Knowledge Assessment of Nursing Personnel about Sexually Transmitted Diseases and Reproductive Duct Infections

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Abstract— *In India, Reproductive Tract Infection (RTI) including Sexually transmitted Diseases (STDs) produce a huge disease burden. Nursing staff plays a major role in prevention of STI/RTIs. So this study was conducted aimed to know the knowledge about STIs/RTIs of nursing personnel of a tertiary care hospital of Rajasthan. 100 nursing professionals were supervised for practice and interrogated for attitude and knowledge as per a semi- structured schedule. It was found that overall mean score of nurses was 56% and only 52% had scores passing marks (≥50%). Although this knowledge about STI/RTI was not found to be associated religion, caste, type of family and socio-economic status but it was found to be associated with sex, marital status and education of nurses. It was also found in this study that gap of training decreases the knowledge and number of training increases the knowledge. It was found to be associated with department where the nurses were working. So all the nurses irrespective of place of posting should be given refresher trainings at regular intervals.*

Key words- *Reproductive Duct Infections diseases, STDs, Knowledge, Nursing personnel.*

1. Introduction

The International Conference on Population and Development held at Cairo in 1994 can be considered as a milestone as it attracted attention on the issue of reproductive and sexual health. Sexually transmitted infections and Reproductive tract infections (STI/RTI) are an important public health problem in India. The 2002 ICMR community based prevalence study of STI/ RTI has shown that 5% to 6% of sexually active adult population are suffering from some form of STI/RTI.[1] The 2005 ICMR multicentre rapid assessment survey (RAS)[1] indicates that 12% of female clients and 6% of male clients attending the out-patient departments for complaints related to STI/RTI. Individuals with STI/RTI have a significantly higher chance of acquiring and transmitting HIV. STI prevalence is a good marker for HIV, as both share common modes of transmission. Moreover, STI/RTI are also known to cause infertility and reproductive morbidity.[2] The incidence of RTIs has increased dramatically throughout the world[2-5] . Globally, it is estimated that as many as 340 million new cases of curable STDs other than HIV/AIDS occur each year, most of which are occurring in developing countries. And every year, with 151 million of them occurring in Asia.[2]

RTIs are a significant public health problem as they cause widespread morbidity and mortality in men and women, especially of reproductive age[4,5] . In developing countries, RTI/STIs are the second or third most common public health problem of young people. District Level Household Survey-3 survey reports 18.3% prevalence of symptoms of RTI/STI in India.[6] A study conducted in Karnataka explored

34.4 % laboratory confirmed cases of STI/RTI in urban area of Hubli.[3] Increased prevalence of RTIs/STIs constitutes a huge health and economic burden for developing countries and account for economic losses because of ill health.[7]

The nursing personals play important role in medical science specially in identification and prevention of STDs and Evidence suggests that nurses can struggle to care for patients with sexually transmitted infections in a non-judgmental way. Due to the severe consequences and other associated morbidities, early detection and treatment of RTIs and STIs is important.[1] Nurses, who see clients in a variety of acute and community settings, have a unique opportunity to discuss STDs and their prevention. However, nurses must retain knowledge that is up-to-date on each of these diseases. Nurses need to take the lead in evaluating their clients' risk of acquiring STDs and tailor specific preventative techniques to the individual needs uncovered.

2. **Methodology**

A descriptive observational study was conducted to know the knowledge of nursing personnel regarding STI/RTI . Study was conducted in attached hospitals of SMS Medical College, Jaipur (Rajasthan) India in year 2015.

For the study, sample size was calculated 100 health care personnel at 95% confidence limit and 20% relative allowable error assuming a correct knowledge in 50% of nursing personnel.

For proper representation nursing personnel of tertiary care hospital, 10 nursing personnel were selected randomly from each of ten identified major departments, i.e. Medicine, Surgery, ENT, Ophthalmology, Gynecology, Pediatrics, Plastic surgery, Cardio-thoracic, Neurosurgery and Urology..

Semi-structured schedule was having four major parts. **Part (1)** includes personnel's information regarding socio-demographic data, professional experience etc. **Part (2)** consist of questions regarding STI/RTI

Part (2) consist of questions regarding STI/RTI is selected from modules of NACO for nursing personnel training, consisting of 2 section. Section Á' has 10 question in 'True' or 'False' and Section 'B' has 15 questions. Thus 25 questions each carry '4'marks, so total marks questionnaire was of 100 marks.

