



Determinants of sexual satisfaction among Bosnian and Herzegovinian women

Andrej Starc¹, Naida Golubović², Tomislav Jukić³, Aleksandar Racz^{4*}, Raja Dahmane Gošnjak⁵

¹Department of Public Health, Faculty of Health Sciences, University of Ljubljana, Ljubljana, Slovenia, ²Department of Public Health, Faculty of Health Sciences, University of Ljubljana, Ljubljana, Slovenia, ³Department of Internal Medicine, History of Medicine and Medical Ethics, Faculty of Medicine, University "Josip Juraj Strossmayer" Osijek, Croatia, ⁴Department of Public Health, University of Applied Health Sciences, Zagreb, Croatia, ⁵Department of Biomedicine in Health Care, Faculty of Health Sciences, University of Ljubljana, Slovenia

ABSTRACT

Introduction: Sexual satisfaction is the pleasure an individual feels both physically and psychologically, and is the result of erotic experiences, thoughts, dreams, and autoeroticism. Purpose: The purpose of the study is to present the determinants of sexual satisfaction among Bosnian and Herzegovinian women.

Methods: The survey was conducted on 387 Bosnian and Herzegovinian women via online questionnaire that consisted of demographic data and 17 statements. The validated questionnaire was used with some adaptations and contained a 5-point Likert scale for each statement, ranging from "not at all satisfied" to "extremely satisfied." The inclusion criteria were: (a) Age 18–60 years; and (b) completion of the questionnaire as personal consent. Data were analyzed using SPSS 26.0 statistical software.

Results: Data collection was conducted from July 2020 to September 2020. The realization rate of the sample was 24.19%. Most of the participants have a high school diploma, most are between 18 and 24 years old and most are currently married. Thirty-five percent of women sometimes experience pain during intercourse (less than half the time). The lower half of the vagina (from the vaginal entrance to the half of the vagina) and the lower part of the abdomen are usually most affected. A relationship was found between the number of children and sexual satisfaction. Women without children were the most satisfied with their sexual life, followed by women who had only one or two children.

Conclusions: Every woman has the right to feel sexual satisfaction. The complexity of sexual satisfaction is reflected in many determinants and factors that can influence it positively and negatively.

Keywords: Sexuality; Sexual intercourse; Sexual satisfaction; Sexual interaction; Sexology; Sexual response

INTRODUCTION

Sexual satisfaction, sexuality, and intimate relationships must be considered holistically (1-3). Sexual satisfaction is the pleasure an individual feels on a physical and psychological level due to shared erotic experiences, thoughts, dreams, and autoeroticism (4). This is because sexual satisfaction is influenced by feelings of love, intimacy, and commitment to a partner (5-7). Rubin notes that positive past experiences enable the anticipation of new sexual pleasures, which increases the likelihood that a person will desire sex (8).

According to the previous research, the most common sexual problems in women include lack of sexual desire (30%), problems reaching orgasm (15%), vaginal dryness (14%), and vaginal cramps (9). Cultural influence also plays an important role. Studies found greater satisfaction in

relationships where couples share "power" equally. Women's dissatisfaction is often related to men's tendency to control and display their dominant personality (10).

Anxiety and depression can be cited as interfering factors in achieving orgasm. In addition, both accelerate cognitive thoughts and excessive thinking, which interfere with a person's response to erotic stimuli (11).

The lack of estrogen in a woman's body can cause discomfort during sexual intercourse, as the decrease in estrogen causes the vaginal wall to thin, resulting in persistent pain from soreness. Estrogen decline also causes dryness and lower acidity of the vaginal mucosa, making it more susceptible to vaginal infections (12).

In addition to the above factors, a higher number of sexual partners and perimenopause, or the post-menopausal period, have been shown to be associated with greater difficulty with sexual arousal, orgasm, and its intensity during intercourse (11).

The study, which involved 1513 people, showed that 62% of women and 38% of men lowered the level of sexual

*Corresponding author: Aleksandar Racz, Department of Public Health, University of Applied Health Sciences, Mlinarska 38, 10000 Zagreb, Croatia. E-mail: aracz@zv.u.hr

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satisfaction in both women and men by frequently viewing pornography. Given that some women use pornography during masturbation to increase arousal and pleasure (13,14), Maddox et al. argued that casual, recreational consumption of pornographic content can positively influence and increase sexual satisfaction and decrease the frequency of sexual avoidance. Among other things, they claim that individuals who watch pornographic movies with a partner report significantly higher sexual satisfaction and commitment to a relationship (15).

