OPEN ACCESS

Saudi Journal of Nursing and Health Care

Abbreviated Key Title: Saudi J Nurs Health Care
ISSN 2616-7921 (Print) |ISSN 2616-6186 (Online)
Scholars Middle East Publishers, Dubai, United Arab Emirates
Journal homepage: https://saudijournals.com

Original Research Article

Nurses' Knowledge and Practice Regarding Sexually Transmitted Diseases at 250 Bedded Bangamata Sheikh Fazilatunnessa Mujib General Hospital, Sirajganj, Bangladesh

Rashida Begum[1*], Md. Mostak Hossain[2], Mst. Rubina Khatun[3], Jannatun Naim[4], Most. Arifa Parvin[5], Anjoli Rani Roy[6], Mollika Rani[7], Munnashi Begum[8], Most. Shahnaj Parvin[9]

[1]Lecturer, Bogura Nursing College, Bogura, Bangladesh
[2]Senior Staff Nurse, 250-BeddedBangamata Sheikh Fazilatunnessa Mujib General Hospital, Sirajganj, Bangladesh
[3]Senior Staff Nurse, National Institute of Cancer Research and Hospital, Mohakhali, Bangladesh
[4]Senior Staff Nurse, Dhaka Medical College Hospital, Dhaka, Bangladesh
[5]Senior St Ethiopia, (2003aff Nurse, General Hospital, Kurigram, Bangladesh
[6]Senior Staff Nurse, M. Abdur Rahim Medical College Hospital, Dinajpur, Bangladesh
[7]Senior Staff Nurse, Upazila Health Complex Atrai, Naogaon, Bangladesh
[8]Senior Staff Nurse, M. Abdur Rahim Medical College Hospital, Dinajpur, Bangladesh
[9]Senior Staff Nurse, Upazila Health Complex, Natore, Bangladesh

DOI: 10.36348/sjnhc.2023.v06i11.005 | **Received:** 29.09.2023 | **Accepted:** 02.11.2023 | **Published:** 10.11.2023

***Corresponding author:** Rashida Begum
Lecturer, Bogura Nursing College, Bogura, Bangladesh

Abstract

Background*:** The term sexually transmitted infection (STI) is used to denote a variety of clinical conditions that caused by pathogens that can be acquired and transmitted through sexual activity. The problem with most STDs is that they can occur symptom-free and can thus be passed on unaware during unprotected sexual intercourse. Sexually transmitted diseases are a major health problem affecting mostly young people, not only in developing but also in developed countries. Over the period 1985-1996, a general decrease in gonorrhea, syphilis, and chlamydia infections was noted in developed countries, both in the general population and among adolescents [1]. ***Objective*:** The aim was to assess Nurses' Knowledge and Practice regarding Sexually Transmitted Diseases at 250 Bedded Bangamata Sheikh Fazilatunessa Mujib General Hospital, Sirajganj. ***Methodology*:** This descriptive cross-sectional study design was used, and a sample size of 110 was a simple random sampling technique followed by those who met the inclusion criteria to assess the nurse's Knowledge and Practice regarding Sexually Transmitted Diseases. The study was conducted from July 2021 to December 2021. The instruments for data collection were a semi-structured questionnaire, which is composed of three parts: Demographic variables, knowledge, and practice-based information on Sexually Transmitted Diseases. ***Results*:** The findings of the present study revealed that the demographic characteristics of the highest 51.82% were within 31-40 years; 80.91% were female; 80.91% were Muslim; 59.09% were married; 60% were diploma in nursing and average knowledge score 41.82% were high level of knowledge regarding the Sexually Transmitted Diseases. ***Conclusion: The present study concluded that the level of nurses' knowledge regarding sexually transmitted diseases was 41.82% high level of knowledge regarding STDs in the current study, which may be due to their professional and clinical experiences. In addition to knowledge regarding STDs, prevention is very important for Bangladeshi people.

Keywords: Knowledge, Sexually Transmitted Diseases, Practice.

