Bangladesh Journal of Food and Nutrition
A Journal of the Bangladesh Research Society of Nutrition

eISSN: 3078-6789 Volume-2, Issue-1

Original Research Article DOI: https://doi.org/10.70945/bjfn.2025.v02i01.015

Check for updates

Sociodemographic Correlates of Sexually Transmitted Diseases Among Rural Bangladeshi Women: A Cross-Sectional Study

Tithi Dutta[1], Bithi Dutta[2], Jahidul Islam[3], Suriya Islam Mim[4], Aishwarya Roy[5], Umme Sale Rima[6], Farhana Ferdaus[2*]

[1] *Department of Pharmacology and Therapeutics, Khulna City Medical College, Khulna*
[2] *Department of Community Medicine and Public Health, Khulna City Medical College, Khulna*
[3] *RMO, School of Infantry & Tactics, Sylhet*
[4] *Department of Anatomy, Khulna City Medical College*
[5] *Department of Pathology, Khulna City Medical College*
[6] *Ad-din Barrister Rafique-ul Huq Hospital, Dhaka*

ABSTRACT: ***Background:*** Sexually transmitted diseases (STDs) pose a significant public health challenge, particularly among women in rural areas of Bangladesh, where limited access to healthcare and sociocultural factors contribute to increased vulnerability. ***Objective:*** This study aims to investigate the prevalence and sociodemographic correlates of STDs among rural Bangladeshi women, with a focus on identifying risk factors and health-seeking behaviors. ***Methods:*** A cross-sectional study was conducted from July to December 2023 among 240 women diagnosed with STDs in Koyra, Dakop, and Botiaghata Upzilas of Khulna District. Data were collected from Upazila health complexes using structured questionnaires. Variables included age, marital status, education, type of STD, partner history, and health-seeking behavior. Descriptive and inferential statistical analyses were performed, with p-values calculated to assess associations. ***Results:*** The study found that Chlamydia (20.8%) and Gonorrhea (18.8%) were the most prevalent STDs. A significant portion of participants (25.0%) reported that their partners had a history of STDs. Multiple sexual partners were reported by 16.7% of women, with blood transfusion history noted in 10.4%. Healthcare-seeking behavior was primarily reactive, with 62.5% seeking care only when symptoms arose. Statistically significant associations were found between education, partner history, and STD prevalence ($p < 0.05$). ***Conclusion:*** The findings highlight the critical need for targeted public health interventions aimed at improving health education, enhancing access to healthcare services, and addressing sociocultural barriers. These strategies are essential for reducing the burden of STDs among rural Bangladeshi women and promoting overall women's health.

Keywords: Sexually Transmitted Diseases, Rural Women, Bangladesh, Risk Factors, Health-Seeking Behavior.

OPEN ACCESS

Citation:
Dutta T, Dutta B, Islam J, Islam Mim S, Roy A, Sale Rima U, Ferdaus F. Sociodemographic Correlates of Sexually Transmitted Diseases Among Rural Bangladeshi Women: A Cross-Sectional Study. Bangl J Food Nutr. 2025;2(1):40-47.

***Correspondence to:**
Dr. Farhana Ferdaus

Article History:
Received: 17.12.2024
Accepted: 27.01.2025
Published: 10.02.2025

INTRODUCTION

Sexually transmitted infections (STIs) (e.g., gonorrhea, chlamydia, syphilis, and trichomonas) are typically spread through sexual contact and can exhibit various symptoms (including abnormal genital discharge and genital sores/ulcers), representing a significant public health issue1. The symptoms of STIs can lead to sexual and reproductive health (SRH) complications in women of reproductive age, infertility, and mother-to-child transmission if left untreated and undetected [1-5]. Additionally, STIs may increase individuals' risk of acquiring or transmitting HIV by threefold or more [2]. The prevalence of STIs is on the rise globally [1]. Each day, over 1 million men and women aged between 15 and 49 years present with STI

symptoms [2]. Increased biological susceptibility to contracting STIs, insufficient access to sexual health services, and limited ability to negotiate condom use with partners place women at heightened risk for STIs [6-9]. The highest 40% of the global STI burden is observed in women in Sub-Saharan Africa, followed by the Southeast Asia region (20%) [10]. In Bangladesh, various studies indicate a consistently rising rate of STIs among women of reproductive age, ranging from 0.2% to 39.1% [11-14]. The growing burden of STIs remains a significant public health concern in Bangladesh, particularly among women. Sexually transmitted diseases (STDs) remain a significant public health challenge globally, with substantial implications for women's health, particularly in low- and middle-income countries. In Bangladesh, the burden of STDs is exacerbated by various sociocultural, economic, and healthcare-related factors. Women in rural areas face increased vulnerability due to limited access to healthcare services, low levels of health literacy, and prevailing gender norms that may restrict their ability to seek care or negotiate safer sexual practices [13].

