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# Partner's participation in family planning from a feminine perspective: a descriptive study

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#### **ABSTRACT**

**Aim:** to describe how women perceive their partner's participation in family planning. **Method:** This is a descriptive qualitative research, in which a field stage was developed during April-June 2012, through semistructured interviews with eight women in a Basic Health Unit in a southern Brazilian city. Minayo Thematic analysis was developed. **Results:** Data were organized into two categories: the couple reaches an agreement about when they should have children and the woman is responsible for the contraception. **Discussion:** the partner's participation takes place through emotional and effective support for the woman to help care for the children and the provision of financial resources. The man participates less in activities of contraception. **Conclusion:** assistance in family planning needs to include men, support their active participation, and recognize the couple and the family as a unit of care.

**Descriptors:** Nursing, Family Planning, Sexual and Reproductive Health.

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#### INTRODUCTION

In Brazil, the regulation of sexual and reproductive rights was set out by Law No. 9263 in January 12, 1996. This law defines, in Article 2, the following: "family planning is a set of actions of fertility regulation that guarantees equal rights for the constitution, limitation or increase of the progeny by women, men or couples"(1).

The references for the formulation of family planning are also aligned to the conceptual plan of the National Policy on Comprehensive Women Healthcare (PNAISM). This plan incorporates, in a gender focus, integrity and health promotion as guiding principles, and seeks to consolidate advances in the field of sexual and reproductive rights. In this document, the inclusion of the male partner in comprehensive women's healthcare is recommended, and is also a strategy to stimulate their participation in family planning<sup>(2)</sup>. This assumption is also reinforced by the National Policy for Comprehensive Attention to Men's Health, with a view to overcoming the restriction of women's responsibility regarding birth control practices, and ensuring men have the right to participate in family planning<sup>(3)</sup>.

In legislative terms, it is understood that to achieve the goals of family planning it is necessary to move forward on extending this approach to men; promoting their effective involvement in decisions, and considering and valuing their responsibility in matters related to sexual and reproductive health<sup>(4)</sup>. Thus, actions of health education should be carried out based on understanding the needs and expectations of the couple to ensure the provision of adequate information to their situation.

In this scenario, the multidisciplinary team, especially the nurse, is in an important position to enlighten individuals and couples about available options for contraception. Moreover, in their practice, they have the opportunity to

promote sexual and reproductive healthcare, considering the subject in its totality<sup>(4)</sup>.

Traditionally, issues related to contraception are still seen as the exclusive role of women, and this can be seen when they alone assume responsibilities related to family planning. Moreover, considering that the conception is a natural outcome between men and women, we expect contraception to be a phenomenon resulting from the actions of the partners involved; however, male culture is seen as predominant over female, emphasizing women's responsibility in the context of family planning<sup>(5)</sup>.

It is understood that one of the policy objectives, integral to the health of both men and women in Brazil, is to encourage the participation and inclusion of men when it comes to reproductive health. In the document on principles and guidelines concerning the male population, there is the matter of raising awareness of men and women regarding the duty and right of men to participate in family planning (2-3). However, whereas men are absent from health services, women are its main users (6). Given this arrangement, we opted to listen to women with the aim of describing how women perceive their partner's participation in family planning.

### **METHOD**

This is a descriptive study, of a qualitative nature, which sought to understand the subject experiences of women that cannot be demonstrated through the operationalization of variables<sup>(7)</sup>. It was conducted with eight users of a Basic Health Unit (BHU) in a medium-sized municipality in southern Brazil from April to June 2012. As inclusion criteria, we defined that participants would be women of childbearing age, at least 18-years old, in a marital relationship with their partner, and who were in a mental and

physical condition to participate in the study.

We chose to cover the issue of partner participation in family planning from the testimony of women who sought healthcare at the unit in question, as the presence of their partners was considered unusual.

The final number of respondents was limited by data saturation, and determined from successive parallel analyzes of data collection to reach a conclusion<sup>(8)</sup>. Thus, the number of women interviewed was sufficient for a recurrence of information when the interviews presented common elements.

