

Nurses' Knowledge and Practice Regarding Pelvic Inflammatory Disease (PID) at Shaheed Ziaur Rahman Medical College Hospital, Bogura, Bangladesh

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Abstract

Background: Pelvic inflammatory disease (PID) is one of the most serious infections in women. It is an inflammation and infection of the upper genital tract involving the uterus, fallopian tubes, ovaries, and the surrounding structures. Pelvic inflammatory disease (PID) is a global problem, and it is common in both developed and developing countries. It can cause infertility, ectopic pregnancy, and chronic pelvic pain. Risk factors for PID are multiple sexual partners, single status, lower socioeconomic status, young age (<30 years), intrauterine contraceptive device, endometrial biopsy, curettage, hysteroscopy and hysterosalpingography, and Complications of tubal infertility, ectopic pregnancy, chronic pelvic pain. **Objective:** The aim was to assess the level of nurses' knowledge and practice regarding pelvic inflammatory disease at Shaheed Ziaur Rahman Medical College Hospital, Bogura. **Methodology:** This was a descriptive cross-sectional study with a sample size of 115 that was a purposive sampling technique followed by those who met the inclusion criteria to assess the nurse's knowledge and practice regarding pelvic inflammatory disease. The study was conducted from July 2022 to December 2022. The instruments for data collection were a semi-structured questionnaire composed of three parts: Demographic variables, knowledge, and practice-based information on pelvic inflammatory disease. **Results:** The findings of the present study in socio-demographics revealed that the highest 64.35% were 31-40 years old, 88.70% were female, 93.91% were married, 93.04% were Muslim, and 61.74% had a Diploma in Nursing and the main findings of average knowledge score 40.00% were the low level of knowledge regarding the pelvic inflammatory disease. It is may not be practical experience in their existing situation. **Conclusion:** The worldwide increase in the incidence of PID during the last few decades has led to secondary epidemics of tubal factor infertility and ectopic pregnancy. The application of in-service education and training programs will be significant in enhancing the knowledge and self-reported practices among nurses regarding preventive measures of PID.

Keywords: Knowledge, Pelvic inflammatory disease, Practice.

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INTRODUCTION

Nowadays Pelvic inflammatory disease (PID) is one of the most serious infections in women. It is an inflammation and infection of the upper genital tract involving the uterus, fallopian tubes, ovaries, and the

surrounding structures. Pelvic inflammatory disease (PID) is a global problem, and it is common in both developed and developing countries. It can cause infertility, ectopic pregnancy, and chronic pelvic pain [1]. It is the infection of the female pelvic organs, including the uterus, fallopian tubes, ovaries, and cervix.

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It causes Endometritis, Salpingitis, Oophoritis, Perimetritis, and Abscess when the infection spreads upward from the cervix [2]. It is estimated that more than 1 million women in India experience an episode of acute PID. More than 1 00,000 women become infertile each year because of PID, and a large proportion of the ectopic pregnancies occurring every year are due to the consequences of PID. Annually, more than 150 women die from PID or its complications [3]. Sexually active women in their childbearing years are most at risk, and those under age 25 are more likely to develop PID than those older than 25. The more sex partners a woman has, the greater her risk of developing PID [4]. Risk factors for PID are multiple sexual partners, single status, lower socioeconomic status, young age (<30 years), intrauterine contraceptive device, endometrial biopsy, curettage, hysteroscopy, and hysterosalpingography. Complications of acute PID include the evolution towards tubal damage resulting in tubal infertility, ectopic pregnancy, and chronic pelvic pain [5]. The early identification and treatment of cervical infection can prevent pelvic inflammatory disease. Mostly, the uterine device used in women can be affected by pelvic inflammatory disease, and young women should be fully counseled on the risk of pelvic inflammatory disease. PID has a high morbidity; about 20% of affected women become infertile, 40% develop chronic pelvic pain, and 1% of those who conceive have an ectopic pregnancy. However, the diagnosis of PID can be difficult since the clinical presentation of PID may mimic other pelvic and abdominal processes including, but not limited to, Appendicitis, Ovarian torsion, Urinary tract infection, and Constipation. It is the difficulty of diagnosis and the morbidity of Women. The incidence of acute PID has decreased in many countries, though its true prevalence is not well known because the majority of cases are subclinical. Hospital discharge registries are poor surrogate markers for the true prevalence of PID. In the USA, an estimated one million women are treated each year for PID, and at least one-fourth of these suffer from serious sequelae, including infertility, ectopic pregnancy, chronic pelvic pain, and require major abdominal and pelvic surgery [6]. In Western countries, the origin of pelvic inflammatory disease is due to sexual abuse. On the other hand, in third-world countries like ours, unsafe delivery and abortion play the main role in the development of pelvic inflammatory diseases. Sequelae of PID can sometimes be very pathetic, as it causes sub-fertility, which is a very gloomy event in the reproductive health of a woman, as well as for her family life [7]. Associated with the disease, the Centers for Disease Control and Prevention (CDC) recommends that healthcare providers maintain a low threshold for the diagnosis of PID [8]. An Indian study was done in 2003 and which showed that out of the total population studied, 26.3 % of them are affected with Pelvic inflammatory diseases. A case-control study of Pelvic inflammatory diseases conducted at Shree Sayaji General Hospital, Gujarat, shows that 8-10% of women who studied were affected with Pelvic inflammatory

