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TRABALHOS DE PESQUISA

AN ANALYSIS OF PATIENTS' KNOWLEDGE ABOUT CONTRACEPTION DURING THE PUERPERIUM IN A PUBLIC REFERRAL MATERNITY HOSPITAL

ANÁLISE DO CONHECIMENTO DE PACIENTES SOBRE CONTRACEPÇÃO NO PUERPÉRIO EM MATERNIDADE PÚBLICA DE REFERÊNCIA

UN ANÁLISIS DEL CONOCIMIENTO DE PACIENTES SOBRE ANTICONCEPCIÓN EN EL PUERPERIO EN UNA MATERNIDAD PÚBLICA DE REFERÊNCIA

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Abstract: To assess the knowledge of pregnant and postpartum women regarding contraceptive methods (CM) that can be used during the puerperium. Methods: Cross-sectional survey-based study involving 363 patients at a referral maternity hospital. A questionnaire was applied, addressing the demographic characteristics of the sample, obstetric profile, and knowledge about CM during the puerperium. Afterwards, researchers provided guidance using educational material. Results: The most well-known CM were: male condom (98.1%), tubal ligation (95.6%), and combined oral contraceptives (92%). A total of 91% of patients had used some method in the past. There was a positive association between the level of CM knowledge and both average monthly income (p-value < 0.03) and educational level (p-value < 0.001). 77% of patients had not received any guidance on postpartum contraception during prenatal care. The most desired method, both before and after the researchers' counseling, was tubal ligation. There was an increase in the desire for LARC and hormonal methods after the counseling session. Conclusion: Knowledge about CM during the puerperium was influenced by educational level and average monthly income, and an increase in the desire to use CM was observed after the counseling. These findings support the hypothesis of deficient healthcare assistance and inadequate implementation of public reproductive planning policies in Piauí, highlighting the importance of health policy interventions.

Keywords: Postpartum period; Contraception; Family development planning; Health knowledge, attitudes, practice. Women's health.

Resumo: Avaliar o conhecimento de gestantes e puérperas sobre os métodos contraceptivos (MC) que podem ser utilizados no puerpério. Métodos: Pesquisa transversal do tipo inquérito, com 363 pacientes, em maternidade de referência. Aplicou-se um questionário envolvendo a caracterização demográfica da amostra, perfil obstétrico e conhecimento acerca dos MC no puerpério. Após, foi fornecida uma orientação, pelos pesquisadores, com material informativo. Resultados: Os MC mais conhecidos foram: preservativo masculino (98,1%), laqueadura tubária (95,6%) e anticoncepcional oral combinado (92%), 91% das pacientes utilizaram algum método no passado. Houve associação positiva entre o nível de conhecimento de MC com a renda mensal média (p-valor<0,03) e escolaridade das participantes (p-valor<0,001). 77% das pacientes não obtiveram orientação sobre contracepção puerperal no pré-natal. O método mais desejado, antes e após a orientação dos pesquisadores, foi a laqueadura tubária. Houve aumento no desejo por LARC e métodos hormonais após a orientação. Conclusão: O conhecimento acerca dos MC, no puerpério, foi influenciado pela escolaridade e renda mensal média, foram observados aumentos no desejo por MC após a orientação. Esses resultados corroboram a hipótese da deficiência na assistência em saúde e na aplicação das políticas públicas de planejamento reprodutivo no Piauí, ressaltando a importância da implementação de medidas em saúde.

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Palavras-chave: Período pós-parto; Anticoncepção; Planejamento familiar; Conhecimentos, atitudes e prática em Saúde; Saúde da mulher.