Obesity can have a negative impact on sexual function (hormonal, metabolic, and psychological parameters). In particular, a high body mass index (BMI) can affect low self-esteem. The latter may lead to lack of interest in sexual intercourse, passivity or fear of failure. A larger waist circumference is associated with a lower frequency of orgasm during intercourse without simultaneous clitoral stimulation (16-19).

An unexpected factor that positively influences sexual satisfaction is the duration of sleep. Longer sleep has been shown to play an important role in healthy sexual response, desire for sexual activity with a partner, and improves genital response during sexual arousal. Research confirms that women with longer average sleep duration report better sexual arousal than women with shorter average sleep duration (20).

A higher level of education is also associated with greater orgasmic pleasure and a higher probability of orgasm, less effort in reaching orgasm than in intercourse and masturbation. This can be explained by the theory that educated women are more aware of their sexuality, problems, and desires and express them more readily to their partner and attach importance to their sexual pleasure in the context of sexual intercourse (11,21).

Little is known about the extent to which heterosexual couples are satisfied with their current sexual frequency and the extent to which this predicts overall sexual and relationship satisfaction. A population-based survey was conducted among 4290 men and 4366 women from Australia aged 16 to 64 years from diverse sociodemographic backgrounds. Only 46% of men and 58% of women were satisfied with their current sexual intercourse (9). The Global Study of Sexual Attitudes and Behaviours surveyed 27,500 men and women aged 40–80 years in 29 countries (22). Three groups of countries were combined - Western Europe, Canada, and Australia - with high satisfaction and four out of five women satisfied about their sexual function. Group two, which included Egypt, Morocco, Italy, Korea, and Malaysia, reported moderate satisfaction with significantly lower scores for emotional, physical, and sexual function. Group three, which included China, Indonesia, Japan, and Thailand, had the lowest scores for emotional and physical satisfaction

The aim of our study was to investigate the determinants of sexual satisfaction among Bosnian and Herzegovinian women. It was conducted on 387 women via online survey. A validated questionnaire was used with some adaptations that allowed the questionnaire to be completed on Bosnian and Herzegovinian women. We used a correlational research method. According to the previous studies,

the most important determinants of sexual satisfaction were (a) feeling desired by the partner, (b) receiving the partner's attention, (c) and being able to satisfy the partner (23).

Less important were physical/sexual factors such as (d) feeling sexual desire, (e) having physical pleasure, and (f) feeling physical arousal. Consistency of orgasm did not appear to be a significant factor. We state that there are other significant factors related to demographic and psychosocial variables. Based on the theoretical background, we hypothesize that some of the variables could be positive or negative predictors. Based on the previous studies (24-26), we hypothesize that there is a strong association between women's younger age, higher number of sexual intercourse and orgasms per month, higher education level, and sexual satisfaction. We also hypothesize that sexual satisfaction decreases with the number of children and with the presence of pain during and after intercourse.

METHODS

The cross-sectional study was conducted on female participants through online survey. A total of 1600 questionnaires were received, of which only 387 were fully completed. The final random sample size was 387. The online survey began in July 2020 and was completed in September 2020. The research was conducted according to the principles of the Declaration of Helsinki 1975, revised in 2013. All participants were informed in writing of the aims and anonymity before the study began. Consent was understood when the participant clicked the "Continue with questionnaire" button.

The questionnaire has already been used in Slovenia and validated and approved by the Faculty Council (No. ZF DEK 276/2020). Due to the focus of the survey, we added questions that did not affect validity. The New Sexual Satisfaction Scale (NSSS - 17 items) questionnaire was originally intended for the female population only (27). Linguistic validation of the questionnaire was based on translation from English to Bosnian and vice versa. We used the quantitative research method. A 5-point Likert scale was used for each statement, ranging from "not at all satisfied" (1) to "extremely satisfied" (5). Data were analyzed using SPSS 26.0 statistical software. The Kolmogorov–Smirnov test and the Shapiro–Wilk test were applied to determine whether the scores had a Gaussian distribution and to choose between parametric and nonparametric statistical tests. The Kolmogorov–Smirnov test and the Shapiro–Wilk test showed a non-normal distribution. Based on this finding, nonparametric statistical analysis was chosen. Statistical significance was set at $p < 0.05$. The Cronbach's alpha coefficient showed adequate internal consistency ($\alpha = 0.954$) for all statements.