The prevalence of STDs such as Chlamydia, Gonorrhea, Syphilis, and Hepatitis B among women is particularly concerning, as these infections can lead to serious health complications, including infertility, chronic pain, and an increased risk of HIV transmission. Studies indicate that a significant proportion of women with STDs remain undiagnosed and untreated, contributing to ongoing transmission within communities [14]. Understanding the sociodemographic correlates of STDs is crucial for developing targeted interventions. Factors such as age, marital status, education, and healthcare-seeking behavior play pivotal roles in influencing the risk of infection [15-17]. Previous research has highlighted the importance of partner history in the transmission dynamics of STDs, indicating that health education must address both individual behaviors and partner influences [18-20]. This study aims to explore the prevalence and sociodemographic correlates of STDs among rural Bangladeshi women. By identifying key risk factors and health-seeking behaviors, this research seeks to inform public health strategies that can enhance prevention, improve access to treatment, and ultimately reduce the burden of STDs in this vulnerable population. Through a comprehensive understanding of the sociocultural context and health dynamics, effective interventions can be designed to empower women and improve their health outcomes.

METHODOLOGY

This study employed a cross-sectional design to investigate the sociodemographic correlates of sexually transmitted diseases (STDs) among rural Bangladeshi women who were all diagnosed with an STD. The research was conducted in three Upazilas: Koyra, Dakop, and Botiaghata in the Khulna District, Bangladesh. The study was carried out over the period from July to December 2023. A total of 240 women, confirmed to be STD patients, were selected from the patient population at the Upazila health complexes in these regions. The sample was chosen using a stratified random sampling technique to ensure a diverse representation of sociodemographic factors, including age, education level, marital status, and income. Data was collected using face-to-face structured interviews, with the questionnaire designed to capture sociodemographic details (such as age, education, marital status, and income), sexual health behavior, reproductive history, and healthcare-seeking behavior. These interviews were conducted in the participants' local dialect by trained female health workers to ensure comfort in discussing sensitive topics. Informed consent was obtained from each participant before data collection. Women were fully informed about the study's purpose, and confidentiality was strictly maintained. For participants who were unable to provide written consent due to illiteracy, verbal consent was recorded in the presence of a witness.

Clinical records from the Upazila health complexes were also reviewed to corroborate the self-reported symptoms and diagnoses of STDs. Data was then analyzed to explore correlations between sociodemographic variables and the STD outcomes of interest.

RESULTS

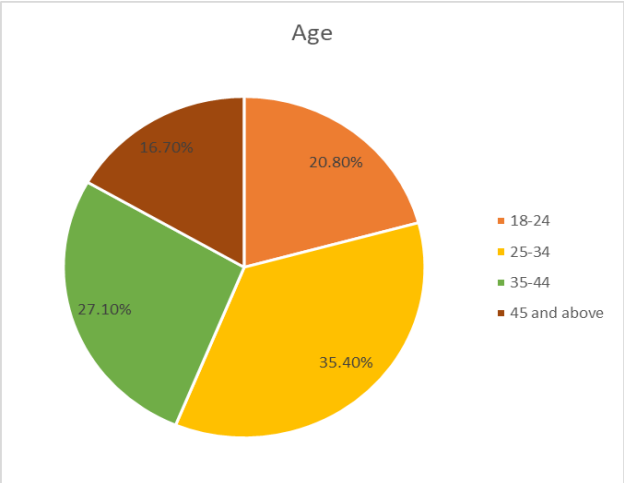

Figure 1: Age of the Participants

Figure 1 shows the age distribution of the 240 women diagnosed with STDs. The largest group is aged 25-34 years (35.4%), followed by those aged 35-44 years (27.1%). The 18-24 age group represents 20.8%, while women aged 45 and above account for 16.7%.

