



Nursing Protocol to overcome Obstacles that Facing Nurses during Family Planning Counseling

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ABSTRACT

Background: A nurse as a family planning Counselor helps women choose and use family planning methods that suit their needs. Nursing protocol improves nurses' knowledge and skill regarding family planning counseling which in turn helps in overcoming obstacles facing nursing counsellors **Aim:** assess the effect of nursing protocol on overcoming obstacles that face nurses during family planning counseling. **Subject and Methods:** A quasi-experimental research (pre/post-test) design; sampling: A purposive sample of 80 nurses at Ain Shams University Maternity Hospital in family planning clinics were recruited in the current study. **Tools:** Data was collected using 1) a Structured Interviewing Arabic questionnaire which included 3 parts nurses' demographic data, nurses' knowledge regarding family planning counselling and Obstacles facing nurses' during family planning counselling; 2) observational checklist used for assessment of the quality of family planning counseling sessions. **Results:** 22.5% of nurses had good knowledge of pre-nursing protocol implementation which improved to 87.5% post-implementation. While 14.2% of nurses had good practice regarding family planning counseling compared to 74.2% post-implementation of the nursing protocol. Concerning obstacles that facing nurses' during family planning counseling the high obstacle was 35.0% pre-nursing protocol implementation which decreased to 22.5% post-implementation. **Conclusion:** the study concluded that the implementation of the nursing protocol has a positive effect on nurses' total knowledge, practice, and overcoming obstacles regarding family planning counseling. **Recommendation:** Implementation of nursing protocol at family planning clinic at different family planning services.

Keywords: Family planning, Family planning counselling, nurse as counselor, nursing protocol, Obstacles.

Introduction

Most emerging nations have significant challenges related to population increase. According to United Nations projections, the world's population is currently 7.8 billion and is increasing by more than 80 million each year (July 2018). By 2025, that number will have risen to over 8 billion (1,2). The population of Egypt is expanding rapidly. According to information from the UN's 2017 World Population Prospects Report, there are currently 97 million people living in Egypt. The population increased to 99.4 million in July 2018. (*Abo El-Enen et al., 2019*)

The family planning program in Egypt had been established as early as February 1966 to address the issue of overpopulation. It sought to assist families in having the right number of children, assist mothers in getting pregnant during the healthiest time for having children, and postpone pregnancy when necessary for social and medical reasons. (*Khalifa et al., 2020*).

Family planning counselling is described as a continual procedure that the counsellor nurse offers to clients and people to assist them in making educated decisions about the number of children they want to have (*Puri et al., 2020*) Family planning counselling is a crucial part of contraceptive treatments for two additional reasons: first, it can enhance patient health outcomes and contraceptive use, which in turn lowers the cost of healthcare (*Muttreja & Singh, 2019*)

Establishing rapport with the client, determining their wants and worries, providing information to address those needs and concerns, assisting the client in making an informed decision or resolving a problem, and assisting the client in implementing that decision are all aspects of the family planning counselling process. Thus, ensuring access for all people to their preferred contraceptive methods advances several human rights including the right to life, liberty, freedom of opinion and express their feeling as well as bringing substantial health and other benefits (*Kantorová et al., 2020*).

The majority of human resources in healthcare organizations are nurses. They are the foundation of the public health system and their performance directly affects the quality of care. As a result, the nation significantly relies on nurses to supply services, and their effectiveness is essential to the efficient delivery of healthcare. Along with nurses, other important players contribute to the development of women's reproductive health. Therefore, it is critical to evaluate the performance of healthcare employees because it has a direct impact on the efficiency and standard of service provided by healthcare organizations. (*Gupta et al., 2019*)

A nurse as a counselor is a type of client-provider interaction that involves two-way communication through counseling sessions between a health care provider, a woman and her partner to confirm and facilitate an informed

decision by the client or help the client address problems or concerns (WHO, 2019). Therefore, counseling is the main way that healthcare workers support and safeguard the client's rights to informed and voluntary decision-making

Many barriers prevent nurses from providing adequate family planning counselling, such as nurses' lack of passion, time constraints, some of them having insufficient knowledge, a lack of professional training on counselling protocols, and a prolonged period without continuous training that obstructs nurses' understanding and practices in this area. The same goes for clinics, where the congested spaces, noise, and hectic schedules make it difficult for nurses to offer family planning advice. (Mashal et al., 2022)

