

Original Research Article

Comparative Analysis of Self-Medication Practices among University Students in Bangladesh and Malaysia

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Article History

Received: 18.08.2024

Accepted: 25.09.2024

Published: 30.09.2024

Abstract: Self-medication is a widely practiced behavior, especially among university students, and is influenced by a variety of socio-economic and cultural factors. This cross-sectional study investigates self-medication practices among university students in Bangladesh and Malaysia, focusing on the prevalence, types of drugs used, reasons for self-medication, and the awareness of its associated risks. A total of 731 students (514 from Bangladesh and 217 from Malaysia) in the study completed a structured questionnaire. The results reveal that self-medication was significantly more prevalent among Bangladeshi students (76.34%) compared to Malaysian students (39.2%). Financial barriers, lack of awareness, and difficulty in accessing healthcare services were the main drivers of self-medication in Bangladesh, while in Malaysia, peer influence and convenience were the primary reasons. The study highlights the importance of targeted interventions to raise awareness about the risks of self-medication and to improve healthcare access for students.

Keywords: Self-medication, university students, Bangladesh, Malaysia, cross-sectional study, medication safety.

INTRODUCTION

Self-medication refers to the use of medications without professional consultation for the treatment of self-diagnosed conditions. It includes the use of over-the-counter (OTC) drugs, herbal remedies, and prescription drugs obtained without a legitimate prescription. While self-medication can be beneficial for minor health issues, its widespread and unsupervised use poses significant public health risks. These risks include the misuse of medications, adverse drug reactions, incorrect self-diagnosis, and the alarming rise of antimicrobial resistance, particularly due to the misuse of antibiotics. The World Health Organization (WHO) reports that up to 50% of medications are inappropriately prescribed, dispensed, or sold globally, which highlights the need for better regulation and education regarding medication use (Ghanbari & Hajjaliasghari, 2021). Among university students, self-medication is a particularly common phenomenon due to several contributing factors. These include academic stress, limited time, perceived ability to self-diagnose, easy access to information through the internet, and the convenience of OTC drugs. Studies have also shown that students may turn to self-medication as a cost-saving measure, particularly when access to healthcare services is limited or expensive (Mishra & Kumar, 2022). In Bangladesh, the prevalence of self-medication among university students is particularly high, with some studies reporting that as many as 78% of students engage in the practice, primarily using antibiotics and analgesics (Rahman & Ahmed, 2022). The reasons for this include financial constraints, lack of accessible healthcare, and a general lack of awareness about the dangers associated with inappropriate medication use. On the other hand, Malaysian students, while also engaging in self-medication, tend to have a lower prevalence of the behavior. This is likely due to better healthcare access and higher awareness of the risks. However, even in Malaysia, the practice is still widespread, with

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CITATION: AHM Mahmudur Rahman & Sidra Sabir (2024). Comparative Analysis of Self-Medication Practices among University Students in Bangladesh and Malaysia. *South Asian Res J Pharm Sci*, 6(5): 169-175.

studies showing that health sciences students in particular are more likely to self-medicate due to their perceived knowledge of medical conditions and treatments (Sharma & Singh, 2023). The objective of the study was to compare self-medication practices between university students in Bangladesh and Malaysia. Specifically, the study pursued to identify the types of medications used, the key factors influencing self-medication behaviors, and the role that healthcare systems and cultural differences play in shaping these practices.

MATERIALS AND METHODS

Study Design

This study employed a cross-sectional descriptive survey design. Data were collected from university students in Bangladesh and Malaysia over a nine-month period. A total of 1021 students filled the survey but 731 students (514 from Bangladesh and 217 from Malaysia) were included in the study as they filled up all the answers. Participants were selected through convenience sampling from public and private universities in both countries. The survey was conducted using a structured questionnaire designed to capture information on the prevalence of self-medication, the types of drugs used, reasons for self-medication, and awareness of its risks.

Data Collection

The questionnaire was administered online and included both open- and close-ended questions. The data collected covered socio-demographic characteristics, self-reported health conditions, types of medications used, sources of information, reasons for self-medication, and participants' awareness of the risks associated with self-medication. The survey also inquired about adverse effects experienced due to self-medication.