Recruitment was based on the following inclusion conditions: (a) Women living in Bosnia and Herzegovina (b) 18–60 years (c) personal consent to the questionnaire. Participants with mental and sexual disorders were also included in the study. All participants were asked about demographic data: Age, marital status, education level, sexual orientation, number of children, number of all sexual partners in life, number of current sexual partners, number of sexual contacts per month, diagnosed mental and/

or gynecological disorders, and for women, the number of achieved orgasms during sexual contact. We added new questions about pain during and after sexual intercourse/activity.

Data were analyzed using SPSS 26.0 statistical software. The Kolmogorov–Smirnov test and the Shapiro–Wilk test were applied to evaluate whether the scores had a Gaussian distribution to choose between parametric and nonparametric statistical tests. The Kolmogorov–Smirnov test and the Shapiro–Wilk test showed a non-normal distribution. Based on this finding, nonparametric statistical analysis was chosen. The determination of the correlation between the proposed variables was based bivariate analysis, Chi-square statistics, and F-test. Statistical significance was set at $p < 0.05$.

RESULTS

A total of 1600 questionnaires were received, of which 387 were fully completed. The realization of the sample was 24.19%. The participants were 18–24 years old (n = 155; 40.1%), 25–31 years old (n = 108; 27.9%), 32–38 years old (n = 71; 18.3%), 39–45 years old (n = 34; 8.8%), 46–52 years old (n = 11; 2.8%), 53–59 years old (n = 6; 1.6%), and 60 and older (n = 1; 0.5%).

Most participants (n = 250; 64.6%) were married, 83 (21.4%) were in a relationship but unmarried, 46 (11.9%), were single (never married), and 8 (2.1%) were divorced.

Most participants had a secondary school degree (n = 198; 51.2%), 74 (19.1%) had a 1st university degree (n = 74; 19.1%), 33 (8.5%) had a high school degree, 32 (8.3%) had a 2nd university degree, 31 (8%) were still in 1st, 3 (0.8%) were in 3rd, and 2 (2.3%) were still in 2nd level of university education.

In the sample, most participants were in a heterosexual relationship (sexual intercourse only with a person of the opposite sex) (n = 371; 95. %), 8 (2.1%) were in a bisexual relationship (sexual intercourse with a person of the opposite and same sex), and 4 (1%) were in a homosexual relationship (sexual intercourse only with a person of the same sex). Four individuals did not respond.

Most had no children (n = 173; 44.7%), one hundred had one (25.8%), two (n = 92; 23.8%), three (n = 19; 4.6%), or four (n = 3; 0.8%) children.

Participants were asked about the total number of sexual partners in their lives. Most had 1–2 (n = 267; 7%), 3–4 (n = 59; 15.2%), 5–6 (n = 22; 5.7%), 7–8 (n = 12; 3.1%), 9–10 and 11–12 (n = 5; 1.3%), and 13 or more (n = 17; 4.4%). Regarding the number of current sexual partners, respondents had one (n = 462; 97.5 %), 2–3 (n = 6; 1.6%), and 4 or more (n = 1; 0.3%) sexual partners (Table 1).

Most of the participants had 11 or more (n = 115; 29.7%) sexual intercourse per month. Others had 5–6 (n = 68; 17.6%), 1–2 (n = 64; 16.5%), 7–8 (n = 50; 12.9%), 3–4 (n = 48; 12.4%), and 9–10 (n = 42; 10.9%) sexual contacts per month (Table 2).

Female representatives were asked about the number of orgasms during sexual intercourse. Most achieved one (n = 168; 43.4%), two (n = 113; 29.2%),

four or more (n = 42; 10.9%), and three (n = 36; 9.3%) orgasms. Twenty-one (7.2%) participants did not achieve orgasm (Table 3).

In the sample, 199 (51.4%) of the representatives initiated sexual intercourse sometimes (about half the time). Others a few times (less than half the time) (n = 113; 29.2%), never (n = 35; 9%), most of the time (more than half the time) (n = 25; 6.5%), and almost always or always (n = 15; 3.9%).

Based on the F-test, we presented only those ranges (age groups, marital status, etc.) where we found correlations, no correlation was found in other ranges.

