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ORIGINALES

Knowledge of nurses about the intrauterine device in the context of basic health units

Conhecimento de enfermeiros sobre o dispositivo intrauterino no contexto das unidades básicas de saúde

Conocimiento de los enfermeros sobre el dispositivo intrauterino en el contexto de las unidades básicas de salud

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ABSTRACT:

Objective: To verify nurses' knowledge about the intrauterine device in the context of Basic Health Units.

Method: Observational study conducted with primary care nurses. The collection instrument was developed by literature review and validated by specialists in the field of women's health. Data were collected remotely between October 2021 and January 2022. Ethical considerations for research with human beings were respected.

Results: Sixty-six (66) nurses participated. Most nurses had their knowledge classified as satisfactory (75.8%). It was observed that the majority answered correctly about IUD classification with copper (69.7%), its side effects (89.4%), that it does not interfere with breastfeeding (97%), does not protect against STI (92.4%), does not develop cervical cancer (92.4%). They knew that nulliparous (69.7%), diabetic (97%) and hypertensive (97%) women can use the IUD with copper. However, they were unaware of the use of IUDs as emergency contraception (87.8%) and by women with AIDS (66.7%), considered the need for previous examinations as an eligibility criterion (86.4%) and that uterine perforation is the most frequent risk of insertion (63.6%).

Conclusion: The lack of knowledge of nurses, in the context of primary health care, about the intrauterine device, becomes a barrier that limits access to the contraceptive method. Therefore, the

skills of nurses should be strengthened through continuing education for the qualification of primary health care.

Keywords: Knowledge; Intrauterine devices; Nurses; Primary health care; Reproductive health.

RESUMO:

Objetivo: Verificar o conhecimento de enfermeiros sobre o dispositivo intrauterino no contexto das Unidades Básicas de Saúde.
Método: Estudo observacional realizado com enfermeiros da atenção básica. O instrumento de coleta foi elaborado por revisão de literatura e validado por especialistas da área da saúde da mulher. Os dados foram coletados de forma remota entre outubro de 2021 e janeiro de 2022. Respeitaram-se as considerações éticas para pesquisas com seres humanos.
Resultados: Participaram 66 enfermeiros. A maioria dos enfermeiros teve seu conhecimento classificado como satisfatório (75,8%). Observou-se que a maioria respondeu corretamente acerca da classificação do DIU com cobre (69,7%), seus efeitos colaterais (89,4%), que o mesmo não interfere na amamentação (97%), não protege contra IST's (92,4%), não desenvolve câncer de colo uterino (92,4%). Sabiam que nulíparas (69,7%), diabéticas (97%) e hipertensas (97%) podem fazer o uso do DIU com cobre. No entanto, desconheciam o uso do DIU como contracepção de emergência (87,8%) e por mulheres com AIDS (66,7%), consideraram a necessidade de exames prévios como critério de elegibilidade (86,4%) e que a perfuração uterina é o risco mais frequente da inserção (63,6%).
Conclusão: A falta de conhecimento dos enfermeiros, no âmbito da atenção primária de saúde, sobre o dispositivo intrauterino, torna-se uma barreira que limita o acesso ao método contraceptivo. Deve-se, portanto, fortalecer as habilidades dos enfermeiros por meio da educação continuada para a qualificação da atenção primária à saúde.

Palavras-chave: Conhecimento; Dispositivos intrauterinos; Enfermeiros; Atenção primária à saúde; Saúde reprodutiva.