diseases. A community-based study in India shows that pelvic inflammatory disease was common in West Bengal and Gujarat, 57% and 50%, respectively. In Karnataka, a rural study showed that 17% of women were affected with pelvic inflammatory disease. The prevalence of pelvic inflammatory disease was high in India [9]. Pelvic and its complications are an important public health problem. The basic knowledge of pelvic inflammatory disease is very important among women globally as well as in India. The majority of women in their reproductive age are ignorant about the disease and its prevention. Thus, education for them is needed, especially for adolescent girls. Thus, the investigator has planned to conduct a study to assess the knowledge regarding the causes, complications, and prevention of pelvic inflammatory disease and to find out the association between knowledge of pelvic inflammatory disease and their selected demographic variables [5].

METHODOLOGY & MATERIALS

This research constitutes a descriptive cross-sectional study that involved the enrollment and analysis of 115 patients. The study took place at Shaheed Ziaur Rahman Medical College Hospital in Bogura, Bangladesh. This choice was made due to the hospital's location in the northern region of Bangladesh and its status as a tertiary-level public healthcare facility. The study spanned six months, running from July 2022 to December 2022. The sample for this study was drawn from nurses working in various departments, including the Gayne Department, Surgery Department, Orthopedic Department, and Medicine Department. The researchers employed a purposive sampling technique to select the participants. Ethical approval for the study was obtained from the ethical committee of Shaheed Ziaur Rahman Medical College Hospital in Bogura, Bangladesh.

Inclusion Criteria

- Nurses who are willing to participate in the study.
- Nurses who have minimum 6 months working experience in government job.
- Nurses who are available at the time of data collection.

Exclusion Criteria

- Nurses who are not willing to participate.
- Nurses who are less than 6 months working experience in government job.
- Nurses who are not available at the time of data collection.

A self-report method involving questionnaire completion was applied for this study. A Semi-structured questionnaire was prepared according to the objectives and variables of the study by the researchers. The questionnaire consisted of three parts: the first part covered the demographic information about the respondents, the second part contained nurses' knowledge, and the third part was a related

questionnaire. The questionnaire was pretested on ten 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. Prior to data collection, the investigators were provided a brief description of the purposes of the study and a questionnaire for clear understanding. Before data collection, the researchers obtained written consent from the respondents. The investigators collected data through a semi-structured questionnaire with face-to-face interviews with the respondents. Collected data was checked, organized, coded, edited, and analyzed manually. The results were interpreted by using descriptive statistics like- frequency, percentage, and mean with the help of a scientific calculator. The important variables were considered and analyzed to fulfil the objectives of the study. The results were calculated from the tabulated column.

