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EVALUATION OF THE SEXUAL FUNCTION IN PRIMIPARAS AFTER VAGINAL DELIVERY AND IN NULLIGRAVIDAS

Lorena Carneiro de Macêdo[1], Hellen Batista de Carvalho[2], Suyane Waneide Macêdo de Medeiros[3], Andressa Maria Bezerra dos Santos[3], Leila Katz[4], Melania Maria Ramos de Amorim[5]

Corresponding author: Lorena Carneiro Macêdo - lorenacmacedo@gmail.com
Physiotherapist. Master's Degree in Mother-Child Health. Professor at the State University of Paraíba. Reseacher at the Professor Joaquim Amorim Neto Institute, Campina Grande, Paraíba, Brazil.
Physiotherapy undergraduation student at the State University of Paraíba, Campina Grande, Paraíba, Brazil.
Physiotherapy undergraduation student at the State University of Paraíba, Campina Grande, Paraíba, Brazil.
Medical Doctor. PhD in Tocogynecology. Professor at the Professor Joaquim Amorim Neto Institute, Campina Grande, Paraíba, Brazil.
Medical Doctor. PhD in Tocogynecology. Professor at the Integral Medicine Professor Fernando Figueira Institute and at the Federal University of Campina Grande. Reseacher at the Professor Joaquim Amorim Neto Institute, Campina Grande, Paraíba, Brazil.

ABSTRACT | **Introduction:** pregnancy and childbirth can harm the function of the pelvic floor muscles (PFM) and influence in the sexual function after the delivery. **Objective:** to evaluate the sexual function in primiparas after vaginal delivery and in nulligravidas. **Materials and Methods:** descriptive cross-sectional study, approved by the Ethics in Research Committee of UEPB (CAAE - 44775015.1.0000.5175) performed with 36 women, in the 18-35 age group, being primiparas after vaginal delivery with episiotomy (n = 12), without episiotomy (n = 12) and nulligravidas (n = 12). Biological and sociodemographic characteristics were verified and the sexual function was evaluated through the Female Sexual Function Index (FSFI). The primiparas answered the questionnaire three months after the delivery and the same questionnaire was answered by the nulligravidas. **Results:** the women with episiotomy, without episiotomy and nulligravidas presented an average of 21,41±4,56; 20,16±4,60 and 26,3±4,16 years old, an average of 14,66±2,42; 14,81±2,44 and 18,83±1,80 years of study, and frequency of dyspareunia equal to 66,66% (n = 8); 50% (n = 6) and 0% (n = 0), respectively. Regarding the sexual function, when comparing the three groups of the research, it was found a minor score of desire in the primiparas with episiotomy and the group without episiotomy presented less arousal, less lubrication, less orgasms and a worse sexual satisfaction compared with the other groups. Regarding the changing pain, the primiparas with episiotomy presented the worst scores. **Conclusion:** in the group of primiparas with episiotomy, it was found a higher frequency of dyspareunia, lower desire indexes and the primiparas without episiotomy presented less arousal, less lubrication, less orgasms and a worse sexual satisfaction.

Keywords: Post-delivery period. Pelvic floor. Episiotomy.

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INTRODUÇÃO

Pregnancy, childbirth and puerperium are periods of physical and psychological changes in women. During pregnancy, the pelvic floor muscles (PFM) undergo a constant overload due to the uterine growth and during the third gestational trimester, they can undergo an overload caused by the nesting and the progression of the fetal head. Besides, the neuromuscular strategies for the postural control during the pregnancy, utilized by women to do their activities, can contribute to the myofascial alterations of the pelvic floor[1,2].

At the moment of childbirth, the pelvic floor is exposed to the fetus compression and to the downward pressures due to the expulsive efforts performed by the parturient. Those strengths distend the pelvic floor, resulting in anatomic and functional alterations in the muscles, nerves and connective tissues. Damages to the innervation of the levator ani and of the sphincteral muscles have been associated to the decrease of the muscular strength after the childbirth[3,4].

