



PREDICTORS OF SEXUAL SATISFACTION: AN INTERNATIONAL STUDY

Andrej Starc¹, Violeta Enea², Aleksandar Racz³, Karoline Palatin⁴, Branko Gabrovec⁵, Vedran Đido⁶,
Raja Dahmane⁷ and Krešimir Rotim⁸

¹Faculty of Health Sciences, Department of Public Health, University of Ljubljana, Ljubljana, Slovenia;

²Alexandru Ioan Cuza Univ, Iasi, Romania;

³Department of Environmental Health, University for Applied Health Sciences Zagreb, Zagreb, Croatia;

⁴Faculty of Health Sciences, University of Ljubljana, Ljubljana, Slovenia;

⁵National Institute of Public Health, Ljubljana, Slovenia;

⁶Faculty of Health Studies, University of Sarajevo, Sarajevo, Bosnia and Herzegovina;

⁷Faculty of Health Sciences, Department of Biomedicine in Health Care, University of Ljubljana, Ljubljana, Slovenia;

⁸Department of Neurosurgery, Sister of Mercy University Hospital Center, Zagreb, Croatia;

Josip Juraj Strossmayer University of Osijek, Faculty of Medicine, Osijek, Croatia;

Department of Anatomy, University of Applied Health Sciences, Zagreb, Croatia

SUMMARY – The aim of this cross-cultural study was to examine predictors of sexual satisfaction. For the present analysis, we used a large-scale sample database that included 8821 individuals from 4 countries. All participants completed the same questionnaires, which were designed to capture numerous important variables that have been shown to correlate with sexual satisfaction. According to our results, predictors of sexual satisfaction were classified into four general categories (demographic factors, psychological factors, sociocultural factors, and pathophysiological factors). Our international study found statistically significantly higher satisfaction among homosexual participants, participants aged 18 to 23 years, those with a higher level of education, in a relationship, with a current sexual partner, in a current partnered (unmarried) relationship, and without a diagnosed sexual or mental disorder. At the same time, we found that the correlation between sexual satisfaction and the different predictors varied considerably across countries, which calls for further research.

Key words: sexual satisfaction; sexual health; predictors

Introduction

Sexual satisfaction is an important indicator of sexual health and is closely related to relationship satisfaction¹. Sexual satisfaction is essential for both the physical and emotional health and well-being of individuals and families and for the social and economic development of communities and countries². In general, the term sexuality encompasses the right of all

people to have the knowledge and ability to lead safe and enjoyable sexual lives³. However, the ability of men and women to achieve sexual health and well-being depends on access to sexual information, knowledge of the risks they face, vulnerability to the negative consequences of sexuality, access to quality sexual health care, and environments that promote sexual health⁴. Sexual health encompasses individuals and couples of all sexual orientations, pleasurable sex, concerns about fertility and reproduction, and includes issues such as sexual dysfunction, disability, and sexual violence. The latter suggests that sexual health is a broader concept than reproductive health⁵, with sexual health defined

*Correspondence to: *Aleksandar Racz*, University for Applied Health Sciences Zagreb, 10000 Zagreb, Croatia,
E-mail: aracz@zvuh.hr

Received July 6, 2022, accepted August 29, 2022

as a state of physical, emotional, mental, and social well-being related to sexuality rather than merely the absence of disease, disorder, or defect². Effective sexual health requires a positive and respectful approach to sexuality and sexual relationships and the opportunity for an enjoyable and safe sexual experience that is free from coercion, discrimination, and violence². Sexual satisfaction is an essential component of sexual health and well-being, but we know little about what factors contribute to it among homosexual and bisexual people. Respect for the sexual rights of all people must be achieved and maintained³. The definition of sexuality can be summarized as a central aspect of human existence throughout the lifespan and includes gender, sexual identity and role, sexual orientation, eroticism, pleasure, intimacy, and reproduction. Sexuality is an experience expressed in thoughts, fantasies, desires, beliefs, attitudes, values, behaviors, roles, and partnerships⁶.

Most authors note that many women suffer from disorders of sexual desire, arousal, vaginal hydration, orgasm, dissatisfaction, dyspareunia, and vaginismus⁷⁻⁹. Sexual dysfunction also occurs in men: erectile dysfunction (ED) occurs in 26 cases per 1,000 men/year. The prevalence of ED ranges from 13% to 81% in different populations¹⁰. ED increases with age and shows a strong association with economic status and comorbid conditions¹¹. It should be noted that 5% of men worldwide also suffer from orgasmic disorders¹².

Factors consistently associated with adult satisfaction may not have the same effect on sexual satisfaction in young people who are just beginning to have sex. These factors include age¹³, frequency of sexual activity and orgasm, relationship stability and level of intimacy, harmonious psychological well-being, or depression¹⁴. Other factors that have been studied in young people include sexual guilt, especially in young women¹⁵, and goal setting¹⁶.

In addition, studies have not documented possible associations between sexual well-being and other more traditional indicators of sexual satisfaction, such as condom use and contraception. The prevalence of sexual dysfunction in both sexes is also influenced by risk factors such as diabetes, cardiovascular disease, urinary tract disease, mental disorders, sociodemographic conditions, smoking, hormonal factors, and drug use¹⁷.

Our research in factors affecting sexual satisfaction was divided into four general categories, and subgroups were formed for each class. These categories

were named as follows: demographic factors, psychological factors, sociocultural factors, and pathophysiological factors. The first category included factors such as age, marital status, education, sexual orientation, and number of children. The second category included factors called psychological factors. Psychological disorders such as depression, anxiety, and mental health were identified as important factors in sexual satisfaction. The third category included interpersonal communication skills, beliefs, and attitudes (the number of sexual contacts per month, faked female orgasm, and total number of sexual partners in their lives, as well as the number of current sexual partners). Finally, the fourth category considered a factor such as pain during and after sexual intercourse.

Based on our previous studies, the theoretical model was composed of several dimensions. The first dimension was the woman's mood before intercourse/activity. The second was the woman's mood during intercourse/activity. The third dimension was the man's mood during intercourse/activity, and the fourth dimension was balance during intercourse/activity. The autonomous variable was mood after sexual activity.

The aim of our study was to examine the predictors of sexual satisfaction in the context of different sexual orientations and countries. Based on the theoretical background, we hypothesized that some of the variables could be positive or negative predictors. Based on previous studies¹⁸⁻²⁰, we hypothesized that there would be a significant inverse relationship between age and sexual satisfaction and that couples who were in a relationship (unmarried) would have higher sexual satisfaction than most other groups²¹. We also hypothesized that higher levels of education would be associated with higher sexual satisfaction. The status of gay men and lesbian women is problematic in countries where there have been and continue to be numerous violations of their rights that can lead to serious negative sexual consequences.

Patients and Methods

Participants and Procedure

The questionnaire was fully completed by 8821 representatives from all participating countries: women ($n=4544$; 51.5%) and men ($n=4277$; 48.5%) aged 18 to 60 years and older ($M = 4.56$, $SD = 2.013$) from four countries (Slovenia ($n=6903$; 78.3%), Croatia ($n=698$; 7.9%), Bosnia and Herzegovina ($n=573$; 6.5%), and Romania ($n=647$; 7.3%).

Most of them lived in heterosexual ($n=8235$; 93.4%), bisexual ($n=325$; 3.7%), and homosexual ($n=219$; 2.5%) relationships. The inclusion criterion was age greater than 18 years. The exclusion criterion of a diagnosed sexual and/or mental disorder was not used because of possible correlations with independent variables. A brief explanation of the purpose of the survey was provided for the participants in the introductory section of the questionnaire. Participation was voluntary and anonymous; an individual was free to discontinue participation at any time without giving a reason. Only the questionnaire administrator had access to the online questionnaire. Secure access was possible via a personal e-mail and password from the administrator.

Survey questionnaire

The Sexual Satisfaction Scale survey questionnaire²² served as the basis of the study.

Demographic factors included age, marital status, education, sexual orientation, and number of children.

Mental disorders such as psychological and sexual disorders were identified as important factors in sexual satisfaction. No special test was used to measure mental and sexual disorders. The question for both was: no (no mental/sexual disorder present), yes (yes, mental/sexual disorder present).

The woman's mood before sexual intercourse/sexual activity ($\alpha=0.920$) as the first dimension. The second was the woman's mood during intercourse/sexual activity ($\alpha=0.824$). The third was the partner's mood during intercourse/sexual activity ($\alpha=0.945$), and the fourth was balance during intercourse/sexual activity ($\alpha=0.845$). The independent variable was mood after sexual activity. The measurement was based on the theoretical dimensions of the variables in the questionnaire:

Sociocultural factors included the number of sexual intercourses per month (1 to 2; $M = 3.06$; $SD = 1.849$), feigned female orgasm (never; $n = 2414$; $M = 1.85$; $SD = 1.067$), and total lifetime number of sexual partners (1 to 2; $M = 3.04$; $SD = 2.175$), as well as the number of current sexual partners (one; $M = 1.96$; $SD = 0.474$).

