

Knowledge and perceptions of pregnant women about the reproductive system: A qualitative study

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ABSTRACT

Background: To know pregnant's perceptions and a critical basis attributed to the body from the perspective of the reproductive system.

Methods: This is a qualitative study. We used a semi-structured questionnaire with socioeconomic and gynecological-obstetric information, an A4 sheet for graphical representation of the reproductive system and pelvic floor and an interview, questioning the meanings of the reproductive system in the pregnancy context. Then, a qualitative analysis of the interviews was produced. **Results:** Five categories were identified: recognition began in adolescence, health-disease relationship, process of being pregnant, insight into sexuality, and lack of recognition of its importance in pregnancy. **Conclusion:** This perception had different meanings and roles in adolescence, changing with pregnancy, becoming a cradle of affection through self-care.

Keywords: Pregnant Women; Reproduction; Teenage pregnancy; Knowledge; Body image.

BACKGROUND

From a cultural perspective, human sexual dimorphism is classified as male and female, in which subjects are divided considering psychological, sexual, anatomical and physiological characteristics.⁽¹⁾ With the feminist debate, scientific thinking about the woman's body has undergone several changes over time and, with this, the participation of women in the production of knowledge has increased.⁽²⁾ Due to the advent of the exposure of female images considered "ideal" to the media, a greater number of women may have less acceptance of their natural anatomy and, consequently, an altered body image.⁽³⁾ Body image refers to the experiences and assessments that a person has of his own body and weight, although it does not reflect the true silhouette, as postulated by previous authors.^(4,5)

Some authors have emphasized the importance of researches that symbolically investigates the body.^(5,6) Therefore, the technique of drawing the body can be a good alternative, since it allows the projection of internalized images. Thus, the drawing expresses different representations of the subject and reflects the concept of himself.⁽⁷⁾ Martins (2005)⁽⁸⁾ presents the symbolism behind the representation of the anatomy of female bodies in the 18th century, in which the images sought to be faithful to the scientific method with the objectification of the real, but were also sources of expression of the perception of femininity. Currently, the female reproductive system is described as a group of organs, composed of two ovaries, two

uterine tubes, a uterus, a vagina and a vulva, located inside the pelvic cavity, these structures being responsible, among other functions, for the reproduction process.⁽⁹⁾

There is evidence that women's understanding of this system influences decision-making about their sexual and reproductive health.⁽¹⁰⁾ In this case, sexual and reproductive education (SRE) can assist through the dissemination of knowledge a better understanding of how your body works and the subject variations of each woman in functional and responsive terms.⁽¹¹⁾ However, even with proven benefits⁽¹²⁾, SRE in most developing countries still find it difficult to reach women in general and, more specifically, during pregnancy.^(13,14) During pregnancy, women experience several transformations (physical, psychological and social) and their corporeality is mostly focused on the growth and well-being of their child.⁽¹⁵⁾ In addition to these gestational changes, similar processes are also experienced in adolescence, in some diseases and even in amputations. However, it is not clear enough in the rehabilitation environment how the perception occurs, that is, the meaning attributed to the reproductive system itself and its adaptations in the condition of pregnant, since the reproductive ability, for now, is already confirmed. The question assumes greater property when analyzing information from different studies, as there is a reduced knowledge of women in relation to the functioning of the female reproductive system.^(10,16)

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As a result, we sought to understand the perception of some adult Brazilian pregnant women in relation to the importance attributed to the biological body from the perspective of the reproductive system during pregnancy. Anyway, how do these women perceive their bodies during pregnancy?

METHODS

Participants

All 13 pregnant women who agreed to participate in the research signed a free and informed consent form from the Research Ethics Committee for Human Beings of the Universidade do Estado de Santa Catarina, approved with number 154/2007. Representative drawings of the reproductive system were selected and, also, the statements of 10 pregnant women were clipped. We were interested in the gestational process and the meanings implicit in the statements.⁽¹⁶⁾ However, three participants who had complications during pregnancy, such as urinary tract infections, women with amputations and eating disorders in the last month, were excluded. The setting of the study was in the waiting room of the health units in the city of Florianópolis/Santa Catarina, at the time of the prenatal visit. The interviews and graphic elaborations were carried out in a room adjoining and private to the waiting room. All names used here are fictitious.

