

# Curriculum Vitae of Md. Rakib Akon

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## Summary of Qualifications

I am a research professional specializing in statistical data analysis, public health research and health system evaluations. As a **Senior Research Assistant (Quantitative)** at BRAC James P. Grant School of Public Health, BRAC University, I contribute to projects on healthcare service assessments, health systems and policy research. I hold a **B.Sc. and M.Sc. degrees in Statistics** and am currently pursuing a **Master’s in Applied Statistics and Data Science** at Department of Statistics and Data Science, Jahangirnagar University.

I am proficient in **Python, R, STATA, SPSS and Excel**, I have extensive experience in survey design, tools development, leading data collection, data cleaning, data analysis, statistical modelling and predictive analysis. I have conducted **quantitative surveys with patients, healthcare providers, and district and central level stakeholders to assess health system performance**. Moreover, I have been responsible for the **data quality control**, ensuring the accuracy and reliability of the data through **checks, revisits and continuous monitoring**. I have co-authored research **published in peer-reviewed journal** and have worked on large-scale health system assessments **funded by the World Bank, World Health Organization (WHO), USAID, British Academy and UNICEF**. Skilled in data-driven insights and policy analysis, I am committed to evidence-based decision-making in public health.

Additionally, I have **teaching and academic mentoring experience**. I have served as a Teaching Assistant to the **undergraduate students at Department of Statistics of Govt. Titumir College, Dhaka**, facilitating courses in categorical data analysis, biostatistics, regression analysis, test of hypothesis and practical data analysis using R, STATA and SPSS. I have been also teaching international **graduate students** online for the last two years in quantitative research methods, data analysis, result interpretation and thesis-related statistical analysis.

## Professional Experience

<b>Senior Research Assistant (Quantitative)</b>	<i>Date: January 2025 – Present</i>
<b>Research Assistant (Quantitative)</b>	<i>Date: June – December 2024</i>
<b>BRAC James P Grant School of Public Health, BRAC University</b>	
<ul style="list-style-type: none"><li>Assigned to the World Bank project ‘<b>Implementation of Health System Assessment for System-Level Quality Improvement in Bangladesh</b>’ &amp; the WHO project ‘<b>Assessment of Public and Private Blood Transfusion Services under the Directorate General of Health Services (DGHS)</b>’, the USAID project ‘<b>USAID’s Urban Health Activity</b>’, the British Academy project ‘<b>Just Transition for Antimicrobial Resistance (JT4AMR)</b>’ &amp; the UNICEF project ‘<b>The implementation research on childhood onset Noncommunicable diseases (NCD)</b>’.</li><li>Contributed to <b>proposal writing and IRB</b> (Institutional Review Board) preparation and submission, including development of <b>methodological frameworks</b> and ensuring compliance with <b>ethical standards and research protocols</b>.</li><li>Designed and implemented <b>sampling strategies</b> to ensure representativeness and data reliability across different tiers of health facilities.</li><li><b>Developed quantitative research methodology and research design</b>, aligning study objectives with feasible <b>analytical and operational</b> approaches.</li><li><b>Designed survey instruments and modules</b>, ensuring alignment with <b>project indicators, WHO frameworks</b>, and contextual adaptation for Bangladesh.</li><li>Spearheaded the development of the XLS form for data collection using <b>ODK, KOBO Toolbox &amp; Survey CTO</b>.</li><li>Conducted <b>quantitative and qualitative</b> research, including <b>surveys with patients, healthcare providers and stakeholders</b>, contributing to a comprehensive <b>assessment of health system performance, specially in MNH, NCD and Blood Transfusion Services in all tiers of health facilities in Bangladesh</b>.</li><li>Played a key role in <b>document review and Rapid Review</b> for <b>health system evaluations</b>, synthesizing key insights to inform <b>policy recommendations</b>.</li><li>Leading <b>data quality control</b>, including backchecks, <b>high-frequency checks</b>, debriefing, <b>revisiting 10% of sampled facilities</b>, and conducting remote and onsite monitoring to ensure data accuracy and integrity.</li><li>Performed <b>data cleaning</b>, modeling, outlier identification and correction, data management, categorization and comprehensive <b>data analysis</b> by using <b>R, STATA &amp; Excel</b>.</li><li>Expertly tabulated results <b>interpreted the findings</b> and compiled <b>detailed reports, manuscript writing</b>, ensuring accuracy and clarity in presenting findings.</li><li>Organized national-level <b>dissemination events and stakeholder workshops</b>, ensuring smooth coordination and <b>communication</b>.</li><li>Contributed to team <b>administrative and coordination tasks</b>, supporting overall <b>project management</b> and operational efficiency.</li></ul>	