RESUMEN:

Objetivo: Verificar el conocimiento de los enfermeros sobre el dispositivo intrauterino en el contexto de las Unidades Básicas de Salud.
Método: Estudio observacional realizado con enfermeros de atención primaria. El instrumento de recolección fue elaborado a través de una revisión bibliográfica y validado por especialistas en el área de la salud de la mujer. Los datos se recopilaron de forma remota entre octubre de 2021 y enero de 2022. Se respetaron las consideraciones éticas para la investigación con seres humanos.
Resultados: Participaron 66 enfermeros. La mayoría de los enfermeros tuvieron sus conocimientos clasificados como satisfactorios (75.8%). Se observó que la mayoría respondió correctamente sobre la clasificación del DIU con cobre (69.7%), sus efectos secundarios (89.4%), que no interfiere con la lactancia (97%), no protege contra las ITS (92.4%), no desarrolla cáncer de cuello uterino (92.4%). Sabían que las mujeres nulíparas (69.7%), diabéticas (97%) e hipertensas (97%) pueden usar DIU de cobre. Sin embargo, desconocían el uso del DIU como anticoncepcional de emergencia (87.8 %) y por parte de las mujeres con SIDA (66.7 %); consideraban la necesidad de exámenes previos como criterio de elegibilidad (86.4 %) y que la perforación uterina es el más frecuente riesgo de inserción (63.6%).
Conclusión: El desconocimiento de los enfermeros, en el contexto de la atención primaria de salud, sobre el dispositivo intrauterino, se convierte en una barrera que limita el acceso al método anticonceptivo. Por lo tanto, las habilidades de los enfermeros deben ser fortalecidas a través de la educación continua para la calificación de la atención primaria de salud.

Palabras clave: Conocimiento; Dispositivos intrauterinos; Enfermeros; Atención primaria de salud; Salud reproductiva.

INTRODUCTION

The pandemic caused by the SARS-CoV-2 (COVID-19) coronavirus has compromised society as a whole. What was thought to be a brief event has become a global health crisis that has lasted for more than two years and especially affects women [(1)]. The redirection of health services to deal with the COVID-19 emergency has left women without access to sexual and reproductive health services, essential for providing

information and support regarding their decisions to continue or postpone pregnancy[2]. Thus, it is estimated that 25% of Latin American or Caribbean adolescents were unprotected from unwanted pregnancy due to lack of an effective reproductive planning policy during the pandemic [3]

It can be seen that difficulties in exercising sexual and reproductive rights have exposed women to a number of situations that compromise their health, including the consequences of an unplanned pregnancy. This is considered a public health problem, since it takes young women and adolescents out of school and the labor market [4]. As an aggravating factor, it is projected that more than 47 million women worldwide have had access to contraceptive methods hindered during the COVID-19 pandemic, which can result in 7 million unplanned pregnancies [5].

Contrary to the reality imposed by the pandemic, the World Health Organization (WHO) warned of the need to guarantee access and continuity to contraceptive methods and sexual and reproductive health services, sharing information by accessible means and dialogical interaction between the university and society[6].

Reproductive planning is the right of all Brazilians, so contraceptive care is a basic activity of the Unified Health System (SUS) [7]. In this sense, in 2002 the Ministry of Health (MH) created the “Technical Manual of Assistance in Family Planning”, reaffirming the importance of reproductive planning and providing health professionals with the necessary knowledge to apply it in Primary Health Care (PHC) [8].

The Basic Health Unit (BHU) has been a strategic place to work on reproductive planning, as most women seek the unit both to perform their prenatal care and to have access to contraceptive methods. In this context, nurses play an important role in reproductive planning supported by the nursing consultation and their duties highlighted in the National Primary Care Policy [9].

It is observed that the Intrauterine Device with copper (IUD TCu 380A) is a long-term contraceptive method, with high efficacy (99%), low cost and should be available in the public network as a method of guaranteeing the sexual and reproductive rights of women, requiring qualified professionals and with the necessary knowledge to carry out the procedure of insertion, revision and removal of the IUD TCu 380A in primary health care [10,11].

This procedure performed by nurses was regulated by COFEN Resolution 690/2022, through theoretical-practical training with pre-defined workload and permanent education for constant technical and scientific updating [12]. In addition, the regulation of the insertion and withdrawal of the IUD in Brazil is also based on Ordinance 526/2020, which included in the SUS procedure table the insertion and removal of the IUD by both physicians and nurses of primary health care [13].