Nursing plays an important role in overcoming the obstacles of family planning through using evidence-based practice derived from empirical research and implemented into clinical practice that considers a particular way of performing nursing care in the right way with cost-effectiveness (Torrens et al., 2020)

The value of nursing protocol lies in giving staff members the chance to observe how information is applied to the health system to identify shortcomings that require remedy. Along with increasing staff nurses' awareness of the services' strengths, weaknesses, and motivation for continuous quality-of-care improvement, other goals include educating the staff about the necessity of thorough data collection and the significance of its veracity for effective

management of activities and programs. (Oldland et al., 2020)

Significance of the study:

According to the *Minister of Health (2019)*, Egypt is one of the most populous countries in the Middle East as the birth rate is constantly increasing, although universal family planning methods are widely promoted. So, Egypt's Ministry of Health proclaimed launching a new strategy to control the rapidly growing population to reach a birth rate of 2.4 for each woman is expected to be achieved by 2030. National Population Council (NPC) reported that 43 per cent of women do not follow birth control methods and only 57 per cent are using contraception (WHO, 2021).

The implementation of high-quality family planning services is centered on client-centered contraception counselling. Receiving high-quality counselling has been linked to the use and maintenance of contraception among family planning patients in a variety of contexts, and it may persuade people to use the healthcare system again if they are dissatisfied with a particular technique. Proper counselling is essential to make sure women choose a method they are comfortable with and are less likely to stop due to dissatisfaction because worries about side effects and health hazards significantly contribute to the non-use of contraception among women who don't want to get pregnant. (Olubodun, et al, 2020). To meet individual demand for contraception and lower rates of unintended pregnancy at the population level, it is essential to ensure the supply of high-quality counselling. Furthermore, the

provision of contraceptive services based on human rights requires excellent counselling to encourage the use of informed decision-making. (Saizonou et al., 2021)

Considering the significance of nurses' roles in counselling, the current study aimed to assess the effect of nursing protocol on overcoming obstacles that facing nurses during family planning counseling through obtain a basic database that helps in improving their knowledge and offer available solutions to overcome the obstacles which hinder them from practice their role as a family planning counselor

Aim of the study

The study aimed to assess the effect of nursing protocol on overcoming obstacles that facing nurses during family planning counseling, through:

- 1- Assessing nurses' knowledge and practice regarding family planning counseling.
- 2- Determining obstacles faced by nurses' counselors in family planning clinics.
- 3- Implementing nursing protocol to overcome obstacles that facing nurses during family planning counseling.
- 4- Evaluation of the effect of the nursing protocol post-intervention

Research Hypothesis:

Implementation of the nursing protocol has a positive effect on overcoming obstacles facing nurses during family planning counseling.

Operational definition:

Nursing Protocol: a set of written guidelines that inform nurses of the precise actions to be performed when assessing an inmate's health status and delivering clinical therapies.

Subjects and methods

Research design:

A quasi-experimental design study using one group (pre and post-test) was carried out to establish a cause-and-effect relationship between an independent and dependent variable

Research setting:

The study was conducted at Ain Shams University Maternity Hospital in family planning clinics.

Sample type and size:

A purposive sample of 80 nurses according to certain inclusion criteria, who were available at the time of data collection, and determined by using appropriate statistical equation.

$$n = \left(\frac{Z_{1-\alpha/2} + Z_{1-\beta}}{ES} \right)^2$$

The standard normal deviate for $\alpha = Z\alpha = 1.960$

The standard normal deviate for $\beta = Z\beta = 0.892$

$$A = 2.500$$

$$B = (Z\alpha + Z\beta)^2 = 8.122$$

$$C = (E/S (\Delta))^2 = 0.1024$$

$$AB/C = 79.6323.$$

$$n = 80$$

$$= (1.96 + 0.89)^2 = 79.6323 \approx 80 \text{ nurses.}$$

Thompson, (2015).

Inclusion criteria:

All maternity nurses provide family planning services at the family planning clinic allocated at Ain Shams Maternity University Hospital.

Tools of data collection:

Data was collected using the following tools:

Tool 1: Structured Interviewing Arabic

Questionnaire: This tool was settled by the researchers based on the review of related literature (*Torrens et al., 2020*) & (*Khalil et al., 2017*) and was written in a simple Arabic language.

The tool consists of the following parts:

Part I: Nurses' demographic data was designed to assess demographic characteristics of nurses such as age, level of education, years of experience, qualification, and place of residence.

