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Anxiety and Insomnia as Predictors of Sexual Satisfaction in Peruvian Adults

Joel Palomino-Ccasa[1]

Dany Yudet Millones-Liza[2]*

Segundo Salatiel Malca-Peralta[3]

María Yngrid Tantaruna Diaz[4]

Karol Astrid Cerrón Barra[4]

Dayana Muñoz Grandez[4]

Neysha Quilca Huamaní[4]

[1]Faculty of Psychology,
National University of San Marcos,
Lima 15081, Perú
[2]UPG Ciencias Empresariales, Escuela de Posgrado,
Universidad Peruana Unión,
Lima 15102, Perú;
Facultad de Ciencias Empresariales,
Escuela Profesional de Administración,
Universidad Peruana Unión,
Lima 15102, Perú
[3]Facultad de Ciencias Humanas y Educación,
Escuela Profesional de Educación,
Universidad Peruana Unión,
Lima 15102, Perú
[4]Professional School of Psychology,
Universidad Privada San Juan Bautista,
Lima 15037, Peru
*Corresponding Author

Abstract

Sexual satisfaction is essential for mental health, and knowing what factors predict it turns out to be essential for its proper enjoyment. Several factors that are linked during sexual intercourse are anxiety and insomnia; however, no research demonstrates how much they predict sexual satisfaction, and that is the objective of this research. For this, a sample of 453 adults between 18 and 45 years old (M= 26.13; SD= 4.69) was considered, of whom 39.7% were men, and 60.3% were women. Likewise, to measure anxiety, the Lima Anxiety Scale (EAL-20) was used, the Athens Insomnia Scale was used to measure sleeping problems, and the Sexual Satisfaction Scale was considered to measure sexual satisfaction. The results showed that high levels of anxiety and insomnia negatively predict the level of Sexual Satisfaction with large effect size (R_2 = 0.542). Leaving a precedent that both sleeping difficulties, as well as worry and somatization caused by anxiety, alter the sexual enjoyment of adults.

Keywords: sexual satisfaction, male sexuality, female sexuality, insomnia, wakefulness, anxiety, anguish

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1. Introduction

Sexual satisfaction is a symbol of a person's psychological and mental well-being, which, beyond being considered an important factor when trying to support couples (Wawrziczny et al., 2022), represents the psychological and physical health status of an individual that could affect their quality of life (Jamea et al., 2021)(Rainer, 2012)(Sánchez-Fuentes et al., 2014), also considered as the source of happiness of an individual regarding the amount of pleasure they feel (Dehghani Champiri & Dehghani, 2023). These statements allow us to suggest that sexual satisfaction, in the case of adults, should be implicit in the comprehensive approach to health and well-being, understanding that there is an important gap between having a sexual life and feeling sexual satisfaction, the same that has also been conceptualized as an indicator of sexual quality and barometer of marital life (Santos-Iglesias et al., 2016;) (Pechorro et al., 2014).

Although sexual satisfaction has been considered a physiological need in hu-mans, it is the most complex to understand because, according to research, feeling sexual satisfaction is a state that requires skills and attitudes; however, there is evidence that shows that there are stressful conditions that decrease sexual satisfaction, such as mental disorders, negative emotions such as anxiety, stress or depression (Baksheesh & Mortazavi, 2010) (Starc et al., 2022). This contrast between recognizing sexual satisfaction as a physio-logical need and the complexity that addresses it underlines the importance of addressing the issue holistically.

A quick review of the literature has been carried out to expand the understanding of this topic and its implications that imply a better quality of life in human beings, thus highlighting certain factors that act negatively towards sexual satisfaction, these being anxiety and insomnia (Pigeon et al., 2023) (Cihan et al., 2023)(Chen et al., 2016). By focusing on these factors, research indicates that sleep disorder (insomnia) causes the prevalence of sexual dissatisfaction (Zhang et al., 2017), to explain this fact, Zhang et al. (2017) (Van, 2012) support that lack of sleep causes a decrease in testosterone, thus affecting sexual desire for both men and women.

In addition, there is evidence that anxiety decreases all physical and communication efforts, which affects sexual satisfaction (Epifanio et al., 2023); this translates into the statement that establishes that a negative mood can change the state of an individual's sexuality, with anxiety also adopting a physiological change that takes time to resolve, consequently generating a slow response toward sexual arousal (Bittoni & Kiesner, 2022). Mitchell et al. (2023) establish that anxiety is an element that hinders sexual satisfaction to give strength to this statement. Therefore, there must be a balanced circuit between mood, mental well-being, and sexual well-being to have a satisfying sexual experience.