However, Brazil presents the use of IUD much lower than expected and the reasons found are related to the lack of supply and training of professionals and the centrality of insertion by gynecologists [14]. Thus, the knowledge of nurses to perform such practice and to discuss reproductive planning is extremely important in the field of sexual and reproductive rights of women. The insertion of IUD by nurses becomes, therefore, a strategy for the expansion of the supply and access of this contraceptive method, as well as for the prevention of unplanned pregnancy [15].

In this sense, this study aimed to verify the knowledge of nurses about the intrauterine device in the context of basic health units.

METHOD

This is an observational cross-sectional study with a quantitative approach carried out in Family Health Units in a municipality in the state of Paraíba, northeastern Brazil.

The sample consisted of nurses working in primary care in the municipality who agreed to participate in the research. Active nurses from the Family Health Strategy linked to the Health Department were included. Nurses who were away from their work activities (vacation, maternity leave or sick leave) during data collection and those who after three attempts to send the research instrument, with a return period of 15 days, did not return it were excluded.

The data collection instrument was a questionnaire prepared through a literature review [8,10,11,14,16-18]. Then, the instrument was evaluated by seven specialists in the area of women's health, using the snowball sampling method. The experts evaluated the adequacy of the content and indication of scores of the knowledge section of each question taking into account the degree of difficulty of the answer (Easy: 1.0; Median: 1.5; Hard: 2.0 points) and the significance of each item. For knowledge, 20 questions were composed, of the true or false type, totaling 25 points.

After adequacy of the questionnaire, a pilot test was carried out with 05 nurses from the primary health care of the municipality of this study, who evaluated it positively and determined the mean time for its resolution of 25 minutes.

For data collection, the questionnaire was sent to the electronic address of the participants through a virtual form. The questions were structured on participants' profile and knowledge about sexual and reproductive rights, eligibility, supply and IUD insertion. Data collection took place between October 2021 and January 2022.

The data were tabulated in spreadsheet creation software and analyzed in statistical software. The analysis was performed using descriptive and inferential statistics. The descriptive analysis was performed by means of absolute and relative frequency, as well as evaluation of measures of central tendency and dispersion (mean, standard deviation, minimum and maximum).

Regarding knowledge analysis, the questionnaire score was subdivided into five categories: 0 to 5, being classified as very unsatisfactory knowledge; 6 to 10, unsatisfactory knowledge; 11 to 15, regular knowledge; 16 to 20, satisfactory knowledge; 21 to 25, very satisfactory knowledge.

In the inferential analysis, Pearson's Chi-square test and Fisher's exact test were applied, the latter only in cases where the number of frequencies with data lower than 5 exceeded 20%. For all analyses, a significance value of 5% (p-value<0.05) was used.
The research was approved by the Research Ethics Committee of a public university through the opinion number 4,736,330. It is noteworthy that the ethical considerations present in Resolution 466 of December 12, 2012 of the National Health Council for

research with human beings [19] were respected. In addition, the Informed Consent Form (ICF) was obtained from each participant.

RESULTS

The sample consisted of 66 nurses. Regarding the sociodemographic and training data of the participants, it was observed that the majority were female (n=64; 97.0%), with a mean age of 43.8 years (SD=11.8), brown (n=40; 60.6%), had specialization/residence (n=46; 69.7%) and had more than 10 years of professional experience (n=41; 62.1%). It was also observed that most participated in some training on sexual and reproductive health (n=44; 66.7%) during professional practice and carried out educational actions in reproductive planning in the health unit (n=48; 72.7%).

Table 1: Distribution of sociodemographic and training data of respondents. João Pessoa, Paraíba, Brazil, 2022. (n=66)

Variables	n	%
Sex		
Female	64	97.0
Male	2	3.0
Age		
Minimum, maximum	23; 77	
Mean/Standard Deviation	43.8 – 11.8	
Age group		
Up to 44 years	34	51.5
above 44	32	48.5
Self-declared race/color		
White	22	33.3
Black	4	6.1
Brown	40	60.6
Yellow	0	0.0
Professional education		
Graduated	13	19.7
Specialization/Residence	46	69.7
Master's Degree	7	10.6
PhD Degree	0	0.0
Years of work experience		
Up to 10 years	25	37.9
Above 10 years	41	62.1
Training in sexual and reproductive health		
Yes	44	66.7
No	22	33.3
Performs educational actions of reproductive planning		
Yes	48	72.7
No	18	27.3