Data Analysis

The data were analyzed using descriptive statistics to summarize the prevalence of self-medication and the types of medications used. The SPSS software version 22 was used to analyze the data.

Ethical Consideration

The study was conducted on a voluntary basis. No personal data was collected, so ethical approval was not required.

RESULTS

In this study included among the 731 university students, the gender distribution was fairly balanced, with 246 males and 268 females in the Bangladeshi cohort, while the Malaysian cohort consisted of 72 males and 142 females (Graph 1). The prevalence of self-medication was significantly higher among Bangladeshi students (Graph 2). In Bangladesh, 76.34% of students reported engaging in self-medication compared to 39.2% of Malaysian students. This difference highlights the socio-economic factors influencing healthcare behaviors in these two countries.

The types of drugs most frequently used in self-medication varied between the two countries is described in Graph 3. In Bangladesh, antibiotics were the most commonly used (78%), followed by antipyretics (69.31%) and analgesics (55.71%). In Malaysia, antipyretics were the most commonly used drugs (77.44%), followed by gastrointestinal agents (70.32%) and supplements (65%). The widespread use of antibiotics in Bangladesh is particularly concerning, as it contributes to the rising issue of antibiotic resistance. The reasons for self-medication differed between the two groups (Graph 4). In Bangladesh, the leading causes included a lack of awareness about the risks of self-medication (91.32%) and the high cost of physician fees (62.21%). In Malaysia, convenience (35%) and advice from family or friends (83%) were the primary reasons for engaging in self-medication. This difference reflects the stronger financial barriers faced by Bangladeshi students compared to their Malaysian counterparts.

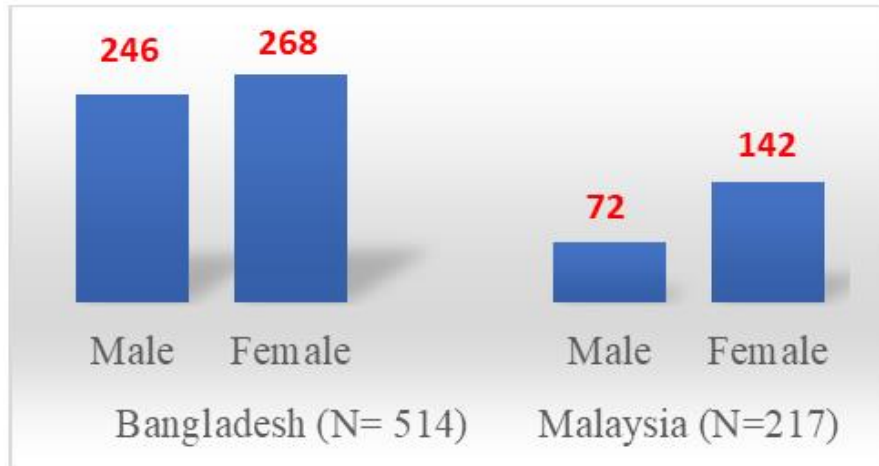
The frequency of self-medication was higher in Bangladesh (Graph 5). While 40% of Bangladeshi students reported engaging in self-medication frequently, 35% did so occasionally, and 25% rarely self-medicated. In Malaysia, the majority of students reported self-medicating rarely (50%), with fewer students doing so occasionally (30%) or frequently (20%).

Students in both countries used self-medication to treat a range of conditions (Graph 6). In Bangladesh, students most frequently self-medicated for headaches (45%), fever (55%), and stomach pain (30%). In Malaysia, students commonly used self-medication for flu (50%), headaches (40%), and cough (35%). This variation highlights the differing health priorities between the two groups.