Now, as mentioned in the previous paragraphs, some studies agree on deter-mining insomnia and anxiety as predictors of sexual satisfaction, but what link do these two factors have with each other? The literature highlights that both are significantly associated; that is, the level of anxiety increases in people who have symptoms of insomnia (Bragantini et al., 2019; Clement-Carbonell et al., 2021). When an individual experiences insomnia, the quality of sleep is altered, increasing anxiety levels. To explain this fact, Morin et al. (2006) support that insomnia has a peculiarity of causing an individual to wake up very early in the morning, presenting an inability to go back to sleep due to self-conscious emotions activated by the nervous system, consequently causing self-disgust (Ypsilanti et al., 2018).

Under the context mentioned above, where anxiety, insomnia, and sexual satisfaction intervene, it is crucial to approach this study to contribute to the improvement of sexual experiences to achieve greater well-being in the adult population, from which emerges the following research question: how could an individual have a satisfying sex life? The objective of the study is to evaluate whether anxiety and insomnia predict sexual satisfaction in Peruvian adults to dispel this question and better understand the factors that could be involved in sexual satisfaction in light of the literature. The results could be relevant to developing sexual and mental health interventions, and programs focused on the well-being of the Peruvian adult population.

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2. Materials and Methods

2.1 Participants

The sample consisted of 453 adults aged 18 to 45 (M= 26.13; SD= 4.69), of whom 39.7% were men and 60.3% were women. In the same way, 41.5 % had university studies, 25.8% had technical studies, and 32.7% had high school studies. Likewise, the length of the relationships the participants had with their partners ranged from 6 months to 20 years, and 93.4% considered themselves single, but they had a relationship; that is, they were cohabiting. It should be noted that all participants were residents of Lima, the capital of Peru, and the type of sampling used was non-probabilistic for convenience to have greater access to the participants.

2.2 Instruments

For this study, the Lima Anxiety Scale (LAS-20) was used. Lozano-Vargas and Vega-Dienstmaier (2018) validated it in the Peruvian population aged 18 to 60. It consists of 20 items that are rated dichotomously, YES (1) or NO (0), indicating that if the score is ≥ 10, there is moderate or severe anxiety. The scale went through an Exploratory Factor Analysis (EFA) that showed the presence of four factors: Physical anxiety, Mental anxiety, Social phobia, and Agoraphobia, where he obtained a variance of 90.38% and an Alpha ratio of .89.

On the other hand, the Athens Insomnia Scale was also used. It was validated in Peruvian adults over 18 years of age by Baños-Chaparro et al. (2021). The scale consists of 5 items with a Likert-type evaluation from 0 (no problem) to 3 (severe problem); the total score varies from 0 to 15. Likewise, the scale underwent a validation of the internal structure, which validated the unidimensional model with a CFI = .99, a RMSEA = .05, and a WRMR = .45. For reliability, the Omega quotient of .83 was considered.

Finally, the Sexual Satisfaction Scale developed by Palomino et al. (2017) was considered in Peruvian adults from 18 to 50 who maintain a relationship of at least 6 months. This scale has a version for men and another for women; both consist of 31 questions that show sexual satisfaction in three factors: Response to desire, Perception of liking—disliking, and Social interaction. The rating method is Likert type from 1 (Not at all) to 4 (A lot). The model was favorable in both versions through the EFA with a KMO greater than .8, a Barttle test of sphericity less than .05, factor loadings greater than .3, and reliability greater than .8 in the coefficient of Alpha. Therefore, all instruments used in the research have adequate levels of validity and reliability in the study population.

2.3 Procedure

The application of the instruments was carried out respecting the standards established in the Declaration of Helsinki (Association, 2013). It is worth mentioning that the sample was collected in person in which the evaluator accompanied the participant while solving the scales and consisted of three parts, which every participant received: a) a presentation of the project, along with the informed consent, which presents a space to be signed and to continue with, b) the sociodemographic data sheet with which the necessary data for the description of the study will be answered, and c) finally the scales with the study variables. None of the shared documents included personal data that facilitates the identification of the participants. Anonymity and confidentiality were guaranteed, as was the individuality of the participants, who only participated if they gave their consent. They were also provided with the contact details of some of the authors' emails in case they wanted to answer any additional questions after the moment of application, which lasted approximately 15 to 20 minutes.

