপ এবং দুঃখী বোধ করেছি।
2. I was unable to experience any positive feeling at all.
আমি একদম কোনো ইতিবাচক অনুভূতি অনুভব করতে পারিনি।
3. I felt that I had nothing to look forward to.
আমি মনে করেছি আমার সামনে কোনো আশা বা প্রত্যাশা নেই।
4. I felt I was using a lot of nervous energy.
আমি অনুভব করেছি আমি অনেক নার্ভাস বা উত্তেজক আছি।
5. I felt sad and miserable.
আমি দুঃখিত এবং দুর্বল বোধ করেছি।
6. I felt that life was meaningless.
আমি মনে করেছি জীবন অর্থহীন।
7. I couldn’t seem to experience any joy or pleasure.
আমি কোনো আনন্দ বা সুখ অনুভব করতে পারিনি।
Anxiety (অ্যাংজাইটি/উদ্বেগ)
8. I was aware of dryness of my mouth.
আমি আমার মুখ শুকিয়ে যাওয়া অনুভব করেছি।
9. I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion).
আমি শ্বাসকষ্ট অনুভব করেছি (যেমন দ্রুত শ্বাস নেয়া, শ্বাসকষ্ট ফিজিক্যাল কাজ ছাড়া)।
10. I experienced trembling (e.g., in the hands).
আমি কাঁপুনি অনুভব করেছি (যেমন হাতে কাঁপা)।
11. I was worried about situations in which I might panic and make a fool of myself.
আমি এমন পরিস্থিতি নিয়ে চিন্তিত ছিলাম যেখানে আমি আতঙ্কিত হয়ে বিব্রত হতে পারি।
12. I felt I was close to panic.
আমি মনে করেছি আমি প্যানিক অবস্থার কাছে আছি।
13. I felt scared without any good reason.
আমি কোনো কারণ ছাড়াই ভীত ছিলাম।
14. I felt nervous and restless.
আমি নার্ভাস এবং অস্থির বোধ করেছি।
Stress (স্ট্রেস)
15. I found it hard to wind down.

আমি আমার মন শান্ত করতে পারিনি।
16. I tended to over-react to situations.
আমি পরিস্থিতির প্রতি অতিরিক্ত প্রতিক্রিয়া দেখিয়েছি।
17. I felt that I was rather touchy.
আমি মনে করেছি আমি বেশ স্পর্শকাতর বা সহজে বিরক্ত হয়ে যাই।
18. I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat).
আমি আমার হৃদস্পন্দন অনুভব করেছি (যেমন হঠাৎ হৃদস্পন্দন বেড়ে যাওয়া, হার্ট মিস হওয়া)।
19. I felt scared without any good reason.
আমি কোনো কারণ ছাড়াই ভীত ছিলাম।
20. I felt irritated.
আমি বিরক্ত বোধ করেছি।
21. I felt that I was using a lot of nervous energy.
আমি অনুভব করেছি আমি অনেক নার্ভাস বা উত্তেজক আছি।

38 Section D: Non-Communicable Disease (NCD) Risk Assessment – WHO Generic STEPS Instrument

Step 1: Behavioral Risk Factors (আচরণগত ঝুঁকি বিষয়ক প্রমাণাবলী)

1. Tobacco Use (তামাক সেবন)
1.1 Do you currently smoke any tobacco products (cigarettes, bidi, pipe, shisha etc.)?
আপনি কি বর্তমানে কোনো ধূমপানজাত দ্রব্য (সিগারেট, বিড়ি, পাইপ, শীশা ইত্যাদি) সেবন করেন?
☐ Yes (হ্যাঁ) ☐ No (না)
1.2 If yes, how many cigarettes/bidi do you smoke per day?
যদি হ্যাঁ হয়, দিনে কত সিগারেট বা বিড়ি পান করেন?
per day (প্রতি দিন)
1.3 Do you currently use smokeless tobacco (chewing tobacco, snuff)?
আপনি কি বর্তমানে ধূমপানবিহীন তামাকজাত দ্রব্য (চিবানোর তামাক, নাস্তা ইত্যাদি) ব্যবহার করেন?
☐ Yes (হ্যাঁ) ☐ No (না)
1.4 If yes, how frequently do you use smokeless tobacco?
যদি হ্যাঁ হয়, দিনে কতবার বা কতক্ষণ ব্যবহার করেন?
times per day (প্রতি দিন)
2. Alcohol Consumption (মদ্যপান)
2.1 Have you consumed any alcoholic drink in the past 30 days?
গত ৩০ দিনে আপনি কি কোনো মদ্যপান করেছেন?
☐ Yes (হ্যাঁ) ☐ No (না)
2.2 If yes, how many standard drinks do you consume on a typical day?
যদি হ্যাঁ হয়, সাধারণত এক দিনে কতটা মদ পান করেন? (এক স্ট্যান্ডার্ড ড্রিঙ্ক = ১৪ গ্রাম পরিশুদ্ধ এলকোহল)
drinks per day (প্রতি দিন)
3. Dietary Habits (খাদ্যাভ্যাস)
3.1 How many servings of fruits do you eat on a typical day?
সাধারণত দিনে কতবার ফলমূল খান?