In the postpartum, the PFMs may present themselves more hypotonic and stretched by the hormonal action, by the baby overload and by possible traumas during the labor (spontaneous lacerations or episiotomy). In this period, the vagina may present itself sensible and dried, which can cause postpartum sexual dysfunction in some women[5].

With a prevalence that varies from 20 to 73% in women, the female sexual dysfunctions (FSD) result from the combination of biological, psychological, social and cultural factors, which becomes a total or partial blockage of the individual's sexual response, related to desire, excitement and orgasm[6]. During the period of pregnancy and postpartum there is an increase in the occurrence of sexual dysfunctions, with prevalence of 33,5% before pregnancy, 76% during pregnancy and 43,5% in the postpartum[7].

A study performed to investigate the experience of the sexuality in the puerperium verified dissatisfaction from those women regarding the sexual intercourse, due to complaints like dyspareunia, generated by gynecological diseases, infections, hormonal disorders and lack of vaginal lubrication[8].

Therefore, the objective of the current study was to evaluate the sexual function in primiparas after the vaginal delivery and in nulligravidas.

MATERIALS AND METHODS

The cross-sectional study was performed in the Instituto de Pesquisa Professor Joaquim Amorim Neto (IPESQ), located in Campina Grande/PB, with a sample of 36 women with ages from 18 to 35 years old, divided in primiparas after vaginal delivery with episiotomy (n = 12), primiparas after vaginal delivery without episiotomy (n = 12) and nulligravidas (n = 12).

To take part in the research, the nulligravidas had to be 18 years old or more, initiated sexual life and absence of previous pregnancy with duration larger than three months and exclusion criteria considered were: previous history of abdominal or urogenital surgery and presence of genital prolapse.

On the other hand, the primiparas had as inclusion criteria: to be the first pregnancy, 18-39 years old, pregnancy until the end (37 to 42 weeks) and alive newborn. And the exclusion criteria considered were: high-risk pregnancy, instrumental childbirth, twin pregnancy, previous history of abdominal or urogenital surgery and the presence of genital prolapse.

The primiparas were collected in the Instituto de Saúde Elpídio de Almeida (ISEA), Campina Grande/PB, during the immediate postpartum. In this initial contact, the objectives and procedures of the research were explained, and the women that agreed to participate, signed the Informed Consent Form so that, then identification information, address and contacts of the participant could be gathered. Three months after the delivery, the eligible primiparas were contacted and appeared at IPESQ to the accomplishment of the interview with the filling of the research form, containing biological and sociodemographic information, life habits and

characteristics of the sexual life and function.

The nulligravidas were recruited by an active search in the Higher Education Institution in the city Campina Grande, where they were informed about the research objectives, agreeing to participate, signed the Informed Consent Form and appeared at IPESQ for the data collection with the accomplishment of the interview, answering to the same research form applied to the primiparas.

The evaluation of the sexual function was accomplished through the questionnaire Female Sexual Function Index (FSFI), with a valid version in Portuguese[9], that presents 19 questions that evaluate the sexual function in the last four weeks, in which each answer receives a score from zero to five. A total score in presented in the end of the application, resulting from the sum of scores of each domain, multiplied by a pre-determined numeric factor that homogenizes the influence of each domain in the total score. When evaluating the domain "pain", the lower the score, the worst the degree of pain in sexual intercourse is, resulting in a worse performance. On the other hand, in the evaluation of the other domains (desire, arousal, vaginal lubrication, orgasm and sexual satisfaction), a low score corresponds to a better classification.

The study was approved by the Ethics in Research Committee of UEPB (CAAE - 44775015.1.0000.5175), in which all the norms for the accomplishment of research with human beings were obeyed. All the evaluated women that presented any sexual dysfunction, in the end of the evaluation, were referred to a specialized public service for the treatment of the dysfunction.

The collected data were organized and tabulated, by the researchers, in an electronic Microsoft Office Excel® spreadsheet, being created tabled of distribution of frequency for the exposure of results. For the inferential analysis, the statistical package SPSS, version 20, was utilized, using the Kruskal-Wallis Test, followed by the Dunn method to verify the difference among the groups.