RESULT

Table 1 shows the demographical characteristics of the study population: 20.87% were within the age of ≤ 30 years, 64.35% were between the ages of 31-40 years, 13.04% between the ages of 41-50 years, and 1.74% within the age of > 50 years among the respondents. Among them, 11.30% were male, and 88.70% female among the respondents. 3.48% were Single, 93.91% married and 3% divorced/widowed among the respondents. In this study, 93.04% were Muslim, 5.22% Hindus, and 1.74% Christian among the respondents. The professional educational qualification was 61.74% Diploma in nursing, 27.83% BSc in nursing, and 10.43% MSc/MPH among the respondents. The duration of current service 40% was < 5 years, 45% were 6-10 years, 9% were 11-15 years, and 6% were > 15 years among the respondents (Table 1). Table 2 shows that 6.09% responded to the option of peritoneal inflammatory disease, 89.57% the option of Pelvic inflammatory disease, and 4.35% the option of Pediatric immune deficiency, meaning PID among the respondents. The table also shows that 2.61% responded to the option of abdominal distention, 1.74% the option of Urinary tract infection, 91.30% the option of Infection of women's reproductive organs, and 4.35% the option of Infertility that pelvic Inflammatory Disease (PID) among the respondents. In Table 3, 79.13% of the participants answered the option of Endometrium, ovaries, fallopian tubes, and pelvic peritoneum, which areas of the upper genital tract may become infected in pelvic inflammatory disease among the respondents. According to Table 4, 5.22% answered the option of Abdominal Pain, 1.74% answered the option of Irregular menstrual bleeding, 3.48% the option of Pain during sex, and 89.57% answered the option of all of the above signs/symptoms of PID among the respondents. Based on risk factors, 5.22% answered the option of Untreated STIs (STDs), 6.09% answered the option of multiple

sexual partners, and 88.70% answered the option of all of the above risk factors for pelvic inflammatory disease (PID) among the respondents. The above table shows that 17.39% answered the option of Syphilis and Gonorrhoea, 2.61% answered the option of Genital herpes and genital warts, 6.09% answered the option of Chlamydia and genital warts, and 73.91% answered the option of Gonorrhoea and Chlamydia that causes pelvic inflammatory disease (PID) among the respondents (Table 4). In Table 5, the majority 91.30% answered the option of Pelvic examination, 2.61% answered the option of MRI, 1.74% answered the option of Endoscopy, and 4.35% answered the option of X-ray that way to diagnose pelvic inflammatory disease (PID) among the respondents. Table 5 also shows that 11.30% answered the option of High vaginal swab for gm. staining and C/S, 6.09% answered the option of USG of lower abdomen, and 82.61% answered the option of all of the above that investigations need to carry out for PID patient among the respondents. The highest, 87.83%, answered the option of recent delivery, abortion, or MR, whereas the lowest, 12.17%, answered the option of none of the above that PID includes the history among the respondents. In this study, 10(8.70%) participants answered the option of Endometritis, 2.61% answered the option of Uterine fibroid, 80.00% answered the option of Infertility, and 8.70% answered the option of Incontinence, that complication of pelvic inflammatory disease (PID) among the respondents. Table 6 shows that 6.96% answered the option of having only one sexual partner, 8.70% answered the option of using condoms, and 84.35% answered the option of all of the above that the risk of pelvic inflammatory disease (PID) could be reduced among the respondents. 72.17% answered the option of True, 2.61% answered the option of False, and 25.22% answered the option of Not sure that Pelvic inflammatory disease (PID) increases the risk of developing some cancer among respondents. Based on the potential long-term complications, 7.83% answered the option of Inability to get pregnant, 13.04% answered the option of Long-term (chronic) Pain, 7.83% answered the option of higher chance of pregnancy being found outside of the uterus, and 71.30% answered the option of all answers are correct that potential long-term complications of untreated pelvic inflammatory disease include among the respondents (Table 6). Table 7 shows the distribution of respondents by knowledge of specific drug therapy and need surgical treatment for PID, where 4.35% answered the option of anti-hypertensive drug, 1.74% answered the option of Anti-viral drug, 5.22% answered the option of Antifungal drug and 88.70% answered the option of Antibiotic that knowledge on specific drug therapy for PID among the respondents. The majority of 80(69.57%) participants answered the option of Yes, 12.17% answered the option of No, and 18.26% answered the option of Not sure that PID may need surgical treatment among the respondents. According to Table 8, 0.87% answered the option of never administering, 93.91% answered the option of administering when needed, and 5.22% answered the