Seven (1.8%) participants were diagnosed with a mental disorder and 2 (0.5%) with a gynecologic disorder. These were also included in the study because we were interested in finding possible correlations. Based on the analysis used, we found no correlation between the intended variables and the mental and sexual disorders. The mental and sexual disorders were used as independent variables. We grouped certain statements into new cushions/variables. We did not use a theoretical background, but grouped variables based on connections about “well-being” before, during, and after sexual intercourse.

The first dimension:

My mood before sexual intercourse/activities ($\alpha = 0.924$):

- My sexual arousal toward a partner
- Evaluate your sexual desire toward a partner
- My sexual response to a partner
- The intensity of my sexual arousal

TABLE 1. Number of sexual partners in their lives and current sexual partners

Number of sexual partners in their lives	n	%	Number of current sexual partners	n	%
1–2	267	69	1	462	97.5
3–4	59	15.2	2 to 3	6	1.6
5–6	22	5.7	4 and more	1	0.3
7–8	12	3.1			
9–10	5	1.3			
11–12	5	1.3			
13 and more	17	4.4			
Total	387	100		387	100

TABLE 2. Number of sexual intercourses per month

	n	%
1–2	64	16.5
3–4	48	12.4
5–6	68	17.6
7–8	50	12.9
9–10	42	10.9
11 and more	115	29.7
Total	387	100

TABLE 3. Number of orgasms

	n	%
1 orgasm	168	43.4
2 orgasms	113	29.2
3 orgasms	36	9.3
4 orgasms and more	42	10.9
Cannot reach orgasm	28	7.2
Total	378	100

My mood within sexual intercourse/activities ($\alpha = 0.821$):

- My emotional commitment during sexual activity
- During sexual activity, I indulge in sexual pleasure
- The intensity of my orgasms

My partner's mood within sexual intercourse/activities ($\alpha = 0.919$):

- Evaluate your partner's sexual activity
- My partners indulge in sexual pleasure
- The way my partner takes care of my sexual needs
- My partner is sexually creative
- My partner is sexually available

My balance within sexual intercourse/activities ($\alpha = 0.835$):

- Evaluate the assessment of the pleasure I provide to my partner
- The diversity of my sexual activities
- The frequency of my sexual activities
- The balance between what I give and what I receive during sexual activities

And the autonomous variable:

- My mood after sexual activity

Based on the Pearson correlation coefficient, strong correlations were found between mood before intercourse/activities and mood during intercourse ($r = 0.842$), balance during intercourse ($r = 0.774$), rating of partner's mood during intercourse/activities ($r = 0.764$), and mood afterwards ($r = 0.743$). There were also correlations between mood within intercourse/activities and mood before ($r = 0.842$), balance within intercourse/activities ($r = 0.794$), mood after ($r = 0.735$), and between rating partner's mood within intercourse/activities ($r = 0.698$). And between the rating of partner's mood during intercourse/activities and balance during intercourse/activities and mood after intercourse/activities ($r = 0.685$) (Table 4).

Based on the F-test, we present only those ranges (age groups, marital status, etc.) where we found correlations. Correlations were found between the age group of 18–24 years and mood before ($F = 2.452$; 0.024) and after sexual ($F = 2.257$; $p = 0.037$) intercourse/activities.

Within the sample correlations were found between married participants and mood before ($F = 5.334$; $p < 0.001$), mood during ($F = 8.575$; $p = 0.001$), partner mood during ($F = 7.779$, $p = 0.000$), balance during sexual intercourse/activities ($F = 7.480$; $p = 0.000$), and participants' mood after sexual intercourse/activities ($F = 2.700$; 0.045) (Table 5).

Correlations were also found between completion of higher education and mood during intercourse ($F =$

1.959 ; $p = 0.043$) and balance partner mood during intercourse ($F = 1.993$; $p = 0.039$).

Several correlations were found between 11 or more sexual intercourses per month and mood before ($F = 6.530$; $p = 0.000$), within ($F = 7.906$; $p = 0.000$), partner's mood within ($F = 11.737$; $p = 0.000$), and balance within sexual intercourse/activities ($F = 12.396$; $p = 0.000$). In addition, a correlation was found between mood after sexual activity ($F = 7.244$; $p = 0.000$) (Table 6).

And strong correlations were found between the three orgasms per intercourse and mood before ($F = 17.914$; $p < 0.001$), mood within ($F = 37.788$; $p < 0.001$), mood of partner within ($F = 14.933$; $p = 0.000$), balance within sexual intercourse/activities ($F = 21.107$; $p = 0.000$), and mood after sexual activity ($F = 21.540$; $p = 0.000$) (Table 7).