Resumen: Objetivo: Evaluar el conocimiento de gestantes y puérperas sobre los métodos anticonceptivos (MA) que pueden utilizarse en el puerperio. Métodos: Estudio transversal tipo encuesta, realizado con 363 pacientes en una maternidad de referencia. Se aplicó un cuestionario que incluyo la caracterización demográfica de la muestra, perfil obstétrico y conocimiento sobre los MA en el puerperio. Posteriormente, los investigadores brindaron orientación mediante material informativo. Resultados: Los MA más conocidos fueron: preservativo masculino (98,1%), ligadura tubárica (95,6%) y anticonceptivo oral combinado (92%). El 91% de las pacientes había utilizado algún método en el pasado. Se encontró una asociación positiva entre el nivel de conocimiento sobre MA y el ingreso mensual promedio (valor p < 0,03), así como con el nivel educativo de las participantes (valor p < 0,001). El 77% de las pacientes no recibió orientación sobre anticoncepción puerperal durante el prenatal. El método más deseado, tanto antes como después de la orientación, fue la ligadura tubárica. Hubo un aumento en el interés por los LARC y métodos hormonales después de la orientación. Conclusión: El conocimiento sobre los MA en el puerperio estuvo influenciado por el nivel educativo y el ingreso mensual promedio. Se observó un aumento en el deseo de utilizar MA después de la orientación. Estos resultados respaldan la hipótesis de una deficiencia en la atención en salud y en la implementación de políticas públicas de planificación reproductiva en Piauí, destacando la importancia de establecer medidas efectivas en salud.

Palabras clave: Período posparto; Anticoncepción; Planificación familiar; Conocimientos; Actitudes y prácticas em salud; Salud de la mujer.

Introduction

The postpartum period has three phases: immediate (1st to 10th day), late (10th to 45th day) and remote (from the 45th day to the first year), in which fertility may already be restored. Therefore, it is crucial to provide information and access to contraceptive methods (CM) during this period to avoid complications during pregnancy and health problems for the newborn (Albera; Mengesha; Tessema, 2015). During the postpartum period, there is a transition from prenatal care to assistance more focused on maternal health and reproductive planning (Henderson et al., 2016). Family planning is essential to prevent closely spaced pregnancies, with an interpregnancy interval of 2 to 3 years being recommended (Appareddy; Pryor; Bailey, 2016).

The successful use of CM helps to avoid unfavorable outcomes, such as increased maternal and neonatal mortality, premature birth and low birth weight (Appareddy; Pryor; Bailey, 2016). However, many women are unable to fulfill their reproductive planning wishes, leading to a high prevalence of unwanted pregnancies (Albera; Mengesha; Tessema, 2015; Abraha; Teferra; Gelagay, 2017). For this reason, health professionals should consider various family factors when helping to choose a contraceptive method, including life stage, beliefs and values (Santos et al., 2016). Family planning should therefore be geared towards the sustainable development of the family, requiring extensive knowledge and health education during prenatal and puerperal care (Santos; Freitas, 2011).

It is therefore known that knowledge of contraceptive methods in the puerperium is vital for family planning and reducing unwanted pregnancies. With this in mind, a study was carried out in a reference maternity hospital in Teresina-PI to assess this knowledge among women in vulnerable situations (economic and/or social) and its associations with socioeconomic and obstetric variables.

The general objective was to assess this knowledge, while the specific objectives included analyzing the patients' sociodemographic profile, previous use of CM, the degree of prior knowledge about the available CM, the source of information about CM, the preference of contraceptive method among those known and its availability in the health service, correlating prior knowledge with sociodemographic variables and advising patients about all the CM available in the puerperium, seeking to identify the preferred choice if all are available in the Unified Health System (hereafter SUS).

Methods

This cross-sectional, survey-type, exploratory, descriptive and quantitative study, carried out in the obstetrics wards of the Dona Evangelina Rosa Maternity Hospital (MDER) in Teresina - PI, aimed to explore and describe knowledge about the use of contraceptive methods (CM) by pregnant and postpartum women. The sample, based on the population of approximately 6516 patients (annual average of deliveries carried out at the MDER), was determined with a 95% confidence level and 5% sampling error, resulting in 363 participants considering a 10% margin of loss (Paranhos et al., 2014).