The women were met in the waiting room of the medical center and taken to a room made available by the BHU for privacy and peace and quiet during interviews. At the request of two women, interviews were conducted at their homes, as they had to look after their children and home.

For data collection we used the interview technique. Interviews were recorded with a digital recorder, guided by questions about socio-demographic characteristics and understanding the women's views on family planning, and considering their partner's participation. We developed a thematic content analysis, which consists of discovering core meanings and whose presence or frequency is significant for the targeted analytical objective. This analysis consisted of three stages: organization, sorting the data and final analysis.

The organization stage consisted of transcribing the interviews and subsequent reading in order to determine the reporting units: phrases or keywords that appear with some frequency in the statements, and characterized as central ideas or relevant aspects. Next, there was the setting of the context units: defining the context of the recording unit and its understanding<sup>(7)</sup>.

The classification stage allowed the construction of two empirical categories, responsi-

ble for specifying the themes and theoretical concepts that guided the discovery and construction of the meaning clusters. These provide the basis of the analysis. The final analysis was based on the treatment of the results and their interpretation, trying to articulate the structured material of the interviews with the literature, and aiming at identifying the underlying content compared that produced.

The project was approved by the Ethics Committee in Research of the Federal University of Santa Maria - Rio Grande do Sul, Brazil, in accordance with the guidelines of the National Board of Health, Ministry of Health, opinion number 01423012.1.0000.5346, on March 27, 2012. The Instrument of Consent was granted from the participants by means of signature, mediated by prior clarification of the research procedures. The anonymity of participants was made possible with the use of alphanumeric representation of the data. To identify respondents we used the letter W, which refers to woman, followed by numbers in ascending order (W1, W2, W3 etc.).

### **RESULTS**

The age of the respondents was between 25 and 45 years old. The number of children ranged from one to six, with an average of three children. Four women reported being married, and four reported consensual union. The length of relationship with their partner ranged from two to 20 years, with an average of 11.25 years. Five were housewives, two had regular jobs and one had an unpaid job (volunteering). As to schooling, we identified three women who had an incomplete elementary education, two with a complete elementary education, another two had an incomplete secondary education and one had completed high school.

Data were organized into two categories: the couple reaches an agreement on when to have children and the woman takes charge of contraception. The first category was based on the expressions: "we talk/plan"; "agreement"; "consensus"; "income"; "comfort"; "feeding"; "children's future"; "providing education"; "emotional support"; "being a companion"; "financial aid" and; "looking after of the children/helping with the kids".

The women in the study reported that there is an agreement, even a consensus, which was mediated over time by the conversation between the couple whether to have children or not. This was the basis for family planning, and this was essential in deciding on ways to execute their plans and to strengthen family ties.

We talked, my husband and me, and we both were working at the time, and the two of us could have this baby. (W1)

My partner and I reached an agreement. He told me it was difficult, that it was not possible at the moment [...]. It is no use if I want to and he doesn't want to. So I thought I had better give up. (W2)

We said we wanted to have a child, so it was planned. (W3)

I don't want to have a baby for now. And for my partner it's okay. Now our life is planned: him, my son and me. We plan, and know that if you don't take care of yourself more babies will come. (W4)

I don't want it, nor does my husband. We talked a lot about the planning of our family, our home, the three of us and we've got to a consensus. (W6) We talk because my companion also thinks we have to prepare our house before having children. So we think it's not the time to have another now. (W8)

The decisions that the couples made from their conversations and negotiations were influenced structure of the present and future life. The women report the physical structure of the house, acquisition of goods and services derived from access to work. Concerns related to financial issues, such as food, family comfort and the education of children were highlighted.

