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Evaluation of sexual function in puerperal women in different delivery ways: vaginal and cesarean

Avaliação da função sexual de puérperas em diferentes vias de parto: vaginal e cesárea

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ABSTRACT

Introduction: Sexuality is very important in the quality of life of all beings and is also influenced by obstetric variables, such as pregnancy, childbirth, and puerperium. Pregnancy and puerperium encompass emotions, feelings, and biomechanical variable changes in women during childbirth and postpartum, making it necessary to emphasize that female sexual function is not only related to the ability to bear a child, but also encompasses the pleasure involved in the sexual experience, both for the relationship between the couple and personal satisfaction.

Objective: To analyze the correlation between the different delivery routes on the sexual function of women of childbearing age postpartum.

Method: A qualitative-quantitative study, of a descriptive, cross-sectional, and analytical nature, through the application of the QS-F questionnaire to a sample of 91 postpartum women.

Result: 60 patients underwent cesarean section and 31 normal delivery. Regarding the QS-F score, the average was higher in cesarean sections (77.37) compared to normal births (69.68 (p = 0.2039). It was not possible to state that there is a significant difference in the female sexual quotient between women who had cesarean sections and those who had normal births (p >0.05).

Conclusion: There was no significant difference between the different delivery routes and the sexual function of women after childbirth.

KEYWORDS: Normal birth. Caesarean section. Sexuality. Postpartum.

RESUMO

Introdução: A sexualidade é muito importante na qualidade de vida de todos os seres e é influenciada também por variáveis obstétricas, como a gestação, parto e puerpério. A gestação e o puerpério englobam emoções, sentimentos e mudanças variáveis biomecânicas na mulher durante o parto e pós-parto, tornando-se necessária enfatizar que a função sexual feminina não tem relação somente com a capacidade de gerar um filho, mas também abrange o prazer envolvido na experiência sexual, tanto para a relação entre o casal quanto satisfação pessoal.

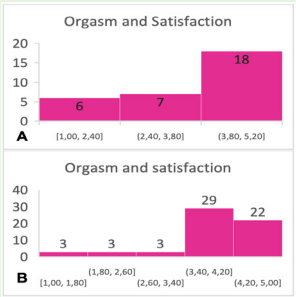
Objetivo: Analisar a correlação entre as diferentes vias de parto na função sexual das mulheres em idade fértil pós-parto.

Método: Estudo de abordagem qualiquantitativa, de caráter descritivo, transversal e analítico por meio de aplicação do questionário QS-F para amostra de 91 puérperas, no período de maio a setembro de 2023.

Resultado: 60 pacientes realizaram parto cesariano e 31 normal. Quanto ao resultado do score QS-F, a média foi maior no cesariano (77,37) comparado ao parto normal (69,68 (p = 0,2039). Não foi possível afirmar que existe diferença significativa no quociente sexual feminino entre mulheres que tiveram partos cesarianos e aquelas partos normais (p >0,05).

Conclusão: Não houve diferença significativa entre as diferentes vias de parto e a função sexual das mulheres após o parto.

PALAVRAS-CHAVE: Parto normal. Parto cesariano. Sexualidade. Pós-parto.



Female sex quotient for normal (A) and cesarean (B) childbirth

Central Message

Pregnancy and the puerperium encompass emotions, feelings and biomechanical variable changes in women during childbirth and postpartum, making it necessary to emphasize that female sexual function is not only related to the ability to bear a child, but also encompasses the pleasure involved in the sexual experience, both for the relationship between the couple and personal satisfaction. This study sought to analyze the correlation between the different modes of delivery in the sexual function of women of postpartum childbearing age.

Perspective

It is believed that the factors that can influence sexual variation are linked to hormonal fluctuations, pain, breastfeeding period, the couple's new rhythm of life, changes in self-image, low availability of time and exacerbated fatigue, in addition to the division of affection between the husband and the baby. Therefore, it is important to emphasize that these factors, such as psychological and emotional aspects, can play a significant role in postpartum sexual function and deserve more in-depth attention.