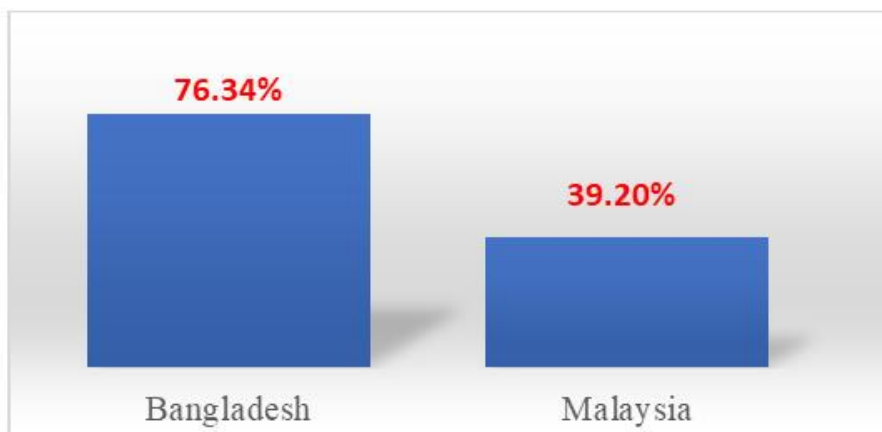
The sources of information students relied on for choosing medications were diverse (Graph 7). In Bangladesh, 40% of students obtained information from family or friends, 30% from the internet, and 15% from pharmacists or doctors.

In Malaysia, the internet was a less common source (20%), with family and friends being the most common source (50%), followed by pharmacists (20%) and doctors (10%).

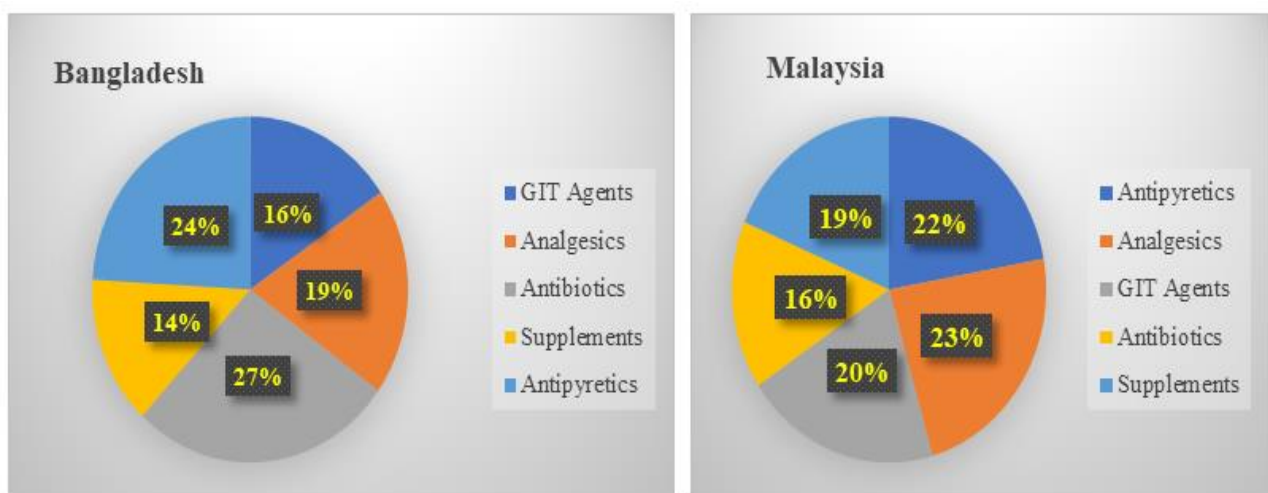
Awareness of the risks associated with self-medication was generally higher among Malaysian students (Graph 8). In Malaysia, 70% of students were aware of the risks, compared to only 35% of Bangladeshi students. This suggests a need for improved education regarding the risks of self-medication in Bangladesh.