You have to plan according to your income! You cannot bring a child into the world without the necessary conditions. (M1)

We decided not to have children for a while. Not until they are raised. Until we have the necessary structure. Not until we can structure ourselves better, have a better financial condition, more comfort. We are building our home, to give them comfort. We've been working to buy clothes, food, so they don't have to ask for anything from anyone. I believe this is my plan. (M2)

Planning is the way for us to think about this son. You have to think about what you're going to give them in the future. How you're going to do it. I'm going to do this, I'm going to do that, good, better, and how we can do this. (M3)

We don't want any more children. For now, we are just going to give this child education and we are going to work and buy our own house. (M4) You gotta have things to give to your kid. It's no use having a bunch of kids when you don't have anything for them to eat. (M5)

Our life structure is already good with three kids. According to our income we think we can't have children anymore. (M6)

When we are poor like this [...] we gotta work. We have to leave early in the morning to work, to buy food, clothes to wear, shoes, buy food for my family, particularly because I don't like to leave my kids without it. (M8)

The women reported that their companions help with household chores, but these women understand that these activities are their responsibility, since they reinforce it with the following line: "He helps me with everything." This help was identified by means of childcare and the alternation in terms of working hours, emotional and effective support for the woman and children, and for the provision of financial support and resources to the family.

He helps me with everything, emotionally, effectively, both me and my children. He helps me financially a lot. Let's say he helps me 100% in everything. He takes care of my children; we take turns, I go to work in the morning and he looks after the children until I arrive home. (M2)

He helped me in everything, really everything, providing care, being together, going to the doctor, always. He is the basis, a friend, a partner; he's always present, he is the best friend I have. He is my husband who is always with me, my companion. (M3)

My husband spends all his time working, just to take care of chubby boy [son]. With this [son] he even helped me a little. While it's a baby he even helps me a little. When I have to prepare food he helps me, taking care of the children, which is already something. (M5)

He participates in all the moments of my life. I don't decide anything on my own and I do nothing alone. He helps me. (M6)

He helps me with the kids. He is a close friend of my daughter and especially of the kids. He is a companion. (M8)

The second category was based on the expressions: "the problem is mine," "I have to take action", "he does not like using condoms", "I take care of myself", "men don't think", "I always took care of myself" "I take pills/injections and I tell him we have to use condoms."

Women see contraception as their responsibility, stating that the decision to use of a method to prevent pregnancy must be their initiative. The use of male condoms only occurs when the woman thinks it is a necessary condition to avoid pregnancy; for example, the time between one packet of pills and another.

This shows the difficulty women have in negotiating condom use with their partners, in which case the attempts to use it become the reason for disagreements between the couple.

Given the male partner's indifference to women taking the pill, and their refusal to use condoms, the woman concludes that the only way to avoid becoming pregnant is to adhere to oral and injectable hormonal contraception.

He doesn't like to use condoms. If I want to start a fight at home all I have to do is to tell him to use condoms. He doesn't use it. It's difficult! Because he says he has a woman so he does not need to use anything. But, in reality, it's my problem, because I am the one who is going to get pregnant. So I have to do something, then I'll take the pill, take the injection. It's the only way. (M2)

He knows the day my pills end; he knows everything. He says, 'you must take them every day'. But he doesn't use it [condoms]. He doesn't like to use it. It's complicated. (M3)

I take care of myself. I do take care of myself. I take my meds [contraceptive] every day. Sometimes we feel a bit insecure because of the medicine, because people say that the remedy is not very reliable, so we use these condoms to prevent pregnancy. (M4)

I used to take pills since I was 17. I just stopped taking them to get pregnant with my son. For my husband I would never take pills. I think he only thinks about having children, but it is not like that. It's that men don't think, but I do. (M5)

As I always took care of myself and always took the pills, we used condoms as much as it was needed. But I don't want more children and neither does he. Then I take the pills. (M6)

I take injections and he says nothing. But on the issue of sterilization, because I want to do tubal ligation, he is against it. I told him: "I don't want more kids; I already have three. I'm going to get old with a bunch of kids." Yet here he is against it. (M7)

When I finish my pills I tell him [partner] that he has to use condoms before I menstruate. If we're having sex, I tell him to use a condom. (M8)

## **DISCUSSION**

Family planning is a complex event with numerous approaches and activities that aim to promote accessibility to information about sexual and reproductive health. Moreover, it is part of a context in which individuals assume, voluntarily and consciously, control over their destiny and accountability, so that decisions are satisfactory and adequate for the couple. It is a way to accomplish a life project<sup>(9)</sup>.