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INTRODUCTION

The theme of sexuality is a very important concept of the health, quality of life and well-being of all beings. It interferes in the individual's evaluation of himself,1 personality characteristic and corresponds to all phases of sexual development, which manifest themselves physiologically. In addition, they are influenced by obstetric variables, such as pregnancy, childbirth and puerperium.[2] Pregnancy is part of a special condition experienced by women who wish to have children with various biomechanical and hormonal changes for the establishment and progression of the pregnancy-puerperal cycle.[3] Vaginal delivery, for example, has fewer maternal4,5 and neonatal complications, and its main characteristic is the involvement of the pelvic floor muscles, which are of great relevance in sexual pleasure.[5] However, physical alterations in the female genitalia caused by childbirth, perineal trauma, and pain during sexual intercourse are frequently reported in the literature. On the other hand, in cesarean delivery there is no change in the perineum for the exit of the fetus, but the changes experienced during the puerperium can be added to other factors such as discomfort in the scar, which negatively influences sexual function.[5]

And it is during the puerperium, also called postpartum,3 the period between the expulsion of the fetus and the end of the involutionary state of the phenomena generated by pregnancy,6 that women experience a wide variety of physical, hormonal and emotional changes, which can affect their well-being,5 the couple's relationship, family routine and increase the vulnerability of the appearance of sexual complaints,7 such as decreased sex drive, sexual arouse, and lubrication.

The aim of this study was to analyze the correlation between the different modes of delivery in the sexual function of women of postpartum childbearing age.

METHOD

The study began after being approved by the Ethics Committee of the Mackenzie Evangelical College of Paraná, under CAAE No. 65640622.0.0000.0103, opinion No. 5,804,796, on December 9, 2022 and by the Research Ethics Committee of the Municipal Health Department of Curitiba, through CAAE No. 65640622.0.3001.0101, opinion No. 6,191,715, on July 19, 2023, Curitiba, PR, Brazil. It was carried out through a qualitative-quantitative, descriptive, cross-sectional and analytical approach, with a final total sample of 94 puerperal women. The inclusion criteria were: puerperal women within 1 year, aged between 18 and 45 years, who signed the Informed Consent Form (ICF) and who correctly completed the questionnaire. The exclusion criteria were: minors, women of non-reproductive age, over 45 years of age, and those who did not sign the informed consent, who refused to answer the survey and who answered the questionnaire incompletely. In the end, 4 questionnaires were excluded.

Data collection was done through the application of an epidemiological questionnaire and another related to sexuality, QS-F, in a virtual way, through tablet or cell phone to fill in the data in a private environment in the basic health units of the city involved in the research. The questionnaire was also shared in groups of pregnant and postpartum women through social networks (Facebook, WhatsApp), where each participant could only access the questionnaires once through their own verified personal/professional email.

The questionnaire related to sexuality, QSF, consists of 10 questions, divided into variables: sexual desire and interest, foreplay, personal arousal and attunement with the partner, comfort, orgasm and satisfaction, each of which must be answered on a scale of 0 to 5. The result of the sum of the 10 answers can vary from 0 to 100, with higher scores indicating a better degree of sexual function and lower scores being considered as sexual dysfunction.

During the application of the questionnaire, the puerperal woman was taken to a private environment, and informed of the existence of doctor-patient confidentiality, in order to avoid any embarrassment that some more delicate issue could cause. Each postpartum woman was randomly selected on the day of her postpartum or pediatric appointment or on specific days when she took her baby to be vaccinated. In addition, confidentiality regarding the identification and the data provided was guaranteed, since there was no nominal identification of any of them. At any time during the interview, your consent could be withdrawn.

Statistical analysis

The data were obtained and organized in spreadsheets in the Excel software. To perform the statistical analysis, the R software version 3.5.2 was used, thus ensuring statistical treatment of the collected data and the Shapiro-Wilk normality test. In addition, in all cases in which statistical inference was necessary, a confidence level of 95% was used, ensuring the robustness of the data obtained.

RESULT

First, the data were descriptively analyzed, and descriptive statistics for the total Female Sexual Quotient (QS-F) score in relation to the type of delivery can be verified in Table 1.

