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Sexual satisfaction of women undergoing hemodialysis: correlational analysis with social vulnerability markers

Satisfação sexual de mulheres que fazem hemodiálise: análise correlacional com marcadores de vulnerabilidade social

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ABSTRACT
This study aimed to analyze the correlation established between the social vulnerability markers with sexual satisfaction of women undergoing hemodialysis. Cross-sectional, correlational study, developed with 102 women receiving dialysis, at the only hospital of Alto Sertão Produtivo in Bahia. A structured questionnaire was used, with questions regarding social vulnerability and sexual activity. Data were processed using the *software Statistical Package for the Social Sciences* (SPSS) version 22.0, which performed Pearson's chi-squared test. The adopted significance level was 0,05. Correlations between sexual satisfaction with social vulnerability markers were established, whose *p* and *r* values were statistically acceptable: age (p= -0,04750; r= -0,79799), marital status (p= -0,04177; r= -0,9360), education level (p= -0,01909; r= -0,4750) and religion (p= 0,03055; r= 0,53055). It was concluded that both biological and behavioral variables, when correlated, are related in the perception of sexual satisfaction according to their vulnerabilities.

Keywords: Woman Health; Sexual Health; Nephropathies; Dialysis; Social Vulnerability.

RESUMO
Objetivou-se analisar a correlação estabelecida entre os marcadores de vulnerabilidade social com a satisfação sexual de mulheres submetidas ao tratamento hemodialítico. Estudo correlacional de corte transversal, desenvolvido com 102 mulheres em tratamento dialítico no único hospital do Alto Sertão Produtivo da Bahia, na cidade de Guanambi. Aplicou-se um questionário estruturado, contendo questões referentes à vulnerabilidade social e à vida sexual. Os dados foram processados no *software Statistical Package for the Social Sciences* (SPSS) versão 22.0, o qual realizou o teste Qui² (r) de Pearson. Adotou-se o nível de significância de 0,05. Foram estabelecidas correlações entre satisfação sexual com os marcadores de vulnerabilidade social, cujos valores de *p* e *r* estatisticamente aceitáveis são: idade (p = -0,04750; r = -0,79799), estado civil (p = -0,04177; r = -0,9360), nível de escolaridade (p = -0,01909; r = -0,4750) e religião (p = 0,03055; r = 0,53055). Conclui-se que tanto as variáveis biológicas quanto comportamentais, quando correlacionadas, estão relacionadas na percepção da satisfação sexual conforme as suas vulnerabilidades.

Palavras-chave: Diálise renal; Nefropatias; Saúde da mulher; Saúde sexual; vulnerabilidade social.

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INTRODUCTION

Chronic kidney disease (CKD) is a renal injury with progressive and irreversible loss of kidney function[1]. Although hemodialysis is the most efficient treatment to prolong patients' life, it brings about negative implications, such as the interference in interpersonal relationships, especially in the affective-sexual ones[2]. Sexuality is an important element of discussion in the context of affective-sexual relationships, as it deals with the sexual experience lived by the presence of two components: security and pleasure, the first being related to sexual practice free of communicable infections, unplanned pregnancies, violence and discrimination; the second is manifested by sexual, emotional and physical satisfaction[3-4].

Sexual satisfaction is constituted as a psychological factor, frequently evaluated between sexual dysfunctions and an indicator used to measure and assess quality of life, of difficult conceptual consensus, due to the different methodological approaches established for evaluation. However, most of the concepts refer the meaning to pleasure that human beings achieve through somebody or something which is capable of arousing emotions, feelings and behaviors that do not always have in the sexual intercourse itself the propeller to their peak[5-6], therefore, this study was designed based on this concept.

Within these two components of sexuality, sexual satisfaction is usually more affected in people who undergo health treatments, especially women receiving hemodialysis. These women are more vulnerable due to the side effects of this therapy, such as physical (e.g., hair loss, edema, change in skin color, acne and progressive catheter presence), emotional and social changes[6-7]. These effects reduce self-esteem, self-image and self-perception, and consequently it interferes in the affective-sexual relation of women who have or look for a partner, once the body and psychological changes derived from the treatment decrease the desire for sexual activity[5,7].