INTRODUCTION

The term sexually transmitted infection (STI) is used to denote a variety of clinical conditions that are caused by pathogens that can be acquired and transmitted through sexual activity [1]. STIs are transmitted predominantly through unprotected sex and can also be transmitted during childbirth or breastfeeding, as well as sharing needles Lazarus, Sihvonen-Riemenschneider, Laukamm-Josten, Wong, & Liljestrand, (2010) [2]. STIs are caused by more than 30 pathogens, including bacteria, viruses, protozoa, and fungi. There are both

curable and non-curable but preventable STIs [3, 4]. Sexually transmitted infections (STIs), also referred to as sexually transmitted diseases (STDs) and venereal diseases (VD), are illnesses that have a significant probability of transmission between humans using human sexual behavior, including vaginal intercourse, oral and anal sex. Sexually transmitted infections (STIs) are recognized as a major public health problem in most of the world. STDs include not only the common classical diseases like Gonorrhea, Syphilis, Chancroids, and Lymphogranuloma venerum but also about twenty infections often referred to as "second generation "STDs caused by bacteria, viruses, parasites, protozoa, and fungal agents. STDs can be recognized as curable and incurable. The common curable STDs are Gonorrhea, Syphilis, Chancroid, Lymph ogranulomavenerum, Chlamydia, and Trichomoniasis and lymphogranuloma Donovan's. Globally, an estimated 35.3 (32.2-38.8) million people were living with HIV in 2012. There was an average of 2.3 (1.9-2.7) million new HIV infections globally. Worldwide, up to 4,000 newborn babies become blind every year because of eye infections attributable to untreated maternal gonococcus and chlamydial infections. In pregnancy, untreated early syphilis resulted in a stillbirth rate of 25% and is responsible for 14% of neonatal deaths and an overall perinatal mortality of about 40% [5]. The problem with most STDs is that they can occur symptom-free and can thus be passed on unaware during unprotected sexual intercourse. On an individual level, complications can include pelvic inflammatory diseases and possibly lead to ectopic pregnancies and infertility. Female adolescents are likely to have a higher risk of contracting an STD than their male counterparts as their partners are generally older and, hence, more likely to be infected. The declining age of first sexual intercourse has been proffered as one possible explanation for the increase in the number of STDs. According to data from different European countries, the average age of first sexual intercourse has decreased over the last three decades, with increasing proportions of adolescents reporting sexual activity before the age of 16 years. An early onset of sexual activity not only increases the probability of having various sexual partners but also increases the chances of contracting a sexually transmitted infection. The risk is higher for female adolescents as their cervical anatomic development is incomplete and especially vulnerable to infection by certain sexually transmitted pathogens. Although knowledge and awareness have been reported to have a limited effect on changing attitudes and behavior, they are important components of sex education that help promote informed, healthy choices. As schooling in Europe is generally compulsory at least up to the age of 15 years and sex education is part of the school curriculum in almost all European countries, school-going adolescents should be well informed on the health risks associated with sexual activity and on how to protect themselves and others. Given the decreasing age of sexual debut and the reported increasing numbers of diagnosed STDs among young people, the results of our review can help point out areas where STD risk communication for school-attending adolescents needs to be improved. The lack of knowledge regarding sexually transmitted diseases among nurses' is a significant problem not only because this is the age group most at risk for acquiring an STD but also because irreversible damage can be caused by sexually transmitted diseases if not treated immediately. Chlamydia and Gonorrhea are capable of causing pelvic inflammatory disease and fallopian tube infections, both of which are difficult to detect in the majority of cases. The permanent damage caused by scar tissue from pelvic inflammatory disease and other reproductive tract infections can ultimately lead to infertility if not treated early [6]. Furthermore, the rates of sexually transmitted diseases among college-aged individuals in Mississippi are significantly higher than in other regions of the country, as Mississippi was recognized for being the fifth highest of the fifty states in diagnosed Chlamydia cases and third highest of the fifty states in diagnosed Gonorrhea cases in 2015, which lends the University of Southern Mississippi college campus to be of particular interest for this study [7]. The STDs that are preventable but not curable are viral STDs, which include HIV, HPV, Hepatitis B virus, and herpes simplex virus. Syndromic case definitions are important when clinical examination and laboratory are not options. STDs present themselves mainly in seven syndromes; these are genital ulcer, urethral discharge, vaginal discharge, lower abdominal pain, inguinal bubo, neonatal conjunctivitis, and scrotal swelling.

RESEARCH METHODOLOGY

A descriptive type of cross-sectional study design was carried out to assess the level of Nurses' Knowledge and Practice regarding Sexually Transmitted Diseases at 250 Bedded Bangamata Sheikh Fazilatunessa Mujib General Hospital, Sirajganj. This study was conducted from July 2021 to December 2021. The study population of registered nurses working at 250 Bedded Bangamata Sheikh Fazilatunessa Mujib General Hospital, Sirajganj was selected. The sample was selected from the nurses working in the Surgery Department, Medicine Department, Orthopedic Department, and Pediatric Department.

Inclusion Criteria

- Nurses who work in the selected area in the hospital.
- Nurses who were willing to participate.
- Respondents who were available on duty during the data collection period.

Exclusion Criteria

- Nurses who were not willing to participate.
- Respondents who were not available during the data collection period.
- Nurses who work less than at least 6 months in the selected wards in the hospital.