The inclusion criteria included pregnant women and puerperal women admitted to the maternity wards, while those with psychiatric disorders that would compromise their understanding of the questionnaire, or without fluency in Portuguese to answer properly, were excluded.

Data were collected from November 2022 to July 2023 using a questionnaire (APPENDIX A) with objective questions on demographic characteristics, obstetric history and knowledge of CM. Participants were interviewed individually in a private room to ensure confidentiality and comfort. The questionnaire included items on age, gestational age, educational level, average monthly income, current or previous contraceptive use, knowledge of contraceptive methods, methods previously offered by healthcare providers, and whether participants would be interested in using a contraceptive method that had not been offered. The questionnaire required no more than 15 minutes to complete, minimizing participant burden.

After administering the questionnaire, the researchers provided additional information on contraceptive methods and carried out verbal counseling with the help of a printed booklet (APPENDIX B), followed by the delivery of informative material (APPENDIX C).

Finally, participants were asked which contraceptive method they would choose if they had unrestricted access to any available method.

The CM were categorized into five groups: barrier methods, hormonal methods, LARC (long-acting reversible methods), definitive methods and behavioral methods. The percentage of CM use in each category was calculated in relation to the total number of methods available in the category. In addition, averages were calculated of the number of known and used CM per participant, before and after the researchers' guidance.

The data were analyzed using the IBM Statistical Package for the Social Sciences version 20.0, with a significance level of $p < 0.05$. Absolute and relative frequencies were used for qualitative variables, while means and standard deviations were used for quantitative variables. Bivariate analysis of the qualitative variables was carried out using Fisher's exact test.

All ethical procedures were followed in accordance with Resolution nº 466/12 and 510/16 of the National Health Council (CNS), guaranteeing respect and protection for the participants. The research was submitted to the Ethics Commission of MDER and, subsequently, to the Research Ethics Committee of the Federal University of Piauí, under the number 58991322.2.0000.5214, and was only carried out after approval by both (APPENDIX F).

The patients were duly informed about the objectives of the study and signed the “Free and Informed Consent Form” (Appendix D) and the “Free and Informed Assent Form” (Appendix E), when necessary. During data collection, safety measures were adopted in accordance with Ministry of Health guidelines for dealing with the pandemic, including hand hygiene, use of PPE and social distancing. The questionnaire was administered in order to guarantee confidentiality and avoid embarrassment.

Although the study involved a potential risk of disclosure of participants' information, this risk was minimized by assigning identification codes and omitting personal identifiers from the questionnaires, thereby ensuring that no identifiable information was disclosed. The study also posed a potential risk of discomfort or embarrassment, as participants were asked to assess their knowledge of contraceptive methods and devote a few minutes to completing the questionnaire. To minimize these risks, data collection was conducted in a private setting. Participants were informed that the study results would be analyzed collectively and used exclusively for scientific purposes rather than for individual evaluation. Furthermore, both in writing, through the Informed Consent Form and the Assent Form, and verbally, participants were informed that they

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could decline to participate or withdraw from the study at any time without incurring any penalty or negative consequences.

This study aims to contribute to the improvement of health care and education regarding contraceptive methods in the postpartum period, providing valuable insights for medical practice and scientific research. The results will be published and disseminated while respecting the confidentiality and privacy of the participants, thus complying with the highest ethical and scientific standards.

Results

The study sample included 363 patients, as shown in Table 1, the vast majority of whom (74.1%) were aged between 18 and 34. With regard to origin, most of the patients (57.6%) came from the interior of the state of Piauí, while 38% came from the state capital, Teresina. Notably, the vast majority of women (70.2%) self-declared as brown. The study included 166 (45.7%) pregnant women and 197 (54.3%) postpartum women.

With regard to average monthly income, 133 patients (36.6%) said they lived on less than one minimum wage, 183 (50.4%) on between one and two minimum wages and only 47 (12.9%) said they lived on more than two minimum wages. With regard to schooling, approximately half of the participants (50.7%) had completed high school, 89 (24.5%) had completed elementary school, and only 23 (6.3%) had completed higher education.