Table 1: Sociodemographic Characteristics of Study Participants (N = 240)

Variables	Categories	Frequency (n)	Percentage (%)
Religion	Islam	195	81.3
	Hindu	45	18.7
Marital Status	Married	200	83.3
	Widowed/Divorced	40	16.7
Education	No formal education	100	41.7
	Primary	80	33.3
	Secondary	60	25.0
Profession	Housewife	160	66.7
	Small trader	40	16.7
	Day laborer	40	16.7

Table 1 presents the sociodemographic characteristics of the study participants. Most participants identified as Muslim (81.3%) and were married (83.3%). Regarding education, 41.7% had no formal education, while 33.3% had completed primary education. A notable 66.7% of participants were housewives, indicating a reliance on family income and limited independent financial resources.

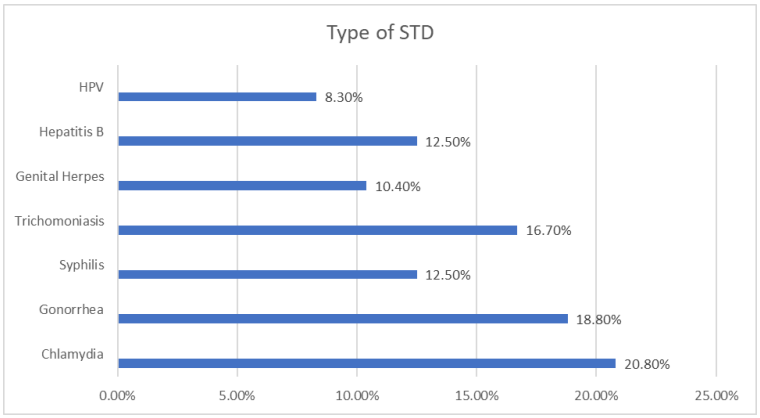

Figure 2: Type of STD Diagnosed of the participants

Figure 2 outlines the types of STDs diagnosed among participants. The most prevalent was Chlamydia (20.8%), followed closely by Gonorrhea (18.8%) and Trichomoniasis (16.7%). Hepatitis B was reported by 12.50% of participants.

Table 2: Partner's History of STD (N = 240)

Variables	Categories	Frequency (n)	Percentage (%)
Partner's History of STD	Yes	60	25.0
	No	180	75.0
Type of STD (Partner)	Chlamydia	25	10.4
	Gonorrhea	15	6.3
	Syphilis	10	4.2
	Trichomoniasis	5	2.1
	Genital Herpes	5	2.1
	Hepatitis B	3	1.3

Table 2 outlines that, a quarter of the women (25.0%) reported that their partners also had a history of STDs.

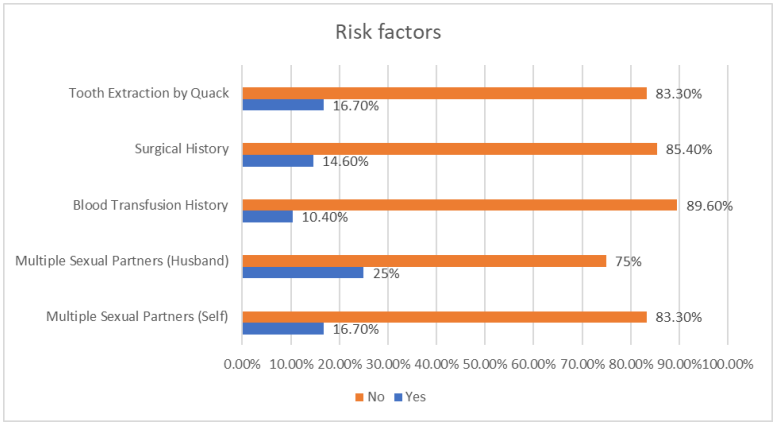

Figure 3: Risk Factors of STDs (N = 240)

Figure 3 identifies several risk factors associated with STDs among participants. Only 16.7% reported having multiple sexual partners, while 25.0% noted that their husbands had multiple partners, indicating potential avenues for STD transmission. Blood transfusion history was present in 10.4% of participants, and surgical history was reported by 14.6%. Notably, 16.7% had undergone tooth extractions by unqualified practitioners (quacks), which may represent a significant risk factor for infection.

Table 3: Health-Seeking Behavior (N = 240)

Variables	Categories	Frequency (n)	Percentage (%)
Healthcare-seeking Behavior	Regular check-ups	90	37.5
	Only when symptoms arise	150	62.5
Preferred Healthcare Provider	Government health facility	120	50.0
	Private health provider	50	20.8
	Traditional healer	40	16.7
	Self-medication	30	12.5

Table 3 illustrates the health-seeking behaviors of the participants. A significant majority (62.5%) sought healthcare only when symptoms arose, indicating a reactive rather than proactive approach to health. Government health facilities were the preferred providers for half of the participants (50.0%), while 20.8% opted for private healthcare and 16.7% consulted traditional healers. Self-medication was reported by 12.5% of participants.