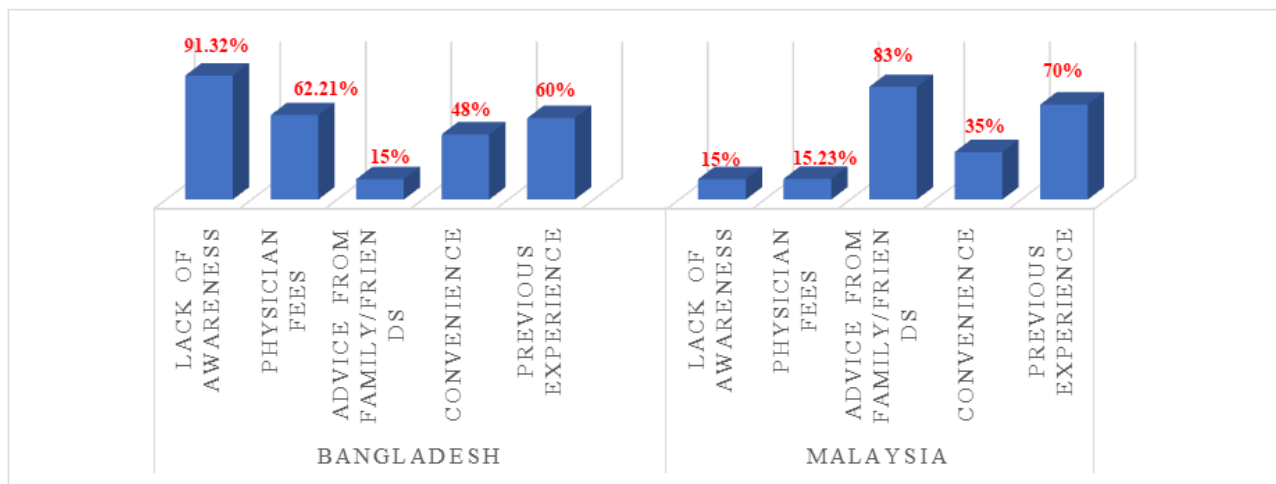
Graph 1: Demographic data of the participants



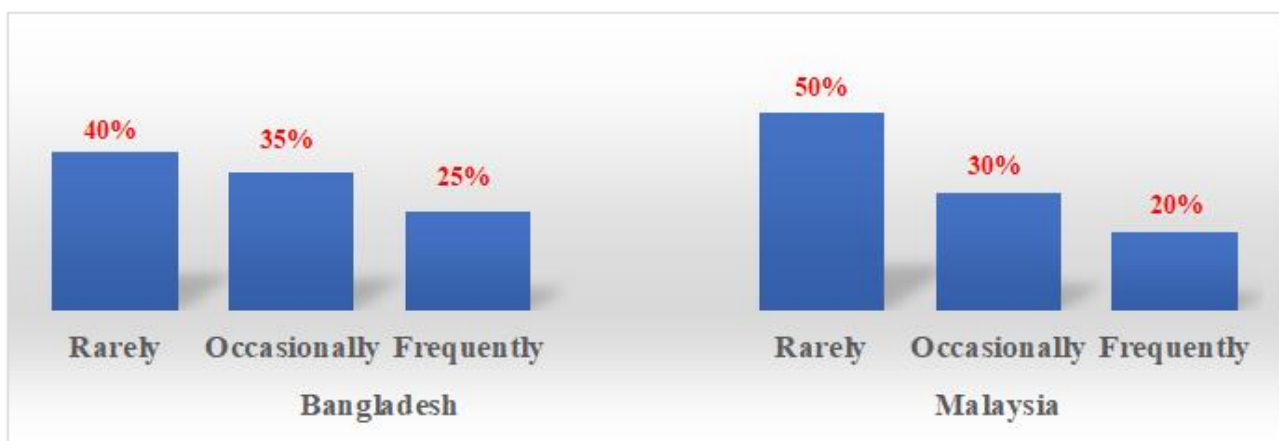
Graph 2: Prevalence of Self-Medication among University Students in Bangladesh and Malaysia