Data collection procedure

For data collection, three instruments were used: (1) Semi-structured questionnaire of socioeconomic and gynecological obstetric information, (2) Graphical representation of the reproductive system (anterior view) and the pelvic floor (lower view) and (3) Semi-structured interview about the meaning of the reproductive system during pregnancy. The first instrument was applied in the form of an interview. The graphic representation was motivated by the following question: How do you represent your reproductive system and the pelvic floor, in an anterior and inferior view? The semi-structured interview consisted of a single question: As a pregnant woman, what is the meaning that the reproductive system has for you? As described by Pinna and Deiana (2018)⁽¹⁷⁾, the graphical representation occurred on a white sheet (A4). Thus, the pregnant woman gave a verbal statement explaining the drawings and the meaning attributed to the reproductive system. According to Bogdan and Biklen (1994)⁽¹⁶⁾, qualitative research is descriptive and its essential concern is with the meanings.

Interpretation of information

It was used a qualitative methodology to analyze the interviews based on proposals described by Bogdan and Biklen (1994) [16], Fudge and Byers (2017)⁽¹⁸⁾ and Minayo *et al.* (2004) [19]. Specifically Fudge and Byers (2017)⁽¹⁸⁾ in a study similar to this one, suggest: a) reading and re-reading all the transcripts to get a general idea; b) extract the most significant statements; c) eliminate redundancies; d) extract the meaning of each significant statement through a reflective process; e) organize meanings into categories related to the experience of the subject; f) synthesize the categories into themes considering the experience of the subject. Complementing the information of these authors, the speeches were duly recorded, transcribed in full in the Word software, classified and, later, categorized by the researcher herself.^(16,19) The information obtained was evaluated by another researcher, who assumed the role of auditor.

RESULTS

After the analysis of the interviews, some specific themes were identified, and presented below.

Recognition began in adolescence

Some women discovered the body during adolescence, specifically, in the immediate post-menarche period: "I gave more importance to the reproductive system when I was a teenager, when I was discovering myself, touching myself, knowing myself ..." (Maria, 23 years, complete high school, housewife, married, 13 weeks, 3rd pregnancy).

On the other hand, Carmem's speech points to a different perception of the juvenile female body: "Actually (laughs) I had a repressive education, so, we had little knowledge of the body, its parts, sexuality..." (28 years, complete higher education, civil servant, married, 27 weeks, 1st pregnancy). Cultural limitations and a more conservative education, as in the case of Carmen, may have resulted in a superficial and rudimentary perception of the reproductive system. On the other hand, in the case of Maria, in which adolescence was full of fantasies and discoveries, it may have generated a synchronism of positive access from childhood to adulthood. Key idea: Unrealistic patterns about body appearance can be challenged.

In the drawings (figures 1 and 2), an outline of the main structures of the reproductive system is observed.



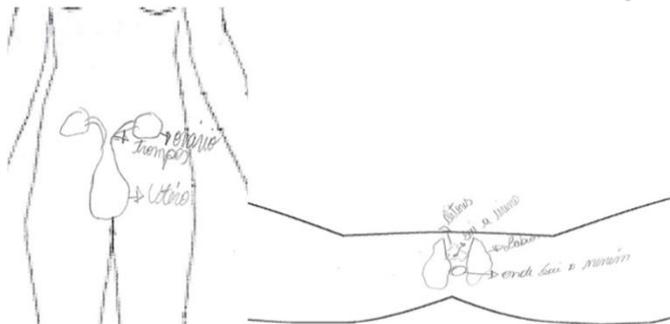


Figure 1. Maria's drawings (original language: Portuguese).

*Note: Graphical representation of the reproductive system (left) and the pelvic floor (right).

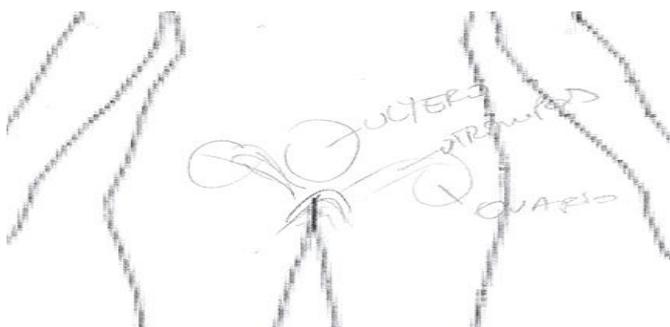


Figure 2. Drawing by Carmen (original language: Portuguese).