The questionnaire had been previously used in Slovenia and validated and approved by the Medical Ethics Committee of the Republic of Slovenia (0120-200/2020/6). Due to the focus of the survey, we added questions that did not affect validity. The New Sexual Satisfaction Scale (NSSS – 20 items) questionnaire was

originally intended for the female population only²². With minor corrections, we adapted some items so that the questionnaire could be completed by heterosexual women, men, and heterosexual couples as well as homosexual women, men, and couples. We used a quantitative method of data collection with an adapted questionnaire. Using a questionnaire for women and men, we determined the prevalence of factors affecting sexual satisfaction. We identified possible differences between the male and female populations.

Pathophysiological factors were pain sensations during and after sexual intercourse. The question was for both: no (pain), yes (pain)

Statistical methods

We applied the quantitative method and used the SPSS 26.0 statistical computer program for the analysis. The following statistical analyses were performed: two-dimensional frequency tables (bivariate analysis, chi-square statistics); the method for determining internal consistency (Cronbach's alpha) was used to evaluate the reliability of the items; the determination of the correlation between the proposed control variables was based on F-tests and linear regression analyses.

Results

Descriptive statistics

The demographic statistics of the sample are presented in Table 1.

Women were able to achieve one orgasm ($n = 2082$; 23.6%), two ($n = 1164$; 13.2%), three ($n = 446$, 5.1%), and four or more ($n = 394$; 4.5%). But 454 (5.1%) failed to achieve orgasm.

Most of the female representatives did not fake orgasm ($n = 2414$; 27.4), some rarely ($n = 975$; 11.1%), sometimes ($n = 682$; 7.7%), several times ($n = 369$; 4.2%), and always ($n = 100$; 1.1%).

In the sample, most women found it easier to experience orgasm during masturbation ($n = 2093$; 23.7%), and 1998 representatives (22.7%) found it easier to experience with their partner. But 244 (2.8%) were unable to achieve orgasm with their partner and/or during masturbation.

Male and female representatives were asked to give their opinions on the reasons why women fake orgasms and the reasons why they do not have orgasms, according to sexual orientation (Table 2, Table 3).

Table 1. Demographic statistics

Participants characteristics	<i>n</i>	%		<i>n</i>	%
Age			Level of education		
from 18 to 23	1686	19.1	completed elementary school	91	1.0
from 24 to 29	1497	17.0	completed secondary school	2055	23.3
from 30 to 35	1383	15.7	completed high school	736	8.3
from 36 to 41	1462	16.6	completed 1 st level of university education	1901	21.6
from 42 to 47	1233	14.0	completed 2 nd level of university education	2734	31.0
from 48 to 53	776	8.8	completed 3 rd level of university education	365	4.1
from 54 to 59	457	5.2	I am still a student	939	10.6
from 60 to 65	195	2.2	Total	8821	100
66 years and more	132	1.5			
Total	8821	100			
	<i>n</i>	%		<i>n</i>	%
Marital status			Sexual orientation		
single	1392	15.8	heterosexual relationship	8235	93.4
married	3235	36.7	homosexual relationship	219	2.5
widower	40	0.5	bisexual relationship	325	3.7
divorced	192	2.2	other	42	0.5
in a relationship (unmarried)	3962	44.9	Total	8821	100
Total	8821	100			
	<i>n</i>	%		<i>n</i>	%
No. of children			No. of total sexual partners		
0 (zero)	4083	46.3	1 do 2	3075	34.9
1	1290	14.6	3 do 4	1703	19.3
2	2347	26.6	5 do 6	1145	13.0
3	809	9.2	7 do 8	658	7.5
4 and more	292	3.3	9 do 10	577	6.5
Total	8821	100	11 do 12	260	2.9
			13 and more	1403	15.9
			Total	8821	100
	<i>n</i>	%		<i>n</i>	%
No. of current sexual partners			No. of sexual intercourses per month		
0 (zero)	1015	11.5	1 do 2	2620	29.7
1	7327	83.1	3 do 4	1515	17.2
2	310	3.5	5 do 6	1283	14.5
3 and more	169	1.9	7 do 8	1052	11.9
Total	8821	100.0	9 do 10	804	9.1
			11 and more	1547	17.5
			Total	8821	100.0
	<i>n</i>	%		<i>n</i>	%
Diagnosis of mental disorder			Diagnosis of sexual disorder		
no	8295	94.0	no	8677	98.4
yes	526	6.0	yes	144	1.6
Total	8821	100.0	Total	8821	100.0

Table 2. *The reasons for faking female orgasms by sexual orientation*

Claims	Heterosexual		Homosexual		Bisexual	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
She wants the sex to end as soon as possible	1514	18.4	37	16.9	101	31.1
She does not want her partner to be disappointed	2647	32.1	64	29.2	134	41.2
She has never experienced an orgasm	545	6.6	13	5.9	40	12.3
She wants to feed the partner's ego	1194	14.5	34	15.5	88	27.1
She does not enjoy sexual intercourse	700	8.5	25	11.4	69	21.2
She has no suitable sexual partner	701	8.5	27	12.3	80	24.6
Her partner does not know how to satisfy her	952	11.6	41	18.7	93	28.6

Table 3. *Common factors for not experiencing female orgasm by sexual orientation*

Claims	Heterosexual		Homosexual		Bisexual	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Foreplay too short	2094	25.4	45	20.5	117	36.0
Sexual intercourse too short	1348	16.4	29	13.2	79	24.3
Disinterest of the partner	1199	14.6	34	15.5	99	30.5
Too little passion	1726	21.0	34	15.5	97	29.8
Ignorance of the partner	1326	16.1	44	20.1	115	35.4
She does not know how to enjoy	734	8.9	11	5.0	38	11.7
She does not allow to enjoy	1469	17.8	32	14.6	83	25.5
She does not know her body well	1350	16.4	28	12.8	87	26.8
She has no sexual desire for her partner	1099	13.3	34	15.5	70	21.5

Table 4. *Common factors for not experiencing erection by sexual orientation*

Claims	Heterosexual		Homosexual		Bisexual	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Foreplay too short	742	9.0	17	7.8	47	14.5
Sexual intercourse too short	1694	20.6	25	11.4	101	31.1
Disinterest of the partner	1632	19.8	24	11.0	83	25.5
Too little passion	754	9.2	14	6.4	49	15.1
He does not know how to enjoy	484	5.9	12	5.5	27	8.3
He does not allow to enjoy	870	10.6	18	8.2	50	15.4
He does not know his body well	513	6.2	15	6.8	37	11.4
He has no sexual desire for his partner	2041	24.8	53	24.2	118	36.3

The male and female participants were also asked to give their opinion on the causes of the lack of erection (Table 4).

Women occasionally experienced pain sensations during and after vaginal intercourse (Table 5, Table 6).

We found a strong correlation between the theo-

retical dimensions and the variables. Male gender correlated strongly with balance in sex/activities. Female gender correlated with their mood before intercourse/activities, partner's mood during intercourse/activities, and balance during intercourse/activities (Table 7).

Table 5. Pain sensation during and after vaginal intercourse by sexual orientation

	During						After					
	Heterosexual		Heterosexual		Bisexual		Heterosexual		Heterosexual		Bisexual	
Claims	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Never	2424	29.4	59	26.9	116	35.7	2979	36.2	63	28.8	144	44.3
A few times (less than half the time)	778	9.4	10	4.6	42	12.9	437	5.3	14	6.4	26	8.0
Sometimes (about half the time)	232	2.8	7	3.2	12	3.7	105	1.3	2	0.9	7	2.2
Most of the time (more than half the time)	79	1.0	3	1.4	6	1.8	37	0.4	0	0.0	3	0.9
Almost always or always	86	1.0	79	36.1	6	1.8	41	0.5	0	0.0	2	0.6

Table 6. Location of pain sensation during and after sexual intercourse within sexual orientation

	During						After					
	Heterosexual		Heterosexual		Bisexual		Heterosexual		Homosexual		Bisexual	
Locations	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Just at the entrance to the vagina	439	5.3	4	1.8	27	8.3	238	2.9	4	1.8	18	5.5
All over the vagina	111	1.3	3	1.4	7	2.2	96	1.2	2	0.9	5	1.5
Lower half of the vagina (from the entrance to the half of the vagina)	207	2.5	4	1.8	12	3.7	96	1.2	3	1.4	7	2.2
Upper half of the vagina (from half of the vagina to the cervix)	168	2.0	3	1.4	8	2.5	42	0.5	2	0.9	2	0.6
Only in the upper part of the vagina (cervix)	230	2.8	3	1.4	20	6.2	55	0.7	219	100.0	5	1.5
In the lower abdomen	355	4.3	6	2.7	20	6.2	206	2.5	6	2.7	18	5.5