Data thus collected were compiled in Microsoft Excel in the form of master chart. These data were analyzed and inferred with the help of Microsoft Excel 2007 and statistical software Primer Version 6. Results were expressed in percentage of marks obtained and mean marks obtained in various groups. For the significance of difference in proportions 'Chi- square' test.[8] For significance 'p' value $\leq$ 0.05 was considered as significant.

3. **Results**

Surveyed nursing personnel in this study were having mean age 38.6 yrs ranging from 23 to 59 years with slight female predominance, mean RTI/STI training number 0.6 ranging from 0 to 4, mean years from last training 0.75 years (8 months) ranging from 0.25 to 4 years and mean professional years 16.11 years ranging from 0.25 years (3 months) to 36 years. (Figure 1 &2)

Mean knowlege score of nursing personel was 56% ranging from 8 to 96% and 52 % were found passed when $\geq$ 50% scores were considered as pass. (Figure 1)

Figure 1

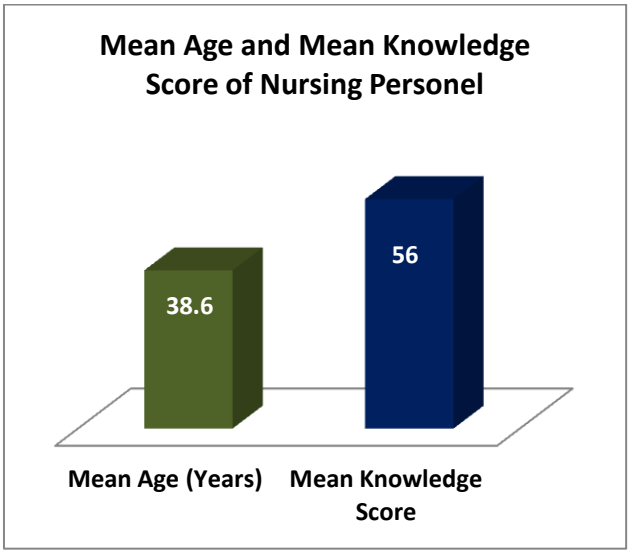
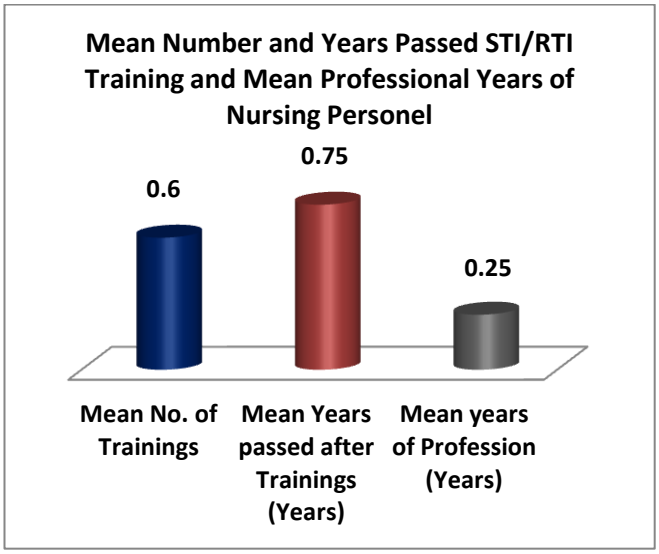


Figure 2



When knowledge was seen with various demographic variables, it was found that although knowledge was not found to be associated religion, caste, type of family and socio-economic status but proportion of passed nurses was found significantly more in females and unmarried/living singly with their counter parts. It was also observed that as education increases the proportion of passed nurses were significantly more. (table 1)

Table No. 1

Association of Knowledge with Socio-demographic variables studied (N=100)

Variables for Association		**Total No**	**Passed (≥50% Marks)**	**% Passed**	**Chi square test P Value LS**
Sex	**Male**	42	9	21.43	25.000 at 1DF
	Female	58	43	74.14	**<0.001 S**
Religion	**Hindu**	66	34	51.52	
	Muslim	3	1	33.33	0.664 at 3DF
	Sikh	10	5	50.00	**=0.999 NS**
	Christian	21	12	57.14	
Caste	**General**	62	39	62.90	
	OBC	24	11	45.83	11.609 at 3DF
	ST	11	2	18.18	**=0.071 NS**
	SC	3	0	0.00	
Type of Family	**Nuclear**	72	39	54.17	0.223 at 1DF
	Joint	28	13	46.43	**=0.637 NS**
SES Class	**Class I**	0	0	0.00	
	Class II	14	9	64.29	5.492 at 3 DF
	Class III	48	28	58.33	**=0.184 NS**
	Class IV	32	14	43.75	
	Class V	6	1	16.67	
Marital Status	**Married**	91	44	48.35	3.89 at 1DF
	Unmarried/Single	9	8	88.89	**=0.049 S**
Education	**Undergraduate**	17	5	29.41	7.411 at 2DF
	Graduate	72	38	52.78	**=0.025 S**
	Post-graduate	11	9	81.82	