*Note: Graphical representation of the reproductive system.

The reproductive system and the health-disease relationship

Another possible landmark in the woman's life, which in turn, makes rethinking the reproductive function, occurs when the body is evaluated in the totality of changes subjecting the different systems. In the process of seeking help and guidance from health professionals, the identification of the real limits and difficulties experienced by them is explicit. Fragility and susceptibility to the appearance of diseases favor the exercise of self-care: "The importance I attach to my reproductive system is in relation to disease [...]. I always took care of the body because of illness" (Francisca, 44 years, complete high school, housewife, married, 16 weeks, 1st pregnancy). The possibility of unwanted maternal-fetal complication makes clear the importance of self-care and protection with a focus on disease prevention. The pregnancy cycle is not understood as a normal, slow, natural process, which, a priori, should not bring any major complications. The notion of danger and risk is frequent in the speeches given the concern with the baby's growth: "This part of the body has to be taken care of. I try to do tests right so I don't have any type of infection that can contaminate the baby" (Rosana, 31 years, complete high

school, hairdresser, lives with partner, 28 weeks, 3rd pregnancy).

The greater importance of the reproductive system came during the process of being pregnant

Pregnancy is a time when your senses are heightened. It is at that moment that the body can have an even broader meaning.

"The importance of my reproductive system, [...], it is all that can bring me good. In the beginning, it had no function at all, it only served to menstruate, colic [...]" (Viviane, 24 years, complete high school, sales promoter, single and without a boyfriend, 36 weeks, 1st pregnancy).

The reproductive system ceases to be a structure composed of apparently static and architecturally housed elements within the pelvic structure (pelvic floor), and starts to assume the complex generating function.

"Now I worry a lot more, I give more importance, even more knowing that there is a being within me. It wasn't like that before! I took care, but not as much as now, [...], I keep touching myself, looking at myself..." (Patrícia, 25 years, incomplete higher education, secretary, married, 18 weeks, 1st pregnancy). Specifically, this pregnant woman verbalizes the differentiated attention to her body, motivated by the condition of pregnant and, particularly, based on the bond created with the fetus. "...when listening to the first heartbeat, it's a lot of emotion! When they start to move then, that's when you give due importance to your uterus" (Carmem, 28 years old, complete higher education, civil servant, married, 27 weeks, 1st pregnancy); "During pregnancy, the woman's whole body is different, and what I liked most is when I started to feel the baby, [...]. From the moment you are pregnant, you already realize, you already feel, and this is the most beautiful thing that can exist in the world" (Beatriz, 28 years, complete high school, administrative assistant, married, 36 weeks, 2nd pregnancy).



Figure 3. Beatriz Drawings (original language: Portuguese).

*Note: Graphical representation of the reproductive system (left) and the pelvic floor (right).





Likewise, the meaning that the reproductive system has of "generating life" is explicit and conscious for many of the informants. The notion of these reproductive organs can be peculiar (figure 4) and, particularly, very subjective, as, for example, in the overvaluation of the placental function: "This system is important because it gives life. In reality it's not these organs, right, it's the placenta, if it didn't have the placenta there would be no life" (Madalena, 18 years, incomplete high school, attendant, lives with a partner, 38 weeks, 1st pregnancy).

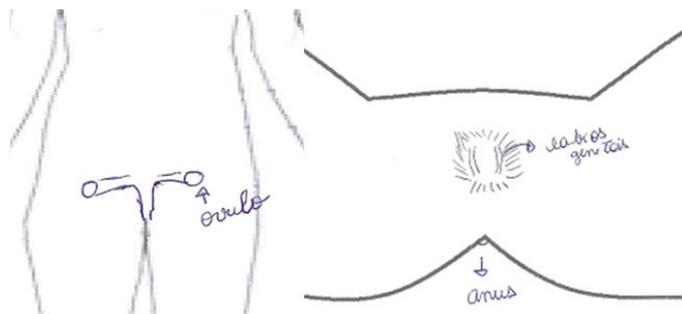


Figura 4. Madalena's drawings (original language: Portuguese).

***Note:** Graphical representation of the reproductive system (left) and the pelvic floor (right).

In the specific case of Madalena, pregnancy maximized the meaning of the placental structure. Thus, it is also perceived that being pregnant can bring with it a world of meanings reflecting aspects of the personal, social and interpersonal component.