A simple random sampling technique was adopted for selecting the sample size following inclusion and exclusion criteria. The researchers prepared a Semi-structured questionnaire according to the objectives and variables of the study. Research instruments consisted of three parts for collecting data. The first part, A, covered the demographic information about the respondents. Moreover, the second, part B, contained a related questionnaire on STDs, and the third, part C, consisted of a related checklist questionnaire. The questionnaire was pretested on 10 respondents in the Medical and surgical department at 250-bed Mohammad Ali Hospital, Bogura. Pretesting of the questionnaire was done for research instrument development and to check the validity, reliability, and acceptability of the questionnaire. Then, necessary corrections and modifications were made by the expert teacher. Research instruments were finalized based on pretested questionnaire findings and experts' opinions.

Data Collection and Analysis

Researchers collected data after getting an approval letter from Bogura Nursing College, Bogura, and researchers met with the Hospital Director and Nursing superintendent and then explained the purpose of this study of educational requirements. After obtaining permission, researchers asked for the cooperation of authority. Then, they explained the purpose of the study and asked for consent as their willingness. Researchers provided them with questionnaires and explained how to complete the questionnaire based on their understanding. Before data collection, the researchers obtained written consent from the respondents. The investigators collected data through a semi-structured questionnaire and face-to-face interviews with the respondents. Data was collected for 3 days (morning and evening). Collected data was checked, organized, coded, edited, and analyzed manually and computer-assisted by the researcher. The results were interpreted using descriptive statistics like- frequency, percentage, and mean with the help of a scientific calculator. The important variables were considered and analyzed to fulfill the study's objectives. The results were calculated from the tabulated column. After the interpretation of data, the study findings were presented by table and graph (bar chart, pie chart, etc).

RESULTS

Table 1 shows the demographical characteristics of the study population, primarily middle-aged individuals, with a notable majority falling within the 31-40 age bracket, constituting 51.82% of the respondents. The participants are predominantly female, 80.91% of the surveyed population, and a significant portion are married (59.09%). Religious diversity is evident within the group, with a substantial majority identifying as Muslim, accounting for 80.91% of the respondents. Regarding educational background, 60% of the participants hold a Diploma in Nursing. In comparison, 33.64% possess a Bachelor's degree in Nursing/PHN, and 10% have achieved a Master's degree/MPH in Nursing, reflecting diverse educational qualifications within the nursing profession. Regarding professional experience, a significant portion of respondents boasts 6-10 years of service, constituting 53.64% of the surveyed group. Moreover, 41.82% of the participants have undergone specialized training, highlighting a proactive approach towards skill development and continuous learning within the nursing profession (Table 1). Table 2 shows the Distribution of the study population based on the knowledge of meaning, transmission, cause, manifestation, sign-symptoms, complications, etc., of STDs provided that it indicates that the vast majority, constituting 98.18%, correctly identified Sexual Transmitted Disease (STD) as the meaning of STDs. Only 0.91% thought it was related to Tuberculosis, and an equal percentage associated it with Meningitis among the respondents. Regarding the transmission routes of STDs, 90.91% correctly pointed out Sexual intercourse, while 5.45% mentioned Sharing food, and 3.64% identified mother-to-child transmission. In terms of the agents causing STDs, 60% correctly identified individuals with multiple sex partners, while 4.55% mentioned protected sex, and 35.45% admitted not knowing the correct answer. Regarding the manifestations of STDs, 40% recognized Weakness, 32.73% identified Lower abdominal pain, 24.55% mentioned Loss of weight, and 2.73% were uncertain (Do not know). Regarding the signs and symptoms of STDs, 15.45% identified Weight gain, 50% recognized lower abdominal pain, 30.91% associated it with Infertility, and 3.64% thought it could lead to Miscarriage. Regarding the sources of information on STDs, 20% mentioned Patients, 20% said Friends, 12.73% referred to School/college, and 47.27% credited Mass media (Television, Radio, Magazine) as their source of information. When it comes to understanding the concept of unprotected sex, 79.09% correctly linked it with sex without using a condom. Meanwhile, 6.36% associated it with Prolonged diarrhea, 7.27% with Weight gain, and an equal percentage (7.27%) were uncertain (Do not know). Regarding complications of STDs, 40.91% identified Headache, 38.18% mentioned Infertility, and 20.91% associated it with Back pain among the respondents (Table 2). Table 3 discusses the Distribution of the study population based on the knowledge of Prevention methods, treatability, vulnerability, and diagnosis of STDs, which reveals that 87.27% of respondents correctly identified condoms as a prevention method for STDs, while 10% mentioned having multiple sexual partners, and 2.73% were uncertain (Do not know). In terms of the treatability of STDs, 88.18% of respondents believed STDs to be treatable, 9.09% considered them untreatable, and 2.73% were unsure (Do not know). Regarding standard precautions in the workplace, 91.82% of respondents were aware of the importance of proper use and disposal of syringes, 6.36% mentioned not using gloves and masks, and 1.82% discussed using unsterile instruments. When asked about vulnerable groups to STDs, 60.91%