In this context of biopsychosocial fragility, these women undergoing hemodialysis become socially vulnerable due to changes in their everyday life, living with the disease and treatment, becoming a group of invisible and stigmatized social minorities[8-10]. The main social vulnerability markers (refer to socioeconomic situation), which leave women with CKD in more difficult conditions to cope well, in the face of the problems derived from the disease are: low economic and education level, age, occupation, lack of housing, religious issues and skin color; how fulfilled they are with themselves, damaged affective relations and social isolation because of the disease[8-9]. National and international studies show that these social vulnerability markers interfere in the hemodialysis, causing emotional changes of these women, which can directly interfere in sexual satisfaction[11-13].

It is highlighted that social vulnerability is related with important indicators that show the invisibilities that some population groups face, as well as the stigmas and marginalization, due to intersectionality (gender, race and social class) and it can be added that women (black, poor and with a type of disease), who historically in patriarchal societies, experience vulnerabilities simply because they are women[14]. Thus, social vulnerability is understood through factors (above mentioned) that make it difficult/impossible for people to perform actions of promotion, prevention and protection to health problems[9].

This study is justified because of the found theoretical gap when using the Boolean descriptors *"renal dialysis"* and "*sexuality*" and "*sexual satisfaction*" in the Pubmed database, aiming to find published studies concerning this topic. Thus, when applying the filter of time clipping of the last five years (2016 to 2020), 9 published articles were found, however, when adding the descriptor "*social vulnerability*", no article was found. This way, the reflection about social characteristics of people's life, such as sexuality and sexual satisfaction, enable to understand how the disease process leads some populations, such as women with CKD, struggle to have good self-esteem, well-being and quality of life. And for this, working aspects related to sexuality with them, from the understanding of how their everyday life is, might lead healthcare professionals to

implement actions that help them find their libido and what allows them to achieve pleasure and satisfaction.

Therefore, it is relevant, because the analysis of these social vulnerability markers can enhance the understanding of how these women can have their sexual health affected, mainly aspects related to pleasure and libido (important for self-esteem and quality of life). Consequently, healthcare professionals, researchers and managers can focus their actions of health promotion on the improvement of factors related with sexual health, such as situations of social vulnerability, which hinders people (women with CKD in this study) to acquire coping conditions for the disease and the limitations caused by it, in an attempt to improve self-esteem, decrease social isolation and the distorted perception of their bodies, considering their peculiarities[5,12,15].

Thus, the following research question was outlined: what is the correlation between the social vulnerability markers and the sexual satisfaction of women with CKD undergoing hemodialysis? Therefore, we aimed to analyze the established correlation between the social vulnerability makers with the sexual satisfaction of women with CKD submitted to hemodialysis.

METHODS

It is a cross-sectional, correlation study, with quantitative approach. The research was developed in the only hospital of Alto Sertão Produtivo in Bahia, located in the city of Guanambi, which performs free dialysis and is a reference to the 19 municipalities that make up the region (Guanambi, Bom Jesus da Lapa, Caetité, Riacho de Santana, Caculé, Igaporã, Malhada, Palmas de Monte Alto, Pindaí, Urandi, Candiba, Ibiassucê, Iuiu, Jacaraci, Lagoa Real, Licínio de Almeida, Matina, Mortugaba and Sebastião Laranjeiras), with around 400,000 inhabitants[16].

When data collection was performed, in the hospital in June and July 2017, 128 women were registered. Among them, a non-probability convenience sampling of 102 women participated in the research as they met the following inclusion criteria: have CKD; receive hemodialysis; be 18 years old or more; be in good physical and emotional conditions after hemodialysis to understand and sign the Informed Consent Form. The ones who had difficulty in understanding questions, were not able to answer the questionnaire, due to the effects after receiving hemodialysis, did not show interest in participating in the research or gave up before the end of the form application were excluded.