When association of knowledge with various variables related to their training was observed, it was found that as the gap of training is increases the proportion of passed nurses declined significantly (p=0.005). And likewise, proportion of passed nurses was found significantly more in nurses who had upto 2 number of training than its counter parts. (table 2)

Table No. 2

Association of Knowledge with variables related to STI/RTI Trainings (N=100)

Variables for Association		**Total No**	**Passed (≥50% Marks)**	**% Passed**	**Chi square test P Value LS**
Number of Trainings	**Training 0**	18	2	11.11	15.799 at 2DF
	Training upto 2	47	31	65.96	**<0.001 S**
	Training upto 4	35	19	54.29	
Year Passed from Last training	**Training Years<1yr**	30	25	83.33	10.805 at 2DF
	Training Years 1-2years	31	19	61.29	**=0.005 S**
	Training Years >2years	21	1	4.76	

When association of knowledge with various place of posting of nurses is observed, it was found that it was found to be associated with department where the nurses were working. Nurses posted in Gynecological department, Medicine, surgery and Urology were passed whereas nurses posted at ophthalmology, ENT and cardiothoracic were passes in less than 5 in number (<50%). (Table 3)

Table No. 3

Association of Knowledge with Place of Posting of Nurses (N=100)

S. No.	**Place of Posting**	**Total No**	**Passed (≥50% Marks)**	**% Passed**
1	**Medicine**	10	10	100.00
2	**Surgery**	10	8	80.00
3	**Gynecology**	10	10	100.00
4	**ENT**	10	4	40.00
5	**Ophthalmology**	10	2	20.00
6	**Pediatrics**	10	9	90.00
7	**Plastic surgery**	10	8	80.00
8	**Cardiothoracic**	10	4	40.00
9	**Neurosurgery**	10	5	50.00
10	**Urology**	10	10	100.00

Chi-square Test =38.095 at 9DF P<0.001 LS=S

4. Discussion:

In this present study surveyed nursing personnel were having mean age 38.6 yrs ranging from 23 to 59 years along with slight female predominance. Mean RTI/STI training number 0.6 ranging from 0 to 4, mean years from last training 0.75 years (8 months) ranging from 0.25 to 4 years and mean professional years 16.11 years ranging from 0.25 years (3 months) to 36 years. Nyamathi et all[9] have well comparable observations, who conducted a study in a tertiary-care public hospital in Delhi, India where age of participants ranged between 25 and 58 years of age (m = 41, SD = 8.7) but all participants were

female, and most (90%) were married, 25% had completed higher secondary, 64% had completed schooling up to senior secondary (10+2), 10% had completed graduate degrees; few (approximately 1%) had completed post-graduate coursework. They also reported that mean total nursing work experience of the participants was 16.4 years (*SD* = 8.7).

In this study mean knowlege score of nursing personel was 56% ranging from 8 to 96% and 52 % were found passed when $\geq$ 50% scores were considered as pass. These findings were also almost same with findings of other authors[5-11] ranging from 22 to 66% scores of nursing personels.

It was also found in this study that although knowledge was not found to be associated religion, caste, type of family and socio-economic status but it was found to be associated with sex, marital status and education of nurses. Other authors also have their findings well in resonance with the findings of present study. This may be because of gender discrimination of concern and being more educated more understandable.

It was also found in this study that gap of training decreases the knowledge and number of training increases the knowledge. Similar was the observed by Nyamathi et all[9] and Unnikrishnan B etall.[11] This depict that training once is not sufficient so there should be refresher trainings at regular interval.

Present study also depict that knowledge was found to be associated with department where the nurses were working. Nurses posted in Gynecological department, Medicine, surgery and Urology were passed whereas nurses posted at ophthalmology, ENT and cardiothoracic were passes in less than 5 in number (<50%). Almost similar observations were made by other authors. It can be explained that nurses posted at super-specialty were much focused towards their faculty only. But they can posted in other department like Gynecology, medicine, surgery etc. so should have proper knowledge.