Table 1 - Sociodemographic profile of the patients studied. Teresina (PI), 2023

Variables	n	%
Age		
< 18 years	22	6,1
18 to 34 years old	269	74,1
35 years or older	72	19,8
Origin		
Teresina	138	38,0
Countryside of Piauí	209	57,6
Capital of another state	3	0,8
Countryside of another state	13	3,6
Self-declared color		
White	32	8,8
Brown	255	70,2
Black	62	17,1
Yellow	14	3,9
Pregnant or postpartum women		
Pregnant women	166	45,7
Postpartum	197	54,3
Gestational age if pregnant		
Less than 14 weeks	4	2,4
Between 14 and 28 weeks	46	27,7
More than 28 weeks	116	69,9
Number of pregnancies		
1 pregnancy	124	34,2
2 pregnancies	91	25,1
More than two pregnancies	148	40,8
Number of births		
Nulliparous	70	19,3
Primipara	124	34,2
Multiparous	169	46,6
How many living children?		
1 child	123	42,0

2 children	83	28,3
3 children	37	12,6
4 children or more	50	17,1
Income		
< 1 minimum wage	133	36,6
≥ 1 minimum wage and < 2 minimum wages	183	50,4
≥2 minimum wages and < 3 minimum wages	27	7,4
≥ 3 minimum wages	20	5,5
Level of Education		
Incomplete primary education	62	17,1
Complete primary education	89	24,5
Completed high school	184	50,7
Higher education completed	23	6,3
Post-graduation	5	1,4

Source: The authors.

When analyzing the interviewed patients' knowledge of contraception, it was found that 100% of them knew at least 3 contraceptive methods (CM). Table 2 shows the percentage of patients who demonstrated knowledge of each method mentioned in the questionnaire, regardless of the other variables studied. The most widely known methods were: male condom (98.1%), tubal ligation (95.6%) and combined oral hormonal contraceptive (92%).

Table 2 - Contraceptive methods known and used in the past by the patients studied, Teresina (PI), 2023

Contraceptive method	Known n(%)		Used n(%)	
	No	Yes	No	Yes
Female condom	81 (22,3)	282 (77,7)	337 (93,1)	25 (6,9)
Male condom	7 (1,9)	356 (98,1)	128 (35,3)	235 (64,7)
Spermicide	331 (91,2)	32 (8,8)	362 (99,7)	1 (,3)
Progesterone mini-pill	259 (71,3)	104 (28,7)	326 (89,8)	37 (10,2)
Progesterone oral hormonal contraceptive	116 (32,0)	247 (68,0)	299 (82,4)	64 (17,6)
Combined oral hormonal contraceptive	29 (8,0)	334 (92,0)	134 (37,0)	228 (63,0)
Injectable hormonal contraceptive	31 (8,5)	332 (91,5)	268 (73,8)	95 (26,2)
Non-hormonal IUD (copper or copper+silver)	150 (41,3)	213 (58,7)	360 (99,2)	3 (,8)
Hormonal IUD (Mirena or Kyleena)	203 (55,9)	160 (44,1)	362 (99,7)	1 (,3)
Subdermal implant (Implanon)	232 (63,9)	131 (36,1)	362 (99,7)	1 (,3)
Vasectomy	63 (17,4)	300 (82,6)	362 (99,7)	1 (,3)
Tubal ligation	16 (4,4)	347 (95,6)	349 (96,1)	14 (3,9)
Breastfeeding (lactation and amenorrhea)	197 (54,3)	166 (45,7)	339 (93,4)	24 (6,6)
Coitus interruptus	116 (32,0)	247 (68,0)	247 (68,0)	116 (32,0)

Source: The authors.

It was observed that the methods most widely used by the patients were: the male condom (64.7%), followed by the combined hormonal contraceptive (63%) and coitus interruptus (32%).