With regard to knowledge about the contraceptive method, 69.7% (n=46) answered correctly about the classification/mechanism of action and the effectiveness of the

copper IUD, while 89.4% (n=59) knew its side effects. Participants also answered that the intrauterine device with copper does not interfere with breastfeeding (n=64, 97%), does not protect against STI (n=61, 92.4%), does not increase the chances of developing cervical cancer (n=63, 92.4%) and that the woman does not delay returning to fertility after withdrawal (n=65, 98.5%). All participants answered that the IUD does not cause discomfort to the woman during sex (n=66, 100.0%). However, 87.8% (n=58) of participants answered that the method cannot be used for emergency contraception.

Regarding the eligibility criteria for IUD insertion, most participants knew that nulliparous adolescents (n=46, 69.7%), diabetic women (n=64, 97%) and hypertensive women (n=64, 97%) can use the intrauterine copper device. However, 66.7% (n=44) were unaware that not all women with AIDS can use the IUD.

Most agreed that the IUD can be inserted in women who did not go through an educational group (n=46, 69.7%). Regarding the performance of transvaginal ultrasound and Pap smear with normal results, 86.4% (n=57) were unaware that they are not eligibility criteria.

Regarding the insertion of the intrauterine device with copper, 56.1% (n=37) of the participants believe that the IUD should be inserted only in the menstrual period and immediate postpartum; 63.6% (n=42) considered that uterine perforation is the most frequent risk during IUD insertion.

Most participants (n=59, 89.4%) answered correctly that nurses can perform IUD insertion, as well as 78.8% (n=52) answered that married women do not need their partner's authorization to insert the device. Most participants (n=65, 98.5%) answered correctly regarding the materials needed for IUD insertion.

Table 2: Knowledge of participants about the IUD.

Variables	Right answer	Correct answers from participants (n=66)	
		n	%
Copper IUD is a copper-coated polyethylene artifact that acts by causing biochemical and morphological changes in the endometrium, leading to an inflammatory and cytotoxic action with spermicidal effect.	True	46	69.7%
The IUD can only be inserted in the menstrual period or immediate postpartum.	False	29	43.9%
The IUD is a highly effective method	True	46	69.7%

and ensures that the woman does not get pregnant during its use.			
Nulliparous adolescents may use the copper IUD as a contraceptive method.	True	46	69.7%
The copper IUD can be used as a method for emergency contraception.	True	8	12.1%
The most frequent risk of IUD insertion with copper is uterine perforation.	False	24	36.4%
Nurses may only perform IUD insertion with copper under medical supervision.	False	59	89.4%
For the insertion of the IUD with copper, it is essential to perform transvaginal ultrasound and Pap smear with normal results.	False	9	13.6%
The copper IUD is not able to protect against STIs.	True	61	92.4%
The IUD with copper cannot be inserted in those who have not previously participated in a reproductive planning group.	False	46	69.7%
A copper IUD increases a woman's chances of developing cervical cancer.	False	63	95.5 %
All women with AIDS can use the copper IUD.	False	22	33.3%
The copper IUD interferes with breastfeeding.	False	64	97%
The copper IUD causes discomfort or pain for the woman during sex.	False	66	100%
The woman is slow to return to fertility after removal of the copper IUD.	False	65	98.5%
The copper IUD can be inserted in women with diabetes.	True	64	97%
The copper IUD can be inserted in a hypertensive woman.	True	64	97%
For the insertion of the IUD with copper, it is necessary to present a	False	52	78.8%

consent form of the partner, for married women.			
Increased menstrual flow and increased or transient onset of menstrual cramps may be considered adverse effects of copper IUD.	True	59	89.4%
The materials required for IUD insertion are: hysterometer, pozzi forceps, cheron forceps, speculum, scissors, gas pack, procedure glove, sterile glove and light spot.	True	65	98.5%

Regarding the sum of the knowledge of each participant, most nurses had their knowledge classified as satisfactory (n=50, 75.8%) (Table 3)

Table 3: Classification of the level of prior knowledge of the participants.