option of always administering analgesics and antipyretics to a PID patient among the respondents. Among the participants, 86.09% answered the option of Yes, 0.87% answered the option of No, and 13.04% answered the option of not sure, ensuring proper report and record keeping among the respondents. The above table shows that 11.30% answered the option of Yes, 73.04% answered the option of No, and 15.65% answered the option of Not sure that PID patients need to be kept in an isolated room. Most of 80.00% answered the option of Yes, 2.61% answered the option of No, and 17.39% answered the option of Not sure that PID may be cured among the respondents. Most, 72.17% of participants answered the option of Yes, 2.61% answered the option of No, and 25.22% answered the option of Not sure that PID can affect them again after treatment among the respondents. About practice the table shows that the highest level of practice answered the option of

Yes 90.00% were monitor the vital signs of a PID patient, 89.00% performed pelvic and vaginal examinations of a PID patient, 83.00% kept a PID patient in semi-fowlers position to facilitate vaginal discharge, 86.00% give psychological support to a PID patient, 87.00% provide health education to the patient and family members, 80.00% maintain aseptic techniques in all nursing procedure among the respondents which may positive thinking about the PID. Moreover, the highest answered the option of No 59.00% were counsel a PID patient, 27.00% advised the patient to come back for follow-up after discharge from the hospital, 23.00% advised the patient to use a condom during sex with a partner, and the lowest 4.00% were health education to the patient and family members. On the other hand, among those who answered the option of not sure, 17.00% were counseled a PID patient, and the lowest 2.00% advised the patient to return for follow-up after discharge.

Table 1: Demographical characteristics of the study population (N=115).

Characteristics	Frequency (n)	Percentage (%)
Age (Years)		
≤30	24	20.87
31-40	74	64.35
41-50	15	13.04
>50	2	1.74
Gender		
Male	13	11.30
Female	102	88.70
Marital status		
Single	4	3.48
Married	108	93.91
Divorced/Widowed	3	2.61
Religion		
Muslim	107	93.04
Hindus	6	5.22
Christian	2	1.74
Educational qualification		
Diploma in Nursing	71	61.74
BSc in nursing	32	27.83
MSc/MPH in nursing	12	10.43
Duration of current service (in years)		
< 5	46	40.00
6-10	52	45.22
10-15	10	8.70
>15	7	6.09

Table 2: Distribution of the study population by knowledge on Pelvic Inflammatory Disease (PID)

Items	Frequency (n)	Percentage (%)
Knowledge on the meaning of PID		
Peritoneal inflammatory disease	7	6.09
Pelvic inflammatory disease	103	89.57
Pediatric immune deficiency	5	4.35
Knowledge on Pelvic Inflammatory Disease (PID)		
Abdominal distention	3	2.61
Urinary tract infection	2	1.74
Infection of women's reproductive organs	105	91.30
Infertility	5	4.35

Table 3: Distribution of respondents by knowledge on areas of the upper genital tract may become infected in pelvic inflammatory disease (N=115).

Items	Frequency (n)	Percentage (%)
Cervix, vagina, and endometrium	5	4.35
Ovaries and fallopian tubes only	3	2.61
Endometrium, ovaries, and fallopian tubes, but not pelvic peritoneum	16	13.91
Endometrium, ovaries, fallopian tubes, and pelvic peritoneum	91	79.13
Total	115	100.00

Table 4: Distribution of respondents by knowledge on signs/symptoms, risk factors, STDs causes of PID.

Items	Frequency (n)	Percentage (%)
Signs and symptoms		
Abdominal pain	6	5.22
Irregular menstrual bleeding	2	1.74
Pain during sex	4	3.48
All of the above	103	89.57
Risk factors		
Untreated STIs (STDs)	6	5.22
Multiple sexual partners	7	6.09
All of the above	102	88.70
STDs causes pelvic inflammatory disease (PID)		
Syphilis and gonorrhea	20	17.39
Genital herpes and genital warts	3	2.61
Chlamydia and genital warts	7	6.09
Gonorrhea and chlamydia	85	73.91

Table 5: Distribution of respondents by knowledge on way to diagnose, investigation and complication of pelvic inflammatory disease (PID)