Table 7. Correlation between gender and variables

Dimensions		F	<i>p</i>	Gender
1	Evaluate your sexual desire to the partner	63.380	0.001	female
4	The intensity of my sexual arousal	10.280	0.001	male
	The intensity of my orgasms	97.523	0.001	
2	During sexual activity I indulge in sexual pleasure	31.128	0.001	
3	Evaluation of the partner sexual activity	641.565	0.001	female
4	Evaluation of pleasure provided to my partner	64.825	0.001	
	The balance between what I give and receive during sexual	154.421	0.001	
	The diversity of my sexual activity	176.996	0.001	
	The frequency of my sexual activities	166.982	0.001	
3	My partner indulges in sexual pleasure	581.273	0.001	
	The way my partner takes care of my sexual needs	566.231	0.001	
	My partner is sexually creative	611.838	0.001	
	My partner is sexually available	753.474	0.001	

Legend: 1-My mood before sexual intercourse/activities, 2-My mood in sexual intercourse/activities, 3-My partner mood in sexual intercourse/activities, 4-My balance in sexual intercourse/activities, 5-My mood after sexual activity

Correlation between age and variables

The age group from 18 to 23 correlated with mood before and during intercourse/sexual activity, partner's mood during intercourse/sexual activity, balance during intercourse/sexual activity, and mood after sexual activity. The age groups from 30 to 35 and from 42 to 47 correlated only with mood in intercourse/sexual activity (Table 8).

Correlation between marital status and variables

The status "in a relationship" ("unmarried") correlated with all five dimensions. With regard to the sensation of pain during vaginal intercourse, a strong correlation was found with single women (Table 9).

Correlation between educational level and variables

Student status correlated with mood before and during intercourse/sexual activity, partner's mood during intercourse/sexual activity, balance during intercourse/sexual activity, and mood after sexual activity. Completion of the 3rd level of university education correlated with mood before intercourse/sexual activity and mood after sexual activity. Ele-

mentary school education correlated with pain perception during and after vaginal intercourse (Table 10).

Correlation between sexual orientation and variables

Sexual orientation as homosexual relationships correlated with all five dimensions (Table 11).

Correlation between number of children and variables

In the sample, having 0 (zero) children correlated with all five dimensions. Having three children correlated with mood before intercourse/sexual activity, and having four or more children correlated with mood before and during intercourse/sexual activity and mood after sexual activity. Pain sensations during and after vaginal intercourse were found in women with no children (Table 12).

Correlation between the total number of lifetime sexual partners and variables

The number of 1 to 2 lifetime sexual partners correlated with mood before and during intercourse/sexual activity and with partner mood during intercourse/

Table 8. Correlation between age and variables

Dimensions		F	<i>p</i>	Age
1	Evaluate your sexual desire to the partner	44.934	0.001	from 18 to 23
1	The intensity of my sexual arousal	21.585	0.001	
2	The intensity of my orgasms	9.247	0.001	from 30 to 35, and from 42 to 47
2	During sexual activity I indulge in sexual pleasure	6.637	0.001	from 18 to 23
3	Evaluation of the partner sexual activity	72.055	0.001	
1	My sexual arousal to the partner	31.951	0.001	
1	My sexual response to my partner	28.334	0.001	
2	My emotional commitment during sexual activity	12.160	0.001	
5	My mood after sexual activity	10.616	0.001	
4	Evaluation of pleasure provided to my partner	28.897	0.001	
4	The balance between what I give and receive during sexual	26.950	0.001	
3	My partner indulges in sexual pleasure	64.650	0.001	
3	The way my partner takes care of my sexual needs	71.225	0.001	
3	My partner is sexually creative	53.609	0.001	
3	My partner is sexually available	76.309	0.001	
2	The diversity of my sexual activity	35.004	0.001	
4	The frequency of my sexual activities	38.729	0.001	

Legend: 1-My mood before sexual intercourse/activities, 2-My mood in sexual intercourse/activities, 3-My partner mood in sexual intercourse/activities, 4-My balance in sexual intercourse/activities, 5-My mood after sexual activity

Table 9. Correlation between marital status and variables

Dimensions		F	<i>p</i>	Marital status
1	Rate your sexual desire to partner	43.395	0.001	in a relationship (unmarried)
1	The intensity of my sexual arousal	19.620	0.001	
2	The intensity of my orgasms	43.533	0.001	
2	During sexual activity I indulge in sexual pleasure	27.788	0.001	
3	Evaluation of the partner s sexual activity	48.085	0.001	
1	My sexual arousal in relation to my partner	27.351	0.001	
1	My sexual response to my partner	24.111	0.001	
2	My emotional commitment during sexual activity	61.802	0.001	
5	My mood after sexual activity	38.097	0.001	
4	Evaluation of pleasure provided to my partner	28.036	0.001	
4	The balance between what I give and receive during sexual	26.694	0.001	
3	My partner indulges in sexual pleasure	45.706	0.001	
3	The way my partner takes care of my sexual needs	42.980	0.001	
4	My partner is sexually creative	38.772	0.001	
4	My partner is sexually available	53.675	0.001	
4	The diversity of my sexual activity	23.980	0.001	
4	The frequency of my sexual activities	52.302	0.001	
	Pain sensation during vaginal intercourse	8.916	0.001	single

Legend: 1-My mood before sexual intercourse/activities, 2-My mood in sexual intercourse/activities, 3-My partner mood in sexual intercourse/activities, 4-My balance in sexual intercourse/activities, 5-My mood after sexual activity

Table 10. Correlation between the level of education and variables

Dimensions		F	<i>p</i>	Level of education
1	Rate your sexual desire to partner	15.664	0.001	I am still a student
1	The intensity of my sexual arousal	7.867	0.001	completed 3 rd level of univ. educ.
2	The intensity of my orgasms	4.429	0.001	
2	During sexual activity I indulge in sexual pleasure	4.187	0.001	still a student
3	Evaluation of the partner s sexual activity	25.832	0.001	
1	My sexual arousal in relation to my partner	13.589	0.001	
1	My sexual response to my partner	12.948	0.001	
2	My emotional commitment during sexual activity	4.141	0.001	
5	My mood after sexual activity	5.809	0.001	completed 3 rd level of univ. educ., and still a student
4	Evaluation of pleasure provided to my partner	8.644	0.001	still a student
4	The balance between what I give and receive during sexual	9.916	0.001	
3	My partner indulges in sexual pleasure	20.776	0.001	
3	The way my partner takes care of my sexual needs	24.421	0.001	
3	My partner is sexually creative	20.564	0.001	
3	My partner is sexually available	26.442	0.001	
4	The diversity of my sexual activity	17.191	0.001	
4	The frequency of my sexual activities	19.414	0.001	
	Pain sensation during vaginal intercourse	7.672	0.001	completed elementary school
	Pain sensation after vaginal intercourse	8.256	0.001	

Legend: 1-My mood before sexual intercourse/activities, 2-My mood in sexual intercourse/activities, 3-My partner mood in sexual intercourse/activities, 4-My balance in sexual intercourse/activities, 5-My mood after sexual activity

Table 11. Correlation between sexual orientation and variables

Dimensions		F	<i>p</i>	Sexual orientation
1	Rate your sexual desire to partner	9.159	0.001	homosexual relationship
1	The intensity of my sexual arousal	3.212	0.022	
2	The intensity of my orgasms	2.183	0.088	
2	During sexual activity I indulge in sexual pleasure	4.988	0.002	
3	Evaluation of the partner's sexual activity	7.693	0.001	
1	My sexual arousal in relation to my partner	7.190	0.001	
1	My sexual response to my partner	7.650	0.001	
2	My emotional commitment during sexual activity	7.330	0.001	
5	My mood after sexual activity	12.426	0.001	
4	Evaluation of pleasure provided to my partner	6.148	0.001	
4	The balance between what I give and receive during sexual	2.685	0.045	
3	My partner indulges in sexual pleasure	7.791	0.001	
3	The way my partner takes care of my sexual needs	7.356	0.001	
4	My partner is sexually creative	5.712	0.001	
4	My partner is sexually available	8.326	0.001	
4	The diversity of my sexual activity	4.314	0.005	

Legend: 1-My mood before sexual intercourse/activities, 2-My mood within sexual intercourse/activities, 3-My partner mood within sexual intercourse/activities, 4-My balance within sexual intercourse/activities, 5-My mood after sexual activity