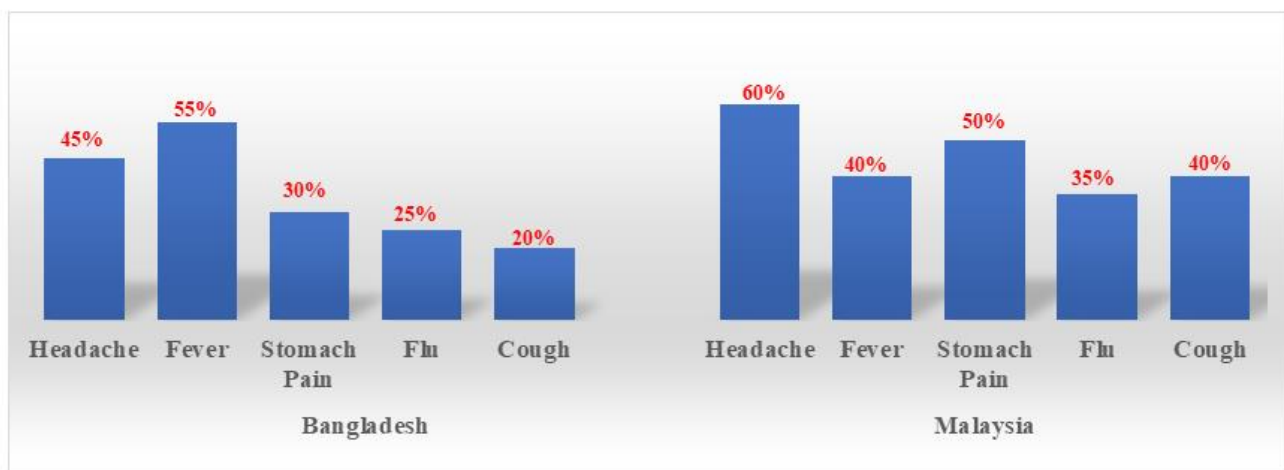
Graph 3: Types of Drugs Used in Self-Medication in Bangladesh and Malaysia



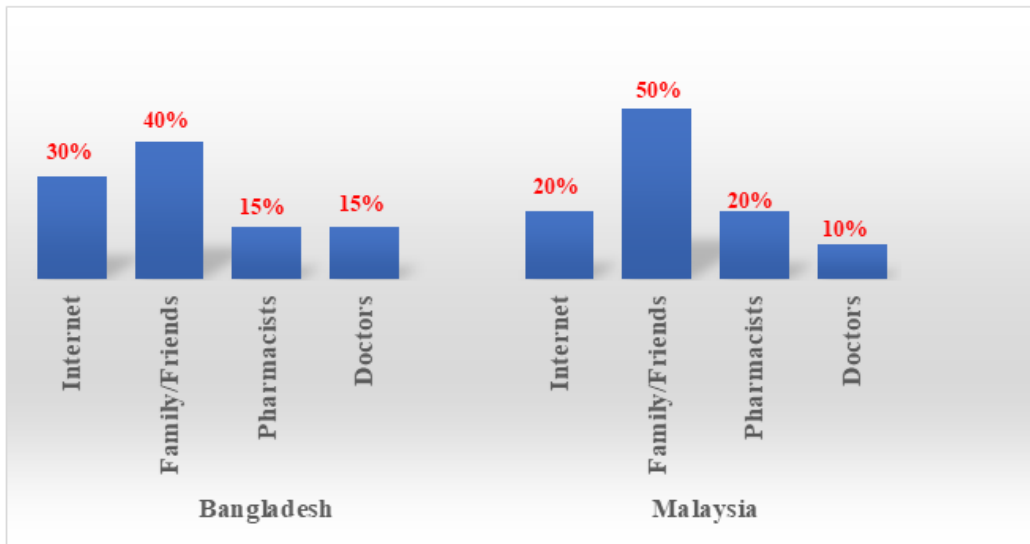
Graph 4: Reasons for Self-Medication among University Students in Bangladesh and Malaysia