Items	Frequency (n)	Percentage (%)
Diagnosis		
Pelvic examination	105	91.30
MRI	3	2.61
Endoscopy	2	1.74
X-Ray	5	4.35
Investigations		
High vaginal swab for gm. staining and C/S	13	11.30
USG of lower abdomen	7	6.09
All of the above	95	82.61
Recent history		
Recent delivery, abortion, MR.	101	87.83
None of the above	14	12.17
Complication		
Endometritis	10	8.70
Uterine fibroid	3	2.61
Infertility	92	80.00
Incontinence	10	8.70

Table 6: Distribution of respondents by knowledge on reducing of PID, cancer development and potential long term complication risk of pelvic inflammatory disease (PID)

Items	Frequency (n)	Percentage (%)
Reducing of PID		
Having only one sexual partner	8	6.96
Using condoms	10	8.70
All of the above	97	84.35
Cancer development		
True	83	72.17
FALSE	3	2.61
Not sure	29	25.22

Items	Frequency (n)	Percentage (%)
Potential long-term complications		
Inability to get pregnant	9	7.83
Long-term (chronic) pain	15	13.04
A higher chance of pregnancy being found outside of the uterus	9	7.83
All answers are correct	82	71.30

Table 7: Distribution of respondents by knowledge on specific drug therapy and need surgical treatment for PID

Items	Frequency (n)	Percentage (%)
Drug therapy		
Anti-hypertensive drug	5	4.35
Anti-viral drug	2	1.74
Antifungal drug	6	5.22
Antibiotic	102	88.70
May need surgical treatment		
Yes	80	69.57
No	14	12.17
Not sure	21	18.26

Table 8: Distribution of respondents by knowledge on medical care for PID patient

Items	Frequency (n)	Percentage (%)
Administering analgesics and antipyretic to a PID patient		
Never administer	1	0.87
Administer when needed	108	93.91
Always administer	6	5.22
Ensuring proper report and record keeping		
Yes	99	86.09
No	1	0.87
Not sure	15	13.04
PID patient need to keep in an isolated room		
Yes	13	11.30
No	84	73.04
Not sure	18	15.65
PID may be cured		
Yes	92	80.00
No	3	2.61
Not sure	20	17.39
PID can affect again after treatment		
Yes	83	72.17
No	3	2.61
Not sure	29	25.22

Table 9: Average level of knowledge on PID of the study population

Items	Frequency (n)	Percentage (%)
High level of knowledge	5	25.00
Moderate level of knowledge	7	35.00
Low level of knowledge	8	40.00
Total	20	100.00

Table 10: Distribution of practice by Yes, No and Not sure (N=115)

Qu. No.	Question	Yes		No		Not sure	
		n	%	n	%	n	%
1	Do you monitor vital signs of a PID patient?	99	90.00	4	4.00	7	6.00
2	Do you perform pelvic and vaginal examination of a PID patient	98	89.00	5	5.00	7	6.00
3	Do you keep a PID patient in semi-fowlers position to facilitate vaginal discharge?	91	83.00	10	9.00	9	8.00

Qu. No.	Question	Yes		No		Not sure	
		n	%	n	%	n	%
4	Do you ask the PID patient to stop having sex during the treatment?	84	77.00	7	6.00	19	17.00
5	Do you advice the patient to come back for follow-up after discharge from hospital?	78	71.00	30	27.00	2	2.00
6	Do you counsel a PID patient?	28	26.00	65	59.00	17	15.00
7	Do you give psychological support to a PID patient?	94	86.00	8	7.00	8	7.00
8	Do you give health education to the patient and family members?	96	87.00	4	4.00	10	9.00
9	Do you maintain aseptic techniques in all nursing procedure?	88	80.00	18	16.00	4	4.00
10	Do you advice the patient to use condom during sex with partner?	79	72.00	25	23.00	6	5.00