servings per day (প্রতি দিন)
3.2 How many servings of vegetables do you eat on a typical day?
সাধারণত দিনে কতবার সবজি খান?
servings per day (প্রতি দিন)
3.3 Do you add salt to your food before eating?
খাবারে অতিরিক্ত লবণ যোগ করেন?
☐ Yes (হ্যাঁ) ☐ No (না)
3.4 How often do you consume fried food?
আপনি কত ঘন ঘন ভাজা খাবার খান?
☐ Daily (প্রতিদিন) ☐ Weekly (সপ্তাহে একবার) ☐ Occasionally (মাঝে মাঝে) ☐ Never (কখনো না)
4. Physical Activity (শারীরিক কার্যকলাপ)
4.1 During a typical week, on how many days do you do moderate-intensity activities like brisk walking, cleaning, gardening?
সাধারণত সপ্তাহে কতদিন মাঝারি তীব্রতার শারীরিক কাজ করেন (দ্রুত হাঁটা, ঘর পরিষ্কার, বাগান করা ইত্যাদি)?
days per week (প্রতি সপ্তাহ)
4.2 On those days, how much time do you spend doing these activities?
সেই দিনগুলোতে আপনি কতক্ষণ এসব কাজ করেন?
minutes per day (প্রতি দিন)
4.3 During a typical week, on how many days do you do vigorous-intensity activities like heavy lifting, digging, aerobics, or fast cycling?
সাধারণত সপ্তাহে কতদিন শক্তিশালী শারীরিক কাজ করেন (ভারি জিনিস তোলা, খনন, এরোবিক্স, দ্রুত সাইক্লিং)?
days per week (প্রতি সপ্তাহ)
4.4 On those days, how much time do you spend doing these activities?
সেই দিনগুলোতে কতক্ষণ এসব কাজ করেন?
minutes per day (প্রতি দিন)
Step 2: Physical Measurements (শারীরিক পরিমাপ)
• Weight (ওজন): kg
• Height (উচ্চতা): cm
• Waist circumference (কোমরের পরিধি): cm
• Hip circumference (কোমর থেকে নিচের পরিধি): cm
• Blood Pressure (রক্তচাপ):
  ○ Systolic (সিস্টোলিক): mmHg
  ○ Diastolic (ডায়াস্টোলিক): mmHg
Step 3: Medical History (চিকিৎসা ইতিহাস)
• Have you ever been diagnosed with hypertension (high blood pressure)?
আপনাকে কি কখনো উচ্চ রক্তচাপের রোগী বলা হয়েছে?
☐ Yes (হ্যাঁ) ☐ No (না)
• Have you ever been diagnosed with diabetes mellitus?
আপনাকে কি কখনো ডায়াবেটিস রোগী বলা হয়েছে?
☐ Yes (হ্যাঁ) ☐ No (না)

• Are you currently on any medication for chronic illness (hypertension, diabetes, heart disease, etc.)?