RESULTS

According to the collected data, it was verified that the nulligravidas had higher ages, a higher number of years of study and a higher sexually active lifetime (9 ± 4,69 years) when compared to the groups of primiparas. The results referent to the biological and sociodemographic characteristics are presented in table 1.

Table 1. Biological and sociodemographic characteristics of the research participants. Campina Grande-PB, 2016.

Variable	With episiotomy N = 12	Without episiotomy N = 12	Nulligravidas N=12
Age (Years)			
X ± DP	21.41 ± 4.56	20.16 ± 4.60	26.3 ± 4.16
Value (minimum – maximum)	16 - 34	14 – 30	20 - 35
BMI (kg/m²)			
X ± DP	24.94 ± 3.17	23.77 ± 5.42	22.94 ± 2.97
Value (minimum – maximum)	18.26 – 28.33	16.91 – 33.27	17.93 – 27.66
Formal education (Years)			
X ± DP	14.66 ± 2.42	14.81 ± 2.44	18.83 ± 1.80
Value (minimum – maximum)	10 - 20	10 – 19	14 - 20
Smoking – n (%)			
Yes	0	1 (8.4%)	0
No	12 (100%)	11 (91.6%)	12 (100%)
Alcoholism – n (%)			
Yes	0	1 (8.4%)	1 (8.4%)
No	12 (100%)	11 (91.6%)	11 (91.6%)
Physical activity - n (%)			
Yes	1 (8.4%)	0	2 (16.67%)
No	11 (91.6%)	12 (100%)	10 (83.33%)

Legend: BMI = body mass index.

It was verified that the group of primiparas with episiotomy has the higher frequency of sexually inactive women (16,6%) and those women have a higher frequency of sexual pain after childbirth (66,6%).

The characteristics of the sexual function, according to the evaluation scores of the Female Sexual Function Index (FSFI) are presented in table 2. When comparing the results among the three groups, it was verified that the primiparas presented a worse sexual function comparing with the nulligravidas, and also, the primiparas without episiotomy present a decreased sexual function in most domains (arousal, lubrication, orgasm and satisfaction), while the primiparas with episiotomy present a worst function in relation to desire and higher scores in relation to pain, in a way that the pain is more frequent and has a higher gravity in this group. Although a difference in the absolute values of the evaluated averages was verified among the groups, a statistically significant difference was not found (p>0,05).

Table 2. Characteristics of sexual function through the FSFI evaluation scores (Female Sexual Function Index). Campina Grande-PB, 2016.

Variable	With episiotomy N = 12	Without episiotomy N = 12	Nulligravidas N=12
Desire			
X ± DP	4.1 ± 0.76	3.9 ± 0.90	3.7 ± 0.43
Value (minimum – maximum)	3 – 5.4	2.4 – 5.4	3 – 4.2
Arousal			
X ± DP	2.95 ± 1.34	3.5 ± 0.88	2.55 ± 0.75
Value (minimum – maximum)	0 – 4.8	2.4 – 5.4	1.5 – 3.9
Lubrication			
X ± DP	3.4 ± 1.40	3.87 ± 0.86	3.85 ± 0.38
Value (minimum – maximum)	0 – 4.8	2.4 – 5.4	3.3 – 4.5
Orgasm			
X ± DP	2.93 ± 1.22	3.53 ± 0.47	3.43 ± 0.49
Value (minimum – maximum)	0 – 4.4	2.8 – 4.4	2.8 – 4.4
Satisfaction			
X ± DP	2.03 ± 1.13	2.16 ± 0.79	2.06 ± 0.56
Value (minimum – maximum)	0 – 4	1.2 – 4.4	1.2 – 2.8
Pain			
X ± DP	3.6 ± 1.48	4.83 ± 0.95	5.56 ± 0.55
Value (minimum – maximum)	1.2 – 6	3.6 – 6	4.4 – 6
Total score			
X ± DP	19.01 ± 5.03	21.80 ± 3.1	21.16 ± 1.8
Value (minimum – maximum)	7.6 – 23.6	15.6 – 27.8	18.1 – 23.7

DISCUSSION

The results found in this study show that women in the postpartum period presented worse sexual function indexes, in most domains, when compared to the nulligravidas. A statistically significant difference was not verified among the evaluated groups (p>0,05), but there was a difference in the absolute values of the averages found among the studied groups.