Part II: Nurses' knowledge regarding family planning counselling was constructed to assess the level of nurse's knowledge (Pre/post) regarding family planning counselling, which included 14 multiple choice questions for family planning counselling as Have information about the family planning counselling, a component of family planning counselling, knowledge about skills of counsellors as know what's the skills of the nurse as a counsellor ...etc.

Knowledge Scoring System: The scoring system for each knowledge item is ranging from (1-3) in which score (1) denotes incorrect answer, score (2) denotes incomplete correct answer, and score (3) denotes complete correct answer, nurses' score was

summed up and converted into a per cent score. It was classified into 3 categories:

- Good knowledge of scores > 70%.
- Average knowledge if score from 60-70%.
- Poor knowledge of score <60%.

Part III: Obstacles facing nurses' during family planning counselling: (Pre/post)

It was developed by the researchers after reviewing related literature to assess obstacles facing nurses during family planning counselling, it included 28 items divided into five domains as follows: obstacles related to infrastructure, work environment domain (3 items) such as unavailability of waiting area, private room for physical examination, ...etc, obstacles related to tools and equipment (8 items) such as unavailability of medical supplies, sterilizer, the instrument used in family planning procedures ...etc, obstacles related to contraceptive methods domain (4 items) such as unavailability of family planning methods, obstacles related to the recipient domain (5 items) such as educational level, disinterest with the counseling, Lack of awareness of the importance of the advice given...etc and obstacles related to counseling service providers domain (8 items) as increased workload, shortage in nurses, poor communication skills, ...etc

Scoring System: each item is rated on three points Likert scale in which always = 3, sometimes = 2 and never = 1. These scores were summed up and converted into a percentage score. It was classified into 3 categories:

- High obstacles: if the score $\geq 70\%$
- Moderate obstacles: if score $< 70:50$
- Low obstacles: if the score < 50

Tool 2: Observation checklist according to United States Agency for International Development user's guide adapted from *Elshazly et al. (2016)* consisted of 11 items that were used for assessment of the quality of FP counseling sessions through observing steps below.

Pre-choice stage; consisted of four steps: establish a friendly rapport, rule out pregnancy, gather all of the counselling materials, and toss away any that are inappropriate after learning about reproductive objectives, breastfeeding, previous method issues, partner support, and condom use.

Method choice stage; It involved three steps: disclosing non-set-aside techniques, asking the client to select the method, and utilizing a brochure to omit non-advised conditions.

Post-choice stage It involved the following four steps: explaining the procedure to the client, providing a recommendation and a backup plan if necessary, finishing the counselling session, inviting the client back and extending gratitude.

Practice scoring system: each item is rated in three points correctly done = 3, incorrectly done = 2 and not done = 1. These scores were summed up and converted into a percentage score. It was classified into 3 categories:

- Good practice: if the score $\geq 85\%$
- Average practice: if score $< 85:60$
- Poor practice: if the score < 60

Preparatory phase:

- It involved researching past, present, local, and global literature and theoretical understanding of many study-related topics using books, papers, the internet, magazines, and journals to create data-gathering methods.

Validity and reliability

Validity of the tool

During the construction of data collection tools, the face and content validity of the study tools were assessed by a group of 3 experts in the maternity and gynecology nursing field and community nursing to judge the tool for its comprehensiveness, clarity, relevance, understanding and applicability. Tools rephrase based on their opinion. The correction and modification of some items were done

Reliability:

- Internal consistency reliability was assessed in the present study tools via Cronbach alpha reliability analysis to indicate how well the items in the instrument fit together conceptually. *Cronbach, (1951)*.

Items	Cronbach alpha
Structured Interviewing Questionnaire	0.881
Observational checklist	0.895

B- Pilot study:

The pilot study was conducted on 10% of the expected sample (8 nurses) to ensure the clarity, applicability and time needed. Tools were

not modified. A pilot study sample was included in the study sample.

C- Fieldwork:

The assessment, implementation, and evaluation phases were used to achieve this research goal. The researchers conducted these phases over three months, three days each week, from the beginning of March 2022 to the end of June 2022.

Phase I: (baseline assessment) at this phase, the researcher explained to nurses the aim of the study then the oral consent of the nurses was obtained. Confidentiality of the information was ensured to gain nurses' confidence and trust. The first tool of data collection was filled by nurses and took about 10 minutes. While the second tool was filled by researchers after observing nurses' counseling sessions for clients and took about 20 minutes.