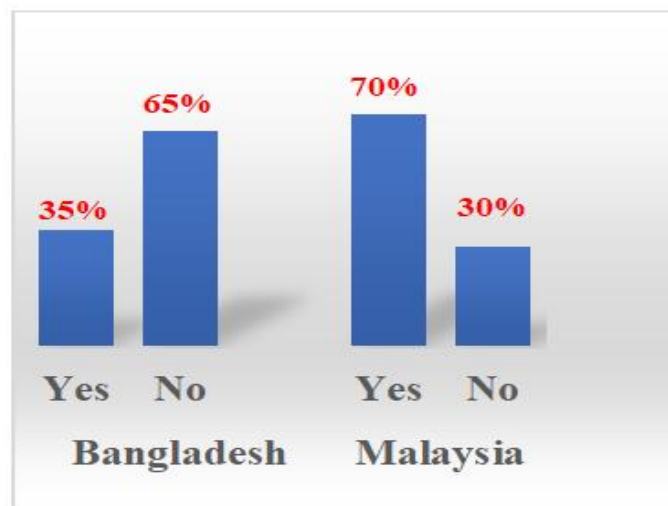
Graph 5: Frequency of Self-Medication among University Students in Bangladesh and Malaysia



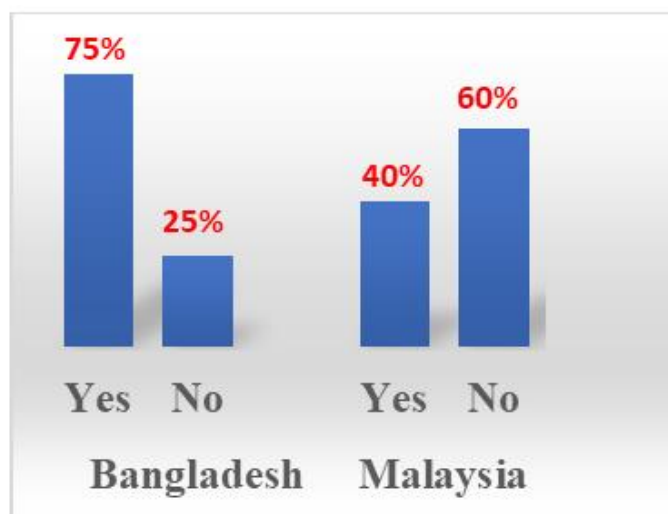
Graph 6: Types of Illnesses Treated with Self-Medication among University Students in Bangladesh and Malaysia



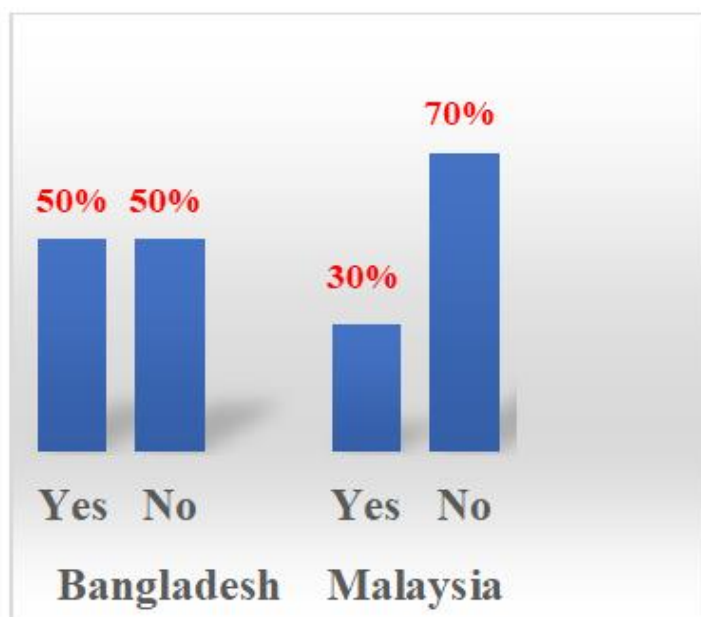
Graph 7: Sources of Medication Information among University Students in Bangladesh and Malaysia



Graph 8: Awareness of Risks Associated with Self-Medication among University Students in Bangladesh and Malaysia



Graph 9: Preference for Self-Medication Over Doctor Visits Among University Students in Bangladesh and Malaysia



Graph 10: Incidence of Adverse Effects from Self-Medication among University Students in Bangladesh and Malaysia

A higher proportion of Bangladeshi students preferred self-medication over visiting a doctor (Graph 9). In Bangladesh, 75% of students expressed a preference for self-medication, compared to 40% in Malaysia. This is likely linked to the financial constraints and lack of healthcare access experienced by Bangladeshi students. The incidence of adverse effects was higher among Bangladeshi students (Graph 10). Half of the Bangladeshi students (50%) reported experiencing adverse effects, such as gastrointestinal discomfort or allergic reactions, compared to 30% of Malaysian students. The high rate of antibiotic misuse in Bangladesh likely contributes to this elevated rate of adverse effects.