TABLE 1 — Descriptive statistics of the female sex quotient in relation to the type of delivery

Descriptive statistics	Childbirth variable / Sex quotient	
	Caesarean	Normal
Minimum	24	16
1st quartile	72	55
Median	78	76
3rd quartile	86,5	86
Maximum	98	98
Average	77,37	69,68
Standard deviation	13,95	21,78

It was found that the mean QS-F was higher for those who had a cesarean section, in addition to having less variability in the data. In order to verify the existence of a relationship between the QS-F and the type of delivery, the analysis protocol was followed.[8]

The normality test showed W = 0.87422 and p = 2.992e-07, strongly suggesting that the data did not follow a normal distribution. Such a low p-value indicated that there was significant evidence to reject the null hypothesis of normality, which implied that the data had a significantly different distribution from the normal one.[9] Graphically, it was also possible to verify the lack of normality of the data (Figure 1).

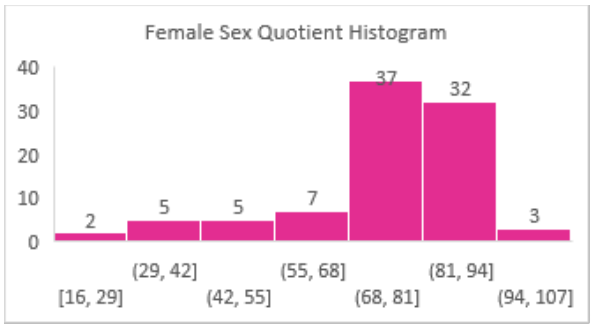

FIGURE 1 — Normality of the data

Bartlett's homoscedasticity of variances test with Bartlett's K-square equal to 8.3267 and p-value equal to 0.003907 indicated that there was statistically significant evidence to reject the null hypothesis of homoscedasticity.[10] Thus, this study used the nonparametric Wilcoxon and Kruskal Wallis tests for mean comparison.

The Wilcoxon test, with a W statistic value of 1082 and a p-value of 0.2039, indicated that there was insufficient evidence to reject the null hypothesis that there was no statistically significant difference in the female sex quotient between the cesarean section and normal delivery groups.

Therefore, it was decided to break down the female sexual quotient into: "sexual desire and interest", "foreplay", "personal arousal and attunement with the partner", "comfort", "orgasm and satisfaction", and to repeat the analyses in order to verify the existence of relationships between these groups (Figure 2).[8]

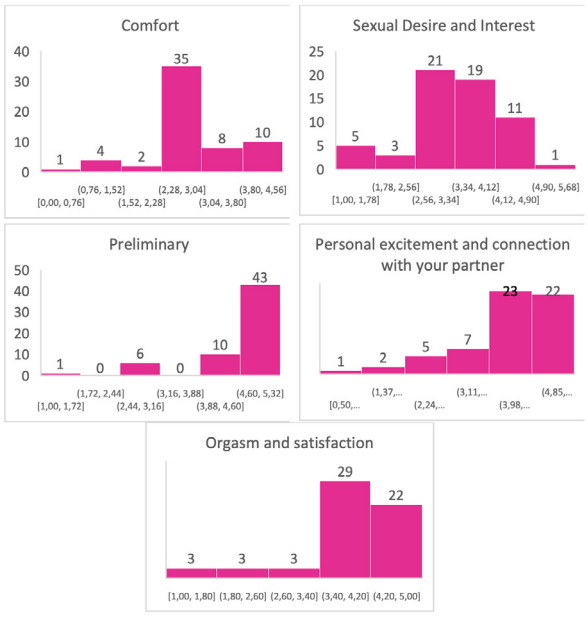

FIGURE 2 — Histograms of the female quotient for cesarean section

Similarly, Figure 3 presents the descriptive measures of these subgroups for the type of vaginal delivery.

