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Preceptors of managing Sexually Transmitted Infections (STIs) among health care professionals in selected primary & secondary care centres

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***Abstract*---**Introduction: Sexually transmitted infections (STIs) are a growing concern for teenagers and young adults worldwide. If not treated properly, STIs can have severe physical, psychological, and even fatal effects. This study aims to evaluate healthcare workers' knowledge, attitude, practice, and perception of barriers to STI services and the factors that contribute to such barriers. Method: An exploratory study was conducted among 463 health care professionals using a purposive sampling technique. Self-structured knowledge questionnaires and checklist (based on CDC STD Preventive Services Checklist) to collect data regarding Knowledge, Attitude, Practice, Perceived challenges, and Barriers of managing Sexually Transmitted Infections (STIs) Perception. Analysis was done using Descriptive and inferential statistics with IBM SPSS. Results: The result showed that

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most of the participants had 289 (62.4%) average knowledge,67% strongly agree as an STD infected person should seek medical help and 58% are having avoiding 'being together' (sexual intercourse) with someone who has sexually transmitted diseases is necessary because it can be contagious. 87% participants are responded counseling for HIV testing& 83% are Lack of STI training accepted under Perceived challenges and barriers of managing sexually Transmitted Infections (STIs).

***Keywords*---**Sexually transmitted infections, Healthcare providers, Health Services, physical, psychological effects.

Introduction

It is estimated that over a million people contract sexually transmitted infections (STIs) each day across the world, with the highest incidence found in low-income countries like India. Sexual contact, which includes vaginal, anal, and oral sex, is the most common way in which STIs are transmitted. However, diagnostic tests are uncommon in low- and middle-income countries. When testing is offered, patients often face high costs and must travel long distances, leading to long wait times for results. This can lead to difficulties in follow-up and inadequate care or treatment.

Screening and treatment for STIs, which includes preventing them from progressing to major health issues or diseases, is essential for the health of STI victims. However, providers' reluctance and lack of training are two main reasons why they fail to effectively address sexual health issues with their patients. There is a clear need for increased sexual health education and training for all types of healthcare providers at all stages of their careers, including during training and in practice. Such training can help providers gain confidence and skills in a range of practice settings, facilitate sexual health conversations that can help eliminate STI-related stigma, and improve sexual health outcomes at all stages of life.

Methodology

Exploratory Study was conducted among Health care Professionals Working in Primary and Secondary Health Centres, Assam from October 2023 to February 2024. Convenience sampling technique was used. Informed consent was taken from study subjects. The data were collected using Self-structured questionnaires and checklist (based on CDC STD Preventive Services Checklist) regarding Knowledge, Attitude, Practice, Perceived challenges, and Barriers of managing Sexually Transmitted Infections (STIs) Perception. The data collected was tabulated and analyzed by using percentage.

Result

The sample was composed of 463 Health care Professionals. The data was analysed by using Statistical Package for the Social Science (SPSS). Descriptive analysis was carried out for the demographic variables then followed by

comparisons among groups was done by using One-way analysis of variance (ANOVA) test. Hence, one-way ANOVA was employed to compare the level of knowledge. Most of the participants belong to age group of 20-25 years 397(85.5%), female 429(92.5%), qualification was B.Sc. N 300(65%), private sector 366(79%) work place. Overall, the level of knowledge of participants on managing sexually transmitted diseases were classified into three groups; good knowledge 84(5.5%), average knowledge 289(62.4%) and poor knowledge 90(19.4%). The ANOVA was statistically significant with age (in years) F (df 3)=34.63, p<0.05, Sex F (df 1)=11.60, p<0.05, Qualification F (df 2)=14.16, p<0.05, Working Place F (df 2)=4.485, p<0.05 and Experience (in Years) F (df 3)=11.64, p<0.05 for the level of knowledge of participants towards managing sexually transmitted disease. But the ANOVA was statistically not significant with socio demographic variables, indicating that the knowledge level of managing Sexually Transmitted Infections (STIs)by the In-service training in STIs F=0.07,p=0.78 and In-service patient communication training in STIs F=3.34,p=0.06 which is shown in *[table 1].*

Table 1: Distribution of subjects according to sociodemographic variables and level of knowledge among Health care professionals