Based on the initial assessment, the nursing protocol was developed by the researchers and revised by specialized professors of maternal and neonatal nursing before its application to assure the safety

Phase II: (Implementation of nursing protocol to overcome obstacles facing nurses regarding family planning counseling):

The beginning of first session is an orientation session regarding the contents of nursing protocol, its general, specific objectives and their impact on nurses' knowledge and practices. Nurses were divided into 4 groups, and each group consisted of 20 nurses approximately. Each session started with a summary of what had been given through the previous sessions and the objectives of the new

session. As well, the session ended with a summary of its content and feedback gained from others.

The sessions were applied in six sessions; each session took about 35-45 minutes. Three sessions were concerned with the theoretical part that covered knowledge related to (the concept of family planning counseling, types of counseling, and criteria of the nurse as a counselor in addition to; sessions for overcoming obstacles facing the nurses in family planning). Researchers used lectures, group discussions, and audio-visual materials such as power point and a poster.

Regarding practical sessions, there were three sessions in which researchers train nurses regarding "Family planning counseling, communication skills". The researchers use demonstrations on real situations, and role play finally researchers distributed the implemented nursing protocol for nurses as a reference to be used after implementation

Session 1&2	<ul style="list-style-type: none"> • Acquaintance and explanation of general & specific objectives • Knowledge related to family planning counseling • Types of counseling, and criteria of the nurse as a counselor
Session 3	<ul style="list-style-type: none"> • Overcoming obstacles related to family planning counseling
Session 4-6	<ul style="list-style-type: none"> • A practical session regarding family planning counseling & communication skills

Phase III: (evaluation): The evaluation of nurses was done immediately after completing the nursing protocol implementation. The researcher interviewed nurses again to redistribute the

questionnaire form for 2nd time and observe nurses' practice to compare and evaluate their knowledge, practice & effect of nursing protocol on overcoming obstacles regarding family planning counseling.

Administrative Design:

An official letter requesting permission to conduct the study was submitted from the Dean of the Faculty of Nursing, Ain Shams University to the director of Ain Shams Maternity University Hospital. This letter included the aim of the study and photocopy from data collection tools to get permission and help for the collection of data.

Ethical consideration:

The approval was obtained from the Scientific Research Ethical committee in the Faculty of Nursing at Ain Shams University before starting the study. Anonymity was guaranteed, and participation was entirely optional. The researcher assured maintaining the anonymity and confidentiality of the subject data before the study began, and nurses were informed that they could choose whether to participate in the study or not and that they have the right to withdraw from it at any time. The researcher then explained the study's objective and aim to the subjects included in the study.

Statistical Design:

Statistical Package for Social Sciences (SPSS) version 24 was used to edit, code, and enter the data gathered from the study sample. Descriptive statistics were used to show the data as frequencies and percentages. Comparisons between qualitative variables were made using the Chi-square test (χ^2).

The degree and direction of a link between two variables are measured by Spearman correlation. An inferential statistic called a paired t-test is utilized to ascertain whether there is a significant difference between the group's means before and after implementation and how they relate to one another.

Significance of the results:

The confidence interval was set to 95.0% and the margin of error accepted was set to 5.0%. So, the P-value was considered significant as the following:

- No significant difference was obtained at $P > 0.05$
- A significant difference was obtained at $P < 0.05(*)$.
- The highly significant difference was obtained at $P < 0.001(**)$.

Results:

All 80 nurses were involved with response rate 100%. The results were presented in 3 tables and 3 figures. **Table (1)** Shows that 47.5 % of the studied nurses were aged (20 - 29) years with a mean age & S.D 33.0 ± 0.15 , 70.0 % of them were married, regarding education level 42.5 % of them were technical institutes of nursing. 45.0 % of nurses had an experience of more than 10 years, and regarding residence 72.5% of them were urban.

Figure (1) Indicates that only 22.5% of nurses had good knowledge of pre-nursing protocol implementation while this percentage improved to

87.5% post-nursing protocol implementation with highly statistically significant improvement.

Table (3) Displays that there was a highly statistically significant reduction in total obstacles "regarding infrastructure and work environment tools and equipment, contraceptive methods, the recipient counseling service providers and total obstacles" pre and post-nursing protocol implementation in which $t = 19.184, 24.93, 16.93, 13.64, 10.89$ and 31.54 at $p\text{-value} = 0.001, 0.002$.