After hemodialysis, we waited for the participants to report a feeling of physical and emotional well-being. Afterwards, these women were taken to a place provided by the hospital, in order to ensure privacy and comfort while answering the questionnaire, which had structured questions, applied in the mentioned hospital with the patients, by the main researcher and two monitors who were previously trained. The questionnaire had structured questions about social vulnerability, which was made up of independent variables (X): age, level of education, self-declared skin color, marital status, religion, income and occupation (socioeconomic data), affective sexual life (sexual and reproductive health). Sexual satisfaction was the dependent variable (Y).

Data were organized and categorized using Microsoft Excel 2016 and afterwards, transferred to the Statistical Package for the Social Sciences (SPSS) version 22.0, to carry out the statistical tests adopted for this study. Pearson's chi-squared test was used to verify the correlation between the independent and dependent variables, adopting significance level *p* 0,05 and confidence interval 95%, as well as *r* values, between -1 and 1. Initially the *p* value verified if there was a correlation between the variables X and Y. When comparing, it was verified whether *p* was greater or less than the significance level of 0,05. When it was greater than 0,05 there was not a correlation between the variables, accepting then, the null hypothesis (H0). If it was less than or equal to 0,05 there was a correlation between the variables, accepting the alternative hypothesis (HA). The Pearson's chi value to verify how close to -1 and 1 the correlation is, since the higher, the statistically stronger the correlation.

The research was approved by the Research Ethics Committee of Centro de Ensino Superior de Guanambi under protocol n.2078315/2017, meeting all the ethic aspects discussed in the resolution 466/2012.

RESULTS

Among the 102 women included in this study, most of them were over 59 years old (36,2%), low level of education (up to eight years of study; 98%), did not have a partner (52,9%) or a job (86,3%), were catholic (62,64%), with low income (equal to or lower than the minimum wage; 88,2%). When it comes to self-declared skin color evaluation, there is a significant difference between the amount of black (84,3%) and white women (15,7%). Concerning sexual health and satisfaction, there was a prevalence of women who were not sexually active (66,6%) and the ones who were sexually satisfied (54,91%). These data were shown in table 1.

Table 1. Characteristics of the studied population according to social vulnerability markers for women with CKD receiving hemodialysis. Guanambi-BA, Brazil, 2018

(continua)

Variables	N	%
Age group		
18 – 35 years old	24	24,60
36 – 50 years old	20	19,60
51 – 59 years old	20	19,60
Over 59 years old	38	36,20
Marital Status		
Without a partner	54	52,90
With a partner	48	47,10
Years of Study		
Up to 8 years	100	98,0
More than 8 years	02	2,0
Monthly income		
Up to 1 minimum wage	90	88,20
More than 1 minimum wage	12	11,80
Self-declared Race/Color		
White	16	15,70
Black	86	84,30
Religion		
Catholic	64	62,64
Evangelical	24	23,52
Others	14	12,84
Occupation		
Not active	88	86,3
Active	14	13,7

(conclusão)

Variables	N	%
Active Sexual Life		
Yes	34	33,4
No	68	66,6
Sexual Satisfaction		
Satisfied	22	21,61
Not very satisfied	34	33,30
Unsatisfied	46	45,09

Source: Research data.

The *p* values pointed a correlation of sexual satisfaction with the variables: age, marital status, level of education and religion, since they were less than the significance level *p*= 0,05, verifying the strength of the correlation with Pearson's chi-square test afterwards. The correlation between age and sexual satisfaction presented a negative result (*p*= -0,04750), that is, women without partners have lower sexual satisfaction. For the level of education the correlation is negative (*p*= -0,01909), showing that women with low level of education have greater sexual satisfaction. Religion also had a significant correlation with sexual satisfaction (*p*= 0,03055).