Table 12. Correlation between number of children and variables

Dimensions		F	<i>p</i>	No. of children
1	Rate your sexual desire to partner	32.634	0.001	0 (zero)
1	The intensity of my sexual arousal	14.349	0.001	3 and 4 and more
2	The intensity of my orgasms	5.146	0.001	0 (zero)
3	Evaluation of the partner's sexual activity	82.211	0.001	
1	My sexual arousal in relation to my partner	23.012	0.001	
1	My sexual response to my partner	21.836	0.001	4 and more
2	My emotional commitment during sexual activity	8.583	0.001	
5	My mood after sexual activity	4.678	0.001	0 (zero)
4	Evaluation of pleasure provided to my partner	18.691	0.001	
4	The balance between what I give and receive during sexual	23.521	0.001	
3	My partner indulges in sexual pleasure	68.934	0.001	
3	The way my partner takes care of my sexual needs	83.786	0.001	
3	My partner is sexually creative	70.854	0.001	
3	My partner is sexually available	96.205	0.001	
4	The diversity of my sexual activity	44.669	0.001	
4	The frequency of my sexual activities	53.519	0.001	
	Pain sensation during vaginal intercourse	20.330	0.001	
	Pain sensation after vaginal intercourse	13.164	0.001	

Legend: 1-My mood before sexual intercourse/activities, 2-My mood in sexual intercourse/activities, 3-My partner mood in sexual intercourse/activities, 4-My balance in sexual intercourse/activities, 5-My mood after sexual activity

sexual activity. Having 11 to 12 sexual partners correlated with mood during intercourse/sexual activity, partner's mood during intercourse/sexual activity, and bal-

ance during intercourse/sexual activity. Pain sensations during vaginal intercourse were observed in women who had 1 to 2 sexual partners in their lifetime (Table 13).

Table 13. Correlation between the total number of lifetime sexual partners and variables

Dimensions		F	<i>p</i>	Total number of sexual partners
1	Rate your sexual desire to partner	5.032	0.001	1 to 2
2	The intensity of my orgasms	4.994	0.001	11 to 12
2	During sexual activity I indulge in sexual pleasure	3.094	0.005	
3	Evaluation of the partner's sexual activity	4.981	0.001	
1	My sexual arousal in relation to my partner	2.300	0.032	1 to 2
2	My emotional commitment during sexual activity	6.854	0.001	
3	The way my partner takes care of my sexual needs	7.970	0.001	
3	My partner is sexually creative	4.479	0.001	
3	My partner is sexually available	3.805	0.001	
4	The frequency of my sexual activities	3.041	0.006	11 to 12
	Pain sensation during vaginal intercourse	4.229	0.001	1 to 2

Legend: 1-My mood before sexual intercourse/activities, 2-My mood in sexual intercourse/activities, 3-My partner mood in sexual intercourse/activities, 4-My balance in sexual intercourse/activities, 5-My mood after sexual activity

Table 14. Correlation between the current number of sexual partners and variables

Dimensions		F	<i>p</i>	Current number of sexual partners
1	Rate your sexual desire to partner	131.374	0.001	1
1	The intensity of my sexual arousal	51.592	0.001	3 and more
2	The intensity of my orgasms	105.589	0.001	
2	During sexual activity I indulge in sexual pleasure	75.208	0.001	
3	Evaluation of the partner's sexual activity	49.709	0.001	
1	My sexual arousal in relation to my partner	88.149	0.001	2
1	My sexual response to my partner	80.432	0.001	3 and more
2	My emotional commitment during sexual activity	119.662	0.001	2
5	My mood after sexual activity	101.419	0.001	1
4	Evaluation of pleasure provided to my partner	64.652	0.001	3 and more
4	The balance between what I give and receive during sexual	65.937	0.001	1
2	My partner indulges in sexual pleasure	53.008	0.001	3 and more
3	The way my partner takes care of my sexual needs	39.074	0.001	
3	My partner is sexually creative	24.514	0.001	
3	My partner is sexually available	34.195	0.001	
4	The diversity of my sexual activity	53.822	0.001	
4	The frequency of my sexual activities	119.447	0.001	

Legend: 1-My mood before sexual intercourse/activities, 2-My mood in sexual intercourse/activities, 3-My partner mood in sexual intercourse/activities, 4-My balance in sexual intercourse/activities, 5-My mood after sexual activity

Table 15. Correlation between the number of sexual intercourses per month and variables

Dimensions		F	<i>p</i>	Number of sexual intercourses per month
1	Rate your sexual desire to partner	405.100	0.001	11 and more
1	The intensity of my sexual arousal	230.107	0.001	
2	The intensity of my orgasms	168.977	0.001	
2	During sexual activity I indulge in sexual pleasure	215.498	0.001	
3	Evaluation of the partner s sexual activity	488.593	0.001	
1	My sexual arousal in relation to my partner	283.491	0.001	
1	My sexual response to my partner	268.057	0.001	
2	My emotional commitment during sexual activity	200.900	0.001	
5	My mood after sexual activity	209.853	0.001	
4	Evaluation of pleasure provided to my partner	241.373	0.001	
4	The balance between what I give and receive during sexual	338.412	0.001	
3	My partner indulges in sexual pleasure	391.265	0.001	
3	The way my partner takes care of my sexual needs	460.640	0.001	
3	My partner is sexually creative	358.922	0.001	
3	My partner is sexually available	538.684	0.001	
4	The diversity of my sexual activity	430.952	0.001	
4	The frequency of my sexual activities	1200.577	0.001	
	Pain sensation during vaginal intercourse	25.042	0.001	
	Pain sensation after vaginal intercourse	11.961	0.001	

Legend: 1-My mood before sexual intercourse/activities, 2-My mood in sexual intercourse/activities, 3-My partner mood in sexual intercourse/activities, 4-My balance in sexual intercourse/activities, 5-My mood after sexual activity

Table 16. Correlation between achieved orgasm during sexual intercourse/activities and variables

Dimensions		F	<i>p</i>	Achieved orgasm	
1	Rate your sexual desire to partner	99.112	0.001	4 and more	
1	The intensity of my sexual arousal	128.168	0.001		
2	The intensity of my orgasms	444.080	0.001		
2	During sexual activity I indulge in sexual pleasure	193.229	0.001		
3	Evaluation of the partner s sexual activity	69.771	0.001		
1	My sexual arousal in relation to my partner	111.253	0.001		
1	My sexual response to my partner	109.631	0.001		
2	My emotional commitment during sexual activity	96.092	0.001		
5	My mood after sexual activity	162.408	0.001		
4	Evaluation of pleasure provided to my partner	50.084	0.001		
4	The balance between what I give and receive during sexual	120.031	0.001		
3	My partner indulges in sexual pleasure	55.234	0.001		
3	The way my partner takes care of my sexual needs	101.487	0.001		3
3	My partner is sexually creative	74.133	0.001		3, and 4 and more
3	My partner is sexually available	44.553	0.001		
4	The diversity of my sexual activity	79.276	0.001	4 and more	
4	The frequency of my sexual activities	51.181	0.001		
	Pain sensation during vaginal intercourse	53.412	0.001	can't reach orgasm at all	

Legend: 1-My mood before sexual intercourse/activities, 2-My mood in sexual intercourse/activities, 3-My partner mood in sexual intercourse/activities, 4-My balance in sexual intercourse/activities, 5-My mood after sexual activity

Table 17. Correlation between faked orgasm and variables

Dimensions		F	<i>p</i>	Faked female orgasm
1	Rate your sexual desire to partner	34.601	0.001	never
1	The intensity of my sexual arousal	30.009	0.001	
2	The intensity of my orgasms	114.160	0.001	
2	During sexual activity I indulge in sexual pleasure	64.737	0.001	
3	Evaluation of the partner's sexual activity	30.164	0.001	
1	My sexual arousal in relation to my partner	26.683	0.001	
1	My sexual response to my partner	27.366	0.001	
2	My emotional commitment during sexual activity	30.089	0.001	
5	My mood after sexual activity	50.114	0.001	
4	Evaluation of pleasure provided to my partner	19.147	0.001	
4	The balance between what I give and receive during sexual	49.202	0.001	
3	My partner indulges in sexual pleasure	27.658	0.001	
3	The way my partner takes care of my sexual needs	46.138	0.001	
3	My partner is sexually creative	38.219	0.001	
3	My partner is sexually available	22.815	0.001	
4	The diversity of my sexual activity	24.933	0.001	
4	The frequency of my sexual activities	20.026	0.001	
	Pain sensation during vaginal intercourse	35.702	0.001	always
	Pain sensation after vaginal intercourse	36.395	0.001	

Legend: 1-My mood before sexual intercourse/activities, 2-My mood in sexual intercourse/activities, 3-My partner mood in sexual intercourse/activities, 4-My balance in sexual intercourse/activities, 5-My mood after sexual activity

Table 18. Correlation between achieved orgasm with the partner or alone with masturbation and variables