DISCUSSION

The study reveals significant differences in self-medication practices between university students in Bangladesh and Malaysia, with a notably higher prevalence of self-medication among Bangladeshi students. These findings can be attributed to several key factors, including economic disparities, differences in healthcare access, and varying levels of awareness regarding the risks of self-medication. In Bangladesh, financial barriers appear to be a major contributor to the high prevalence of self-medication, as evidenced by the 62.21% of students who cited physician fees as a deterrent to seeking professional healthcare. This aligns with previous studies that have highlighted the role of economic constraints in driving self-medication in low-income countries (Sharma & Singh, 2023). The widespread use of antibiotics among Bangladeshi students is particularly concerning, as it contributes to the growing global problem of antibiotic resistance. This is consistent with earlier research that has identified antibiotic misuse as a major public health concern in developing countries (Rahman & Ahmed, 2022). In contrast, the lower prevalence of self-medication in Malaysia can be attributed to better access to healthcare services and higher levels of awareness about the risks associated with self-medication. However, the fact that 39.2% of Malaysian students still engaged in self-medication suggests that there is still a need for greater awareness and regulation, particularly concerning OTC medications and dietary supplements. The convenience of obtaining medications without a prescription was a significant factor for Malaysian students, echoing findings from previous studies conducted in high-income countries, where self-medication is often driven by the perceived ease and time-saving benefits (Mishra & Kumar, 2022). The study also highlights the role of peer influence in self-medication practices. In both countries, students frequently relied on advice from family and peers when choosing medications, with 83% of Malaysian students and 48% of Bangladeshi students reporting this influence. This reflects a broader cultural trend where individuals rely on informal advice rather than seeking professional medical consultation, especially when the symptoms are perceived to be mild or familiar. This behavior, while common, can lead to improper drug use, as individuals may not fully understand the risks or appropriate dosages of the medications they consume.

The relatively low awareness of the risks associated with self-medication, particularly in Bangladesh, underscores the urgent need for educational interventions. With 65% of Bangladeshi students unaware of potential adverse effects, it is clear that public health campaigns should focus on raising awareness about the dangers of improper medication use. This includes educating students on the risks of antibiotic resistance, drug interactions, and the importance of consulting healthcare professionals before taking medication, even for minor ailments. Despite the differences in healthcare access and awareness, both countries demonstrate a need for stronger regulation of over-the-counter medications. In particular,

the unrestricted availability of antibiotics in Bangladesh poses a serious threat to public health, and stricter enforcement of prescription requirements could help reduce the misuse of these drugs. Additionally, universities in both countries could play a more active role by providing on-campus healthcare services, thereby reducing students' reliance on self-medication due to convenience or financial constraints.

CONCLUSION

This study highlights the significant differences in self-medication practices among university students in Bangladesh and Malaysia. The higher prevalence in Bangladesh is driven by financial barriers and lack of awareness, while in Malaysia, convenience plays a major role. Targeted interventions are necessary to address the public health risks associated with self-medication, particularly antibiotic misuse and adverse drug reactions.

RECOMMENDATIONS

To effectively address the issue of self-medication among university students, educational programs should be introduced to raise awareness about the potential risks and emphasize the importance of consulting healthcare professionals before using any medication. In Bangladesh, improving access to affordable healthcare services is essential to help reduce financial barriers that drive students toward self-medication. Stricter regulations on the sale of over-the-counter medications, particularly antibiotics, should be implemented to prevent misuse and safeguard public health. Additionally, universities should establish on-campus health services to offer easy access to medical advice, which would significantly reduce students' reliance on self-medication as a convenient alternative.

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