Table 2. Correlations between the social vulnerability markers and sexual satisfaction. Guanambi-BA, Brazil, 2018

	SEXUAL SATISFACTION		
Vulnerability markers	*p* Value of correlation	Significance Level p=0,05	Pearson's chi-square test -1 to 1
Age	*p*= -0,04750	Test p < 0,05	*r*= -0,79799
Marital Status	*p*= -0,04177	Test p < 0,05	*r*= -0,9360
Level of education	*p*= -0,01909	Test p < 0,05	*r*= -0,4750
Monthly income	*p*= 0,20146	Test p > 0,05	*r*= 0,20146
Self-declared skin color	*p*= -0,09360	Test p > 0,05	*r*= -0,04177
Religion	*p*= 0,03055	Test p < 0,05	*r*= 0,53055
Occupation	*p*= 0,17238	Test p > 0,05	*r*= 0,17238
Active sexual life	*p*= 0,79799	Test p > 0,05	*r*= -0,01909

Source: Research data.

The four markers with significant correlations are also strong or moderate with sexual satisfaction, once they presented values close to -1 or 1: age (*r*= -0,79799), marital status (*r*= -0,9360), level of education (*r*= -0,4750) and religion (*r*= 0,53055). It is highlighted that the null hypothesis will be rejected when the significance level is equal to or less than 0,05 ($p \leq 0,05$), as it was the case of the significant correlations in this study. The other markers did not have correlation with sexual satisfaction for this study, because the *p* value was greater than the significance level 0,05 ($p \geq 0,05$), thus, it is inferred that there was not a correlation between the four ones because the null hypothesis was accepted.

DISCUSSION

In the results of this study, being younger is positively related with sexual satisfaction, while religion, low level of education and not having a partner are related with lower sexual satisfaction, highlighting the fact that the biological and behavioral variables are involved in the pleasurable perception of sexual activity and fulfillment of sexual satisfaction. Older age is a factor that interferes in women's libido, decreasing it. However, sexual satisfaction for these women is more influenced by emotional quality than the sexual relationship itself, thus, sexual and emotional satisfaction refer to age[4].

In this study there was not a correlation between the variables active sexual life with sexual satisfaction. Most women, despite not being sexually active, were satisfied. This data reveals that these women are more prone to valuing the emotional quality of the relationship instead of a pleasurable sexual intercourse, that is, pleasure is closely involved by care, love and affection which they provide themselves (masturbation and self-care) or receive from family and partners.

Other research evaluating the correlation of active sexual life with sexual satisfaction, which is essentially determined by sexual intercourse and libido, described that women with a steady partner or not, were sexually unsatisfied[1,17-18]. This fact occurs most of the times these women have sex due to obligation, even being sick, as a way to reward their partners for not leaving them throughout the process of treatment[1,17].

Women with chronic diseases who do not have a partner, usually opt for being alone due to fear of (re)abandonment, self-devaluation and uncertainty in the face of a loving relationship that requires attitudes of resilience and sacrifice because of the disease[4,18]. National and international studies[19-22] showed that for women who are undergoing hemodialysis and are alone (divorced, widow or single), sexual activity is also lower related to men, which interferes in sexual satisfaction. However, the main reasons that reduce sexual activities for women with CKD are related with the treatment priority, lack of will, psychological difficulties, troubled marital relationships and social isolation[13,19-22].

Older age together with lack of a partner increases the difficulty of sexual satisfaction in women with chronic diseases and health problems, such as CKD, or the ones undergoing treatment for a long time[6], reinforcing the correlations shown in this study. Most women, who made up the sampling of this study, who have CKD not only have low level of education, but also little guidance and information from healthcare services. Thus, they do not know that sexual satisfaction can be achieved, even without a partner, when they have greater self-esteem and know their body well, as well as the erogenous zones[21]. Therefore, the low level of education makes them vulnerable, negatively influences the ability for self-care[23], in sexual performance and satisfaction[24], because they do not know the treatment for sexual dysfunction[20,25] and have difficulty in perceiving themselves and their ill body[26-27].