2.4 Analysis of data

The program used for data analysis was SPSS version 25, starting with a descriptive analysis of the study variables, taking into account mean, standard deviation, kurtosis, and skewness, considering that the latter is within the appropriate ranges (Pérez & Medrano, 2010). A difference in means according to sex was subsequently considered, for which the comparison of independent samples of Student's t was considered; in addition, Cohen's effect size (d) was taken into account to see if the difference they present is significant, taking into account that if the value was < 0.20 (small), < 0.50 (moderate) and higher values (large) (Cohen, 1988). The Pearson correlation was then carried out, taking into account that if the values were ≥ 0.20 (minimal), r ≥ 0.50 (moderate), and r ≥ 0.80 (strong) (Dominguez-Lara, 2018). Finally, the multivariate linear regression was carried out where it was observed that the level of significance was less than 0.05 and the coefficient of determination R^2 was calculated, where an R^2 <0.02 shows that there is an absence of the ≥ 0.02 (small), R^2 ≥ 0.13 (medium) and R^2 ≥ 0.26 (large) (Ellis, 2010).

3. Results

3.1 Descriptive analysis

Table 1 shows that the values of kurtosis and asymmetry range between 0.6 and 0.8, evidencing that they are within the range ± 1.5, indicating that they are adequate to continue with the following analyses (Pérez & Medrano, 2010).

Table 1. Descriptive analysis of the variables

Variables	Mean	Standard Deviation	Skewness	Kurtosis
Sexual Satisfaction	95.5	18.3	-0.657	0.996
Insomnia	9.4	3.63	0.832	-0.148
Anxiety	7.35	4.79	0.7	-0.427

3.2 Difference between anxiety, insomnia, and sexual satisfaction

When comparing means (Table 2), no statistically significant differences were found between men and women in the insomnia and anxiety variables (t=0.045, p=0.964; t=-0.408, p=0.683). While in the satisfaction variable, a statistically significant difference is found in favor of women (t=-5.6224, p=<.001), with a small effect size (d=-0.5398).

Table 2. Differences between men and women concerning sexual satisfaction, insomnia, and anxiety.

Variable	Male		Female		t	p	d
	Mean	Standard Deviation	Mean	Standard Deviation			
Sexual Satisfaction	89.71	14.28	99.26	19.61	-5.622	< .001	-0.539
Insomnia	9.39	3.3	9.41	3.84	-0.045	0.964	-0.004
Anxiety	7.23	4.62	7.42	4.90	-0.408	0.683	-0.039

The results of the correlations between the variables were statistically significant between the three variables (Table 3). It was found that high insomnia scores are related to low levels of sexual satisfaction (r=-0.682), in the same way, occurs between anxiety and sexual satisfaction (r=-0.669). On the other hand, it was found that high levels of insomnia are related to high levels of anxiety

(r=0.680). It should be noted that all correlations had moderate strength.

Table 3. Differences between men and women concerning sexual satisfaction, insomnia, and anxiety.

Variables	Sexual Satisfaction	Insomnia	Anxiety
Sexual Satisfaction	1		
Insomnia	-0.682**	1	
Anxiety	-0.669**	0.680**	1

Note. * → p < .05; ** → p < .01; *** → p < .001

3.3 Predictors of sexual satisfaction

Table 4 shows the results of the multiple regression analysis, showing an adequate fit of the proposed model (F test = 268.53, p<.001), where insomnia (β = -0.423, p <.001) and anxiety (β =-0.382, p <.001) significantly negatively affect the sexual satisfaction of adults (adjusted R2 = 0.542). In the same way, it was observed that the Beta values of the predictor variables are statistically significant (p <.001), and the R2 value indicates that the regression model has a significant large effect size.

Table 4. Predictors of sexual satisfaction in adults.

Model	B	SE	β	t	p
(Constant)	126.19	1.624		77.68	< .001
Insomnia	-2.13	0.218	-0.423	-9.74	< .001
Anxiety	-1.46	0.166	-0.382	-8.8	< .001

*dependent variable = sexual satisfaction (F-test=94.9, p<.001; adjusted R2 = 0.542), B, non-standardized coefficient; SE, standard error; β, standardized regression coefficient

4. Discussion

The COVID-19 pandemic brought with it an increase in emotional, physical, and social problems (Brooks et al., 2020), some of which stand out are depression, anxiety (Hermosa-Bosano et al., 2021), as well as distress caused sleep problems, which led to an increase in insomnia (Khan et al., 2018). Although the pandemic is over, these emotional problems prevail (Roger et al., 2024), including problems in sexual satisfaction (Yılmaz et al., 2023). Although this area of human life is so important for mental health (Wawrziczny et al., 2022), the variables that affect it have been little studied, which is why this study sought to determine how much anxiety (emotional factor) and insomnia (physical factor) predict the sexual satisfaction of Peruvian adults.