Dimensions		F	<i>p</i>	Reached female orgasm
1	Rate your sexual desire to partner	102.241	0.001	with a partner
1	The intensity of my sexual arousal	103.437	0.001	
2	The intensity of my orgasms	241.007	0.001	
2	During sexual activity I indulge in sexual pleasure	142.856	0.001	
3	Evaluation of the partner's sexual activity	92.560	0.001	
1	My sexual arousal in relation to my partner	108.988	0.001	
1	My sexual response to my partner	106.286	0.001	
2	My emotional commitment during sexual activity	95.680	0.001	
5	My mood after sexual activity	121.513	0.001	
4	Evaluation of pleasure provided to my partner	57.765	0.001	
4	The balance between what I give and receive during sexual	142.368	0.001	
2	My partner indulges in sexual pleasure	73.299	0.001	
3	The way my partner takes care of my sexual needs	127.599	0.001	
3	My partner is sexually creative	103.086	0.001	
3	My partner is sexually available	71.021	0.001	
4	The diversity of my sexual activity	98.682	0.001	
4	The frequency of my sexual activities	97.139	0.001	
	Pain sensation during vaginal intercourse	22.124	0.001	not with the partner and not with masturbation

Legend: 1-My mood before sexual intercourse/activities, 2-My mood in sexual intercourse/activities, 3-My partner mood in sexual intercourse/activities, 4-My balance in sexual intercourse/activities, 5-My mood after sexual activity

Table 19. Regression model of sexual orientation and theoretical dimensions

	Heterosexual							
	1		2		3		4	
	β	Sig.	β	Sig.	β	Sig.	β	Sig.
Country	.031 ^b	0.037	-.041 ^b	0.007	-.010 ^b	0.493	.010 ^b	0.465
Age	-.150 ^b	0.001	-.027 ^b	0.079	-.094 ^b	0.001	-.064 ^b	0.001
Marital status	.016 ^b	0.291	.049 ^b	0.002	.024 ^b	0.109	.000 ^b	0.988
Level of education	.020 ^b	0.173	.018 ^b	0.240	.038 ^b	0.009	.033 ^b	0.017
No. of children	-.085 ^b	0.001	.019 ^b	0.219	-.011 ^b	0.455	-.002 ^b	0.895
No. of total sexual partners	-.058 ^b	0.001	-.007 ^b	0.673	-.110 ^b	0.001	-.068 ^b	0.001
No. of current sexual partners	.020 ^b	0.201	.065 ^b	0.001	.046 ^b	0.002	.056 ^b	0.001
Mental disorder diagnoses	-.068 ^b	0.001	-.096 ^b	0.001	-.058 ^b	0.001	-.081 ^b	0.001
Sexual disorder diagnoses	-.002 ^b	0.870	-.017 ^b	0.280	.003 ^b	0.823	-.002 ^b	0.914
No. of achieved female orgasms	-.071 ^b	0.001	-.159 ^b	0.001	-.068 ^b	0.001	-.068 ^b	0.001
No. of faked orgasms	-.139 ^b	0.001	-.252 ^b	0.001	-.172 ^b	0.001	-.157 ^b	0.001
	Homosexual							
	β	Sig.	β	Sig.	β	Sig.	β	Sig.
Age	-.173 ^b	0.091	-.245 ^b	0.021	-.147 ^b	0.158	-.177 ^b	0.075
Marital status	.042 ^b	0.675	.126 ^b	0.230	-.030 ^b	0.774	-.012 ^b	0.900
Level of education	.115 ^b	0.261	.124 ^b	0.243	.209 ^b	0.042	.120 ^b	0.226
No. of children	-.140 ^b	0.167	-.224 ^b	0.032	-.232 ^b	0.023	-.175 ^b	0.075
No. of total sexual partners	-.004 ^b	0.969	.045 ^b	0.670	.002 ^b	0.987	-.034 ^b	0.732
No. of current sexual partners	-.100 ^b	0.323	.010 ^b	0.927	-.123 ^b	0.229	-.134 ^b	0.171
Mental disorder diagnoses	.086 ^b	0.410	.135 ^b	0.211	.200 ^b	0.057	.082 ^b	0.419
Sexual disorder diagnoses	.038 ^b	0.707	-.098 ^b	0.349	.021 ^b	0.838	-.073 ^b	0.458
No. of achieved female orgasms	-.094 ^b	0.348	-.097 ^b	0.353	-.184 ^b	0.070	-.217 ^b	0.025
No. of faked orgasms	-.029 ^b	0.776	-.021 ^b	0.842	.018 ^b	0.858	-.001 ^b	0.990
Age	-.231 ^b	0.020	-.335 ^b	0.001	-.319 ^b	0.001	-.254 ^b	0.008
	Bisexual							
	β	Sig.	β	Sig.	β	Sig.	β	Sig.
Age	.030 ^b	0.661	-.044 ^b	0.524	.002 ^b	0.972	.022 ^b	0.744
Marital status	-.055 ^b	0.424	-.015 ^b	0.827	-.096 ^b	0.163	.023 ^b	0.731
Level of education	-.017 ^b	0.811	.039 ^b	0.585	.066 ^b	0.365	.034 ^b	0.621
No. of children	-.010 ^b	0.890	.007 ^b	0.914	.042 ^b	0.545	.079 ^b	0.237
No. of total sexual partners	-.005 ^b	0.943	-.030 ^b	0.661	-.061 ^b	0.375	.036 ^b	0.590
No. of current sexual partners	.008 ^b	0.915	-.058 ^b	0.424	-.138 ^b	0.060	.005 ^b	0.944
Mental disorder diagnoses	-.039 ^b	0.588	-.092 ^b	0.200	-.081 ^b	0.264	.004 ^b	0.951
Sexual disorder diagnoses	-.144 ^b	0.035	-.127 ^b	0.063	-.062 ^b	0.371	-.091 ^b	0.169
No. of achieved female orgasms	-.096 ^b	0.161	-.112 ^b	0.102	-.003 ^b	0.961	-.064 ^b	0.328
No. of faked orgasms	-.182 ^b	0.008	-.170 ^b	0.012	-.176 ^b	0.010	-.070 ^b	0.289
Age	-.107 ^b	0.119	-.272 ^b	0.000	-.156 ^b	0.023	-.163 ^b	0.012

Legend: b. Predictors in the Model: (Constant), How_much_sexual_intercourse_do_you_have_per_month

Table 20. Regression model of female pain sensation during and after sexual intercourse

Independent variables	Heterosexual				Homosexual				Bisexual			
	During		After		During		After		During		After	
	β	Sig.	β	Sig.	β	Sig.	β	Sig.	β	Sig.	β	Sig.
Country	.157 ^b	0.001	.116 ^b	0.001	.133 ^b	0.201	.169 ^b	0.111	-.056 ^b	0.448	.044 ^b	0.590
Age	-.137 ^b	0.001	-.071 ^b	0.001	-.185 ^b	0.074	-.204 ^b	0.053	.031 ^b	0.668	.038 ^b	0.611
Marital status	.017 ^b	0.309	-.030 ^b	0.071	.096 ^b	0.363	-.004 ^b	0.971	.000 ^b	1.000	.124 ^b	0.094
Level of education	.015 ^b	0.378	.013 ^b	0.430	.048 ^b	0.647	-.067 ^b	0.520	.079 ^b	0.275	-.018 ^b	0.861
No. of children	-.153 ^b	0.001	-.084 ^b	0.001	-.019 ^b	0.853	.019 ^b	0.858	.074 ^b	0.311	-.104 ^b	0.193
No. of total sexual partners	-.075 ^b	0.001	-.036 ^b	0.031	.007 ^b	0.947	.014 ^b	0.896	-.088 ^b	0.223	-.038 ^b	0.625
No. of current sexual partners	-.037 ^b	0.031	-.050 ^b	0.003	.146 ^b	0.159	.245 ^b	0.019	-.049 ^b	0.500	-.095 ^b	0.198
Mental disorder diagnoses	.045 ^b	0.006	-.074 ^b	0.001	-.134 ^b	0.196	.037 ^b	0.727	-.105 ^b	0.147	.077 ^b	0.303
Sexual disorder diagnoses	.086 ^b	0.001	.073 ^b	0.001	.248 ^b	0.020	.009 ^b	0.933	.027 ^b	0.714	.118 ^b	0.109
No. of achieved female orgasms	.132 ^b	0.001	.093 ^b	0.001	.087 ^b	0.405	.083 ^b	0.426	.042 ^b	0.565	.077 ^b	0.296
No. of faked orgasms	.140 ^b	0.001	.111 ^b	0.001	.054 ^b	0.602	.167 ^b	0.113	.174 ^b	0.017	.123 ^b	0.095

Legend: Heterosexual, during: b. Predictors in the Model: (Constant), How_much_sexual_intercourse_do_you_have_per_month; Heterosexual, after: b. Predictors in the Model: (Constant), Have_you_ever_faked_an_orgasm; Homosexual, during: b. Predictors in the Model: (Constant), Have_you_been_diagnosed_with_a_mental_disorder; Homosexual, after: b. Predictors in the Model: (Constant), Have_you_ever_faked_an_orgasm; Bisexual, during: b. Predictors in the Model: (Constant), Have_you_been_diagnosed_with_a_sexual_disorder; Bisexual, after: b. Predictors in the Model: (Constant), Age

Having one current number of sexual partners correlated with mood before sexual intercourse/activity and mood after sexual activity. Having two current sexual partners correlated with mood before sexual intercourse/activity, and having with 3 or more correlated with mood before and during sexual intercourse/activity and with mood of the partner during sexual intercourse/activity (Table 14).