Figure (2) Points out that there was a statistically significant reduction in total obstacles" that facing nurses while providing family planning counseling as high obstacles that represent 35.0% pre-nursing protocol implementation decreased to 22.5% post-nursing protocol implementation

Figure (3): Reveals that there was a statistically significant improvement in total nurses' practice regarding family planning counseling as good practice that represents 14.2% pre-nursing protocol implementation was improved to 74.2% post-nursing protocol implementation

Table (4): clarifies that, there was a highly statistically positive correlation between nurses' total knowledge, practice, and obstacles regarding family planning counseling pre and post-nursing protocol implementation P value (0.001**).

Table (1): Frequency and percentage distribution of the studied nurses according to their personal information (n=80).

Personal information		(n =80)	
Age	N	%	
20-29	38	47.5	
30-40	20	25.0	
>40	22	27.5	
Mean \pm SD	29.67 \pm 9.86		
Marital status			
Single	24	30.0	
Married	56	70.0	
Experience years			
1-5 years	20	25.0	
6-10 years	24	30.0	
>10 years	36	45.0	
Mean \pm SD	9.12 \pm 6.73		
Education level			
Nursing diploma	30	37.5	
Technical institutes of nursing	34	42.5	
Bachelor's degree in nursing	14	17.5	
Postgraduate	2	2.5	
Residence			
Urban	58	72.5	
Rural	22	27.5	

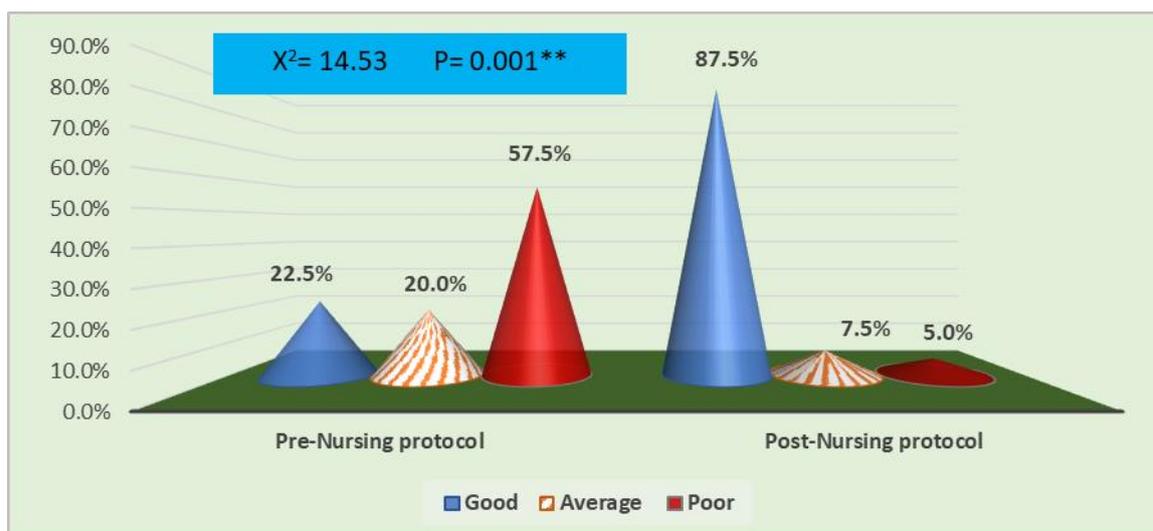


Figure (1): Comparison between the total knowledge of studied nurses' at pre and post-nursing protocol implementation (n=80).

Table (3): Comparison between the total obstacles facing nurses' during family planning counseling at pre and post-nursing protocol implementation (n=80).

Obstacle's	Pre-nursing protocol	Post-nursing protocol	Paired T-test	P-value
	Mean \pm SD	Mean \pm SD		
Obstacles related to infrastructure, work environment	1.06 \pm 8.88	6.73 \pm 0.82	19.184	0.001**
Obstacles related to tools and equipment	19.46 \pm 3.93	13.34 \pm 3.19	24.93	0.002
Obstacles related to contraceptive methods	10.81 \pm 3.71	6.57 \pm 2.36	16.93	0.001**
Obstacles related to the recipient	11.77 \pm 2.62	9.72 \pm 3.91	13.64	0.001**
Obstacles related to counseling service providers	15.39 \pm 4.76	10.32 \pm 1.97	10.89	0.001**