With regard to LARCs, the knowledge of each interviewee was considerable (58.7% knew about the copper IUD, 44.1% the hormonal IUD, and 36.1% the Implanon), but their use was close to zero. With regard to hormonal methods, knowledge was even higher, reaching a percentage of over 90% for combined oral contraceptives and injectable contraceptives, but previous use was not equally significant. In contrast, among barrier methods, the male condom was as widely known as it was used, with over 90% knowledge and over 60% previous use.

In the analysis of the relationship between the level of knowledge about CM used in the puerperium

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and the sociodemographic variables assessed in the questionnaire, as shown in Table 3, there was a positive and statistically significant association between the level of knowledge about CM and the level of schooling (p-value < 0.001) and between knowledge and the average income of the patients interviewed (p-value = 0.030).

Table 3 - Number of known contraceptive methods according to the sociodemographic profile of the patients studied, Teresina (PI), 2023

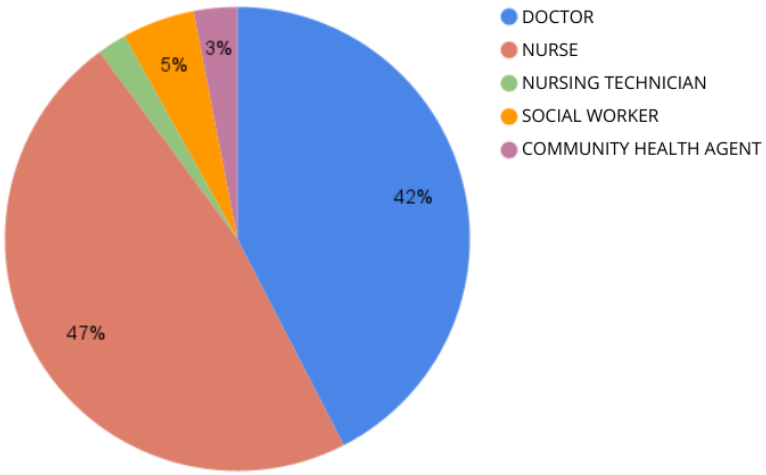
Variables	Number of known methods			p-value
	0 to 4	5 to 9	10 to 14	
	n (%)	n (%)	n (%)	
Age				
< 18 years	2 (9,1)	13 (59,1)	7 (31,8)	0,346
18 to 34 years old	8 (3,0)	138 (51,3)	123 (45,7)	
35 years or older	1 (1,4)	38 (52,8)	33 (45,8)	
Origin				
Teresina	2 (1,4)	68 (49,3)	68 (49,3)	0,201
Countryside of Piauí	9 (4,3)	115 (55,0)	85 (40,7)	
Capital of another state	-	-	3 (100,0)	
Countryside of another state	-	6 (46,2)	7 (53,8)	
Color				
White	2 (6,3)	17 (53,1)	13 (40,6)	0,636
Brown	9 (3,5)	134 (52,5)	112 (43,9)	
Black	-	31 (50,0)	31 (50,0)	
Yellow	-	7 (50,0)	7 (50,0)	
Indigenous	-	-	-	
Pregnant or postpartum women				
Pregnant women	6 (3,6)	89 (53,6)	71 (42,8)	0,647
Postpartum women	5 (2,5)	100 (50,8)	92 (46,7)	
Opinion on the ideal interval between births				
Up to 1 year	-	-	2 (100,0)	0,329
1 year	1 (6,7)	10 (66,7)	4 (26,6)	
2 years	2 (3,6)	25 (44,6)	29 (51,8)	
3 years	3 (4,8)	32 (50,8)	28 (44,4)	
4 years	3 (7,1)	22 (52,4)	17 (40,5)	
5 years	1 (1,2)	45 (55,6)	35 (43,2)	
More than 5 years	1 (1,0)	55 (52,9)	48 (46,2)	
Observed interval between births				
< 2 years	1 (2,9)	21 (60,0)	13 (37,1)	0,573
≥2 and < 3 years	1 (2,3)	19 (44,2)	23 (53,5)	
≥3 years and < 4 years	1 (4,5)	12 (54,5)	9 (40,9)	
>4 years	2 (1,5)	71 (51,8)	64 (46,7)	
Number of births				
Nulliparous	4 (5,7)	41 (58,6)	25 (35,7)	0,308
Primipara	3 (2,4)	65 (52,4)	56 (45,2)	
Multiparous	4 (2,4)	83 (49,1)	82 (48,5)	
How many living children?				
1 child	3 (2,4)	64 (52,0)	56 (45,5)	0,276
2 children	3 (3,6)	34 (41,0)	46 (55,4)	
3 children	-	17 (45,9)	20 (54,1)	
4 children or more	1 (2,0)	31 (62,0)	18 (36,0)	
Income				
< 1 minimum wage	4 (3,0)	85 (63,9)	44 (33,1)	**0,030**