Correlation between the number of sexual intercourses per month and variables

Eleven or more sexual contacts per month correlated with all five dimensions. With regard to the sensation of pain during and after vaginal intercourse, we found a correlation with women who had intercourse 1 to 2 times per month (Table 15).

Correlation between the mental and sexual disorders and variables

We did not find correlations with dimensions in individuals suffering from a mental disorder. However, we found a correlation between mental disorders and pain perception during ($F = 19.361$; $p = 0.000$) and after ($F = 26.870$; $p = 0.000$) vaginal intercourse. We also found no correlations with the dimensions in those

who suffered from sexual disorders, but we found a correlation with sexual disorders and pain perception during ($F = 46.129$; $p = 0.000$) and after ($F = 38.463$; $p = 0.000$) vaginal intercourse.

Correlation between achieved orgasm during sexual intercourse/activities and variables

For female participants who could achieve 4 or more orgasms during intercourse/activity, we found correlations with all five dimensions. Achieving up to 3 orgasms correlated with partner mood during intercourse/activity. In terms of pain perception during vaginal intercourse, we found a correlation with women who could not reach orgasm (Table 16).

Correlation between faked orgasm and variables

We found no correlations in the participants who never faked orgasm. Regarding pain sensation during vaginal intercourse, we found a correlation with participants who always faked orgasm (Table 17).

Correlation between achieving orgasm with the partner or alone with masturbation and variables

In women who could reach orgasm with their partner, a correlation was found with all five dimensions.

In terms of pain sensation during vaginal intercourse, we found a correlation with women unable to reach orgasm with their partner and/or with masturbation and/or others (Table 18).

To determine a possible correlation between the theoretical model and sexual orientation, we calculated a regression model and used a stepwise model. Most correlations were found in the heterosexual sexual orientation (Table 19). Table 19 shows that the predictors that determine the criterion of heterosexuality in the first dimension are age, number of children, number of sexual partners, diagnoses of mental disorders, as well as the number of orgasms experienced and the number of false orgasms. The second dimension of heterosexuality was determined by the place of residence, marital status, number of current sexual partners, diagnoses of mental disorders, as well as the number of orgasms experienced and the number of false orgasms. The third dimension of heterosexuality was determined by age, level of education, total number of sexual partners, current number of sexual partners, number of orgasms experienced, and number of fake orgasms. The fourth dimension of heterosexuality was determined by age, level of education, total number of sexual partners, current number of sexual partners, number of orgasms experienced, and number of fake orgasms. Predictors that determine homosexuality in the first dimension were age; in the second dimension predictors of homosexuality were age, number of children and age. The third dimension of homosexuality was determined by level of education, number of children, and age, while the fourth dimension was determined by the number of experienced female orgasms. The first dimension of bisexuality was determined by the diagnosis of sexual disorders and the number of false disorders. The second dimension of bisexuality was determined by the number of fake orgasms. The third dimension of bisexuality was determined by the number of fake orgasms and age, while the fourth dimension of bisexuality was determined by age.

The regression model (method: stepwise) was used to compare female pain perception during and after sexual intercourse and the independent variables. Except for marital status, educational level, and number of children, we found a correlation during and after sexual intercourse (Table 20).

Table 20 shows that heterosexuals showed significant correlation results after measurement, determined

by predictors of place of residence, age, number of children, total number of sexual partners, current number of sexual partners, diagnosis of mental disorders, diagnosis of sexual disorders, number of female orgasms experienced, and number of fake orgasms. The criterion of homosexuality showed a statistically significant association after measurement for the predictor of the current number of sexual partners, while a statistically significant association in the criterion of bisexuality was observable after measurement for the predictor of the number of false orgasms.

Discussion

According to our results, the predictors that influence sexual satisfaction were classified into four general categories or groups of factors and determinants.

Demographic determinants

According to our results, there was a significant inverse relationship between age and sexual satisfaction. Our international survey found statistically significant higher satisfaction among participants in the 18 to 23 age group after six main questions were asked for nine groups of different ages. The age group of 18 to 23 correlated with mood before and during intercourse/sexual activity, partner's mood during intercourse/sexual activity, balance during intercourse/sexual activity, and mood after sexual activity. And the age groups from 30 to 35 and from 42 to 47 correlated only with mood during sexual intercourse/sexual activity. The results of some studies support this finding that the lower the age of the participants, the greater the sexual satisfaction^{19,20}. Aulander¹⁸ found that 85% of adolescents and young adults reported a sense of satisfaction in their sexual relationships¹⁸. It appears that adolescents' sexual activity is influenced by new commitments in their lives as they age, such as having a job or being involved in the care of for their children and other family and social responsibilities. The results of our study are at odds with those of Jalili's study. He believed that husbands gradually learn to make love and these changes can lead to higher sexual satisfaction.

In this survey, the six main questions were asked in five groups of participants (single, married, divorced, widowed, and in a relationship). The results show that couples who were in a relationship (unmarried) had higher sexual satisfaction than most other groups. Divorced, single, and widowed women had lower scores

than married and unmarried (in a relationship) women. "In a relationship (unmarried)" status correlates with all five dimensions. In terms of pain perception during vaginal intercourse, a strong correlation was found with single women. Moreover, the results show that marriage as such does not contribute to sexual satisfaction. In fact, the baseline model in Table 7 shows that married couples perform relatively poorly in this regard. Thus, it appears that it is not marriage that promotes sexual satisfaction, but rather the fact of having a partner. Since the correlation between marital status and sexual satisfaction was not as strong, it is possible that older couples have less desire or ability to perform sexually. The length of their relationship underscores a diminishing marginal effect, as shown by several longitudinal studies examining other effects of marriage over time²¹.

This study examined the association between different levels of education and sexual satisfaction among women from different countries. It was predicted that higher levels of academic education would be associated with higher sexual satisfaction. Student status correlated with mood before and during intercourse/sexual activity, partner mood during intercourse/sexual activity, balance during intercourse/sexual activity, and mood after sexual activity. Completion of the third level of the university correlated with mood before intercourse/sexual activity and mood after sexual activity, but not during intercourse. Pain perception during and after vaginal intercourse correlated with women who completed elementary school. It appears that women with less schooling reported greater pain intensity and psychosocial distress compared with pain-free women.

Ji and Norling²³ also found a positive correlation between education and sexual satisfaction. They 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 achieve. Although this is consistent with most previous studies, the study by Abdoly and Pourmousavi²⁴ found that the correlation between education level and sexual satisfaction was linear only for the under-doctoral group, while surprisingly, in the doctoral and post-doctoral groups, women's sexual satisfaction scales decreased. They speculate that this lower sexual satisfaction could be caused by some factors, such as higher education, pressure on daily activity and increasing age; stressful conditions for students

in obtaining a university degree, and greater efforts by women in obtaining a university degree.

The aim of the present study was to examine sexual satisfaction in the context of different sexual orientations. Because most research on sexual satisfaction has focused exclusively on heterosexual samples, we also examined homosexual and bisexual samples. In our study, homosexual sexual orientation correlated with all five dimensions.

However, it would be incorrect to claim that most homosexual people in most societies have excellent sexual health. Homosexual men and women are also subject to a system of inequality, and in many countries sexual orientation determines access to valued resources more than gender does. In almost every society, there are groups such as minorities, homosexuals, and transsexuals. The status of gay men and lesbian women is problematic in countries where there have been and continue to be numerous violations of their rights that have resulted in serious negative physical, psychological, and sexual consequences. Among gay men, sexual satisfaction was predicted by positive relationships characterized by emotionally intimate and loving relationships with others. This finding supports previous research by Deenen *et al.*²⁵, who found that intimacy, not frequency of sexual contact, determined sexual satisfaction among gay men. Taken together, these findings refute the stereotype that gay men prefer relationship-free sex to committed sexual relationships.

Additionally, in the study by Henderson *et al.*²⁶, the authors conducted an Internet survey of married heterosexual women and lesbian/bisexual women in committed same-sex relationships. Their results showed that for a similar constellation of factors (depressive symptoms, relationship satisfaction, sexual functioning, and social support) was related to sexual satisfaction both groups of women. For lesbian/bisexual women, internalized homophobia was an additional factor.