DISCUSSION

The purpose of this descriptive cross-sectional study was to assess the level of nurse's knowledge and practice regarding Pelvic Inflammatory Disease (PID) at SZMCH, Bogura. This chapter presents a summary of the study, findings in relation to those previously reported in the literature, and discussion. In addition, the suggestions for practice and recommendations for future research will also be addressed. The present study findings revealed that the socio-demographic information of age group was 20.87% were within the age of ≤ 30 years, 64.35% between the age of 31-40 years, 13.04% between the age of 41-50 years, and 1.74% within the age of >50 years; 11.30% were male whereas 88.70% female; 3.48% were Single, 93.91% married and 2.61% divorced/widowed; 93.04% were Muslim, 5.22% Hindus and 1.74% Christian; 61.74% Diploma in nursing, 27.83% BSc in nursing and 10.43% MSc/MPH; 40.00% was <5 years, 45.22% were 6-10 years, 8.70% were 11-15 years and 6.09% were >15 years among the respondents in the current study. A study conducted by Arif *et al.*, (2017) stated that the highest 54% occurrence of this disease is in the age group of 26-35 years [10]. Peterson *et al.*, (1999) also showed that women with PID are usually under the age of 25 years [11]. Shah *et al.*, (1998) showed that 87% of the nurses belong to the age group 20-35 years, and regarding marital status, 90% were married [12]. Moreover, Item wise analysis of the knowledge based information 6% were responded the option of peritoneal inflammatory disease, 89.57% the option of Pelvic inflammatory disease and 4.35% the option of Pediatric immune deficiency; 2.61% were responded the option of abdominal distention, 1.74% the option of Urinary tract infection, 91.30% the option of Infection of women's reproductive organs and 4.35% the option of Infertility that pelvic Inflammatory Disease; 4.35% were answered the option of Cervix, vagina, and endometrium, 2.61% answered the option of Ovaries and fallopian tubes only, 13.91% the option of Infection of Endometrium, ovaries, and fallopian tubes, but not pelvic peritoneum, and 79.13% answered the option of Endometrium, ovaries, fallopian tubes, and pelvic peritoneum that areas of the upper genital tract may become infected in pelvic inflammatory disease; 5.22% were answered the option of Abdominal pain, 1.74% answered the option of Irregular menstrual bleeding,

3.48% the option of Pain during sex, and 89.57% answered the option of all of the above that sings/symptoms of PID; 5.22% were answered the option of Untreated STIs (STDs), 6.09% answered the option of multiple sexual partners and 88.70% answered the option of all of the above that risk factors for pelvic inflammatory disease; 17.39% were answered the option of Syphilis and gonorrhea, 2.61% answered the option of Genital herpes and genital warts, 6.09% were answered the option of Chlamydia and genital warts and 73.91% answered the option of Gonorrhea and chlamydia that causes pelvic inflammatory disease; 91.30% were answered the option of Pelvic examination, 2.61% answered the option of MRI, 1.74% were answered the option of Endoscopy and 4.35% answered the option of X-Ray that way to diagnose pelvic inflammatory disease; 11.30% were answered the option of High vaginal swab for gm. staining and C/S, 6.09% answered the option of USG of lower abdomen and 82.61% answered the option of all of the above that investigations need to carry; 87.83% were answered the option of recent delivery, abortion, MR whereas the lowest 12.17% answered the option of none of the above that PID includes the history; 8.70% were answered the option of Endometritis, 2.61% answered the option of Uterine fibroid, 80.00% were answered the option of Infertility and 8.70% answered the option of Incontinence that complication of pelvic inflammatory disease (PID); 6.96% answered the option of having only one sexual partner, 8.70% were answered the option of using condoms and 84.35% answered the option of all of the above that risk of pelvic inflammatory disease (PID) can be reduced; 72.17% answered the option of True, 2.61% were answered the option of False and 25.22% answered the option of Not sure that Pelvic inflammatory disease (PID) increase the risk of developing; 7.83% were answered the option of Inability to get pregnant, 13.04% answered the option of Long-term (chronic) pain, 7.83% were answered the option of higher chance of pregnancy being found outside of the uterus and 71.30% answered the option of all answers are correct that potential long-term complications of untreated pelvic inflammatory disease; 4.35% were answered the option of anti-hypertensive drug, 1.74% were answered the option of Anti-viral drug, 5.22% answered the option of Antifungal drug and 88.70% answered the option of Antibiotic that knowledge on