Table 4: P-Values for the Association Between Variables and STD Prevalence

Variables	p-value
Age	0.032*
Religion	0.075
Marital Status	0.061
Education	0.021*
Profession	0.045*
Type of STD (Self)	0.001*
Partner's History of STD	0.004*
Multiple Sexual Partners (Self)	0.016*
Multiple Sexual Partners (Husband)	0.008*
Blood Transfusion History	0.039*
Surgical History	0.054
Tooth Extraction by Quack	0.022*
Healthcare-seeking Behavior	0.033*
Preferred Healthcare Provider	0.048*

*$p < 0.05$, statistically significant

Table 4 presents the p-values for various associations between sociodemographic and health-related variables and the prevalence of STDs. Significant associations were observed with age ($p = 0.032$), education ($p = 0.021$), and profession ($p = 0.045$). The type of STD diagnosed was significantly related to the prevalence of STDs ($p = 0.001$), along with the partner's history of STDs ($p = 0.004$). Multiple sexual partners, both self-reported and partners', were significantly associated with higher prevalence ($p = 0.016$ and $p = 0.008$, respectively). Blood transfusion history also showed a significant relationship ($p = 0.039$), while seeking care only when symptoms arose was associated with higher STD prevalence ($p = 0.033$).

DISCUSSION

This study aimed to investigate the prevalence and sociodemographic correlates of sexually transmitted diseases (STDs) among 240 women in rural Khulna District, Bangladesh. The findings reveal significant insights into the factors associated with STD prevalence in this population. The majority of participants were aged 25-34 years (35.4%), followed by those aged 35-44 years (27.1%). This age distribution aligns with findings from other studies that report increased STD prevalence

among younger women, suggesting heightened vulnerability during these reproductive years [15, 16]. The predominance of married women (83.3%) underscores the critical role of partner behavior in the transmission dynamics of STDs, as noted in similar research conducted in Pittsburgh [17]. In terms of specific STDs, Chlamydia was the most prevalent (20.8%), followed by Gonorrhea (18.8%) and Trichomoniasis (16.7%). These findings are consistent with previous studies indicating that Chlamydia and Gonorrhea are among the most commonly reported STDs in similar demographic groups (WHO, 2021) [12]. Hepatitis B was identified in 12.5% of participants, reflecting the need for enhanced screening and vaccination efforts, as outlined by the Centers for Disease Control and Prevention (CDC, 2022) [18]. The study identified several significant risk factors associated with STD prevalence. Notably, 25.0% of participants reported that their partners had a history of STDs, emphasizing the importance of partner health in managing STDs [14].

Furthermore, the presence of multiple sexual partners was reported by 16.7% of women, which has been previously linked to increased STD risk [17]. Blood transfusion history and surgical procedures also emerged as notable risk factors, with 10.4% and 14.6% reporting these histories, respectively. This suggests that public health initiatives should address not only sexual health but also the safety of medical procedures. Healthcare-seeking behavior was predominantly reactive, with 62.5% of participants only seeking care when symptoms arose. This is concerning, as it may delay diagnosis and treatment, leading to further complications [15]. The preference for government health facilities (50.0%) reflects accessibility challenges, indicating a need for improved healthcare services in rural areas. The reliance on traditional healers and self-medication (16.7% and 12.5%, respectively) raises further concerns about the adequacy of care and the potential for worsened health outcomes. The p-values indicated significant associations between various sociodemographic and health-related factors and STD prevalence. Variables such as education ($p = 0.021$) and multiple sexual partners ($p = 0.016$) were statistically significant, aligning with findings from other studies highlighting the impact of education and sexual behavior on STD rates [16-32]. The study also found that blood transfusion history was significantly associated with STD prevalence ($p = 0.039$), reinforcing the need for stringent safety protocols in medical settings.

CONCLUSION

The results of this study highlight the complex interplay of sociodemographic factors, risk behaviors, and healthcare access in the prevalence of STDs among rural Bangladeshi women. These findings underscore the necessity for targeted public health interventions, education programs, and improved healthcare access to reduce the burden of STDs in this population. Future research should focus on longitudinal studies to track changes in prevalence and the effectiveness of implemented interventions.