*Significant at $p < 0.05$. **Highly significant at $p < 0.001$

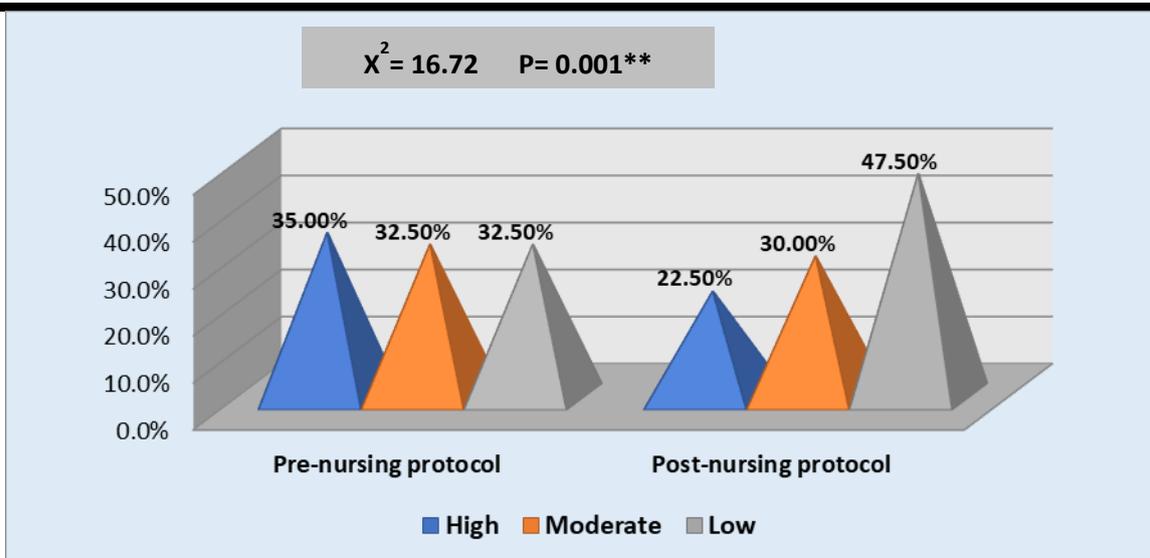


Figure (2): Comparison between the total obstacles facing nurses' regarding family planning counseling pre and post-nursing protocol implementation (n=80).

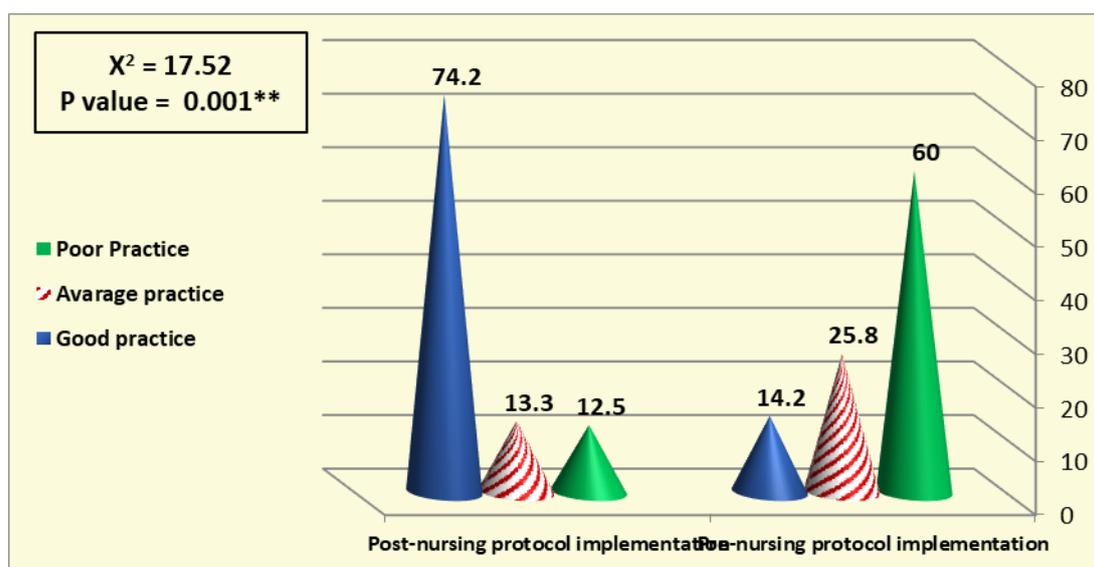


Figure (3): Comparison between the total practice of studied nurses' at pre and post-nursing protocol implementation (n=80).

Table (4): Correlation between study variables pre & post -program (n= 80).