n=463

Variables	Frequency (f)	Percentage (%)	Knowledge level				
			Mean	SD	df	F	P
1.Age (in years)							
a. 20 -25	397	85.5	6.16	2.23	3	34.63	0.000
b. 26 - 30	35	7.5	8.02	2.0			
c. 31- 35	18	4	8.27	2.37			
d. 36 - 41	13	3	6.46	1.05			
2.Sex							
a.Male	34	7.5	7.03	1.87	1	11.601	0.000
b.Female	429	92.5	6.33	2.217			
3.Qualification							
a.GNM	112	24	5.857	2.301	2	14.162	0.000
b.B.Sc. N	300	65	6.378	2.086			
c.M.Sc. N	51	11	7.608	2.201			
4.Working Place							
a.Private Sector	366	79	6.26	2.20	2	4.485	0.011
b.Government Sector	12	3	6.42	2.50			
c.Autonomous	85	18	6.94	2.06			
5. Experience (in Years)----------							
a. Fresher	299	65	6.09	2.09	3	11.64	0.000
b.≤ 1 year	77	17	6.58	2.17			
c.2- 5 years	58	12	7.6	2.44			
d.<6 years	29	6	6.52	1.92			
5.In-service training in STIs							
a.Yes	102	22	6.4	2.20	1	0.074	0.785
b.No	361	78	6.34	2.17			
6.In-service patient communication training in STIs							
a.Yes	119	26	6.48	2.21	1	3.346	0.068

The mean score and standard deviation for attitude was 24.16±21.8 out of 30. As showed in 312 (67%) participant are strongly agree towards STD infected person

should seek medical help, 269 (58%) Avoiding 'being together' (sexual intercourse) with someone who has sexually transmitted diseases is necessary because it can be contagious and 237 (51%) feel screening for STDs before marriage is important. *[table 2].*

Table 2: Distribution of subjects according to Attitude towards sexually transmitted diseases

n=463

Attitude	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree	Mean	SD
Avoiding 'being together' (sexual intercourse) with someone who has sexually transmitted diseases is necessary because it can be contagious	269 (58%)	125 (27%)	39 (8%)	17 (4%)	13 (3%)	4.33	3.92
An STD infected person should seek medical help	312 (67%)	108(23%)	28(6%)	7 (2%)	8 (2%)	4.53	4.08
I feel screening for STDs before marriage is important	237 (51%)	138(30%)	51(11%)	24 (5%)	13 (3%)	4.21	3.81
STDs are not dangerous because they can be cured	59 (13%)	95(20.5%)	80(17%)	141(30.5%)	88(19%)	2.77	2.58
In my opinion, I feel STDs can cause death if left untreated	166 (36%)	186(40%)	82(18%)	29 (6%)	-	4.05	3.63
I feel condoms play an important role in preventing STDs	226 (49%)	160 (35%)	52 (11%)	16(3%)	9 (2%)	4.24	3.82

One-way ANOVA of attitude with age and Experience (in Years) showed that there was statistically significant at F (df=3)=18.5, $p<0.05$ & F (df=3)= 3.55, $p<0.05$ for the attitude of participants towards managing sexually transmitted disease .Hence, attitude is affected by their age and Experience (in Years)[*Table 3].*

Table 3: Level of attitude with demographic variables

n=463

Variables	Frequency (f)	Percentage (%)	Attitude level				
			Mean	SD	df	F	P
1.Age (in years)							
a. 20 -25	397	85.5	23.6	3.51	3	18.531	0.000
b. 26 - 30	35	7.5	25.14	2.43			
c. 31- 35	18	4	25.72	2.05			
d. 36 - 41	13	3	24.92	2.46			
2.Sex							
a.Male	34	7.5	24.62	4.16	1	7.072	0.008
b.Female	429	92.5	23.77	3.35			
3.Qualification							
a.GNM	112	24	23.27	3.52			
b.B.Sc. N	300	65	23.77	3.486	2	9.692	0.000
c.M.Sc. N	51	11	25.44	2.12			
4.Working Place							

Variables	Frequency (f)	Percentage (%)	Attitude level				
			Mean	SD	df	F	P
a. Private Sector	366	79	23.98	3.31	2	14.163	0.000
b.Government Sector	12	3	21.75	5.39			
c.Autonomous	85	18	23.53	3.45			
5. Experience (in Years)----------							
a. Fresher	299	65	23.58	3.45	3	3.554	0.014
b.≤ 1 year	77	17	24.17	3.47			
c.2- 5 years	58	12	24.24	2.86			
d.<6 years	29	6	23.58	3.45			

The most practice towards sexually transmitted diseases were respondent 401(87%) yes as counseling for HIV testing, 376(81%) examination of the genitals of patients suffering from STIs, 367(79%) asking patients about the number of sexual partners*[table 4].*

Table 4: Distribution of subjects according Practice towards sexually transmitted diseases

n=463

Practice	Yes	No
Asking patients about the number of sexual partners	367(79%)	96(21%)
Examination of the genitals of patients suffering from STIs	376(81%)	87(19%)
Filling of the partner notification slips after attending to the index patient	318(69%)	145(31%)
Counseling for HIV testing	401(87%)	62(13%)

The participants has responded yes 385(83%) lack of STI training, 376(81%) lack of counseling, 347(75%) lack of professional resources and 349(75%) adequacy of Facilities and Services and Health Assessment towards Perceived challenges and barriers of managing sexually Transmitted Infections (STIs) *[table 5].*