39 • Which type of healthcare provider do you prefer when ill?
আপনি অসুস্থ হলে কোন চিকিৎসা পদ্ধতি বেছে নেন?
☐ Registered Medical Doctor (রেজিস্টার্ড ডাক্তার)
☐ Kabiraj/Traditional Healer (কবিরাজ/ঐতিহ্যবাহী)
☐ Homeopathic Practitioner (হোমিওপ্যাথি চিকিৎসক)
☐ Other (অন্যান্য):
Step 4: Language Barrier and Health Information Source (ভাষাগত প্রতিবন্ধকতা ও স্বাস্থ্য তথ্য উৎস)
• Do you face any language problems when seeking treatment at healthcare centers in Dhaka?
ঢাকায় চিকিৎসা কেন্দ্রে চিকিৎসা নিতে গিয়ে কি আপনি ভাষাগত সমস্যার সম্মুখীন হন?
☐ Yes (হ্যাঁ) ☐ No (না)
• Where do you usually get your health-related information from? (You can select multiple)
আপনি সাধারণত স্বাস্থ্য সংক্রান্ত তথ্য কোথা থেকে পান? (আপনি একাধিক উত্তর দিতে পারেন)
☐ Facebook (ফেসবুক)
☐ YouTube (ইউটিউব)
☐ Neighbors (প্রতিবেশী)
☐ Friends (বন্ধু)
☐ MBBS Doctors (রেজিস্টার্ড ডাক্তার)
☐ Other Doctors (অন্যান্য চিকিৎসক)
☐ Others (অন্যান্য):
Optional: Family History and Check-up
• Do you have a family history of cardiovascular disease?
আপনার পরিবারে কারো কি হৃদরোগ আছে?
☐ Yes (হ্যাঁ) ☐ No (না)
• Do you undergo any regular physical check-up?
আপনি কি নিয়মিত কোনো স্বাস্থ্য পরীক্ষা করেন?
☐ Yes (হ্যাঁ) ☐ No (না)
Note: All information provided will be kept confidential and used only for research purposes. Participants have the right to withdraw at any time without any consequences.
প্রদত্ত সকল তথ্য গোপনীয় রাখা হবে এবং শুধুমাত্র গবেষণার উদ্দেশ্যে ব্যবহার করা হবে। অংশগ্রহণকারীদের যেকোনো সময় কোনোও ধরনের অসুবিধা ছাড়াই অংশগ্রহণ থেকে সরে যাওয়ার অধিকার রয়েছে।

Protocol references

1. Prehypertension and Hypertension among the Medical Students of Public Medical Colleges in Dhaka, Bangladesh: A Cross-Sectional Study
DOI: 10.3329/bsmmuj.v17i2.71379

2. Risk Factors of Childhood Extrapulmonary Tuberculosis Compared to Pulmonary Tuberculosis in Bangladesh: A Hospital-based Study
DOI: 10.1097/PMR.0000000000001364

3. Duration of Workplace Noise Exposure and Blood Pressure among Rural Adult Weavers
DOI: 10.1101/2025.05.23.25328248v1

REFERENCES: Vancouver style to be followed

Note: All citations should be referenced in the reference section/bibliography.

Acknowledgements

Sponsoring/Collaborating Agencies: None/ BANGLADESH MEDICAL RESEARCH COUNCIL
Total Cost: 500,000 BDT (Five Lakh Taka)
Other Support for Proposed Research: No other support or applications for funding from other organizations.
Date of Submission: 17-08-2025
Endorsement of the Institute Head required.

Objectives:

General Objective:
- To examine the association between perceived discrimination and the mental health status and non-communicable disease (NCD) risk factors among indigenous students studying in Dhaka.

Specific Objectives:
- To measure the prevalence of perceived ethnic discrimination among indigenous students in Dhaka using the Perceived Ethnic Discrimination Questionnaire (PEDQ).
- To assess the mental health status (depression, anxiety, and stress) of indigenous students using the DASS-21 scale.
- To evaluate the prevalence of key NCD risk factors (e.g., tobacco use, physical inactivity, unhealthy diet, blood pressure, BMI) using the WHO Generic STEPS Instrument.
- To analyze the association between perceived discrimination and mental health outcomes among indigenous students.
- To determine the relationship between perceived discrimination and NCD risk factors in the study population.

Research Question:
Is there a significant association between perceived discrimination and mental health status as well as NCD risk factors among indigenous students studying in Dhaka?

Hypothesis:
Perceived discrimination is positively associated with poorer mental health outcomes and higher prevalence of NCD risk factors among indigenous students.