Vision about sexuality

"The meaning of the reproductive system is life. [...]. There are people who evaluate only the sexual aspect. One should not only think about the pleasurable part, but that, from there, can generate a new life" (Renata, 22 years, complete high school, cashier, married, 20 weeks, 1st pregnancy). As noted, sexuality during pregnancy is still a taboo, as the greater meaning is often related to procreation. The negative factors that hinder sexual intercourse during pregnancy are anxiety, the belief that intercourse is dangerous for the baby, fear of premature birth and insecurities about the body and the partner.

Absence of recognition of its importance as a pregnant woman

Lara commented on the denial process directed at the body and even at pregnancy. This category can be better understood in the following summary text:

"I never gave much importance to the reproductive system, nor do I now give so much importance because I didn't want to get pregnant [...]. I think if I got pregnant later I would be interested in the reproductive system [...]. I knew how to draw the reproductive system well because I always liked biology. I give importance because of health, care, hygiene, to have no infection; I've always been concerned with that, but not in the reproductive sense" (Lara, 26 years, incomplete higher education, administrative assistant and actress, single and with boyfriend, 14 weeks, 1st pregnancy).

The design of this pregnant woman was the most complete and the one that best represented the reproductive system (figure 5). Her knowledge of this system is not related to self-perception and self-knowledge.

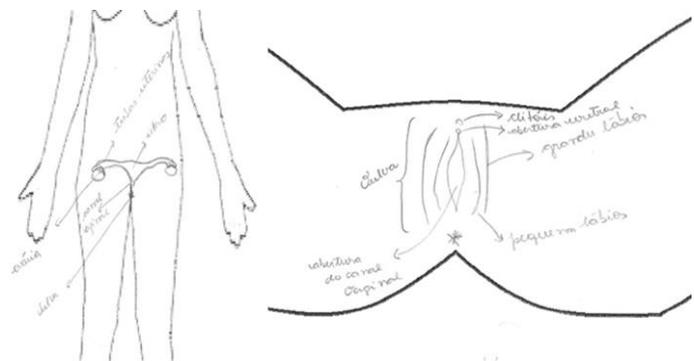


Figura 5. Lara's drawings (original language: Portuguese).

***Note:** Graphical representation of the reproductive system (left) and the pelvic floor (right).

In general, we could observe that most of the designs of the reproductive system (anterior view) had a common characteristic: a complex involving the uterus, tubes and ovaries, located in the lower abdomen. Thus, the representations of the pelvic floor (lower view) often represent structures such as the vaginal canal and the lips. On the other hand, in some drawings of the reproductive system (anterior view) the omission of the vaginal canal was observed.

DISCUSSION

According to Fudge and Byers (2017),⁽¹⁸⁾ through the analysis of the interviews it is possible to evaluate the experiences lived in a multifactorial way, enabling the understanding of the experiences described by the subject and understanding the true meaning of the phenomenon experienced by them. About body recognition initiated in adolescence, it is considered that touch, manipulation and perception of the body serve as vehicles for self-knowledge.⁽²⁰⁾





Such attitudes favor familiarization with it, with new sensations and experiences, through the construction of a true bodily self, influencing the personality of each subject.⁽²¹⁾ The early discovery of the reproductive body may have been due to the previous recognition of the biological body, already in the adolescence period, when most of the emotional, physical and socio-cultural transformations take place.⁽²²⁾ Volck et al. (2013)⁽²³⁾ concluded that gynecological knowledge increases with advancing age, and this is maintained regardless of sexual experiences and multiple partners.

In the theme “The reproductive system and the health-disease relationship”, it is noted that the fear of possible maternal-fetal complications makes women practice self-care. Another feeling, also evidenced by the pregnant women in the study of Guedes and Canavarro (2014),⁽²⁴⁾ was the conformity with these and other physical transformations, due to the fact that the maternity process is desired. This fear and apprehension in relation to diseases can be observed in speeches of our informants, showing the socio-cultural and religious influence, as well as the possible relationship with the health-disease process.