It was verified that most of the primiparas with episiotomy presented pain during the sexual intercourse, having also the worst scores in the domain "desire". The sexual response involves a coordinated sequence of phases (desire, arousal, lubrication, orgasm and resolution) and all the components of the answer are mutually dependent, suggesting that the presence of pain can be related with the inhibition of other components of the sexual response[9], which can justify the influence of dyspareunia in the low sexual desire of those primiparas with episiotomy.

The pain during the sexual activity compromises the quality of life, the woman's sexual function, affection the relationship of steady couples, as the partner may avoid the contact, afraid of causing the discomfort, which may decrease his initiative to the sexual activity or even decrease his interest[10].

Corroborating with our findings, a study presented a

relevant prevalence of sexual female dysfunction in pregnancy and puerperium, being present in about 70% of Brazilian pregnant women[11] and in 86% of women in the puerperium, with the most frequent dysfunctions being the dyspareunia (22 to 41%) and the decrease in the sexual desire (83 to 86%)[12,13]. In the third month after the childbirth, 45 to 55% of women refer to dyspareunia, and in the sixth month, 18 to 30% still persist with sexual problems[14,15].

A study developed in a teaching hospital in Sweden compared the sexual health of woman submitted or not to episiotomy. The results did not show a significant difference in the level of sexual satisfaction between the groups, despite indicating that women that had episiotomy presented a higher vaginal discomfort, finding association between the realization of episiotomy and the occurrence of dyspareunia[16].

These findings complement the knowledge existent about the sexual function in the postpartum. The literature shows that women that underwent vaginal delivery with episiotomy presented in the postpartum, lower levels of libido, more difficulty to reach the orgasm, lower sexual satisfaction and higher degree of pain during sexual intercourse, comparing to the women with intact perineum or spontaneous lacerations[17].

Although having found a lower sexual function in primiparas after vaginal delivery, the Caesarian section must not be considered a factor for the protection to the pelvic floor, as it was not found any difference in the sexual function (evaluation of 12 to 18 months after childbirth) between women submitted to normal labor or elective caesarian section[18].

Also in this context, seeking to determine the effect in long-term (6-11 years) of the kind of childbirth over the prevalence and gravity of the pelvic pain (dysmenorrhea, dyspareunia and pelvic pain not related with menstruation or sexual relation), it was verified that the vaginal delivery is not associated to a higher rate of pelvic pain, when compared to the caesarian section, excepting the forceps delivery and a vaginal delivery of a baby that weights more than 4 kilos, that has association with dyspareunia 6-11 years after the normal labor[19].

FINAL CONSIDERATIONS

Primiparas after the vaginal delivery presented a worse sexual function compared with the nulligravidas, with the primiparas with episiotomy having a worse function in relation to the desire and higher scores in relation to the sexual pain, while the primiparas without episiotomy presented a decreased sexual function in arousal, lubrication, orgasm and satisfaction.

It is worth noting that other studies must be done with a bigger sample, evaluating women after caesarean section and correlating the findings of sexual function with the characteristics of childbirth and birth.

AUTHOR CONTRIBUTIONS

Macêdo LC and Carvalho HB were responsible for fundamental contributions to the study design and data acquisition; Medeiros SWM e Santos AMB were responsible for data acquisition. Amorim MMR and Katz L were responsible for writing the manuscript and performing a critical review, final draft approval and post peer review modifications.

COMPETING INTERESTS

No financial, legal or political competing interests with third parties (government, commercial, private foundation, etc.) were disclosed for any aspect of the submitted work (including but not limited to grants, data monitoring board, study design, manuscript preparation, statistical analysis, etc.).

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