mentioned commercial sex workers, 33.64% referred to healthcare workers, and 5.45% were uncertain (Do not know). Regarding diagnostic methods, 91.82% recognized blood tests, 6.36% mentioned urine analysis, and 1.82% referred to biopsy to diagnose STDs. Regarding awareness of STD services at their workplace, 59.09% of respondents confirmed their knowledge of such services, while 40.91% were unaware of any STD services available (Table 3). Figure 1 discusses the Average level of knowledge, which indicates that 42% of respondents possessed a high level of knowledge about STDs, 21% demonstrated a moderate level of knowledge, and 37% exhibited a low level of knowledge on the subject (Figure 1). Table 4 discusses Practice-related questionnaires answered yes and No by the respondents, which indicates that among those who answered "Yes," a significant majority, 93.64%, treated STD patients with courtesy. Additionally, 90.91% successfully established and maintained therapeutic relationships with patients, and 98.18% ensured personal protection by wearing gloves and hand sanitizers. Furthermore, 78.18% properly disposed of disposable syringes and needles as part of safety management, and 83.64% effectively managed emergencies involving STD patients. Moreover, 85.45% took necessary precautions when in contact with STD patients, and 99.09% provided comprehensive health education regarding STD prevention. A considerable 70.91% established therapeutic rapport with patients, and 92.73% offered crucial mental support to patients and their families. Additionally, 75.45% diligently monitored patients' vital signs. Surprisingly, 58.18% recognized the importance of understanding religious beliefs in the context of STD prevention. In contrast, among those who answered "No," 5.45% treated STD patients with courtesy, and only 9.09% successfully established therapeutic relationships. A mere 1.82% ensured personal protection through gloves and hand sanitizers. Furthermore, 21.82% failed in proper disposal of disposable syringes and needles, and 16.36% struggled in managing emergencies involving STD patients. Additionally, 14.55% did not maintain necessary precautions during interactions with STD patients, and a mere 0.91% provided adequate health education regarding STD prevention. Only 6.36% offered essential mental support, and 25.45% regularly monitored patients' vital signs. Surprisingly, 41.82% did not recognize the significance of understanding religious beliefs in the context of STD prevention (Table 4).

Table 1: Demographical characteristics of the study population (n=110).

Characteristics	Frequency (n)	Percentage (%)
Age group (years)		
≤ 30	38	34.55
31-40	57	51.82
41-50	13	11.82
>50	2	1.82
Gender		
Male	21	19.09
Female	89	80.91
Marital status		
Divorced	8	7.27
Married	65	59.09
Single	37	33.64
Religion		
Islam	89	80.91
Hindu	17	15.45
Christian	4	3.64
Professional Educational status		
Diploma in Nursing	66	60.00
BSc in nursing/PHN	33	30.00
MSc/MPH	11	10.00
Length of services		
≤5	37	33.64
6-10	59	53.64
11-15	12	10.91
>15	2	1.82
Special training		
Yes	46	41.82
No	64	58.18

Table 2: Distribution of the study population based on the knowledge of meaning, transmission, cause, manifestation, sign-symptoms, complications, etc., of STDs (n=110).

Variables	Frequency (n)	Percentage (%)
Meaning of STDs		
Sexual Transmitted Diseases	108	98.18
Tuberculosis	1	0.91
Meningitis	1	0.91
Route of transmission of STDs		
Sexual intercourse	100	90.91
Sharing food	6	5.45
Mother to child	4	3.64
Causes of STDs		
Multiple sex partners	66	60.00
Protected sex	5	4.55
Don't know	39	35.45
Manifestation of STDs		
Weakness	44	40.00
Lower abdominal pain	36	32.73
Loss of weight	27	24.55
Don't know	3	2.73
Signs and symptoms of STDs		
Weight gain	17	15.45
Lower abdominal pain	55	50.00
Infertility	34	30.91
Miscarriage	4	3.64
Source of information about STDs		
Patients	22	20.00
Friends	22	20.00
School/college	14	12.73
Mass media (Television, Radio Magazine	52	47.27
Understand unprotected sex		
Without using a condom while having sex	87	79.09
Prolong diarrhea	7	6.36
Weight gain	8	7.27
Don't know	8	7.27
Complication of STDs		
Headache	45	40.91
Infertility	42	38.18
Back pain	23	20.91

Table 3: Distribution of the study population based on the knowledge of Prevention methods, treatability, vulnerability, and diagnosis of STDs (n=110).