## Research Fellowship

<b>South Asian Institute for Social Transformation (SAIST)</b>	<i>Date: May 2024</i>
<ul style="list-style-type: none"><li>Played a key role in <b>data cleaning, data tracking, data management</b> and data analysis.</li><li>Participated in <b>data collection campaigns</b>, collecting data on height, weight, peak flow and blood pressure.</li><li>Consistently completed and submitted work on time, proving strong discipline.</li></ul>	

Research Assistant

Research and Education Unit, Uthshargo Foundation Bangladesh

Date: January 2024 – April 2024

- Contributed significantly for the managing research design, **questionnaire preparation**, data collection, **data cleaning and analysis**, interpretation and presentation for various projects.
- Conducted qualitative and quantitative research with experienced professionals.
- Collaborated effectively in a team environment to achieve project objectives.

Teaching Experience

Teaching Assistant

Department of Statistics, Govt. Titumir College, Dhaka

Date: January 2023 – December 2024

Courses: Categorical Data analysis, Time Series Analysis, Biostatistics, Epidemiology, Econometrics, Intro. to SPSS, Regression Analysis and Test of Hypothesis (Using R & SPSS/STATA)

- Developed course materials, conducted assessments and provided individualized support to enhance student understanding and academic performance.
- Led practical sessions on Econometrics and Statistical Modeling, guiding students in applying statistical techniques to real-world data analysis.
- Provided hands-on training in Data analysis for categorical data, time series data and econometric regression analysis using R & STATA, improving students' analytical skills and software proficiency.
- Conducted assessments, provided feedback and evaluated student performance, contributing to a ~25% increase in student retention rates.
- Provided one-by-one instruction and assistance to students in understanding complex statistical concepts, resulting in a ~10% increase in student confidence levels.

Mentor – International Postgraduate Students (Privately in online platform)

Quantitative Research, Statistics & Data Analysis

- Tutoring international postgraduate students in basic statistics, hypothesis testing, regression, and data interpretation.
- Supporting thesis-related data analysis using SPSS, R, and STATA.
- Assisting with statistical reporting and result interpretation for academic work.

Publication

Peer-Reviewed Publication:

Jamil, S., Hossain, M.J., Mohammad Ali, H., **Akon, M.R.**, Asumah, M.N., Hasan, M., Suresh, H., Okesanya, O.J., Al-Mamun, M., Ahmed, M.M. and Sarkar, T.Y., 2025. Association of Knowledge and Attitude Toward Antibiotic Use and Resistance With Self-Medication Practice of Antibiotics Among Bangladeshi Private University Teachers: A Cross-Sectional Study. Health Science Reports, 8(3), p.e70526.

Submitted Paper:

Safayet J., Mohammad, Neeru C., **Akon, M.R.**, Salman S., J. K., Chandrima C., Alauddin C., P. S., Nazli M., Shilpa G., Syed Z. (2024). Knowledge, Awareness, and Preventive Practices on Dengue Fever among Disaster-Affected Riverine Dwellers in Bangladesh. Infectious Medicine. Manuscript Number: IMJ-D-24-00030. (Under Review)

Working Paper:

Facility readiness to deliver maternal and newborn health services in Bangladesh: Insights from two underperforming districts

R (programming language), STATA, Descriptive & Inferential Analysis, Readiness Scoring

- Currently contributing to develop the manuscript focuses on assessing health facility readiness to deliver MNH services.
- Conducting data analysis, readiness score computation and interpretation using WHO SARA and national MNH service frameworks.
- Involved in outlining and drafting key manuscript sections, including background, methodology, findings and policy implications to support SDR (Service Delivery Redesign) initiatives.

A national-level assessment of the blood transfusion services in public and private health facilities in Bangladesh: Cross-sectional study

STATA, KOBO Toolbox, Readiness Indexing, Descriptive & Inferential Analysis

- Currently contributing to manuscript development focusing on evaluating the readiness of public and private facilities in Bangladesh to provide safe blood transfusion services.
- Conducting primary data analysis, effective indicator and interpretation of readiness scores across key domains including staffing, infrastructure, guidelines, TTI testing and supply sufficiency.
- Engaged in shaping the manuscript structure based on global studies and national findings to inform DGHS policy and service readiness strategies.

Assessing the Impact of Demographic Factors on the Economic Burden of Dengue: A Quantitative Analysis of Catastrophic Health Expenditure in Bangladesh

R (programming language), Forest plot, STATA, Microsoft Excel, Regression Analysis

- Utilized R and STATA for data analysis, revealing significant correlations between demographic factors and Catastrophic Health Expenditure (CHE).