This project should take into consideration the freedom of couples to decide the number of children they want or can have<sup>(10)</sup>. The women in the study identified a number of factors that influence this decision, such as the relationship with their partner, where the woman feels supported by him and in situations where some couples understand that the family is now complete with the couple and the children.

In this sense, we highlight the importance of understanding the issues in the couple's relationship with regards to family planning. These issues may influence aspects such as planning offspring and shared decision-making<sup>(9)</sup>. Therefore, the family is considered a group of people united by ties of affection and mutual care. Thus, the couple plans the number of children and how the family will be shaped<sup>(11)</sup>.

Therefore, there is an opportunity for professional nurses to broaden their views regarding family care. Nurses develop supportive attitudes towards the family, which expects nursing care to be consistent with the needs of the individuals involved. To consider the family in the planning of nursing care contributes to the development of a collaborative approach between professionals and families; to understand it as a care unit<sup>(9)</sup>.

Women identify the couple's financial situation as an issue that influences decision-making with regard to family planning. Some couples need to strengthen their financial situation and, therefore, enter the labor market to further accomplish reproductive planning. Increasingly, more men and women achieve independence and exercise the right to play different social roles and functions. The positions occupied by both began to be established in accordance with their needs, desires, expectations and skills, in an attempt to overcome the rigid sexual division of labor.

In addition to economic issues we can also highlight domestic work, both inside and outside the home, low pay at the personal and family level, and low education as factors that may interfere with this plan<sup>(12)</sup>. The balance between income and number of children is important to social development and alleviating poverty. In this sense, family planning contributes to family organization in a way that it is based on sustainability, and considering the social, political and economic factors in which they find themselves <sup>(13)</sup>.

Regarding the family's financial provision, issues such as food, education, clothing and even housing are considered when the couple plans their reproductive choices. Planning in this context refers to the organization and support provided by the family with the intention of minimizing difficulties in their daily lives. Thus,

to have a better life means deciding to have children according to their economic status and being able to provide a comfortable family life.

It is possible to perceive the presence of the father in the daily life of his child, participating in education and sharing care with the mother. In some situations, the father adapts his activities, especially work and social life, to participate in the care of the child. Moreover, the contemporary father shares tasks traditionally performed by the mother. Thus, he intensifies his participation as a partner and father<sup>(14)</sup>.

In this scenario, where the man is seen in a differentiated manner in the care of his partner and children, roles that once seemed to be exclusively female are now expected to be performed by men; for example, becoming emotionally involved with the child and actively participating in the child's life. However, it may be highlighted that providing for the family continues to be the father's particular responsibility, a condition historically constructed, which recognizes him as head and provider of the family<sup>(15)</sup>. In this scenario, the male role remains as head and provider, although in reality, in Brazil, this is in transition.

Such an assertion converges with the findings of this study, where family income comes predominantly from the labor activities of the partner. This fact contributes to the dependence of women on their companion, limiting their reproductive freedom and autonomy. Such a limitation may lead to difficulties in women controlling family planning, as this planning falls under the influence of their companion; for example, when the couple decide to have children<sup>(16)</sup>.

We can observe that women deal with contraception as their exclusive responsibility. The participation of the man occurs when she believes it to be necessary. Such accountability can be seen in the choice of contraceptive methods, including oral and injectable hormonal

contraceptives, tubal sterilization and intrauterine devices. A minority pointed to vasectomy as a method of choice, strengthening the fact that contraception is the responsibility of women<sup>(17)</sup>.