Variables	Frequency (n)	Percentage (%)
Prevention Methods of STDs		
Using condom	96	87.27
Having multiple sexual partners	11	10.00
Don't know	3	2.73
Treatability of STDs		
Treatable	97	88.18
Untreatable	10	9.09
Don't know	3	2.73
Standard precaution methods		
Proper uses and disposal of syringes	101	91.82
Don't use gloves and a mask	7	6.36
Using unsterile instrument	2	1.82
Vulnerable group to STDs		
Commercial sex workers	67	60.91
Health care workers	37	33.64

Variables	Frequency (n)	Percentage (%)
Don't know	6	5.45
Diagnosis of STDs		
Blood test	101	91.82
Urine analysis	7	6.36
Biopsy	2	1.82
STD service available at your workplace		
Yes	65	59.09
No	45	40.91

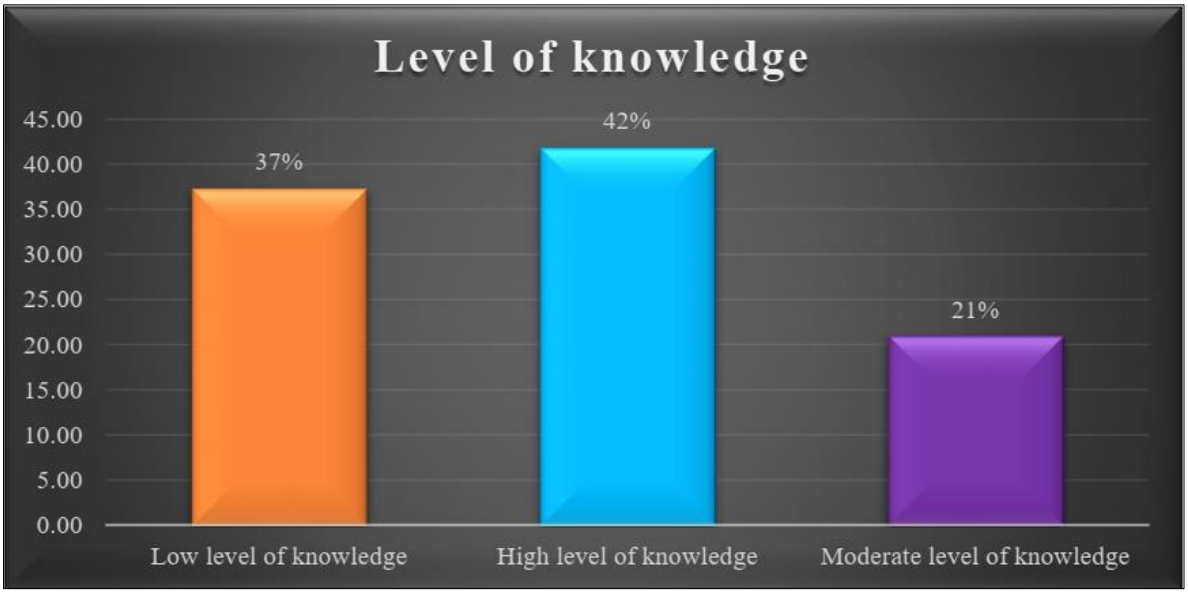

Figure 1: Average level of knowledge.

Table 4: Practice-related questionnaires answered 'Yes' and 'No' by the respondents.

Parameter	Yes		No	
	f	%	*f*	%
Do you receive the STD patient cordially?	103	93.64	6	5.45
Do you establish and maintain therapeutic relationships with patients?	100	90.91	10	9.09
Are you protected by wearing gloves and hand sanitizer as a duty nurse yourself from STD patients?	108	98.18	2	1.82
Do you dispose of it after using disposable syringes and needles as safety management?	86	78.18	24	21.82
Do you manage any emergencies of STD patients?	92	83.64	18	16.36
Do you maintain precaution when you encounter STD patients?	94	85.45	16	14.55
Do you give proper health education about the prevention of STDs?	109	99.09	1	0.91
Do you establish a therapeutic relationship with the patient?	78	70.91	32	29.09
Do you give mental support to the patient and their relatives?	102	92.73	7	6.36
Do you monitor the patient's vital signs regularly?	83	75.45	28	25.45
Do you know that religious belief is essential for the prevention of STDs?	64	58.18	46	41.82