The present global study examined the association between sexual satisfaction and the number of children in an international sample. We found that the number of children was a significant negative predictor of sexual satisfaction. In the sample, having 0 (zero) children correlated with all five dimensions. Having three children correlated with mood before intercourse/sexual activity, and having four or more children correlated with mood before and during intercourse/sexual activity and mood after sexual activity. Pain sensations during and after vaginal intercourse were observed in

women with no children. Our results are consistent with other studies²⁷ that have shown that the number of children can be considered a global negative correlate of sexual satisfaction. Parents with more children reported lower levels of sexual satisfaction. Previous studies have shown that parents from Western countries, generally considered more individualistic, experience lower marital and sexual satisfaction after the birth of their children²⁸. Therefore, we hypothesized that higher levels of individualistic values might be related to sexual satisfaction and number of children. Lalwani *et al.*²⁹ found that collectivists are more likely to engage in deception and socially desirable responses to maintain good relationships with others. In contrast, individualists are portrayed as open and sincere because individualism encourages people to “be themselves”. The authors assume that people with both types of cultural orientations and backgrounds engage in desirable behavior, albeit in different ways.

Sociocultural factors

Satisfaction in a sexual relationship requires interpersonal communication skills and attitudes, social skills, and conflict resolution. These skills lead to higher self-esteem, self-confidence, and self-concept in couples and are critical for a successful relationship and subsequent sexual intimacy. Teaching appropriate and satisfying life skills in the area of sexual activity in life leads to higher sexual satisfaction⁴.

We also examined the correlation between the total number of sexual partners in life and the variables. Having 1 to 2 lifetime sexual partners correlated with mood before and during sex/sexual activity and with partner mood during sex/sexual activity. Having 11 to 12 lifetime sexual partners correlated with mood during intercourse/sexual activities, mood of partner during intercourse/sexual activities, and balance during intercourse/sexual activities. Pain sensations during vaginal intercourse were observed in women who had 1 to 2 lifetime sexual partners.

The correlation between the number of sexual contacts per month and the variables showed that 11 or more sexual contacts per month correlated with all five dimensions. Regarding the sensation of pain during and after vaginal intercourse, we found a correlation with women who had intercourse 1 to 2 times per month.

The correlation between feigned orgasm and the variables showed no correlations regarding the par-

ticipants who had never feigned orgasm. Regarding pain sensation during vaginal intercourse, we found a correlation with female subjects who always faked orgasm.

Psychological determinants

In the sample, we found 526 (6%) individuals with a diagnosed mental disorder and 144 (1.6%) with a sexual disorder. We found no correlations with the dimensions in individuals who were suffering from a mental disorder. However, we found a correlation between mental disorders and pain perception during and after vaginal intercourse. We also found no correlations with the dimensions in those who suffered from a sexual disorder, but we found a correlation with sexual disorders and pain perception during and after vaginal intercourse.

Overall, participants with mental and sexual disorders reported higher levels of sexual dissatisfaction. One of the most important determinants of sexual satisfaction is mental health^{30,31}. In most studies, mental health is cited as the strongest determinant of sexual satisfaction. Thus, mental health refers to the fact that what people think and feel about their lives in general and in specific areas such as sex, interpersonal relationships, and physical and mental health depends on personal standards³¹. Mental health, as a determinant that most strongly affects sexuality, and in particular sexual satisfaction, is defined as a person's positive and rational evaluation of various aspects of life that balances positive feelings such as happiness, willpower, self-confidence, and a positive self-image with negative emotions such as anxiety, stress, and depression. People with mood, anxiety, and substance use disorders have elevated scores for sexual dissatisfaction, even when relevant confounding factors are accounted for. Sexual satisfaction appears to be most strongly influenced by alcohol, drug dependence, and bipolar disorder. Once the substance use disorder is overcome, there is still an association with current sexual dissatisfaction³².

Pathophysiological determinants and pain

Dyspareunia, more recently referred to as Genito-Pelvic Pain/Penetration Disorder (GPPPD), is considered a negative factor affecting a couple's sexual satisfaction and health. Reporting painful sex was closely related to other sexual function problems, particularly vaginal dryness, anxiety, and lack of sexual desire.

In our study, perceptions of pain during and after vaginal intercourse correlated with single women, women with less education, women who had only 1 to 2 lifetime sexual partners, and women who had intercourse 1 to 2 times per month.

However, we found a correlation between mental disorders and pain perception during and after vaginal intercourse. We also found a correlation between sexual disorders and pain perception during and after vaginal intercourse. We found a correlation with women who cannot achieve orgasm and those who always fake orgasm. The prevalence of pain in the population worldwide is estimated to range from 3% to 18%, and lifetime estimates range from 10% to 28%. The wide range reflects considerable heterogeneity in the methods used in prevalence studies³³. Underlying conditions are often difficult to diagnose and treat, and etiologic factors are complex and poorly understood. For this reason, among others, sexual pain disorders are often overlooked or poorly treated, which greatly increases patient distress³⁴. Reporting painful sex was closely related to other problems of sexual function, particularly vaginal dryness, anxiety, and lack of pleasure from sex.

Study Limitations

The results of the present study should be interpreted in the context of its limitations. One limitation is the cross-sectional design of our study, which does not allow us to establish causality. Challenges in obtaining accurate measures of self-reported sexual behavior, such as recall error, bias due to social desirability, and poor understanding of survey questions, are well-documented in the literature³⁵. The self-report questions used in the current study were translated by members of the research team, but they were not validated with samples from each country. In addition, the perception that God views sex negatively and high religious commitment could be sources of bias and threats to the validity of self-reported measures of sexual satisfaction in our study. Future research should incorporate measures of religiosity in longitudinal data to ensure that these associations are independent of religion and robust over time. Furthermore, we were aware that there was a possibility that respondents gave socially desirable answers. Lalwani *et al.*²⁹ found that collectivists are more likely to engage in deception and socially desirable responses to maintain good relationships with others. In con-

trast, individualists are portrayed as candid and sincere because individualism encourages people to “be yourself.” The authors propose that people with both types of cultural orientations and backgrounds engage in desirable responding albeit in distinct ways²⁹. The obtained results agree with previously published studies on the sexual satisfaction of respondents in the same and comparable populations^{36,37}.

Conclusion

Sexual satisfaction is one of the physiological needs of humans that can be said to be more complex and yet more difficult to achieve than other needs. Our international study found statistically significantly higher satisfaction among homosexual individuals, participants aged 18 to 23 years, those with a higher level of education, with a current sexual partner, in a current partnered (unmarried) relationship, with 11 or more sexual contacts per month, and without a diagnosed mental and sexual disorder. At the same time, we found that the relationship between sexual satisfaction and the different determinants varied across countries, which calls for further research.

Ethical statement

We have received ethical approval for the study (Slovenia – ZF DEK 374/2021, Bosnia and Herzegovina – 0105-11761/21, Croatia – 251-379-10-21-02, Romania – No. 3320 (15.10.2021)).

Conflict of interests:

The authors declare no conflict of interests.”

Funding:

None.

References

1. Higgins JA, Mullinax M, Trussell J. Sexual satisfaction and sexual health among university students in the United States. *Am J Public Health*. 2011;101:12. doi: 10.2105/AJPH.2011.300154
2. WHO (2010). Developing sexual health programmes. World Health Organisation. 1–20. Available at: http://apps.who.int/iris/bitstream/10665/70501/1/WHO_RHR_HRP_10.22_eng.pdf Cited: November 17, 2017.
3. Starc A, Gošnak Dahmane R, Božič M. Biološke osnove ženske spolne funkcije in motnje: univerzitetni učbenik. Ljubljana: Zdravstvena fakulteta; 2019.
4. Yoo H, Bartle-Haring S, Day RD, Gangamma R. Couple communication, emotional and sexual intimacy, and relationship satisfaction. *Journal of Sex & Marital Therapy*. 2014;40(4):275–93. doi: 10.1016/S0140-6736(13)62378-8