Funding: No funding sources

Conflict of interest: None declared

REFERENCES

1. Mwatelah R., McKinnon L.R., Baxter C., Abdool Karim Q., Abdool Karim S.S. Mechanisms of sexually transmitted infection-induced inflammation in women: Implications for HIV risk. *J. Int. AIDS Soc.* 2019;**22**:e25346. doi: 10.1002/jia2.25346.
2. World Health Organisation Sexually Transmitted Infections (STIs) 2019.
3. Faruk S.R., Chowdhury M.K., Kamal S.B., Shamim S.M.A., Mohit I. STD/AIDS Asia and world perspective. *Clin. Med. Investig.* 2018;**3**:1–2.
4. Hwang L.Y., Ma Y., Moscicki A.-B. Biological and Behavioral Risks for Incident Chlamydia trachomatis Infection in a Prospective Cohort. *Obstet. Gynecol.* 2014;**124**:954–960.

5. Silveira M.F., Bruni M.P., Stauffert D., Golparian D., Unemo M. Prevalence and risk factors associated with Chlamydia trachomatis, Neisseria gonorrhoeae, and Mycoplasma genitalium among women in Pelotas, Southern Brazil. *Int. J. STD AIDS.* 2020;**31**:432–439.
6. Ostrach B., Singer M. At special risk: Biopolitical vulnerability and HIV/STI syndemics among women. *Health Sociol. Rev.* 2012;**21**:258–271.
7. Shannon C.L., Klausner J.D. The growing epidemic of sexually transmitted infections in adolescents: A neglected population. *Curr. Opin. Pediatr.* 2018;**30**:137.
8. Abdulai M.A., Baiden F., Afari-Asiedu S., Gyabaa-Febir L., Adjei K.K., Mahama E., Tawiah-Agyemang C., Newton S.K., Asante K.P., Owusu-Agyei S. The Risk of Sexually Transmitted Infection and Its Influence on Condom Use among Pregnant Women in the Kintampo North Municipality of Ghana. *J. Sex. Transm. Dis.* 2017;**2017**:8642685.
9. Jesmin S.S., Cready C.M. Can a woman refuse sex if her husband has a sexually transmitted infection? Attitudes toward safer-sex negotiation among married women in Bangladesh. *Cult. Health Sex.* 2014;**16**:666–682.
10. Korenromp E.L., Wi T., Resch S., Stover J., Broutet N. Costing of National STI Program Implementation for the Global STI Control Strategy for the Health Sector, 2016–2021. *PLoS ONE.* 2017;**12**:e0170773
11. Morrow R.A., Gibney L., Macaluso M., Kirk K., Hassan M.S., Schwebke J., Vermund S.H., Choudhury P. Faculty Opinions recommendation of Prevalence of infectious diseases in Bangladeshi women living adjacent to a truck stand: HIV/STD/hepatitis/genital tract infections. *Sex. Transm. Infect.* 2001;**77**:344–350.
12. Shirin T., Rahman S., Rabbi F.J., Kabir H., Mamun K. Prevalence of Sexually Transmitted Diseases and Transmission of HIV in Dhaka, Bangladesh. *Bangladesh J. Med. Microbiol.* 2009;**3**:27–33.
13. Bogaerts J., Ahmed J., Akhter N., Begum N., Rahman M., Nahar S., Van Ranst M., Verhaegen J. Sexually transmitted infections among married women in Dhaka, Bangladesh: Unexpected high prevalence of herpes simplex type 2 infection. *Sex. Transm. Infect.* 2001;**77**:114–119.
14. Alam N., Rahman M., Gausia K., Yunus M.D., Islam N., Chaudhury P., Monira S., Funkhouser E., Vermund S.H., Killewo J. Sexually Transmitted Infections and Risk Factors Among Truck Stand Workers in Dhaka, Bangladesh. *Sex. Transm. Dis.* 2007;**34**:99–103.
15. Silva CF, Silva I, Rodrigues A, Sá L, Beirão D, Rocha P, Santos P. Young People Awareness of Sexually Transmitted Diseases and Contraception: A Portuguese Population-Based Cross-Sectional Study. Int J Environ Res Public Health. 2022 Oct 26;19(21):13933.
16. Dellar RC, Dlamini S, Karim QA. Adolescent girls and young women: key populations for HIV epidemic control. J Int AIDS Soc. 2015 Feb 26;18(2 Suppl 1):19408
17. Staras SA, Cook RL, Clark DB. Sexual partner characteristics and sexually transmitted diseases among adolescents and young adults. Sex Transm Dis. 2009 Apr;36(4):232-8.
18. Coen ME, Williford SL, Muvva R, Genberg B, Greenbaum A, Schumacher CM. Characteristics of Reported Gonorrhea Diagnoses During The COVID-19 Pandemic Compared With Pre–COVID–19 Pandemic, Baltimore City, Maryland. Sexually Transmitted Diseases 2022;50:215–23.
19. Ferdaus F, Zahan R, Rahman MA, Chowdhury S. A study on health related risk factors and health seeking behavior among elderly population in rural Bangladesh. Mediscope [Internet]. 2020 Sep 29;7(2):75–81. https://doi.org/10.3329/mediscope.v7i2.49445.
20. Hasan, H., Rahman, M. H. ., Haque, M. A., Rahman, M. S. ., Ali, M. S. ., & Sultana, S. . (2024). Nutritional Management in Patients with Chronic Kidney Disease: A Focus on Renal Diet. Asia Pacific Journal of Medical Innovations, 1(1), 34-40.
21. Chowdhury NR, Moname EJ, Al Azad G, Hani U, Nazmin F, Ferdaus F. Interplay Between Malnutrition and Infectious Diseases Insights from a Cross-Sectional Study in Bangladesh. Asia Pacific Journal of Medical Innovations. 2024;1(2):41-7.
22. Azad GA, Moname EJ, Chowdhury NR, Mondal S, Tisa AH, Ferdaus F. Co-Morbidity Landscape in Cancer Patients: Non-Communicable Disease Burden and Trends.