Variable	n	%
Level of knowledge		
Very unsatisfactory	0	0.0
Unsatisfactory	0	0.0
Regular	5	7.6
Satisfactory	50	75.8
Very satisfying	11	16.7

Regarding the sociodemographic data, it was observed that there was no statistically significant association between the variables. However, the predominance of satisfactory knowledge was identified in professionals aged up to 44 years (n=6; 17.6%), who had a master's degree (n= 2; 28.6%), and had more than 10 years of professional experience (n=7; 17.1%)

DISCUSSION

The study observed that primary care nurses have satisfactory knowledge for offering, reviewing and inserting IUD with copper. However, in the municipality of the study, which has coverage of 96% of the Family Health Strategy, the IUD offer is still incipient. In the year 2021, in Paraíba, according to information contained in DataSUS, 298 IUD insertions were performed in outpatient units [(20)].

International studies show that the factor of knowledge is extremely important with regard to the contraceptive method, changing conceptions and the general scenario of use of methods. Thus, women feel more informed and secure when they realize that the professional has mastery of the subject, demystifying the subject and expanding the offer/insertion [(21-23)]

An English study showed that the nurses interviewed reported that the main barriers to access the IUD with copper involve the lack of training to perform the insertion and insufficient knowledge about the method [(22)]. Regarding the knowledge of the participants of our study, it was found that nurses have a theoretical basis about the

classification, mechanism of action, effectiveness, side effects, potential and weaknesses of the intrauterine device. This situation reflects the need to implement a practical training policy for nurses, since they have the theoretical knowledge of the method, but without its applicability in the offer/insertion of the IUD during the nursing consultation in gynecology.

Regarding the knowledge about the use of IUD during breastfeeding as a safe method, a study conducted in the United States identified that only 16.4% of the nurses in the study understand IUD as a safe method for breastfeeding [24]. This discrepancy points to a better update of the Brazilian nurses in this study when compared to the Americans, since only 16% of nurses had previous contraceptive education [(24)], while in our study 66.7% of nurses reported training in sexual and reproductive health.

Thus, associating theoretical knowledge with practical knowledge in offering the postpartum IUD may contribute to the spacing between pregnancies and the improvement in the quality of care for children and mothers. Because it is a long-lasting method, women will have more autonomy when they choose to become pregnant. Moreover, it can contribute to the reduction of maternal deaths due to unsafe abortion.

Regarding the association of the IUD with the increased chance of developing cervical cancer and increased discomfort for women during sex, a Peruvian study that analyzed the same variables with women observed that 57.6% concluded that the intrauterine device can cause cervical cancer and 27.3% concluded that the IUD threads bring discomfort to the partner during sex, classifying these topics as possible reasons for refusing the method[(25)]. However, it is observed that there are no associations between IUD and the higher incidence of cervical carcinogenesis by Human Papillomavirus (HPV), since it acts as a protective agent of this neoplasm by stimulating the immunity of cervical cells [(26)].

It is also noticed that the lack of knowledge about the use of the IUD as an emergency contraceptive method decreases women's options to avoid unwanted pregnancies in emergency contraception situations, especially for PHC nurses, as a gateway to SUS. This situation keeps users uninformed, since health professionals are the main source they have access to regarding the passage of reliable information about emergency contraception [(21)].

Regarding the knowledge of the eligibility criteria for IUD insertion, it was observed that nurses know that the IUD can be inserted in hypertensive and diabetic women. The supply of IUDs with copper for hypertensive and diabetic women results in a decrease in the supply of hormonal contraceptives (HCC), which shows itself as a potentiality, by contributing to the reduction of morbidity and mortality due to high blood pressure, thrombosis and deaths from stroke, as well as reducing the worsening of the condition of diabetes due to the interaction of HCC with the drugs used for its treatment [(27,28)].