- Ensured data accuracy with meticulous cleaning in Excel and developed insightful visualizations (charts, graphs) for effective communication with the team.
- Applied advanced statistical knowledge for regression analysis in R, identifying key predictors influencing Catastrophic Health Expenditure in Dengue patients.

Research Experience

Academic Project: Date: March 2023 – November 2023

Investigating the Effects of Life Satisfaction on Mental Health among Undergraduate Students  
SPSS, STATA, Microsoft Excel, Statistical Testing, Graph & Charts

- Spearheaded the entire research project lifecycle from conceptualization to completion, including developing a research proposal and design.
- Conducted thorough data analysis in STATA & SPSS and created clear visualizations to reveal significant correlations & association between life satisfaction and mental health outcomes.
- Authored a comprehensive research document encompassing methodology, results and recommendations.

Voluntary Experience (Research):

1) Factors Influencing Antibiotic Usage Without Prescription among Public University Students in Bangladesh: A Mixed Methods Study.

- Identified research knowledge gaps through comprehensive review of existing literature.
- Will participate in the execution of the study across six reputable public universities in Bangladesh.
- Drafted research proposals and contributed to the development of research designs.
- Developed questionnaire and formulated methodologies for the quantitative aspect of the study.

2) Evaluating the Effectiveness of Health Awareness Intervention on Female High School Student's Knowledge Regarding Breast Cancer and Breast Self-Examination.

- Conducted pre-post quasi-experimental study and cross-sectional studies.
- Managed data collection efforts and performed accurate data cleaning and analysis.
- Ensured validity and reliability of data through comprehensive analysis techniques.

Education

Masters in Applied Statistics and Data Science  
Jahangirnagar University, Savar, Dhaka-1342 Date: September 2024 – December 2025  
Session: Summer 2024

- Relevant Coursework: Data Science with Python, Machine Learning for Data Science, Statistical Inference, Biostatistics and Epidemiology, Time Series Analysis and Forecasting.

Masters of Science in Statistics  
Dhaka College, University of Dhaka Date: November 2023 - December 2024  
Session: 2022-23

- Relevant Coursework: Theory of Inference, Advanced Biostatistics, Applied Multivariate Analysis, Design & Analysis of Experiment.

Bachelor of Science in Statistics  
Government Titumir College, University of Dhaka Date: January 2019 - December 2023  
Session: 2018-19

- Relevant Coursework: Probability, Hypothesis Testing, Categorical Data Analysis, Research Methodology, Econometrics, Time Series Analysis, Regression Analysis, Multivariate Analysis, Epidemiology, Biostatistics, Demographic Analysis.

Skills

Statistical Skills : Decision Making Methods, Research Data Analysis, Regression Analysis, Testing Hypothesis, AVONA, ANCOVA, Multivariate Analysis, Statistical Inference, Data Visualization, Time Series Forecasting.  
Data Analysis Software : IBM SPSS, STATA, Microsoft Excel.  
Research Related Soft Skills : Zotero, Mendeley, ODK, Survey CTO, KOBO Toolbox, Latex, Nvivo.  
Research Type : Qualitative and Quantitative Research.  
Programming Language : R & Python (Statistical Analysis & Visualization).  
Presentation Skills : Academic, Research Conference, Research Poster, Research Proposal.  
Computer Basics : Microsoft Word, PowerPoint, Adobe Photoshop.

Extra-curricular Activities

- Founding General Secretary, Govt. Titumir College Analytics Club. (January-2023)
- Co-Instructor, Govt. Titumir College Research Club, an IBM SPSS workshop for students comes from different domain. (February-2023 & May-2025)
- Achieved **Best Leadership Award** from Department of Statistics. (December-2023)
- Data Analytics Instructor, Govt. Titumir College Analytics Club. (May-2023)
- Presenting the **challenge and mitigation** to implement the national level blood transfusion service assessment research project in **Early and Mid-Career Researcher Forum** at BRAC JPGSPH. (June-2025)
- Having own YouTube channel to teach research data analysis and basics of statistics.

References

<b>Prof. Syed Masud Ahmed</b> <b>Director</b> , Centre of Excellence for Health Systems and Universal Health Coverage (CoE HS&UHC) <b>BRAC James P Grant School of Public Health, BRAC University</b> Email: ahmed.sm@bracu.ac.bd	<b>Dr. Nahitun Naher</b> <b>Deputy Director</b> , CoE HS&UHC <b>BRAC James P Grant School of Public Health, BRAC University</b> Email: nahitun.naher@bracu.ac.bd	<b>Md. Galib Hossain</b> <b>Assistant Professor</b> Department of Statistics <b>Govt. Titumir College, Dhaka</b> Email: galib29ju@gmail.com
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