DISCUSSION

This descriptive cross-sectional study aimed to assess the level of Nurses' Knowledge and Practice regarding Sexually Transmitted Diseases at 250 Bedded Bangamata Sheikh Fazilatunessa Mujib General Hospital, Sirajganj. This chapter summarizes the study, findings about those previously reported in the literature, and discussion. In addition, the suggestions for nursing practice and recommendations for future research were also addressed. The present study findings revealed that the socio-demographic characteristics of age were 34.55% within ≤ 30 years of age, 51.82% were within 31-40 years, 11.82% were 41-50 years, and 1.82% were >50 years of age; 19.09% were male, and 80.91% female; 59.09% were married, 33.64% were single, and 7.27% were divorced; 80.91% were Muslim, 3% Hindu and 15.45% were Christian; 3.64%; 60% were Diploma in Nursing, 30% were BSc in nursing/PHN, and 10% were MSc/MPH of professional Degree; 33.64% were within ≤ 5 years of service, 53.64% were within 6-10 years of service, 10.91% were within 11-15 years and 1.82% were >105years of services; 41.82% were received special training, whereas 58.18% were not received any special training among the respondents in

the present study. In relation to knowledge related findings the majority 98.18% was answered the option of It is sexual Transmitted disease for the knowledge on meaning of STDs, 0.91% were answered the option of Tuberculosis and rest of 0.91% answered Meningitis; 90.91% were answered the option of Sexual intercourse, 5.45% answered the option Sharing food and 3.64% the option of Mother to child about the knowledge on route of transmission of STDs; the 60% were answered the knowledge on agent that a causes of STDs the option of who have multiple sex partners, 4.55% answered the option of Protected sex and 35.45% answered the option of Don't know; the highest 40% were answered the option of Weakness, 32.73% were answered the option of Lower abdominal pain, 24.55% the option of Loss of weight, and 2.73% the option of Don't know about the knowledge on manifestation of STDs; 15.45% was answered the option of Weight gain, 50% the option of Lower abdominal pain, 30.91% the option of Infertility and 3.64% the option of Miscarriage about the knowledge on Signs and symptoms of STDs; 20% were answered the option of Patients, 20% were answered the option of Friends, 12.73% were answered the option of School/college and 47.27% the option of Mass media (Television, Radio Magazine) knowledge on source of information about STDs; 79.09% was answered the option of Without using condom while having sex, 6.36% the option of Prolong diarrhea, 7.27% the option of Weight gain and 7.27% the option of Don't know about the knowledge or understand by unprotected sex; 40.91% were answered the option of Headache, 38.18% the option of Infertility, and the 20.91% the option of Back pain for the knowledge on complication of STDs; 87.27% were answered the option of condom, 10% the option of having multiple sexual partners, and the 2.73% the option of don't know for the knowledge on Prevention Methods of STDs; 88.18% was answered the option of Treatable, 9.09% the option of Untreatable and 2.73% the option of don't know about the knowledge on treatability of STDs; 91.82% was answered the option of Proper uses and dispose of syringes, 6.36% the option of Don't uses gloves and mask and 1.82% the option of Using unsterile instrument about the knowledge on Standard precaution methods you use in work; 60.91% were answered the option of Commercial sex workers, 33.64% the option of Health care workers and the 5.45% the option of don't know; 91.82% were answered the option of Blood test, 6.36% the option of Urine analysis and the 1.82% the option of Biopsy for the knowledge on STDs can be diagnosed; 59.09% were answered the option of Yes, and 40.91% the option of No for the knowledge on aware of any STDS service available at your work place. A study in Malaysia conducted by Awang, Wong, Jani, and Low (2013) stated that the knowledge of sexually transmitted diseases and sexual behaviors, 92% of the respondents had heard of at least one of the listed STDs, which included syphilis, gonorrhea, chlamydia, herpes, genital warts, trichomonas's and HIV/AIDS [8]. The least known diseases were chlamydia and trichomonas; only 13 % of the respondents were aware of those diseases. Another study carried out in the United States by Clark, Jackson, and Allen- Taylor (2002) showed that despite having received relevant education from school, home, and friends, a high percentage of adolescents were lacking in knowledge regarding various STDs [9]. The adolescents educated by parents, school, relatives and friends performed better than those educated by other sources. Nearly all adolescents had good knowledge of HIV, but they knew far less about other serious STDs. Moreover, the study carried out in the USA by Kershaw, Ickovics, Lewis, Niccolai, Milan, and Ethier (2004) studied whether previous sexual risk-taking would prevent risk-taking in the future [10]. Women who had been diagnosed with an STD and women who had not been diagnosed with an STD were questioned twice at six-month intervals. Results showed that the women who had been diagnosed the first time were as likely to have contracted a new STD as the women without a previous STD diagnosis. Having previously contracted a disease did not change these women's attitudes and did not decrease their sexual risk-taking. The authors mean that this contradicts the behavior model Health Belief Model that says that if you are diagnosed with an STD, it should affect your health risk behavior, and therefore, you will be less likely to contract a new STD. A previous study carried out in secondary schools in Ghana by Rondini and Krugu (2009) showed that 71 % of the male and 75% of the female students were worried about and thought about HIV/AIDS [11]. The students could mention gonorrhea and syphilis as common STDs besides HIV/AIDS but showed very little knowledge of STDs and their symptoms when being asked questions that are more detailed about the symptoms of the diseases. Regarding the students' attitudes towards protecting themselves from STDs, they showed a significant barrier towards condom use. The female students would not purchase condoms out of fear of being judged as "bad girls," and the male students claimed that they would not accept a condom from a girl because "the girl is not to be trusted." A study was conducted in Tanzania and Wolaita Sodo University in which 99% and 96.4% of the respondents heard about STIs, respectively. This might be because of the educational difference between the students since the study was conducted on university students, and some respondents in this study were from rural areas, 24%, and had no access to mass media. The study showed that the most frequent source of information for STIs was radio/TV 83% followed by school 77% and parents 51%.This finding was slightly higher than the survey conducted in Gondar, Ethiopia, regarding the source of information on STIs; respondents got information from radio/TV 78%, school 45%, parents 22%, and youth club 12% where more than one source was common. This difference might be because of current media and curriculum-level emphasis on STIs. In the study, 84.6% of respondents were aware of the signs and symptoms of STIs, but the remaining 15% did not know any signs and symptoms of STDs. This finding was closely similar to a survey conducted in Hawassa,