Table 5: Distribution of subjects according Perceived challenges and barriers of managing sexually Transmitted Infections (STIs)

n=463

S.No	Perceived challenges and barriers	Yes	No
1.	Lack of STI training	385(83%)	78(17%)
2.	Lack of professional resources	347(75%)	116(25%)
3.	Lack of time	327(71%)	136(29%)
4.	Lack of reimbursement	316(68%)	147(32%)
5.	Lack of privacy/ confidentiality	343(74%)	120(26%)
6.	Lack of counseling	376(81%)	87(19%)
7.	Adequacy of Facilities and Services and Attitude and Behavior	333(72%)	130(28%)
8.	Adequacy of Facilities and Services and Health Assessment	349(75%)	114(25%)
9.	Adequacy of Facilities and Services and Confidentiality	332(72%)	131(28%)
10.	Availability of Supplies and Equipment and Attitude and Behavior	342(74%)	121(26%)

Association of knowledge & attitude of managing sexually Transmitted Infections (STIs)

A bivariate Pearson's correlation was used to evaluate the possible association of knowledge and attitude. There was a positive but weak correlation between knowledge and attitude, $r=0.28$, $p<0.05$.

Discussion

In the present study, the majority of participants were between the ages of 20-25, comprising 397 individuals (85.5%). The study included 429 females (92.5%), with 300 participants holding a B.Sc. qualification (65%) and 366 (79%) working in the private sector. These findings are consistent with a study conducted by Subbarao NT and Akhilesh A., which found that 256 males (73%) and 94 females (27%) participated in the study. Additionally, 313 students (90%) had heard of sexually transmitted infections (STIs), and 223 (64%) had knowledge about STIs.

Knowledge

Participants' level of knowledge on managing sexually transmitted diseases was divided into three categories: good knowledge (5.5%), average knowledge (62.4%), and poor knowledge (19.4%). These findings are similar to a study conducted by Zin et al., which also categorized participants' knowledge into three groups: high knowledge (33.3%), medium knowledge (35.0%), and low knowledge (31.7%). Although most participants had heard of HIV/AIDS (95%), other STDs were less well-known. Another similar study by Winarto et al. showed that 84% of individuals had good knowledge, and the median score for knowledge was 79.20 towards Sexually Transmitted Infections among Women of Reproductive Age in an Urban Community Health Centre in Indonesia.

Attitude

The study found that the mean score and standard deviation for attitude towards sexually transmitted diseases (STDs) was 24.16 ± 21.8 out of 30. Out of the 465 participants, 312 (67%) strongly agreed that an STD-infected person should seek medical help. Additionally, 269 (58%) believed that avoiding sexual intercourse with someone who has an STD is necessary because it can be contagious, and 237 (51%) thought that screening for STDs before marriage is important.

These findings are similar to a study conducted by Vasudev, Meghana B. et al. According to their research, 265 out of 336 students thought that the sex education they received in school had been beneficial. Moreover, 96 students (90.7% of the total) felt that people in their age range should always wear protection, like condoms, when participating in any kind of sexual activity. Interestingly, 239 (47.1%) students thought that buying condoms from a pharmacy was a humiliating act, while 444 students (87.5%) felt that condoms should only be used during sex with somebody you don't know.

Practice

According to a present study, the majority of people (87%) believe that counseling for HIV testing is necessary for the prevention of sexually transmitted diseases. 81% of respondents agreed that examining the genitals of patients suffering from STIs is an important practice, and 79% believe that asking patients about the number of sexual partners is crucial. These findings were supported by Zin NM, Ishak I, Manoharan K. et al. The survey also revealed that 43% of participants had dated three or more people in the last three years. The most common reasons for engaging in sexual activity were personal choice (43%), coercion by a partner (23%), and curiosity (23%). Shockingly, almost 77% of participants admitted that they don't use any form of birth control.

Perceived challenges and barriers

The participants responded to the challenges and barriers of managing STIs by mentioning "lack of STI training" (83%), "lack of counselling" (81%), "lack of professional resources" (75%), and "adequacy of Facilities and Services and Health Assessment" (75%).The study conducted by Do K, Minichiello V, Hussain R, and Khan A reported that almost all (99%) of the participants faced at least one barrier to managing sexually transmitted infections (STIs). The most frequently cited barriers were "lack of STI training" (57%), "lack of professional resources" (41%), "lack of time" (38%), "lack of reimbursement" (21%), "lack of privacy/confidentiality" (17%), "lack of counselling" (15%), and "not the role of primary care provider" (7%).

Conclusion

According to the present study, healthcare professionals have an average level of knowledge when it comes to managing Sexually Transmitted Infections (STIs). Our findings suggest that individuals who are infected with an STD should seek medical help immediately, and it's crucial to avoid engaging in sexual intercourse with someone who has a sexually transmitted disease since it can be contagious. As a result, future research may be required to identify the barriers healthcare professionals face in practicing their knowledge and attitude, or to find better ways to improve their level of practice.

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