The greater importance given to the reproductive system during pregnancy is explained by the fact that, after its confirmation, the woman experiences different sensations, among them the fact that she feels victorious for being able to exercise one of the most important and complex functions of the female body: to generate a life.⁽¹⁵⁾ Despite the challenges, the future mother, especially the primigravida, still experiences feelings of happiness and fulfillment as she starts a family and is able to continue the new social function.⁽²⁵⁾

According to Victora (1995),⁽²⁶⁾ the existence of large and spacious cavities in the designs of the reproductive system suggests the need for these women to have an adequate and sufficiently large space to originate and maintain a life, as well as the design of the informants in this study. It was possible to observe the existence of an obstacle regarding sexuality. Literature demonstrates that until the eighteenth century it was developed the idea that women had a single function: the reproductive one. Following the analysis of the trajectory of the woman's body, the author Victora (1995)⁽²⁶⁾ debates about the feminine nature, the social roles and the visions of the feminine body in the constitution of the obstetrics of the XIX and XX centuries. She analyzes medical-scientific images published in obstetrics books in Europe.

On the other hand, this historical process developed on the female body (mysterious, sinful

and forbidden) may have been responsible for the fact that some women, even today, do not know themselves, and their own body.⁽¹⁰⁾ In summary, and, concurrently, the sexual act could not provide them with pleasure. Comparing our representative designs of the reproductive system (previous view) with those of Victora (1995),⁽²⁶⁾ although the study was with non-pregnant women, we found that the designs are very similar. Victora (1995)⁽²⁶⁾ she associated the knowledge of the body arising from practical and everyday experiences, combined with the re-reading of medical speeches, and information in magazines, television and health posts.

The omission of the vaginal canal also found in the study of Victora (1995),⁽²⁶⁾ may be related to a restricted notion of the limits and functions of the body, placing the vaginal canal as an external structure, since, in the representations of the lower view, this structure was recognized by a large part of the informants. Martins et al. (2014)⁽²⁷⁾ realized that the biggest difficulties in the anatomical-functional denomination of the female genital organs, is related to internal organs. It becomes interesting to replicate the study with women at different socio-cultural levels, ages, parities and religions. In view of such considerations, it is believed that some aspects of the physical body are still unknown and/or veiled in the female imagination.

CONCLUSION

It was evident in this study the importance of the school and its Sexual Education and Health Education programs. Concomitantly, the preventive aspects of sexual health, diseases, risks and possible consequences of not performing prenatal care also maintained a connection with these findings. The language barriers between the family and the woman are still evident in the current culture, with a greater recognition of this system due to the pregnancy. Ovaries, tubes and uterus were structures present in most designs. Such behavior is understood by the possible relationship with fertilization (ovary and fallopian tubes) and menstruation (uterus), even before pregnancy. The other elements of the external genitalia (pelvic floor) and the vagina (internal genitalia) did not appear in the present study, probably due to the difficulty that women have in dealing with the touch and the most intimate caresses that lead us to sexuality and not only reproduction. From then on, it is understood that it is at times of major changes in the woman's body (in the post-menarche period and during pregnancy) that knowledge and identification of the roles linked to her reproductive system are processed. These can be positive or negative,





depending on previous experiences and the context in which it is inserted, and can have a great impact on the experience of female sexuality.

Authors' contributions: FFS, CS e FLC projetaram o estudo. CS e FLC realizaram as análises qualitativas. FFS, CS, GMM, IK e FLC interpretaram os dados e escreveram o manuscrito. FFS, CS, GMM, IK e FLC revisaram criticamente o manuscrito. Todos os autores leram e aprovaram a versão final.