Conception is understood as the natural result of sexual relations between men and women; therefore, contraception should be a phenomenon with its origins in the combined efforts of the partners involved in the relationship<sup>(5)</sup>. However, this does not often happen, as the burden of responsibility carried by a woman regarding contraception, appears to be, for her and for society in general, a natural role that labels certain activities as exclusively female, such as caring for the home and children.

Reproductive health in our society remains the responsibility of women. This becomes evident if you consider the expressiveness of women who take responsibility for contraception, when they decide to use any contraceptive method while her companion does not<sup>(18)</sup>.

Although there are campaigns to encourage men to use condoms, which focus primarily on the prevention of sexually transmitted diseases, the discourse persists that men are reluctant to use condoms. The argument used is that condoms reduce sexual pleasure. Moreover, perceptions and behaviors about condom use may vary according to age, gender, educational level, social status, religious belief and ethnicity<sup>(19)</sup>.

Therefore, the difficulties in negotiating condom use among most couples become evident. Thus, women abdicate in their desire to maintain safe and pleasurable sexual relations in the face of difficulties in persuading their sexual partners regarding the use of contraceptive methods<sup>(16)</sup>.

In the current scenario of sexual and reproductive care the participation of men is not significant, especially in family planning services. This situation needs to be reversed, since decisions and actions in this field should be carried out by the couple<sup>(11)</sup>. However, in planning the number of children the choice of an appropriate health care method and the couple's beliefs is not enough; there needs to be a mature agreement between the couple<sup>(10)</sup>.

For this, strategies of empowerment and autonomy are tools of great importance for the promotion of the couple's health. These strategies, in addition to motivating the individual to legitimize and enable the expression of marginalized groups, also promote the breakdown of barriers that cause limitations to a healthy life. For this construction, the intervention of the professional nurse is important, as this professional can offer knowledge for the acquisition of new behaviors<sup>(20)</sup>.

From this perspective, it is important for women to understand themselves as subjects of necessary changes, which may place men and women side by side in the resolution of situations and contexts that concern the couple and family, among which is contraception. Moving in this direction, the nurse/practitioner will implement the premises of the National Policy for Comprehensive Care to Women Health (PNAISM), which recommends a gender perspective in assisting women and encouraging female empowerment.

# **CONCLUSION**

From the findings of this study, it is understood that the inclusion of men in family planning occurs in a timely and limited manner, since women assume, as their responsibility, actions that permeate this planning. Thus, it is necessary for the introduction of family planning assistance that includes men in the guidelines on sexual and reproductive health, and which makes possible their integration

into areas of healthcare, such as prenatal care, child care and the creation of family planning groups with flexible schedules for the couple to attend.

The introduction of the nurse in this scenario is important in encouraging actions for health education in order to provide a horizontal knowledge construction. We highlight the importance of women in developing a critical understanding of the cultural and social determinants that affect their lives and health, as well as the inclusion of male partners in groups of family planning. These spaces shall be based on the role of the subjects and of comprehensive care with regard to sexual and reproductive health.

In sexual and reproductive healthcare planning, we understand the need to consider the expectations of the two individuals involved: men and women. With this, one can visualize a situation that recognizes these subjects as a couple, with the possibility of guiding nursing care and assisting other healthcare professionals, and understanding their demands.

The research presents the major limitations of a qualitative study, contextualized to the time and place where it was developed. It is considered that the generalization of results is not the focus, but rather the deepening of the perception of women regarding the participation of the partner in the family planning.

We recommend further studies on the subject, covering other regions of Brazil and other countries, as well as studies that give voice to men in order to provide visibility to the way they understand themselves in the context of family planning. Therefore, we believe we can contribute to the improvement of nursing care through assistance guided by the uniqueness of women and men, and their sexual and reproductive choices.