CONCLUSIONS

Nurses were lacking in knowledge about STI/RTI even so that about half of nurses could not get even 50% of scores. Although this knowledge about STI/RTI was not found to be associated religion, caste, type of family and socio-economic status but it was found to be associated with sex, marital status and education of nurses. It was also found in this study that gap of training decreases the knowledge and number of training increases the knowledge. It was found to be associated with department where the nurses were working. So all the nurses irrespective of place of posting should be given refresher trainings at regular intervals.

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Annexure: STI/RTI Questions Paper

Test Questionair on Control and Prevention of STI/RTI level

S. No. _____

Name: _____ Mobile No_____ Date of test _____

Address of Posting: _____ Address of Posting _____

Instructions:

Answer all questions. Please read each question and the multiple choices carefully and circle correct answers in sections A and B. Follow specific directions for each section.

Section A. Tick Circle T (true) of F (false). Each question cary '4' marks

1. Screening of ANC cases can help in detection of infections without symptoms: True | False

2. It is possible to have STI/RTI without having any signs or symptoms of infection: True | False

3. STI are passed from person to person only through sexual contact: True | False

4. All STI/RTI are easily curable with antibiotics treatment: True | False

5. If left untreated, STI/RTI can cause serious complications: True | False

6. Biologically, both men and women have an equal risk for acquiring an STI from a sexual partner: True | False

7. STI treatment and prevention can be important tools in limiting the spread of HIV: True | False

8. Asymptomatic infections cannot be passed to a Partner during sexual contact: True | False

9. Using Copper-T can prevent STI/RTI transmission: True | False

10. Condoms are the only barrier method proven highly effective against STI/RTI transmission and pregnancy prevention: True | False

Section B:

Select only one answer to each question. Place tick before the correct answer.

Each question cary '4' marks.

1. RTI means

a. Research and Training Institutes
b. Reproduction Training Institutes
c. Respiratory Tract infections
d. Reproductive Tract infections

2. STI means

a. Social Taboos in Infections
b. Sexuality Training Institutes
c. Sexually Transmitted Infections
d. Social Service Training Institutes

3. Following are some of the STI/RTI except

a. Polio
b. Chlamydia infection
c. Syphilis
d. Candidiasis

4. You can prevent STI/RTI by

a. Abstinence
b. Being faithful with one Partner
c. Use condoms correctly and consistently
d. By all above

5. Unsafe or high-risk activities means

a. Receiving a blood transfusion of infected blood
b. Using unsterilized needles and syringes, or cutting instruments, on yourself or someone else that are likely to be contaminated by another person's blood
c. Having penetrative vaginal or anal sex where the penis enters the vagina or anus without using a condom
d. All of the above

6. Gonorrhoea is caused by

a. Bacteria
b. Protozoan
c. Virus
d. Fungus

7. Candidasis is caused by

a. Bacteria
b. Protozoan
c. Virus
d. Fungus

8. HIV infection is caused by

a. Bacteria
b. Protozoan
c. Virus
d. Fungus

9. In women, the signs and symptoms of STI/RTI are often:

a. More easily recognized than in men.
b. Less likely to be diagnosed than in men
c. Less likely to become serious than they are in men.
d. More likely to affect older women.

10. Which of the following contributes to the rapid spread of STI/RTI?

a. Lack of sufficient laboratory facilities for diagnosis. b. Poor hygiene.
c. Lack of effective drugs. d. High risk sexual behavior.

11. Which of the following questions may help you to assess a person's risk of getting or giving STI/RTI?

a. Does your Partner live away from home?
b. Have you had a new sexual Partner in the past 3 months?
c. Have you ever had a STI?
d. All of the above

12. A woman has vaginal discharge and lower abdominal pain. Which of the following is correct?

a. She should be referred immediately to a Medical officer of PHC.
b. She should be told to wait for a week and then seek care from a PHC.
c. She should not be referred unless she is pregnant.
d. She should not be referred unless she is having infertility problem.

13. Genital ulcer disease is important because:

a. It is a major cause of infertility. b. It may facilitate the spread of HIV.
c. It often causes impotence in men. d. It is usually associated with another RTI.

14. A young female sex worker comes to you with vaginal discharge. She says she has had several time various STI/RTI in the past. Which of the following is the most appropriate action to take?

a. Educate her about STI/RTI and condom use. b. Tell her to find other work.
c. Warn her that she might have STI/RTI. d. Avoid topics that might embarrass her.

15. Which of the following are components of STI/RTI management?

a. Condom promotion b. Partner notification
c. Counseling and education d. All of the above.