Participants experienced pain during sexual activity a few times (less than half the time) ($n = 138$; 35.7 %), never ($n = 128$; 33.1 %), sometimes (about half the time) ($n = 102$; 26.4 %), most of the time (more than half the time) ($n = 10$; 2.6 %), and almost always or always ($n = 9$; 2.3%) (Table 8). The lower half of the vagina (from the vaginal entrance to the middle of the vagina) and the lower abdomen were most affected ($n = 95$; 24.5%) (Table 9).

Participants were first asked to indicate whether they felt pain during sexual intercourse and where it occurred. The same was asked for a possible sensation of pain after sexual intercourse and the location. In the table and in the text, we show the results of all respondents. After sexual activity, they experienced pain never ($n = 235$; 60.7%), rarely (less than half the time) ($n = 90$; 23.3%), sometimes (about half the time) ($n = 35$; 9%), almost always or always ($n = 22$; 5.7%), and most of the time (more than half the time) ($n = 5$; 1.3%) (Table 10). The most commonly affected region was the lower abdomen ($n = 73$; 18.9%) and the lower half of the vagina (from the entrance to the middle of the vagina) ($n = 46$; 11.9%) (Table 11).

Different variables were set and tested to demonstrate satisfaction or dissatisfaction. Participants without children were the most satisfied with their sex lives, followed by participants with only one or two children. Satisfaction decreased with the number of children, so that participants with three or four children were least satisfied with their sex lives.

DISCUSSION

Sexual satisfaction is the pleasure a person feels on a physical

TABLE 4. Person's correlations between statements.

	My mood before sexual intercourse/activities	My mood within sexual intercourse/activities	My partner mood within sexual intercourse/activities	My balance within sexual intercourse/activities	My mood after sexual intercourse/activity
My mood before sexual intercourse/activities	-	0.842**	0.764**	0.774**	0.743**
My mood within sexual intercourse/activities	0.842**	-	0.698**	0.794**	0.735**
My partner mood within sexual intercourse/activities	0.764**	0.698**	-	0.775**	0.685**
My balance within sexual intercourse/activities	0.774**	0.794**	0.775**	-	0.657**
My mood after sexual activity	0.743**	0.735**	0.685**	0.657**	-

** $p < 0.01$

and psychological level (4). Sexual satisfaction and positive past experiences are the most important reasons for resuming sexual intercourse (8).

Our results show that there is a significant inverse relationship between age and sexual satisfaction. The social relations of the younger population determine the “expectation” of orgasm in both sexes (28). As a result, the prevalence of sexual satisfaction is high in the younger population (29). Recent studies of young people’s sexual behavior have taken two approaches. The first approach links sexual behavior to the fulfillment and timing of social roles. Researchers who take this view ask to what extent social control associated with gender role, social class, religion, and race still influences adolescent sexual expression (30). Our results showed a strong correlation between sexual satisfaction before and after sexual intercourse in young women. According to these results, the second approach places more emphasis on personal biography. Researchers in this tradition hypothesize that the sexuality of today’s adolescents is more flexible and less influenced by institutionalized settings (31).

Strong correlations have been found between completion of higher education and mood during intercourse and mood of partner during intercourse. This can be explained by the theory that educated women are more aware of their sexuality, problems, and desires and express them more easily

to their partner and give more importance to their sexual pleasure during intercourse (11,21). We can also argue that education can influence economic stability. When couples are educated, they have a greater chance of achieving economic stability and thus higher marital and sexual satisfaction than couples with less formal education.

Our research has also shown us that higher sexual satisfaction is strongly related to previous experience or more sexual partners. This finding is confirmed by Ostovich and Sabini, who found a correlation between sex drive and socio-sexuality and the number of sexual partners (32).

The study found a correlation between the number of children and sexual satisfaction. Namely, women without children were the most satisfied with their sex lives, followed by women who had only one or two children. Satisfaction decreased with the number of children, so women with three or four children were the least satisfied with their sex lives. Liu theorizes that couples are devoted to parental responsibilities. It follows that when a couple has children, the partners pay less attention to sexuality in the marriage and are more concerned with raising and supporting their offspring. As a result, the frequency of legal sex decreases (33).