#### **REFERENCES**

- Brasil. Lei nº 9.263, de 12 de janeiro de 1996. Regula o § 7º do art. 226 da Constituição Federal, que trata do planejamento familiar, estabelece penalidades e dá outras providências. Diário Oficial da União 15 jan 1996; Seção 1.
- Ministério da Saúde. Política Nacional de Atenção Integral à Saúde da Mulher: princípios e diretrizes. Brasília: MS: 2011.
- Ministério da Saúde. Política Nacional de Atenção Integral à Saúde do Homem princípios e diretrizes. Brasília: MS; 2008.
- 4. Ministério da Saúde. Saúde sexual e saúde reprodutiva. Brasília: MS; 2010.
- 5. Silva RM, Araujo KNC, Bastos LAC, Moura ERF. Planejamento familiar: significado para mulheres em idade reprodutiva. Ciênc saúde coletiva. 2011; 16(5): 2415-24.
- Villela WV. Relações de gênero, processo saúdedoença e uma concepção de integralidade. Bol Inst Saúde. 2009; (48): 26-30.
- 7. Minayo MCS. O desafio do conhecimento: pesquisa qualitativa em saúde. 10. ed. São Paulo: Hucitec: 2010.
- 8. Fontanella BJB, Ricas J, Turato ER. Amostragem por saturação em pesquisas qualitativas em saúde: contribuições teóricas. Cad saúde pública. 2008; 24 (1):17-27.
- Bezerra MS, Rodrigues DP. Representações sociais de homens sobre o planejamento familiar. Rev RENE. 2010; 11(4): 127-34.
- 10. Sauthier M, Gomes MLB. Gender and family planning: an ethical approach about the professional commitment toward the integration of men. Rev bras enferm. 2011; 64(3): 457-64.
- 11. Mourab ERF, Silva RM, Gomes AMA, Almeida PC, Evangelista DR. Perfil demográfico, socioeconômico e de saúde reprodutiva de mulheres atendidas em planejamento familiar no interior do Ceará. Rev baiana saúde pública. 2010; 34(1): 119-33.
- Amazonas MCLA, Vieira LLF, Pinto VC. Modos de subjetivação femininos, família e trabalho. Psicol ciênc prof. 2011; 31(2): 314-27.
- 13. Coelho EAC, Andrade MLS, Vitoriano LVT, Souza JJ, Silva DO, Gusmão MEN, et al. Association

- between unplanned pregnancy and the socioeconomic context of women in the area of family health. Acta paul enferm.2012; 25(3): 415-22.
- 14. Santos JC, Freitas PM. Planejamento familiar na perspectiva do desenvolvimento. Ciênc saúde coletiva. 2011; 16(3): 1813- 20.
- Gabriel MR, Dias ACG. Percepções sobre a paternidade: descrevendo a si mesmo e o próprio pai como pai. Estud psicol(Natal). 2011; 16(3): 253-61.
- Oliveira AG, Silva RR. Pai contemporâneo: diálogos entre pesquisadores brasileiros no período de 1998 a 2008. Psicol argum. 2011; 29(66): 353-60.
- 17. Prates CS, Abib GMC, Oliveira DLLC. Poder de gênero, pobreza e anticoncepção: vivências de multíparas. Rev gaúch enferm. 2008; 29(4)604-11.
- Parreira BDM, Silva SR, Miranzi MAS. Intenção de uso de métodos anticoncepcionais entre puérperas de um hospital universitário. Rev RENE. 2011; 12(1):150-7.
- 19. Andrade EC, Silva LR. Planejamento familiar: uma questão de escolha. Reveletrônica enferm [internet] 2009 [cited 2013 jan 11] 11(1): 85-93. Available from: http://www.fen.ufg.br/revista/v11/n1/v11n1a11.htm.
- Pinto ACS, Fiuza MLT, Pinheiro PNC, Vieira NFC, Galvão MTG. Life experiences of HIV/AIDS carriers in terms of the perspectives of the promotion

of health. Online braz j nurs [Internet]. 2012 Nov [cited 2013 jan 28] 11 (3):815-28. Available from: http://www.objnursing.uff.br/index.php/nursing/article/view/3650. doi:http://dx.doi.org/10.5935/1676-4285.20120054

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Tassiane Ferreira Langendorf - theoretical and methodological deepening in the development stages of the research.

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