Ethiopia, in which 80% of respondents knew the signs and symptoms of STDs. This might be because of the same educational level of students. Concerning the Route of transmission of STDs, 85% knew the Route of transmission of STDs, and from this, 73% answered unsafe sex, and 62% had contact with contaminated needles and blood. This result was lower than the study conducted in Wolaita Sodo University, in which 92% reported unsafe sex as a mode of transmission. This difference might be due to educational differences, and awareness about STDs is higher in university students than in high school students. Concerning the overall knowledge of STDs, 32% had good knowledge, 48% had fair knowledge, and the remaining 21% had poor knowledge. This result was lower than that of Wolaita Sodo University, in which 36.0% had good knowledge, and the rest had Poor knowledge of STDs. This might be because of educational differences between the study subjects. From the study participants, the majority of respondents were 83.1% aware of prevention methods for STDs, but 17% were not aware. From prevention methods, abstinence was listed by 68% of respondents, followed by being faith 46% and using condoms 40%. This result differed from the previous study, which was conducted in Durban, South Africa; most students mentioned condoms at 80%, followed by zero gazing at 46% and abstinence at 20%. However, it was almost similar to the study done in Debre Markose regarding knowledge. Respondents answered individual preventive methods like abstinence 52%, and 70% said to be faithful to one uninfected partner. This difference might be the effect of cultural practice in which, in our country, there was a negative attitude towards condom use but a positive attitude about abstinence and faithfulness. Concerned with their attitude towards the risk of acquiring STDs, most of the students 76% said they were more vulnerable to STDs, while 24% said they were not more vulnerable to STDs. This result was inconsistent with that of research conducted in Tanzania; 46% of students said they were not at risk of Contracting STDs, while 38% said they were at risk. Another study showed little knowledge of the potential complications of STDs; for example, only 15% of participants knew that infertility is a complication of STDs, which is supported by the results of Paz-Bailey *et al*., (2003) [12]. Kershaw *et al*., (2003) concluded that as long as the students do not consider STDs as a great health risk, they will not change their behavior [13]. Seeing that the Thai students in this study showed little knowledge of possible complications of STDs, it is presumable that they will not change their behavior until further knowledge is received.

Limitations of the Study

There was a small sample size. This is a small representation of nurses in 250 Bedded Bangamata Sheikh Fazilatunessa Mujib General Hospital, Sirajganj, and, as such, the study results may be limited to one particular area. Therefore, it seems necessary to consider the perceived susceptibility, severity and barriers as the focus areas of further educational intervention to create sensitivity and remove barriers. There was a small sample size, and selecting samples only from the limited population at 250 Bedded Bangamata Sheikh Fazilatunessa Mujib General Hospital, Sirajganj, the limitations of our study. Thus, large-scale studies with larger sample sizes selected randomly from all parts of society are recommended to obtain more generalizable results for further study in the health sector. Finally, there were limitations regarding how the descriptive statistics were computed manually.