5. Wellings KA, Johnson M. Framing sexual health research: adopting a broader perspective. *The Lancet*. 2013;382,9907, P1759-1762. doi: 10.1016/S0140-6736(13)62378-8
6. WHO (2006). Defining sexual health: Report of a technical consultation on sexual health, 28–31 January 2002. Geneva, World Health Organization. 5. Available at: http://www.who.int/reproductivehealth/publications/sexual_health/defining_sexual_health.pdf Cited: November 17, 2017.
7. Basson R. Women's sexual dysfunction: Revised and expanded definitions [review]. *CMAJ*. 2005;172:1327-33. doi: 10.1503/cmaj.1020174
8. Geiss IM, Umek WH, Dungal A, Sa, C, Ris, Hanzal E. Prevalence of female sexual dysfunction in gynecologic and urogynecologic patients according to the international consensus classification. *Urology*. 2003;62:514-8. doi: 10.1016/S0090-4295(03)00487-4
9. Phillips NA. Female sexual dysfunction: Evaluation and treatment. *Am Fam Physician* 2000;62:127-36. doi: 10.1038/sj.ijir.3901524
10. Shiri R, Häkkinen JT, Hakama M, Huhtala H, Auvinen A, Tammela TL, Koskimäki J. Effect of lower urinary tract symptoms on the incidence of erectile dysfunction. *The Journal of Urology*. 2005;174(1):205-9. doi: 10.1097/01.ju.0000162042.90554.64
11. Ramlachan P, Campbell MM. Male sexual dysfunction. *S Afr Med J*. 2014;104(6):447.
12. Kalra S, Singh YP Balhara, Baruah M. Consensus guidelines on male sexual dysfunction. *Journal of Medical Nutrition and Nutraceuticals*. 2013;2(1):5-18. doi: 10.4103/2278-019X.105288
13. Rossi AS. Eros and caritas: A biopsychosocial approach to human sexuality and reproduction. In: Rossi AS (ed.). *Sexuality across the life course* (pp. 3–36). The University of Chicago Press; 1994, 3-36. <https://psycnet.apa.org/record/1994-98116-001>
14. Dundon CM, Rellini AH. More than sexual function: predictors of sexual satisfaction in a sample of women age 40–70. *J Sex Med*. 2010;7(2):896-904. doi: 10.1111/j.1743-6109.2009.01557.x.
15. Moore NB, Davidson JK Sr. Guilt about first intercourse: an antecedent of sexual dissatisfaction among college women. *J Sex Marital Ther*. 1997;23(1):29-46. doi: 10.1080/00926239708404415.
16. Moore NB, Davidson JK Sr. College women and personal goals: cognitive dimensions that differentiate risk-reduction sexual decisions. *J Youth Adolesc*. 2006;35(4):574-89.
17. Lewis RW, Fugl-Meyer KS, Bosch R. Epidemiology/risk factors of sexual dysfunction. *J Sex Med*. 2004;1(1):35-9. doi: 10.1111/j.1743-6109.2004.10106.x.
18. Auslander BA, Rosenthal SL, Fortenberry JD, Biro FM, Bernstein DI, Zimet GD. Predictors of sexual satisfaction in an adolescent and college population. *J Pediatr Adolesc Gynecol*. 2007;20(1):25-8. doi: 10.1016/j.jpag.2006.10.006.
19. Taavoni S, Haghani H. Sexual satisfaction and marital satisfaction in 45–65 year old men in the north of Tehran. *Am J Mens Health*. 2010;7(3):284. doi: 10.1016/j.jomh.2010.09.014.
20. Tayebe Z, Jannati Y, Mobasheri E, Taghavi, T, Abdollahi H, Modanloo M, Behnampour N. The Relationship between Marital and Sexual Satisfaction among Married Women Employees at Golestan University of Medical Sciences, Iran. *Iran J Psychiatry Behav Sci*. 2014;8(2):44-51.
21. Lucas RE, Clark AE, Georgellis Y, Diener, E. Reexamining adaptation and the set point model of happiness: reactions to changes in marital status. *Journal of Personality and Social Psychology*. 2003;84:527-39. doi: 10.1037/0022-3514.84.3.527.
22. Stulhofer A, Buško V, Brouillard P. Development and bicultural validation of the new sexual satisfaction scale. *J Sex Res*. 2009;47(4):257-68. doi: 10.1080/00224490903100561.
23. Ji J, Norling AM. Sexual satisfaction of married urban Chinese. *J Dev Soc* 2004;20(1-2):21-38. doi: 10.1177%2F0169796X04048301.
24. Abdoly M, Pourmousavi L. The relationship between sexual satisfaction and education levels in women. *Int J Women's Health Reproduction. Sci* 2013;1(2):39-44.
25. Deenen AA, Gijs L, van Naerssen AX. Intimacy and sexuality in gay male couples. *Archives of Sexual Behavior*. 1994;23(4):421-32. doi: 10.1007/BF01541407.
26. Henderson AW, Lehavot K, Simoni JM. Ecological models of sexual satisfaction among lesbian/bisexual and heterosexual women. *Arch Sex Behav*. 2009;38(1):50-65. doi: 10.1007/s10508-008-9384-3.
27. Kowal M, Groyecka-Bernard A, Kochan-Wójcik M, Sorokowski P. When and how does the number of children affect marital satisfaction? An international survey. *PLoS ONE*. 2021;16(4):e0249516. doi: 10.1371/journal.pone.0249516.
28. Twenge JM, Campbell WK, Foster CA. Parenthood and Marital Satisfaction: A Meta-Analytic Review. *Journal of Marriage and Family*. 2003;65(3), 574-583. doi: 10.1111/j.1741-3737.2003.00574.x.
29. Lalwani AK, Shavitt S, Johnson T. What is the relation between cultural orientation and socially desirable responding? *Journal of Personality and Social Psychology*. 2006;90(1):165-78. doi: 10.1037/0022-3514.90.1.165.
30. Bakhshayesh A, Mortazavi M. The relationship between sexual satisfaction, general health and marital satisfaction in couples. *Journal of Applied Psychology*. 2010;3(4):73-85.
31. Syme ML, Klonoff EA, Macera CA, Brodine SK. Predicting sexual decline and dissatisfaction among older adults: The role of partnered and individual physical and mental health factors. *J Gerontol B Psychol Sci Soc Sci*. 2013 May;68(3):323-32. doi: 10.1093/geronb/gbs087.
32. Vanwesenbeeck I, Ten Have M, de Graaf R. Associations between common mental disorders and sexual dissatisfaction in the general population. *The British Journal of Psychiatry*. 2018;205(2):151-7. doi: 10.1192/bjp.bp.113.135335.
33. Mitchell KR, Geary R, Graham CA, Datta J, Wellings K, Sonnenberg P, et al. Painful sex (dyspareunia) in women: prevalence and associated factors in a British population probability survey. *BJOG*. 2017;124:1689-97. doi: 10.1111/1471-0528.14518.
34. Bergeron S, Likes WM, Steben M. Psychosexual aspects of vulvovaginal pain. *Best Pract Res Clin Obstet Gynaecol*. 2014;28:991-9. doi: 10.1016/j.bpobgyn.2014.07.007.

35. DiClemente RJ, Wingood GM, Sales JM, Brown JL, Rose ES, Davis TL, et al. Efficacy of a telephone-delivered sexually transmitted infection/human immunodeficiency virus prevention maintenance intervention for adolescents: a randomized clinical trial. *JAMA pediatrics*. 2014;168(10):938-46. doi:10.1001/jamapediatrics.2014.1436.
36. Starc A, Trampuš M, Pavan Jukić D, Grgas-Bile C, Jukić T, Polona Mivšek A. Infertility and sexual dysfunctions: a systematic literature review. *Acta Clinica Croatica*. 2019;58(3):508-15.
37. Starc A, Jukić T, Poljšak B, Dahmane R. Female sexual function and dysfunction: a cross-national prevalence study in Slovenia. *Acta Clinica Croatica*. 2018;57(1):52. doi:10.20471/acc.2018.57.01.06.

Sažetak

PREDIKTORI SEKSUALNOG ZADOVOLJSTVA: INTERNACIONALNA STUDIJA

A. Starc, V. Enea, A. Racz, K. Palatin, B. Gabrovec, V. Đido, R. Dahmane i K. Rotim

Cilj ove međukulturalne studije bio je ispitati prediktore seksualnog zadovoljstva općenito. Za ovu analizu koristili smo opsežnu bazu podataka uzorka koja uključuje 8821 pojedinca iz 4 zemlje. Svi su sudionici ispunili iste upitnike koji su bili osmišljeni kako bi obuhvatili brojne važne varijable za koje se pokazalo da koreliraju sa seksualnim zadovoljstvom. Prema našim rezultatima, prediktori seksualnog zadovoljstva klasificirani su u četiri opće kategorije (demografski čimbenici, psihološki čimbenici, sociokulturni čimbenici i patofiziološki čimbenici). Naše međunarodno istraživanje pokazalo je statistički značajno veće zadovoljstvo homoseksualnih sudionika, sudionika u dobi od 18 do 23 godine, s višom razinom obrazovanja, u vezi, sa sadašnjim seksualnim partnerom, u trenutnoj partnerskoj (nevjenčanoj) vezi i bez dijagnosticirane seksualne ili mentalni poremećaj. U isto vrijeme, otkrili smo da korelacija između seksualnog zadovoljstva i različitih prediktora znatno varira među zemljama, što zahtijeva daljnje istraživanje.

Ključne riječi: seksualno zadovoljstvo; spolno zdravlje; prediktori