Items	Knowledge	Practice	Obstacles
Knowledge		r =75.7 P = 0.001**	r =90.1 P = 0.001**
Pre-nursing protocol implementation			
Post-nursing protocol implementation		r =98.4 P = 0.001**	r =96.2 P = 0.001**
Practice	r =75.7 P = 0.001**		r =87.6 P = 0.001**
Pre-nursing protocol implementation			
Post-nursing protocol implementation	r =98.4 P = 0.001**		r =92.6 P = 0.001**
Obstacles	r =90.1 P = 0.001**	r =87.6 P = 0.001**	
Pre-nursing protocol implementation			
Post-nursing protocol implementation	r =96.2 P = 0.001**	r =92.6 P = 0.001**	

(**) Statistically significant at $p < 0.01$. r Pearson correlation

Discussion

Family planning kept the lives of women and children by helping to avoid unsafe abortion, limiting the risk of planning limiting the risk of pregnancy and childbirth, reducing the number of births, and limiting pregnancy to the healthiest ages and desired points in time. (Zimmerman et al., 2019) Nurses play a key role in the promotion of women's reproductive health. Family planning counseling is an important intervention by nurses in the all-healthcare setting as nurses educate consumers about ways to manage their health process more effectively (said et al., 2022)

The study aims to assess the effect of nursing protocol on overcoming obstacles that facing nurses during family planning counseling with a Hypothesis Implementation of a nursing protocol has a positive effect on overcoming obstacles facing nurses during family planning counseling

Regarding the studied nurses' demographic characteristics, the data of the current study showed that less than three-quarters of the studied nurses their age were between 20 > 40 with a mean age & S.D 29.67 ± 9.86 and the highest percentage of nurses aged between (20 - 29) years. Also, more than two-fifths of nurses had experienced more than 10 years. These results in accordance with the study conducted by (Hassan et al. 2019) who stated that above half of the surveyed nurses were aged 25 to 29 years. This may be due to same circumstances and regulations regarding primary care in Egypt.

Regarding education level, more than two-fifths of the studied nurses were technical institutes of nursing. This may be explained by that most nurse who holds a diploma or technical institutes of nursing are distributed in health care places such as clinics, and maternal and child health care centers, while nurses with higher degrees in nursing are distributed to administrative positions in government,

educational hospitals and critical departments which receives a large number of patients 24 hours a day. This finding supports the findings of **Abdel-Haleem et al. (2019)**, who showed that the majority of nurses had a nursing diploma. It contrasts with a study by **Hashem (2018)**, which indicated that less than two-thirds of nurses had a nursing bachelor's degree.

Regarding nurses' knowledge about family planning counselling, data analysis revealed that nurses' total knowledge score was a high statistically significant improvement post-implementation of the nursing protocol. This might be connected to the nurses' capacity and interest to advance their knowledge and role as family planning counselors and also the immediate effect of the implementation of a nursing protocol has a positive effect on overcoming obstacles facing nurses during family planning counseling in addition to the developed Arabic booklet that may probably be attributed to it.

These findings are consistent with those of **Abdel-Haleem et al. (2019)**, who discovered that nurses' understanding of unintended pregnancy and family planning counselling was insufficient. Therefore, none of them had sufficient knowledge during the pre-planning stage of the guidelines, which covered rumors and misconceptions about the method and how to dispel them, criteria for choosing women, signs of potential complications, the justifications for seeking medical advice, and an appropriate family planning follow-up schedule. While there was a

considerable improvement in the nurse's practice and understanding of unintended pregnancy and family planning counselling in the post-test

Additionally, the findings are in line with those of **Al-Shawakh et al. (2020)**, who claimed that nearly two-thirds of nurses have a good level of knowledge about family planning counselling. The researchers explained these findings by noting that the majority of the nurses in their study had worked in reproductive clinics for many years and that their education and training concentrated on a specialized area like reproductive health nursing. The current study's findings, however, contradict those of **Karvande (2018)**, an Indian study that highlights nurses' limited familiarity with family planning counselling.

While the absence of nurses' prior knowledge of family planning counselling pre-implementation may have been caused by the fact that the nurses in the study didn't obtain the necessary courses and ongoing training programs about family planning counselling. Because of this ignorance, family planning counsellors provide subpar nursing care.

These findings are in line with those of **Sikorski et al. (2018)**, who stated that in order to offer women high-quality care, a nurse must be aware of both physical changes in the mother and psychosocial and emotional changes in the entire family.