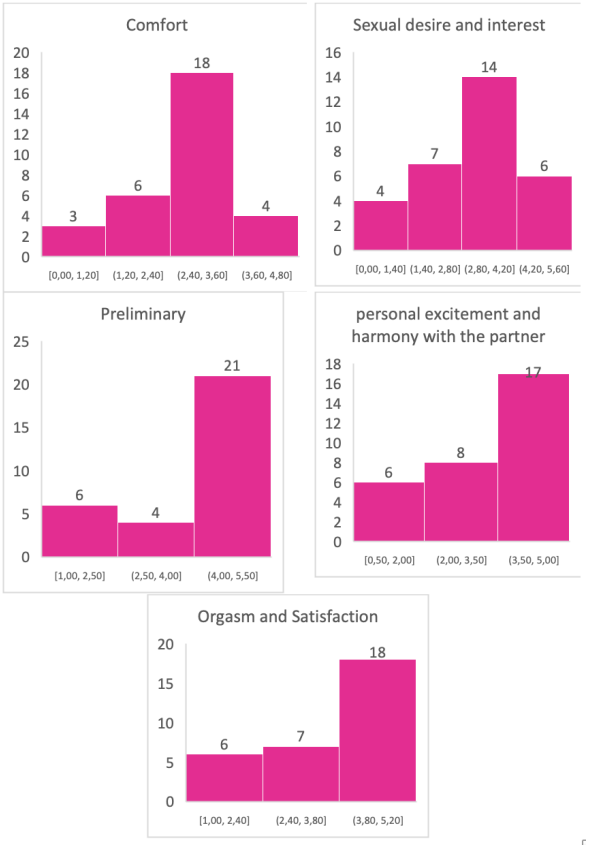

FIGURE 3 — Histograms of the female quotient for normal delivery

Table 2 presents the Wilcoxon W statistics and their respective p-values for comparisons between the means of each subgroup vs. their score.

TABLE 2 — Wilcoxon test for comparison between means of the female quotient subgroups

Subgroups	W for wilcoxon	p
Sexual desire and interest	W = 1100.5	0,1514
Foreplay	W = 998.5	0,4794
Personal arousal and attunement with partner	W = 1114.5	0,114
Comfort	W = 1069.5	0,2305
Orgasm and satisfaction	W = 1060	0,2683

Since no significant difference was found between the type, cesarean and normal, we sought to verify whether there could be a difference in relation to other variables: age group, marital status, education, and number of deliveries (Figure 4 and Table 3).[8]

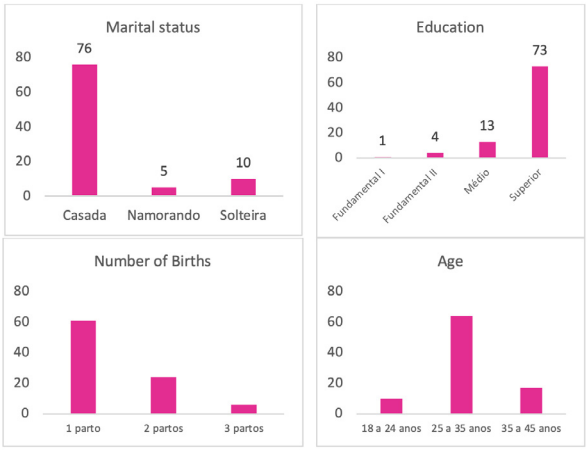

FIGURE 4 — Age group, marital status, education and number of deliveries

TABLE 3 — Kruskal-Wallis test

Variables	Chi-square statistic of Kruskal-Wallis	Degrees of freedom	p
Age group	0,3882	2	0,8236
Marital status	1,2382	2	0,5384
Schooling	7,606	3	0,0549
Number of births	0,48776	2	0,7836

Since no significant differences were found between the female quotient score and the type of cesarean section or normal delivery, we sought to verify whether the time between the last delivery could influence the respective score. Therefore, the number of days between the last delivery and the date of the survey response was calculated (Table 4).

TABLE 4 — Descriptive statistics for the time between the last delivery and the date of the survey

Descriptive statistics	Time between last birth / Sex quotient	
	Cesarean	Normal
Minimum	4	5
1st quartile	23,75	16
Median	97	129
3rd quartile	184,25	219
Maximum	328	493
Average	117,05	144,5
Standard deviation	98,50	141,15

The variable postpartum time was transformed into a qualitative dichotomous variable with more or less than 100 days after delivery, in order to test its relationship with the variable of the female quotient. The 100 days were chosen since there were no significant differences for other value ranges. Thus, 48% of the deliveries were performed in less than 100 days and 52% in more than 100 (Figure 5).[8]