≥ 1 minimum wage and < 2 minimum wages	7 (3,8)	83 (45,4)	93 (50,8)	
≥2 minimum wages and < 3 minimum wages	-	12 (44,4)	15 (55,6)	
≥ 3 minimum wages	-	9 (45,0)	11 (55,0)	
Level of Education				
Incomplete primary education	4 (6,5)	45 (72,6)	13 (21,0)	**<0,001**
Complete primary education	5 (5,6)	51 (57,3)	33 (37,1)	
Completed high school	2 (1,1)	85 (46,2)	97 (52,7)	
Higher education completed	-	8 (34,8)	15 (65,2)	
Post-graduation	-	-	5 (100,0)	

p-value = Fisher's exact.
Source: The authors.

It was also found that the majority (77%) of patients did not receive guidance during prenatal care on the use of CM in the puerperium. Of those who did receive this guidance, the health professionals who most often provided this service were nurses (47%) and doctors (42%), as shown in Graph 1. Among the CM presented to patients, tubal ligation stood out as the most commonly recommended method, with a total of 48 recommendations (13.2%), followed by the copper IUD, with 26 recommendations (7.2%) and the male condom, with 25 recommendations (6.9%).

Graph 1 - Professionals who gave advice on contraception. Teresina (PI), 2023



Source: The authors.

Before the researchers provided guidance, the patients in the study were asked about the CMs they would like to have access to for contraception in the puerperium, among those they already knew. The results of this analysis show, as shown in Table 4, that the most desired methods were tubal ligation, with 51.5% wanting to use it, male condoms with 33.1% and combined oral hormonal contraceptives with 27.3%.

Table 4 - Contraceptive methods that the patients studied would like to use in the puerperium, before and after guidance from the researchers. Teresina (PI), 2023

	Before orientation		After orientation	
Contraceptive method	**No**	**Yes**	**No**	**Yes**
Female condom	332 (92,0)	29 (8,0)	256 (70,7)	106 (29,3)
Male condom	243 (66,9)	120 (33,1)	325 (90,3)	35 (9,7)
Spermicide	359 (98,9)	4 (1,1)	339 (93,6)	23 (6,4)
Progesterone mini-pill	329 (90,6)	34 (9,4)	240 (66,5)	121 (33,5)
Progesterone oral hormonal contraceptive	302 (83,2)	61 (16,8)	251 (69,3)	111 (30,7)

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Combined oral hormonal contraceptive	264 (72,7)	99 (27,3)	301 (83,6)	59 (16,4)
Injectable hormonal contraceptive	267 (73,6)	96 (26,4)	219 (60,5)	143 (39,5)
Non-hormonal IUD (copper or copper+silver)	287 (79,1)	76 (20,9)	240 (66,5)	121 (33,5)
Hormonal IUD (Mirena or Kyleena)	328 (90,4)	35 (9,6)	240 (66,5)	121 (33,5)
Subdermal implant (Implanon)	330 (90,9)	33 (9,1)	224 (61,9)	138 (38,1)
Vasectomy	302 (83,2)	61 (16,8)	289 (80,1)	72 (19,9)
Tubal ligation	176 (48,5)	187 (51,5)	152 (41,9)	211 (58,1)
Breastfeeding (lactation and amenorrhea)	334 (92,0)	29 (8,0)	270 (74,6)	92 (25,4)
Coitus interruptus	310 (85,9)	51 (14,1)	308 (85,1)	54 (14,9)

Source: The authors.