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REFERENCES

- Da Costa-Júnior FM, Maia ACB, Couto MT. Gênero e cuidados em saúde: Concepções de profissionais que atuam no contexto ambulatorial e hospitalar. *Sex. Salud y Soc.* 2016; 97–117.
- Feltrin RB, Velho L. Representações do corpo feminino na menopausa: estudo etnográfico em um hospital-escola brasileiro. *Sex Salud y Soc.* 2016; 148–174.
- Truong C, Amaya S, Yazdany T. Women's Perception of Their Vulvar Appearance in a Predominantly Low-Income, Minority Population. *Female Pelvic Med Reconstr Surg.* 2017;23(6):417-419.
- Ridolfi DR, Crowther JH. The link between women's body image disturbances and body-focused cancer screening behaviors: a critical review of the literature and a new integrated model for women. *Body Image.* 2013;10(2):149-162
- Laus MF, Costa TM, Almeida SS. Gender differences in body image and preferences for an ideal silhouette among Brazilian undergraduates. *Eat Behav.* 2015;19:159-62.
- Waldrop JB, Page RA, Bentley ME. Perceptions of Body Size in Mothers and Their Young Children in the Galapagos Islands. *Matern Child Health J.* 2016;20(10):2012-8.
- Suehiro ACB, Cardim NA, Benfica T de S. Produção Científica sobre o Teste Desenho da Figura Humana entre 2002 e 2012. *Psicol Ciência e Profissão.* 2016; 36:439–448.
- Martins APV. A ciência dos partos: visões do corpo feminino na constituição da obstetrícia científica no século XIX. *Rev Estud Fem.* 2005; 13:645–666.
- Hamabe A, Ito M. A three-dimensional pelvic model made with a three-dimensional printer: applications for laparoscopic surgery to treat rectal cancer. *Tech Coloproctol.* 2017;21(5):383-387.
- Harmanli O, Ilarslan I, Kirupananthan S, Knee A, Harmanli A. Women's perceptions about female reproductive system: a survey from an academic obstetrics and gynecology practice. *Arch Gynecol Obstet.* 2014;289(6):1219-23.
- Keogh SC, Stillman M, Awusabo-Asare K, et al. Challenges to implementing national comprehensive sexuality education curricula in low- and middle-income countries: Case studies of Ghana, Kenya, Peru and Guatemala. *PLoS One* 2018.
- Fonner VA, Armstrong KS, Kennedy CE, O'Reilly KR, Sweat MD. School based sex education and HIV prevention in low- and middle-income countries: a systematic review and meta-analysis. *PLoS One.* 2014;9(3):e89692.
- Kemigisha E, Bruce K, Nyakato VN, et al. Sexual health of very young adolescents in South Western Uganda: a cross-sectional assessment of sexual knowledge and behavior. *Reprod Health.* 2018;15(1):148.
- Neal S, Harvey C, Chandra-Mouli V, et al. Trends in adolescent first births in five countries in Latin America and the Caribbean: disaggregated data from demographic and health surveys. *Reprod Health.* 2018; 15(1).
- da Silva APF, Hirai KN, Silva ME, et al. Os fatores emocionais gerados pela gravidez na adolescência. *ConScientiae Saúde* 2009;8(1):91–97.
- Bogdan RC, Biklen SK. *Investigação qualitativa em educação.* Porto: Porto Editora; 1994.
- Pinna B, Deiana K. When the whole is equal to the sum of its parts: A new approach to study face and body perception and representation. *Vision Res.* 2019;157:252-263.
- Fudge MC, Byers ES. "I Have a Nice Gross Vagina": Understanding Young Women's Genital Self-Perceptions. *J Sex Res.* 2017;54(3):351-361.
- Minayo MC de S, Deslandes SF, Neto OC, et al. *Pesquisa social: teoria, método e criatividade.* Vozes. Petrópolis; 2004
- Velten J, Margraf J. Satisfaction guaranteed? How individual, partner, and relationship factors impact sexual satisfaction within partnerships. *PLoS One.* 2017;12(2):e0172855.
- Fahs B. Genital panics: constructing the vagina in women's qualitative narratives about pubic hair, menstrual sex, and vaginal self-image. *Body Image.* 2014;11(3):210-8.
- Smith KA, Harrison A. Teachers' attitudes towards adolescent sexuality and life skills education in rural South Africa. *Sex Educ.* 2013;13(1):68-81.





23. Volck W, Ventress ZA, Herbenick D, Hillard PJ, Huppert JS. Gynecologic knowledge is low in college men and women. *J Pediatr Adolesc Gynecol.* 2013;26(3):161-6.
24. Guedes M, Canavarro MC. Risk Knowledge and Psychological Distress During Pregnancy Among Primiparous Women of Advanced Age and Their Partners. *J Midwifery Womens Health* 2014; 59:483–493.
25. Mihelic M, Morawska A, Filus A. Preparing parents for parenthood: protocol for a randomized controlled trial of a preventative parenting intervention for expectant parents. *BMC Pregnancy Childbirth.* 2018;18(1):311.
26. Victora C. As imagens do corpo: representações do aparelho feminino e reapropriações dos modelos médicos. In: Ondina F. Leal (2a ed), *Corpo e significado.* Editora da UFRS. Porto Alegre; 1995
27. Martins CB de G, Moreira RMF, Mendes S de S, et al. O adolescer e a sexualidade: o conhecimento sobre o próprio corpo. *Rev Baiana Saúde Pública* 2014;38(2):370–386.