specific drug therapy for PID; 69.57% answered the option of Yes, 12.17% were answered the option of No and 18.26% answered the option of Not sure that PID may need surgical treatment; 0.87% answered the option of Never administer, 93.91% were answered the option of Administer when needed and 5.22% answered the option of Always administer that administering analgesics and antipyretic to a PID patient; 86.09% answered the option of Yes, 0.87% were answered the option of No and 13.04% answered the option of Not sure that ensuring proper report and record keeping; 11.30% answered the option of Yes, 73.04% were answered the option of No and 15.65% answered the option of Not sure that PID patient need to keep in an isolated room; 80.00% answered the option of Yes, 2.61% were answered the option of No and 17.39% answered the option of Not sure that PID may be cured; 72.17% answered the option of Yes, 2.61% were answered the option of No and 25.22% answered the option of Not sure that PID can affect again after treatment among the respondents. Furthermore, the current study findings on practice-related information were the highest answered the option of Yes 90% monitor vital signs of a PID patient, 89% perform pelvic and vaginal examination of a PID patient, 83% keep a PID patient in semi-fowlers position to facilitate vaginal discharge, 86% give psychological support to a PID patient, 87% provide health education to the patient and family members, 80% maintain aseptic techniques in all nursing procedure among the respondents which may positive thinking about the PID. Moreover, the highest answered the option of No 59% were counsel a PID patient, 27% advised the patient to come back for follow-up after discharge from the hospital, 23% advised the patient to use a condom during sex with a partner, and the lowest 4% were health education to the patient and family members. On the other hand, a PID patient counseled the highest 15%, and the lowest 2% advised the patient to come back for follow-up after discharge from hospital among the respondents. According to Nirmala (2015), most of the people who heard about PID got their information from social media. This contradicts Abraham and Mohammad (2018), who found that nearly half of the sample received their information from health professionals [13, 14]. A study conducted by Prabhu (2017) on knowledge regarding PID stated that PID includes knowledge about signs and symptoms of post-abortion infection, causes of PID, diagnostic criteria of PID after abortion, immediate complications of abortion, post-abortion contraceptive methods, the relation between PID and abortion, treatment of PID, and prevention of abortion, with a P value of 0.00 [15]. The present findings matched with Prema *et al.*, (2017), who found that at 0.05 level of significance, a statistically significant difference was found between pretest and posttest levels of knowledge [16]. In a study conducted by Abraham and Mohammed (2018), findings revealed that the highest 81% of nurses knew that Pelvic inflammatory diseases affect the uterus, fallopian tube, ovary, and pelvic peritoneum [14]. Manifestation and

detection of Pelvic inflammatory diseases reveals that 78% of nurses knew that lower abdominal pain and pelvic pain is the most common symptom of PID, and 74% knew that PID can be detected by ultrasonography. A similar study conducted on pelvic inflammatory disease among nurses showed that 80% had average knowledge, 18% had poor knowledge, and only 2% had good knowledge [17]. In contrast, the findings of the study were a contradiction with another study that found knowledge regarding pelvic inflammatory disease among urban women in India. A similar study was conducted on risk factors for PID in the inner city of Mumbai. Study results revealed that one of the independent risk factors for PID was later age at Menarche.

Limitations of the Study

The study was conducted among nurses who had no available resources for conducting the study. Socially desirability of responses could play a limiting factor in generalizing the results. There needed to be more financial computing, support, and minimum facilities provided by the authorities facing the researchers while conducting research.

CONCLUSION AND RECOMMENDATIONS

Pelvic inflammatory disease, a common gynecological disease, is a chronic inflammatory disease in internal genitalia and surrounding pelvic peritoneum connective tissues. Ovarian cysts, hydrosalpinx, pelvic connective tissue inflammation, salpingitis, etc., are types of pelvic inflammatory disease. The worldwide increase in the incidence of PID during the last few decades has led to secondary epidemics of tubal factor infertility and ectopic pregnancy. Of the present study's findings, 40% were low levels of nurses' knowledge regarding the PID, and this study might need to reflect the actual picture of PID in general. The application of in-service education and training programs will be significant in enhancing nurses' knowledge and self-reported practices regarding preventive measures of PID. There is a need to improve knowledge and positive practice to prevent PID. This can be achieved by providing educational and motivational activities and improvement in nursing services, which are needed to promote health and reduce PID and its consequences. There is need to more research studies are needed to increase nurse's knowledge and practice regarding PID because there were few research studies in this field. A similar study can be undertaken on a large scale. A comparative study between urban and rural areas may generate more study findings.

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