A Brazilian study conducted with primary care workers showed that most professionals do not indicate the IUD for adolescents (62.2%), but that they offer the IUD for nulliparous women (62.2%) [(29)]. Due to the lack of information, it is possible that nurses are failing to offer the IUD as a long-term method and few side effects for adolescents,

so that not offering it increases the risk of teenage pregnancy, since the use of condoms and HCC for adolescents have risks of failure due to discontinuity, due to forgetfulness, inconvenience in its use, health concern or side effects [30].

Part of the professionals stated that for IUD insertion it is essential to perform transvaginal ultrasound and Pap smear with normal results and participation of an educational group of reproductive planning, and the need for such procedures are not configured as true. These data are in line with a study that observed that 71.6% of the participants stated that it was necessary to perform exams and 25.4% the participation of an educational group [11]. Thus, the implementation of unnecessary eligibility criteria represents a barrier that prevents women from having access to the intrauterine device.

Another misconception observed refers to the lack of knowledge of the participants when they affirm that women with AIDS cannot enjoy the IUD with copper as a contraceptive method. One study shows that 26.9% of respondents adopt HIV as a clinical condition that prevents IUD insertion [11]. However, according to the Ministry of Health, the copper IUD can only be inserted in women with AIDS in clinical stages 3 and 4, so women who have HIV and AIDS clinical stage 1 and 2 can use the method[9].

Regarding the IUD insertion, it was observed that some nurses conditioned the insertion of the method exclusively to the menstrual period and immediate postpartum. In disagreement, a study showed that 89.6% of participants (physicians and nurses) know that the IUD can be inserted at any stage of the menstrual cycle [22]. Conditioning the IUD supply to the menstrual period means reducing the chances of access to the method, since in the municipality of this research the IUD insertion is performed by scheduling and not by spontaneous demand. Therefore, in this perspective, it would be necessary to coincide the menstrual period with the day of insertion, characterizing itself as a barrier.

As for the risks of the method, most nurses still pointed to uterine perforation as the most frequent risk. However, even though it is not an everyday risk, a study showed that 40.5% of professionals consider uterine perforation as a barrier to supply and 52.0% as a barrier to the insertion of the intrauterine device in the scope of primary care [29]. Accordingly, research shows that nurses feel insecure at the time of insertion due to fear of perforation. However, the risk of uterine perforation is low, usually associated with not performing the measurement of the internal length of the uterine cavity and lack of careful technique in insertion, which shows the importance of practical training for correct and safe insertion [9].

This study has limitations that may lead to biased results, including the limitation of the sample and the choice of non-random form, considering the ease of contact with the participants. Data collection was done remotely and without supervision, which may have given room for participants to research the issues in the virtual environment. The results of this study may not be generalizable.

As strengths, it is clear that this study enables an overview of services that promote sexual and reproductive health, which opens space for reflection and enables the implementation of public policies of continuing education that aim to train nurses for the offer/revision/insertion of the intrauterine device. The incorporation of such

practices is a positive point, as it directly impacts the work process of nurses, promoting greater efficiency and quality care for the population [23].

FINAL CONSIDERATIONS

The lack of knowledge of nurses, in the context of primary health care, about the IUD TCU 380A regarding the eligibility criteria, side effects, mechanism of action and need for previous examinations, as observed in this study, becomes a barrier that limits access to the contraceptive method.

The insertion, revision and removal of intrauterine device with copper during the nursing consultation in gynecology, in health units, based on care protocols and through practical training, have the potential to reduce unwanted pregnancy, unsafe abortion and maternal deaths in Brazil. Therefore, the skills of nurses should be strengthened through continuing education for the qualification of primary health care and thus increase the possibility of women to obtain access to contraception methods, especially IUD TCU 380A.

Thus, governmental efforts are necessary for the establishment of a training policy that qualifies nurses regarding the technique of insertion, revision and removal of the IUD in the context of basic health units. The establishment of a policy of continuing education guarantees advanced practice in nursing care as well as minimizes barriers to contraception and enables means to guarantee women's sexual and reproductive rights.

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