After the orientation, the patients were asked which methods they would like to use in the postpartum period if they were all available through the Unified Health System (SUS). Still according to Table 4, the most desired method continued to be tubal ligation (58.1%), followed by injectable contraceptives (39.5%). It is worth noting the significant increase in the desire to use LARCs, especially the subdermal implant, which went from 9.1% to 38.1% after guidance. In addition, the copper or copper + silver IUD and the hormonal IUD saw their acceptance increase, reaching a total preference rate of 33.5% each.

Discussion

The knowledge profile shown in the survey follows the trend presented in similar studies, in which hormonal methods (especially injectables) and condoms are among the most widely known methods among patients (Bajracharya, 2017; Mekonnen; Gelagay; Lakew, 2021; Pal et al., 2022). Having knowledge about contraception is one of the most important aspects of reproductive planning and plays an extremely important role in preventing unwanted pregnancies (Bajracharya, 2017). However, 77% of the patients interviewed had not received reproductive counseling about any CM in prenatal care up to the date of the interview. A study carried out in 2018 in 77 countries showed that there is a very low satisfaction of family planning desires among younger, poorer and rural women (Trindade et al., 2021), who make up a large proportion of the patients interviewed.

Only 23% of the participants in the study had received prenatal guidance on reproductive planning. This scenario shows that there are deficiencies in the public service in Piauí with regard to reproductive health care, since the concrete exercise of sexual and reproductive rights requires public policies on the part of the state. Furthermore, the guarantee of these rights is intrinsically linked to the work processes of health professionals, so the team's lack of involvement in care compromises the guarantee of these rights, which can translate into restrictions on the distribution of contraceptives and low female adherence to activities (Faúndes; Filho, 2018; Telo; Witt, 2018).

In this study, among the professionals who provided this assistance during prenatal care, the two who did so the most were nurses (47%) and doctors (42%). Studies such as the one carried out in southern Brazil in 2020 have shown the importance of doctors and nurses working together in reproductive planning programs, as well as the whole team, and have shown that the role of nurses was fundamental in getting puerperal women into the reproductive planning program. In addition, during the postpartum period, contact with professionals, especially doctors and nurses, is constant; if the guidance previously given during prenatal care is reinforced at this time, there is a greater likelihood of adherence to the most appropriate CM (Canario et al., 2020).

The variables that had a significant impact on the interviewees' knowledge of CM in the puerperium were education level and average monthly income, showing that women with a higher level of education and income were generally better informed about the methods. Similarly, a study carried out in 2015 in Nepal with 400 puerperal women found that patients with an average level of schooling knew 93.3% of the methods presented and also had a much higher desire for future use than patients with a basic level of education (Bajracharya, 2017). Another study carried out in Ethiopia found that women who had a formal education were 2.3 times more likely to use a method of contraception (Wakuma et al., 2020).

With regard to average monthly income, this study showed that knowledge about CM is also influenced by this variable. This data has already been studied and corroborated by other similar studies, such as the one carried out in Paraná in 2020, with 358 puerperal women, which showed that women with poorer economic conditions made less use of CM and demonstrated less knowledge and more dissatisfaction about them (Canario et al., 2020). This is not only a public health issue, but also an obstacle to the development of society, given that the quality of sexual health and the exercise of reproductive rights have an impact on reducing poverty and improving the living conditions of individuals (Darsie et al., 2015).

