Psychological Status of Social Media User among Student of Selected University in Dhaka, Bangladesh

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Background : Social media, a form of electronic communication encompassing social networking and micro-blogging platforms, allows users to create online communities for sharing information, ideas, and personal messages. Young people, across all age groups, are increasingly shifting from traditional electronic media (e.g., television and radio) to social media.

Objectives: This study aimed to assess the psychological status of social media users among students at Bangladesh University of Health Sciences.

Methods : A cross-sectional study was conducted in 2022 among 253 conveniently selected undergraduate student from the university. Data were collected using a semi-structured, self-reported questionnaire covering socio-demographic factors, social media-related factors (including internet addiction), lifestyle-related factors, and mental health indicators (anxiety and depression). Social media addiction, anxiety, and depression were assessed using adapted versions of the Internet Addiction Test (IAT), Generalized Anxiety Disorder-7 (GAD-7), and Patient Health Questionnaire (PHQ-9), respectively. Ethical approval was obtained from the Ethical Review Committee of Bangladesh University of Health Sciences.

Results: The mean age of participants was 22.4 ± 3.1 years, with 56.5% being women and the remainder men. About 49% of students were engaged in part-time work. 89.3% used social media platforms such as Facebook, YouTube, Instagram, and TikTok. On average, students spend 6.8±0.9 days per week and 5.69±3.8 hours per day on social media. Half (50.6%) exhibited mild to severe internet addiction, while 49.8% and 40.7% reported symptoms of depression and anxiety respectively. A significant association was found between time spent on social media and anxiety ($p = 0.001$).

Conclusion : Half of the undergraduate students were addicted to the internet and exhibited symptoms of depression and anxiety, highlighting the urgent need for interventions such as counseling.

Knowledge, Attitude and Practices Regarding Hospital-Acquired Infections Prevention in Bangladesh

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Background : The prevalence of Hospital-acquired infections (HAIs) in Bangladesh can reach as high as 30% in some hospitals. Assessing the knowledge, attitude, and practices (KAP) regarding hospital-acquired infection prevention and infection prevention control measures (IPC) among healthcare workers, and identifying the associated factors, is crucial for managing these infections. This study aims to explore the knowledge, practices, and related factors in preventing healthcare-associated infections (HAIs) and infection prevention and control (IPC) among nurses at a tertiary hospital in Dhaka city.

Materials and Methods : A mixed-methods study was conducted, combining quantitative and qualitative approaches to understand nurses' KAP regarding HAIs comprehensively. A total of 550 nurses from various departments of 6 tertiary care hospitals in Dhaka participated in the study. In the qualitative research, 10 Key informant interviews (KII) with the director, deputy director, nurse supervisor, and superintendent were conducted. Additionally, 1 focus group discussion with 6 nurses was conducted.

Results : The mean age of nurses in our study was 34.76±7.1 (CI: 34-35). Of the total, 94.3% of nurses in the infectious ward and 88.9% of nurses in the non-infectious ward were aware of HAIs (p-value: 0.022). The study found that 85.5% had poor waste disposal practices (p-value: 0.026). The qualitative study identified a lack of IPC training, overcrowding, inadequate community engagement, environmental factors, and the reuse of instruments or a lack of protective equipment as some of the key barriers to implementing IPC measures effectively.

Conclusion : The study found a significant knowledge gap among nurses. Better waste management, community awareness and regular IPC training are key factors in preventing HAIs.

Keywords : Hospital-acquired infections, nurse, Infection prevention and control, Bangladesh

Association between Social Participation and Blood Pressure and Blood Glucose among Older Adults