The results so far also point to the correlation between sexual satisfaction and education level, corroborating another study conducted in Alcântara, whose relations among results showed that the level of knowledge of women was low, around 362 (55,2%) and had studied for less than 8 years; 277 (44,8%) had studied for more than 8 years, which affected sexual satisfaction[28]. It is highlighted that in this study (with the sample of women from Alto Sertão Baiano), religion presented a statistically significant difference in relation to sexual satisfaction. Other studies converge to the same understanding when describing that as the proportion of Catholic Christian women increases, the likelihood of being sexually satisfied decreases, reducing their perception of quality of life during hemodialysis treatment[7,29-30]. It is specifically during CKD and the treatment, that religion is used to help them cope with the disease[7,19,31].

Although religion (in this case in the sphere of structure and doctrines), differently from spirituality (this item is a dimension of quality and is important for people to acquire ways of coping adversities), is a social tool and vulnerability marker that influences behaviors and ideas of people and society, arises questionings concerning up to what

extent it influences on quality of life and the way how people cope with health problems, that is, regarding women with CKD, on the way they have sexual satisfaction affected due to the treatment[23,29-31].

Furthermore, even today many women find it difficult to speak and express themselves about their sexual life, sexuality, sexual satisfaction, pleasure and orgasm, in addition to believing that their partner's satisfaction can be canceled due to theirs, which was also noticed among women participating in this study[31]. Sexual satisfaction and sexuality issues are left behind when many women are socially vulnerable due to several aspects, such as non-communicable chronic diseases, in this case CKD, which makes them feel worried about the treatment and physiological recovery, and ignore sexual life, especially concerning sexuality, pleasure and libido.

This study presented the scarcity of written material as a limitation, a gap in literature about this object (Sexual satisfaction, hemodialysis/women with CKD and social vulnerability markers), which could establish a more specific discussion about the object of study, such as important tools to be used as theoretical and grounding support. Another limitation was the fact that the patients are from the countryside, located in Alto Sertão Produtivo of Brazilian Northeast, where there is prejudice, stigmas, low income and low education and, consequently, lack of information about the subjects sexual health, sexuality and treatment for possible sexual dysfunctions. As methodological limitations, the use of a tool with structured questions through self-report, which was collected in person after hemodialysis, is highlighted.

CONCLUSION

It is concluded that age, marital status, level of education and religion were the social vulnerability markers that presented correlation with sexual satisfaction of women receiving hemodialysis, on the other hand, monthly income, self-declared skin color, occupation and active sexual life were markers which did not have a correlation, therefore, did not interfere in sexual satisfaction. Thus, both the biologic and behavioral variables are related in the perception of sexual satisfaction. Active sexual life is highlighted, commonly associated by people, and presented in other research, as a determining factor for sexual satisfaction, did not present a statistically significant correlation for women with CKD in this study, and this was one of the main findings, conforming to the concept of sexuality, which goes beyond sexual intercourse and refers to all forms of pleasure.

It is seen that the object studied social vulnerability versus sexual satisfaction, as a perspective of understanding quality of life, is a new proposal of study with few published results, and it is permeated by taboos, but is key to design actions of care for health promotion of population groups, especially regarding health and sexual right issues, such as self-esteem and positive emotions concerning sexual satisfaction and sexual pleasure of women with chronic diseases (such as chronic kidney disease), which are many times invisible in health actions. It is added the need to carry out comparative studies with people from the general population, with the objective of establishing a parameter to be used in relation to the results obtained.

ETHIC RESPONSABILITIES

Protection of people and animals. The authors declare that for this research, experiments with humans or animals were not carried out.

Data confidentiality. This article does not show confidential data of participants.

Right to privacy and informed consent. All participants signed the Terms of Free and Informed Consent.

Financial support. There was not one.

Conflicts of interest: The authors declare that there were not any conflicts of interest.

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