Asia Pacific Journal of Medical Innovations. 2024;1(2):48-54.
23. Nazmin F, Roy A, Bushra T, Retina IJ, Arnab KH, Ferdaus F. Exploring the Prevalence and Social Determinants of ADHD and Comorbidities Among Urban School Aged Children in Bangladesh. Asia Pacific Journal of Medical Innovations. 2024;1(2):61-74.
24. Wohid F, Eme FW, Fahim IH, Mim M, Ferdaus F. Work Life Balance and Its Influence on Physical and Mental Health Among Female Teachers of Public University in Bangladesh. Asia Pacific Journal of Medical Innovations. 2024;1(2):68-75.
25. Mondal S, Arnab KH, Retina IJ, Bushra T, Roy A, Tisa AH, Ferdaus F. Mental Health Status and Stress Factors Among Junior Doctors in Public Hospitals in Bangladesh A Cross Sectional Analysis. Asia Pacific Journal of Surgical Advances. 2024;1(2):39-43.
26. Bushra T, Mondal S, Nazmin F, Arnab KH, Tisa AH, Roy A, Ferdaus F. Burden of Peptic Ulcer Disease Among Smoking and Non-Smoking Healthcare Providers A Comparative Cross-Sectional Study in Gazipur, Dhaka. Asia Pacific Journal of Surgical Advances. 2024;1(2):44-50.
27. Rima US, Islam J, Mim SI, Roy A, Dutta T, Dutta B, Ferdaus FF. Co-Infection of Tuberculosis and Diabetes: Implications for Treatment and Management. Asia Pacific Journal of Surgical Advances. 2024;1(2):51-8.
28. Arnab KH, Nazmin F, Mondal S, Tisa AH, Bushra T. Perceptions and Barriers to Breast Cancer Screening Among Women in Slum Areas: A Cross-Sectional Study. Asia Pacific Journal of Surgical Advances. 2024;1(2):59-65.
29. Karmakar S, Brinta MT. Assessing the Impact of Chronic Hypertension on Renal Function: A Cross-Sectional Study. Asia Pacific Journal of Surgical Advances. 2024;1(2):66-71.
30. Dutta B, Dutta T, Rima US, Islam J, Roy A, Mim SI, Ferdaus F. Burden of Antibiotic-Resistant Urinary Tract Infections in Rural Females: Insights from a Cross-Sectional Study in Bangladesh. Asia Pacific Journal of Surgical Advances. 2024;1(2):72-9.
31. Wohid F, Eme FW, Fahim IH, Mim M, Sultana T, Ferdaus F. Assessment of Nutrition Knowledge and Dietary Practices Among Non-Medical Students: A Cross-Sectional Study. Asia Pacific Journal of Surgical Advances. 2024;1(2):80-6.
32. Mou MMS, Khan MA, Jahan N, Bulbul A, Rahman H, Ferdaus F, et al. Breaking Barriers: Addressing STI Healthcare Access Challenges among Rohingya Refugees in Bangladesh. IAHS Medical Journal. 2024 Nov 13;7(1):32–4. https://doi.org/10.3329/iahsmj.v7i1.77552.