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Background : Cerebrovascular and cardiovascular diseases and diabetic complications greatly affect healthy life expectancy. Proper control of blood pressure and blood glucose is essential. Japan's "Health Japan 21" aims to lower systolic blood pressure and reduce the proportion of people with HbA1c ≥8.0. Although prior surveys suggest social participation may help prevent hypertension and diabetes, evidence on its association with clinical indicators remains limited. [Objective]
To examine the association between social participation and control of blood pressure and blood glucose using municipal survey and health checkup data.
Methods : We used 2022 data from the Japan Gerontological Evaluation Study (JAGES), targeting older adults in 25 municipalities. The study included 12,185 men and 14,559 women who were functionally independent with available health data. Social participation was defined as participation in one or more of nine community activities, including paid work, based on Healthy Japan 21. Outcomes were systolic blood pressure and HbA1c ≥8.0. Covariates included age, BMI, smoking, alcohol use, dyslipidemia, heart disease, stroke, education, and equivalent income. Analyses were stratified by gender. Linear regression was used for systolic blood pressure, and logistic regression for HbA1c.
Results : Mean systolic blood pressure was 132.4 mmHg (SD = 16.3) in men and 132.8 mmHg (SD = 16.6) in women. HbA1c ≥8.0 was observed in 1.7% of men and 0.8% of women. Social participation rates were 79.1% in men and 78.1% in women. Participants had lower systolic blood pressure (men: B = -1.11 mmHg, $p = 0.006$; women: B = -2.14 mmHg, $p < 0.001$), and lower odds of HbA1c ≥8.0 (men: OR = 0.68, $p = 0.026$; women: OR = 0.67, $p = 0.118$).
Conclusion : Social participation was associated with more favorable blood pressure and blood glucose levels, especially systolic blood pressure in both genders. It may contribute to chronic disease prevention in public health.

Heterogeneity in the Association between Daily Step Counts and Change in Body Mass Index

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Background : Despite ample evidence demonstrating the benefits of walking 6,000–8,000 steps per day on average, little is known about which individuals benefit most from walking more than 6,000 steps per day. Thus, we investigated heterogeneity in the association between daily step counts and changes in BMI.

Methods : We analyzed data from adults aged ≥20 years who had annual health check-up records in 2019 and 2021 and daily step count data in 2020 measured via the Kencom apps. Participants were categorized into two groups according to their average daily step counts: ≥6,000 steps/day (n=14,753) and <6,000 steps/day (n=18,108). The outcome was the change in BMI from 2019 to 2021. We applied causal forest models to examine the heterogeneity in the relationship between daily steps and change in BMI. Pragmatic subgroup discovery was conducted to derive clinically relevant subgroups.

Results : Achieving ≥6,000 steps/day was associated with –0.049 (95%CI, -0.077 to -0.021) change in BMI compared to <6,000 steps/day. The association was heterogeneous, with age, sex, BMI, SBP, and LDL-C contributing most to heterogeneity in the relationship. Pragmatic subgroup discovery identified that among men, the greatest benefit was observed in those with BMI ≥25 kg/m² and SBP ≥140 mmHg (change in BMI, –0.18), whereas the smallest benefit was observed in those with BMI <25 kg/m² and age <40 years. Among women, the greatest benefit was seen in those with BMI ≥25 kg/m² and SBP ≥160 mmHg (change in BMI, –0.14), while the smallest benefit was in those with BMI <25 kg/m² and LDL-C <130 mg/dL.

Conclusions : In this large cohort of Japanese adults, higher daily step counts were associated with modest reductions in BMI over two years, with substantial heterogeneity in effects across demographic and clinical subgroups. Identification of subgroups with the greatest potential benefit may help target step count–based interventions for weight management.

The Double-Bind Phenomenon of Accessibility Disparities for the Blind in Japan

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Background : Accessibility for blind individuals is a core human right and an essential indicator of social inclusion. However, regional analyses balancing economic independence (employment) and physical safety (traffic accident prevention) are lacking.

Objective : This study aimed to identify structural factors underlying "paradox regions" in Japan's 47 prefectures, where rankings for employment rate and traffic safety differ by ≥4 positions.

Methods : We conducted a cross-sectional ecological study (2023–2024). Outcomes were blind employment rate (% of median general income) and annual traffic accident rate per 100,000 population. Explanatory variables included accessibility law compliance, number of schools for the blind, public transportation accessibility score, and acoustic signal coverage. Regional rankings were created, and multivariate regression identified associated factors.

Results : The national mean employment rate was *54.1*%, and the accident rate was *16.9/100,000*; *33* prefectures (*70.2*%) were classified as paradox regions. Urban areas showed high traffic safety but limited employment opportunities, while rural areas had greater employment opportunities but higher traffic accident risks, indicating a "double-bind phenomenon."

Conclusions : This study is the first to empirically demonstrate the structural dilemma preventing blind individuals from achieving both safety and independence. An integrated policy approach prioritizing employment promotion in urban areas and traffic safety infrastructure in rural areas is essential.