Rationale:

Indigenous populations in Bangladesh, particularly students migrating to urban centers like Dhaka, face unique challenges related to rapid urbanization. Urban environments often expose indigenous students to social exclusion, discrimination, and stressors that can undermine their mental and physical health. Coping with these pressures is further complicated by limited social support and cultural disconnection in the city. Addressing the health and well-being of indigenous students aligns directly with several United Nations Sustainable Development Goals (SDGs), including SDG 3 (Good Health and Well-being), SDG 4 (Quality Education), and SDG 10 (Reduced Inequalities). By focusing on mental health and non-communicable disease (NCD) risk factors among this vulnerable group, the study supports efforts to reduce health disparities and promote inclusive, equitable

education. Moreover, urbanization poses both opportunities and challenges: while it may improve access to education and healthcare, it can also increase exposure to discrimination and lifestyle-related health risks. Understanding how indigenous students cope with urban stressors and discrimination is critical to designing interventions that enhance resilience and reduce health risks. This study will fill an important gap in knowledge by quantifying the impact of perceived discrimination on mental health and NCD risk factors within the context of urbanization and SDGs. The findings will provide actionable insights for policymakers and health planners committed to inclusive urban health development and indigenous rights.

Methodology:

Study Design:
A cross-sectional quantitative study.

Study Population:
Indigenous students currently enrolled in universities and colleges located in Dhaka city.

Sampling:
A stratified random sampling technique will be used to select participants from different institutions to ensure representativeness of various indigenous groups.

Sample Size:
Sample size will be calculated based on the prevalence of perceived discrimination reported in similar studies, with a confidence level of 95% and a margin of error of 5%. Assuming an estimated prevalence of 30%, the minimum sample size is calculated as [provide formula and calculated value].

Variables:
- **Independent Variable:** Perceived discrimination (measured by Perceived Ethnic Discrimination Questionnaire - PEDQ).
- **Dependent Variables:**
  - Mental health status (Depression, Anxiety, Stress measured by DASS-21).
  - Non-communicable disease (NCD) risk factors (tobacco use, alcohol use, physical activity, diet, BMI, blood pressure) measured by WHO Generic STEPS Instrument.

Data Collection Procedures:
Structured questionnaires incorporating PEDQ, DASS-21, and the WHO STEPS instrument will be administered face-to-face by trained research assistants. Anthropometric measurements (height, weight, blood pressure) will be taken using standardized protocols.

Pretesting:
The questionnaire will be pretested on a small sample (approximately 5% of the total sample size) to ensure clarity, cultural appropriateness, and validity.

Data Analysis:

Data will be entered and analyzed using statistical software (e.g., SPSS or Stata). Descriptive statistics will summarize the demographic

characteristics and prevalence of perceived discrimination, mental health status, and NCD risk factors.

Analytical statistics will include:
- Correlation analysis to examine relationships between perceived discrimination and health outcomes.
- Regression analysis to identify predictors of mental health issues and NCD risk factors.
- Significance testing at p c 0.05 level.

Impact of Research:
This study will generate important data on the health effects of perceived discrimination among indigenous students, a marginalized group often overlooked in health research. By identifying links between discrimination, mental health challenges, and non-communicable disease risk factors, the findings will inform targeted public health strategies and policies to reduce health disparities. Incorporating these insights into national health programs will help promote mental well-being and prevent NCDs in vulnerable populations, contributing to Bangladesh's overall health development goals. The research aligns with the country's commitment to equitable healthcare and supports progress toward the Sustainable Development Goals, particularly in reducing inequalities and enhancing inclusive education and health services.

Approval of the Head of the Department/Institute:
This research proposal has been reviewed and approved by the Head of the Department/Institute. The necessary support and resources will be provided to facilitate the successful completion of the study.

Signature:
Name:
Designation:
Date:

Flow Chart (Describe sequence of tasks within time frame):

Activity	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Preparation and Literature Review	■					
Development of Tools 026 Questionnaire	■					
Ethical Approval Process	■	■				
Training of Data Collectors		■				
Pretesting of Questionnaire		■				
Data Collection			■	■		
Data Entry and Cleaning				■		
Data Analysis					■	
Report Writing and Dissemination						■