Regarding the total obstacles facing nurses pre and post-implementation of nursing protocol, data

from the current study showed a high statistically significant decrease in total obstacles that face nurses' during family planning counseling post-implementation. This may be attributed to the training program's success and applicability, which helped to remove barriers that nurses have when providing family planning counselling.

Regarding the obstacles related to the infrastructure, work environment, tools and equipment the mean score decreased post-implementation. The existence of these obstacles before implementation may be explained by the possibility that the number of sterile IUD insertion sets is limited and exhausts in accordance with the flow of women at this time, as the sterilization process of this equipment is linked to a specific time to get the necessary sterilization, which in turn forces the women to go home and return the following day due to a lack of sterile equipment.

These results agree with a study done in Jharkhand by **Karvande et al., (2018)** who state that inadequacy of quality infrastructure in terms of physical infrastructure, transport, equipment, etc. was identified as one of the health system challenges. Hence, the benefits of training healthcare providers can only be realized with the presence of an optimal infrastructure

Regarding the mean of Obstacles related to counseling service providers, the mean score was decreased post-implementation this may be due to a lack of knowledge regarding family planning counseling which improved post-implementation. This indicates the effectiveness of the

implementation of a nursing protocol has a positive effect on overcoming obstacles facing nurses during family planning counseling. The same direction is followed. According to **Weshahi, El, et al. (2021)**, one of the root causes of this shortcoming was a lack of counselling service providers' supervision and training. In order to give information to all postpartum women in both health and community settings, they should undergo on-site systematic training based on the current standards. Moreover, the government must fully support current mass media initiatives that promote family planning.

These findings support those of **Abo El-Enen et al. (2019)**, who found that while most nurses asked their clients about their chosen strategy, more than half failed to inform them about other birth spacing options. This indicates that nurses still require additional training. Roughly all of them didn't explicate the approach they chose to the client, and less than two-thirds of them didn't support the client in selecting the best option, but they all determined the date of the return visit as being accurate and complete.

Regarding the obstacles related to contraceptive methods were decreased post-implementation. This also may be due to the efficiency and effectiveness of the implementation of a nursing protocol having a positive effect on overcoming obstacles facing nurses during family planning counseling but at the same time. This conclusion wasn't particularly surprising considering that family planning is a priority program of the Ministry of Health & Population (MOHP), a part of the reproductive

health package, and fundamental health care services of the Egyptian Health Sector Program. Additionally, it shows how the ministry of health and population works with federal and national organizations.

These results disagree with (*Mkwindu et al., 2022*) who revealed that participants indicated that they had inadequate clinical supplies in their clinics to assist the women which negatively impacted the quality of care provided.

Regarding the mean Obstacle related to the recipient, the mean score was decreased post-implementation it may be explained by the inability of nurses to deal with the barriers regarding the women before implementation as a decrease in women's awareness regarding the importance of family planning counselling and also the different cultures of the women consider one of the obstacles during family planning counseling

Agree with the findings of **Weshahi, El, et al. (2021)** who discovered that providers were frustrated by having to deal with clients' persistent misconceptions and rumors. Their spread is in part due to Egyptian women's lack of awareness regarding contraceptives, which is often acquired from unreliable sources including family, peers, other patients at medical institutions, or careless sources.

The current study also showed that there was a statistically significant improvement in all nurses' family planning counselling practices after implementation, demonstrating the efficacy of the nursing protocol and also demonstrating the high

level of willingness among nurses to enhance their family planning counselling practices.

These findings are in line with those of *Elshazly et al. (2016)* who found that nurses performed better than physicians when it came to counselling patients. This may be explained by the fact that nurses in the study group had greater experience overall than physicians did, and by the fact that nurses were more likely than physicians to attend FP counselling training courses.

Disagree with the current findings *Al-Shawakh et al (2020)*. who found that nurses had a good level of knowledge and a low level of practice for family planning counselling and that there is a relationship between the level of knowledge and the level of practice about family planning counseling.

Conclusion

These results achieved the aim of the study and support the research hypothesis that the Implementation of a nursing protocol has a positive effect on improving nurses' knowledge, and practice, and overcoming obstacles facing nurses during family planning counseling

Recommendations:

In light of the findings of the current study the following recommendations are suggested:

- ✓ Implementation of nursing protocol at family planning clinic at different family planning services.

- ✓ Further studies include the effect of the implementation of the nursing protocol on family planning methods' continuation use.
- ✓ Further studies include larger samples of nurses from different geographical areas to generalize the results in Egypt.

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