Within-sample strong correlations were found between married participants and mood before, mood during, partner’s mood during, balance during intercourse/activities, and participant’s mood after intercourse/activities. Our results agree that married people are generally happier, more

TABLE 5. Correlation between marital status and dimensions

	F	p
My mood before sexual intercourse/activities	5.334	0.001
My mood within sexual intercourse/activities	8.575	0.000
My partner mood within sexual intercourse/activities	7.779	0.000
My balance within sexual intercourse/activities	7.480	0.000
My mood after sexual activity	2.700	0.045

TABLE 6. Correlation between number of sexual intercourses per month and dimensions

	F	p
My mood before sexual intercourse/activities	6.530	0.000
My mood within sexual intercourse/activities	7.906	0.000
My partner mood within sexual intercourse/activities	11.737	0.000
My balance within sexual intercourse/activities	12.396	0.000
My mood after sexual activity	7.244	0.000

TABLE 7. Correlation between number of orgasms per sexual intercourse and dimensions

	F	p
My mood before sexual intercourse/activities	17.914	0.000
My mood within sexual intercourse/activities	37.788	0.000
My partner mood within sexual intercourse/activities	14.933	0.000
My balance within sexual intercourse/activities	21.107	0.000
My mood after sexual activity	21.540	0.000

TABLE 8. Pain sensation during sexual activity

	n	%
Never	128	33.1
A few times (less than half the time)	138	35.7
Sometimes (about half the time)	102	26.4
Most times (more than half the time)	10	2.6
Almost always or always	9	2.3
Total	387	100

TABLE 9. Location of the pain sensation during sexual activity

	n	%
In general, in the entire vaginal area	11	2.8
The low half of the vagina (from the entrance to the middle of the vagina)	95	24.5
The upper half of the vagina (from the middle of the vagina to the cervix)	32	8.3
Only in the upper part of the vagina (cervix)	17	4.4
In the lower abdomen	95	24.5
Missing	137	35.4
Total	387	100

TABLE 10. Pain sensation after sexual activity

	n	%
Never	235	60.7
A few times (less than half the time)	90	23.3
Sometimes (about half the time)	35	9.0
Most times (more than half the time)	5	1.3
Almost always or always	22	5.7
Total	387	100

TABLE 11. Location of the pain sensation after sexual activity

	n	%
In general, in the entire vaginal area	14	3.6
The low half of the vagina (from the entrance to the middle of the vagina)	46	11.9
The upper half of the vagina (from the middle of the vagina to the cervix)	11	2.8
Only in the upper part of the vagina (cervix)	7	1.8
In the lower abdomen	73	18.9
Missing	236	61.0
Total	387	100

emotionally satisfied, and more spiritually fulfilled - as well as more sexually satisfied - compared to people who are single, cohabiting, or separated/divorced.

However, other studies also show the opposite. The duration of marriage underscores a decreasing marginal effect, as shown by several longitudinal studies examining other effects of marriage over time (34).

Smith et al. cited that the most commonly reported problems include lack of sexual desire (30%), problems reaching orgasm (15%), vaginal dryness (14%), and vaginal cramping, and that pain often occurs as a factor negatively affecting sexual satisfaction (9). Landry and Bergeron found that 20% of sexually active women have reported regular pain during intercourse for at least 6 months or longer (35). The most painful site is the entrance to the vagina. The findings of other authors are consistent with those of our study, showing that approximately 35% (n = 138; 35.7%) of women experience pain during intercourse more than once (less than half the time). Moreover, we find the localization of pain in the lower half of the vagina (from the entrance to the half of the vagina) and in the lower part of the abdomen (n = 95; 24.5%).

Limitations

The results of our research should be interpreted in the context of their limitations. It is difficult to obtain accurate data on self-reported sexual behavior, such as recall error, bias due to poor understanding of survey questions. In addition, the perception that high religious commitment could be a source of bias and compromise the validity of self-reported measures of sexual satisfaction in our study. Future studies should include measures of religiosity to ensure that these correlations are independent of religion and stable over time.

CONCLUSIONS

Every woman has a right to sexual satisfaction, the complexity of which is reflected in many determinants and factors that positively and negatively influence sexual satisfaction. A strong association was found between younger age of women, higher number of sexual intercourse and orgasms per month, higher level of education, and sexual satisfaction. Sexual satisfaction decreased with the number of children and with the occurrence of pain during and after sexual intercourse. The results of our study should be interpreted in the context of its limitations: inaccurate data bias due to poor understanding of survey questions, social desirability, and religiosity.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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