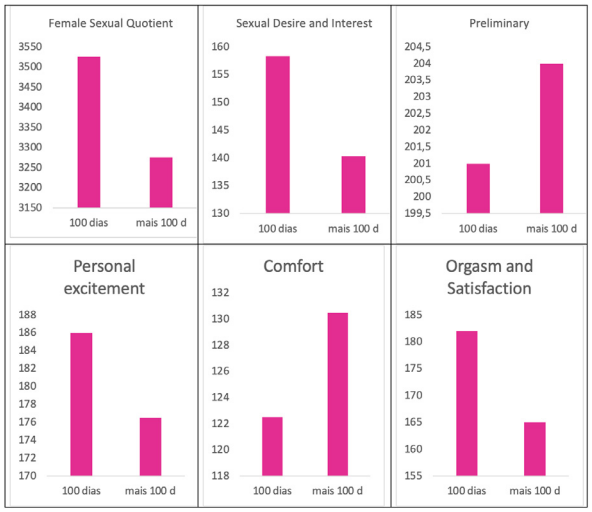

FIGURE 5 — Postpartum days vs. sum female sexual quotient score

It was preliminarily verified that the means for female sexual quotient (W = 1418.5, p = 0.002256), sexual desire and interest (W = 1420.5, p = 0.002008) and orgasm and satisfaction (W = 1401, p = 0.002967) were slightly higher in situations with deliveries less than 100 days, which can be proven by the Wilcoxon statistics and p-values presented.[8]

DISCUSSION

Even with the vast diversity of research on sexual function, calculated by other questionnaires that have also been validated, this theme addresses the difference in sexuality after the pregnancy period resulting from cesarean section or normal deliveries, which proved to be a question that has not been enriched in research. Based on this, the comparisons made here were based on the available literature that also researched sexual function.

The present study analyzed 91 responses to the epidemiological and QS-F questionnaires. In view of this, an analysis was performed based on the results, and it was not possible to affirm that there is a statistically significant difference in the female sex quotient between women who had cesarean deliveries and those who had vaginal deliveries.

It is possible to observe in this study that 43.5% of the women presented some degree of sexual dysfunction in the postpartum period; however, a cause-and-effect relationship could not be made.[3] However, here an issue related to injuries during childbirth stands out, such as vaginal delivery with sutures, which in turn can be a factor for some sexual dysfunction when compared to cesarean section.[3] There may be a problem with difficulty in sexuality during the puerperium, but in this study it was not possible to state whether there was a significant discrepancy between the routes studied.

Among the results, it was found that there were no statistical differences between the means of the female sexual quotient scores in relation to the variables: age group, marital status, education and number of deliveries. However, when mentioning only the schooling variable, it is perceived that the averages for elementary schools I and II are lower than those for high school and higher

education. This fact can be associated with fallacies, such as that of Sigmund Freud, in which in his psychoanalytic writings he pointed out education as repressive of sexual morality and also civilizing sexual instincts, in addition to Foucault, who elucidated the pedagogization of the child's sex as a form of control of bodies.[11] In the article on School Education, Sexuality and Adolescence, some topics showed relevance to this study, especially the one about the association between the level of education and correct information on sexuality. Several studies have proven that with the increase in education, the information and knowledge about sexuality are greater and safer, although with the perception of a certain distance between learning and practice.[11]

The present study sought to verify whether the time between the last delivery could influence the quantification of the score used, an issue that was moderately relevant, but with little literary support related to the subject. That said, through statistical attempts, the number of days between the date of the last delivery and the date of the survey response was calculated, and after tests comparing other possibilities, a period of 100 days was defined for the comparison, as there were no significant differences for other value ranges. Thus, the statistical analysis was able to analyze in advance that the averages for desire, sexual interest, orgasm and satisfaction are considerably higher in situations with births with less than 100 days. On the other hand, an article published in Revista Prevenir reveals that 89% of the women interviewed are sexually active at 4 months postpartum, and only 17% sexually active during the 1st month after labor. It is believed that the factors that can influence this variation are linked to hormonal fluctuations, pain, breastfeeding period, the couple's new rhythm of life, changes in self-image, low availability of time and exacerbated fatigue, in addition to the division of affection between the husband and the baby. Therefore, it is important to emphasize that these factors, such as psychological and emotional aspects, can play a significant role in postpartum sexual function and deserve further investigation.

CONCLUSION

The results revealed that there is no significant difference between the type of delivery and the index of female sexual function. This suggests that, from a statistical point of view, the different modes of delivery do not seem to substantially influence women's sexual function after childbirth.

Authors' contributions

Conceptualization: Victoria Carolina Pereira França
Methodology: Najla Isabella Ortiz Amaral
Project Administration: Juliana de Biagi
Writing (original draft): All authors
Writing (proofreading and editing): All authors

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