When analyzing the comparison of means, it was found that there is only a significant difference in the level of sexual satisfaction, showing greater satisfaction in women. This result is similar to what was seen in Chilean women (Luttges et al., 2019). The same happens when men invest in the emotional component of the relationship before, during, and after the sexual encounter (Walker & Lutmer, 2023). On the other hand, it was found that there is less sexual satisfaction in those men or women who present high levels of body dissatisfaction (Schumm et al., 2023); just as the level of satisfaction can be raised with cannabis stimulation, this method being another alternative to treat sexual dysfunctions, especially in women (Moser et al., 2023). Likewise, no significant difference was found in the level of sexual satisfaction in men or women who used a penile implant to treat sexual dysfunction. However, it was revealed that it improved significantly in women who received psychotherapy sessions (Kornyenko et al., 2023); the same thing happens in older adults who have an active sexual life (Wang et al., 2023). In contrast, it was also found that the level of sexual satisfaction was lower in women due to the latent fear of becoming pregnant or acquiring a sexually transmitted disease (Ramos et al., 2023).

Regarding the multiple regression, it was identified that both anxiety and insomnia affect the level of sexual satisfaction in both adult men and women over 25 years of age who maintain a sexual relationship with their partners for more than 6 months. These results are associated with what was found in those adults who practice masturbation more frequently, which is related to high rates of anxiety, depression, and stress (Phuah et al., 2023). Similarly occurs in those who have a problem with low back pain, since pain inhibits sexual desire, arousal and increases the anxiety of aggravating the health of the sexual partner, which decreases sexual frequency and satisfaction (Cokar et al., 2024), another factor associated with increased anxiety is the fear of contracting or spreading an infectious disease such as COVID 19, since the fear of dying and social distancing caused sexual activity to decrease and although vaccination caused satisfaction levels to improve, the rate dissatisfaction still occurred due to anxiety levels (Yılmaz et al., 2023). In the same way, it happens in people who have hypothyroidism, whose anxiety and stress levels are high, which frequently decreases libido, arousal, orgasms, and the level of sexual satisfaction (Sheikh et al., 2023); it also happens with Women who have endometriosis whose sexual response is perceived by their partners is lower, which increases the level of depression, stress and anxiety, increasing sexual dissatisfaction (Kfoury et al., 2023). Along the same lines, some survived cancer, even 10 after learning about the disease, since the practice of sexual relations decreased due to the treatment and everything that the chronic disease generates, emphasizing that both depression and anxiety undermined their sexual satisfaction (Heyne et al., 2023). On the other hand, another factor that increases anxiety is the plurality of sexual partners, which increases the level of insecurity, decreases self-esteem (men), deteriorates desire excitement, and causes sexual dysfunctions (women), which leads to sexual dissatisfaction (Péloquin et al., 2023; Barut & Mohamud, 2023).

In the same way, it was observed that the level of insomnia predicts how sexually satisfied the person is; this result is similar to what was found in young university students (Quito et al., 2023). Likewise, in women who presented social dysfunction, with depressive and anxious symptoms (Banaei et al., 2021), the same way it was observed that it occurs in postmenopausal women, who have low sexual arousal, orgasmic dysfunction, and sleep problems which causes sexual dissatisfaction (Kalmbach et al., 2019). Likewise, lack of sleep was found to cause Persistent Genital Arousal Disorder PGAD (Ferenidou et al., 2019). As observed, anxiety and depression are closely linked to insomnia (Sadeghniiat-Haghighi et al., 2021), and insomnia, like depression and anxiety, is related to sexual dysfunctions, which cause sexual dissatisfaction (Huang et al., 2023).

It is important to mention some delimitations of the research; firstly, the type of non-parametric sampling does not allow the results to be generalized to other populations. Secondly, it can be seen that several investigations on the topic were carried out in a healthcare population or in a sample of people who have a medical condition, and this investigation did not take into account a population with these characteristics, which would be essential to analyze if the results found are replicated in that sample. Thirdly, the sample collection was developed as a self-report, which could affect the results because searching for personal approval is such a sensitive and intimate topic. For optimal results, it is recommended that the sample be collected through personalized interviews.

These findings constitute an important contribution to the study of sexual satisfaction, highlighting that both insomnia and anxiety predict their level of satisfaction. Therefore, if you want to increase the level of sexual satisfaction, it is crucial to take into account the quality of sleep and the concerns that the sexual partner has.

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