CONCLUSION AND RECOMMENDATIONS

The term sexually transmitted diseases denotes disorders that are principally spread by intimate contact. Sex is an important factor in sexual and reproductive health issues, including STDs. Biological and social differences put boys and girls at different levels of risk of contracting STDs; hence, their needs regarding STD prevention may differ. These diseases are not merely acute illnesses but may lead to serious complications. The present study concluded that the level of nurses' knowledge regarding sexually transmitted diseases was 42%, a high level of knowledge regarding STDs in the current study place and may be due to their professional and clinical experiences. In addition to knowledge regarding STDs, prevention is very important for Bangladeshi people.

The study can be replicated in a large sample for better generalization.

1. A similar study can be done in knowledge regarding sexually transmitted diseases among the nurses conducted on a larger scale for wider application.
2. This study will be a reference for research scholars.
3. Evidence-based nursing practice must take a higher profile in order to increase awareness among the nurses working in hospitals.
4. Nurses have satisfactory levels of knowledge and should continue by continuing education, special training, refresher training, morning sessions, workshops, and proper monitoring.
5. Curriculum regarding sexually transmitted diseases can be included in their academic program.
6. Provide up-grading information and proper monitoring.
7. The hospital management team must ensure health education and counselling on sexually transmitted diseases to the people so that nurses can provide care to those who are affected by STDs and prevent them from STDs.

Funding: No funding sources
Conflict of Interest: None declared
Ethical Approval: The study was approved by the Institutional Ethics Committee.

REFERENCES

1. Workowski, K. A., & Bolan, G. A. (2015). Sexually transmitted diseases treatment guidelines, 2015. *MMWR. Recommendations and reports: Morbidity and mortality weekly report. Recommendations and reports*, *64*(RR-03), 1.
2. Lazarus, J. V., Sihvonen-Riemenschneider, H., Laukamm-Josten, U., Wong, F., & Liljestrand, J. (2010). Systematic review of interventions to prevent the spread of sexually transmitted infections, including HIV, among young people in Europe. *Croatian medical journal*, *51*(1), 74-84.
3. Assefa, Y., Gelaw, Y. A., Hill, P. S., Taye, B. W., & Van Damme, W. (2019). Community health extension program of Ethiopia, 2003–2018: successes and challenges toward universal coverage for primary healthcare services. *Globalization and health*, *15*, 1-11.
4. Matkins, P. P. (2013). Sexually transmitted infections in adolescents. *North Carolina medical journal*, *74*(1), 48-52.
5. World Health Organization. Global strategy for the prevention and control of sexually transmitted infections: 2006-2015: breaking the chain of transmission.
6. Shepherd, S. M., & Weiss, B. (2013). *Pelvic inflammatory disease. Medscape*. Updated, 10.
7. Dietz, W. H. (2015). The response of the US Centers for Disease Control and Prevention to the obesity epidemic. *Annual review of public health*, *36*, 575-596.
8. Awang, H., Wong, L. P., Jani, R., & Low, W. Y. (2014). Knowledge of sexually transmitted diseases and sexual behaviours among Malaysian male youths. *Journal of Biosocial Science*, *46*(2), 214-224.
9. Clark, L. R., Jackson, M., Allen-Taylor, L. (2002). *Adolescent knowledge about sexually transmitted diseases. Sexually transmitted diseases*, *1*, 436-43.
10. Kershaw, T. S., Ickovics, J. R., Lewis, J. B., Niccolai, L. M., Milan, S., & Ethier, K. A. (2004). Sexual risk following a sexually transmitted disease diagnosis: the more things change the more they stay the same. *Journal of behavioral medicine*, *27*, 445-461.
11. Rondini, S., & Krugu, J. K. (2009). Knowledge, attitude and practices study on reproductive health among secondary school students in Bolgatanga, upper east region, Ghana. *African journal of reproductive health*, *13*(4).
12. Paz-Bailey, G., Kilmarx, P. H., Supawitkul, S., Chaowanachan, T., Jeeyapant, S., Sternberg, M., ... & Van Griensven, F. (2003). Risk factors for sexually transmitted diseases in northern Thai adolescents: an audio-computer-assisted self-interview with noninvasive specimen collection. *Sexually Transmitted Diseases*, 320-326.
13. Kershaw, T. S., Ickovics, J. R., Lewis, J. B., Niccolai, L. M., Milan, S., & Ethier, K. A. (2004). Sexual risk following a sexually transmitted disease diagnosis: the more things change the more they stay the same. *Journal of behavioral medicine*, *27*, 445-461.