Regarding the previous use of CM, this study showed that hormonal methods, despite being the third most popular, are among the two most used prior to the interview. This data is similar to that of the National Health Survey (PNS) carried out by the IBGE in 2019, which showed that around half of Brazilian women use some hormone to prevent pregnancy. As for LARCs, although knowledge about them in this survey sample was medium to low, their use in the past was almost non-existent. Around 99% of the patients interviewed had never used any of the methods in this category before, following the trend of the 2019 National Health Survey, which found a prevalence of only 4.4% among women aged between 15 and 49 years old.

According to the Ministry of Health's Ordinance nº 3.265, the copper IUD has been available on the SUS since 2017, and low adherence to this method among the patients interviewed may be due to the short time it has been available. In addition, this may also be due to various other barriers within care, such as unnecessary organizational barriers (Gonzaga et al., 2017), ranging from the lack of protocols or referral of interested patients and the lack of knowledge of professionals about the guidelines and evidence related to LARC (Martins; Nóbrega; Queiroga, 2023), to the lack of training for its insertion (Luchowski et al., 2014).

As in a study carried out in Myanmar in 2021, in this study almost all of the patients showed a desire for some contraceptive method in the puerperium, even before the researchers' guidance (Yu et al., 2021). The most desired category at this stage was hormonal methods, following the scenario of use that the patients had before the interview, as was also evidenced in other studies such as those carried out in Nepal in 2017 and in Myanmar in 2021.

After the orientation, in addition to the new information acquired, the patients were faced with a new scenario: “and if all the methods mentioned were available on the SUS, which would you like to have access to?”. An increase in the desire to use all categories of methods was observed in this question, but none was as significant as that of the LARC category, especially the hormonal IUD and the implant, precisely the methods that are not widely available in the SUS (SAPS, 2023). The lack of knowledge about these methods and their benefits is the result of a lack of education and mistaken beliefs about risks and unrealistic side effects, which have already been shown to be a negative influence on the use of this class of methods in other studies (Farmer et al., 2015; Tibaijuka et al., 2017).

Therefore, it is necessary to increase investments in health education and tackle social inequality in Brazil, given that, as was also shown in this study, education and average income influence knowledge of methods, which in turn reduces the negative impacts of short birth intervals (EPHI, 2019). This can be done by expanding reproductive guidance in the prenatal period, by all the professionals involved in caring for pregnant and postpartum women, in the PHC context, by improving their qualifications and increasing access to CM in the puerperal period, which helps to ensure ideal birth intervals and favorable maternal and child outcomes (Bocanegra et al., 2014; Glasier et al., 2019; Rodrigues et al., 2023).

The weaknesses of this study are that, despite an adequate n, it was carried out in a single center, making it difficult to extrapolate data to other realities. In addition, at the questionnaire application stage, the reasons for using or not using certain methods or categories were not asked, nor was it investigated from which sources, external to health care, the patients obtained knowledge about CM. The strength of the study lies in the fact that no other studies have been found on this subject in the north-eastern region of Brazil.

Conclusion

It can be seen from this survey that the patients had considerable knowledge of contraceptive methods, with an emphasis on condoms, hormonal contraceptives and tubal ligation. The sample's level of

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knowledge was statistically significantly related to schooling and average monthly income, increasing progressively as the level of these parameters grew.

There were significant increases in the desire to use CM in the postpartum period after the guidance provided by the researchers at the end of the questionnaire, especially in the categories of LARC and hormonal methods, which, combined with the evidence that the vast majority of participants did not receive advice on contraception during prenatal care, suggests that there is a deficiency in health care and in the application of family and reproductive planning policies in Piauí.

This underscores the importance of implementing government measures at all levels of care in order to improve sexual and reproductive education, increase professional qualifications and broaden these women's access to health services and the contraceptive methods of their choice, thus avoiding unwanted pregnancies, inadequate intervals between pregnancies and all the unfavorable maternal and child outcomes related to these.

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Appendices

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