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Examination of the relationship between dimensions of sexual perfectionism and female sexual function and sexual performance anxiety among Iranian married women of reproductive age: a cross-sectional study

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Abstract

Background Perfectionism is a multidimensional personality trait that manifests itself through various aspects of life as well as sexuality. Yet, the specific nexus between perfectionism and women's sexual experiences continues to remain unaddressed. Hence, this research aimed to investigate the relationship between the dimensions of sexual perfectionism, sexual function, and sexual performance anxiety (SPA) among Iranian married women of reproductive age in Gonabad, Iran.

Method A cross-sectional study was conducted in Gonabad City in 2021, involving 450 women of reproductive age. Stratified sampling was used to select public healthcare centers, and participants were chosen via simple random sampling. Data were collected online through platforms like WhatsApp and Telegram, using the Multidimensional Sexual Perfectionism Questionnaire (MSPQ), Female Sexual Function Index (FSFI), and Brief Sexual Performance Anxiety Scale (BSPAS). The validity and reliability of these instruments were confirmed through content validity assessments and Cronbach's α. Hierarchical linear regression was performed using SPSS version 26, with the significance level set at $p < 0.05$.

Results Linear regression analysis indicated that self-oriented sexual perfectionism was positively associated with all FSFI domains, including desire, arousal, lubrication, orgasm, satisfaction, total FSFI ($p < 0.001$), and pain ($p < 0.01$). Partner-oriented sexual perfectionism was positively associated with satisfaction ($p < 0.05$). In contrast, partner-prescribed sexual perfectionism was negatively associated with all domains of FSFI, including desire, pain ($p < 0.05$), arousal, lubrication, total FSFI ($p < 0.001$), orgasm, and satisfaction ($p < 0.01$). Socially-prescribed sexual perfectionism

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was positively associated with desire and negatively associated with pain ($p < 0.05$). In particular, only partner-prescribed and socially-prescribed sexual perfectionism were positively associated with SPA ($p < 0.01$).

Conclusion The association found between dimensions of sexual perfectionism, sexual function, and SPA in Iranian women underscores the necessity for educational initiatives tailored to psychologists, psychiatrists, counselors, sexologists, and other healthcare practitioners. These programs would help to build a deeper insight into the origins of women's sexual complaints and identify and manage them within the context of marital relationships.

Keywords Multidimensional sexual perfectionism, Female sexual function, Sexual performance anxiety, Reproductive age women

Introduction

Women's sexual health is a critical element of overall well-being and life satisfaction, which also plays a pivotal role in maintaining long-term romantic relationships [1]. Sexual function has been identified as a key component of sexual health, influenced by a complex interplay of physiological, psychological, personal, interpersonal, societal, and cultural norms [2, 3]. Impairment in sexual function happens when any stage of the human sexual response cycle, including desire, arousal, orgasm, and satisfaction, is disrupted [4–6]. These disturbances may arise from various interconnected factors, whether or not physical symptoms are present, often due to underlying psychological causes [4, 7, 8]. For example, lower levels of arousal and satisfaction have been associated with self-critical thoughts and anxiety, which supports the undeniable role of psychological factors in sexual well-being [2, 8]. For that reason, studies recommend clinicians to acknowledge the importance of personality traits as much as consider other contributing factors in the evaluation and management of sexual dysfunction [2, 9].

Perfectionism is a personality trait characterized by the pursuit of flawlessness, aspiring for high-performance standards, being overly self-critical, and being concerned over others' evaluations [10, 11]. Recent research has increasingly focused on understanding the role of perfectionism as an essential factor influencing interpersonal dynamics, sexual function, and overall sexual health [12–21]. In that context, Hewitt and Flett conceptualized general perfectionism as a multidimensional structure reflecting on how perfectionism manifests internally, towards others, or through external pressures. Accordingly, their model distinguishes four dimensions of perfectionism: self-oriented, other-oriented, and socially prescribed [22]. Consequently, self-oriented perfectionism captures an individual's internal drive to achieve perfection by setting high personal standards and striving for flawlessness. In contrast, other-oriented perfectionism focuses on one's tendency to impose perfectionistic expectations and high standards onto those around them. Lastly, socially prescribed perfectionism is marked by the belief that others expect one to meet their high standards and expectations. Also, acceptance and approval by others are contingent upon meeting these external standards [22, 23].

Snell and Rigdon expanded Hewitt and Flett's multidimensional perfectionism model [22] to incorporate aspects related to sexual performance [24]. Thereby, Snell offered the concept of multidimensional sexual perfectionism divided into four dimensions: self-oriented, partner-oriented, partner-prescribed, and socially prescribed dimensions [24, 25]. Self-oriented sexual perfectionism refers to the individual's desire to be a perfect sexual partner and set high standards for themselves in their sexual role. In contrast, partner-oriented sexual perfectionism involves high standards and expectations that an individual applies towards their sexual partner. Partner-prescribed sexual perfectionism involves individuals perceiving that their partner demands perfection from them and they should fulfill these sexual expectations. On the other hand, socially prescribed sexual perfectionism arises from the belief that society or significant others impose high standards and expectations on one's sexual behavior. Therefore, individuals foster a sense of external pressure to fulfill societal ideals [24]. Notably, the latter two dimensions represent individuals' subjective beliefs and do not necessarily reflect the accurate expectations of others [19, 24].

Depending on a specific dimension, perfectionism may show varied and sometimes contrasting relationships with measures of psychological well-being [22]. Likewise, sexual perfectionism might also exhibit such associations with indicators of sexual well-being and sexual maladjustment [13, 14, 19, 20, 26]. In this regard, sexual perfectionism can be considered adaptive when it leads to behaviors that enhance sexual functioning, such as heightened desire, arousal, orgasm, or satisfaction. Conversely, when it results in disruption of sexual functioning, such as increased pain, anxiety, or reduced desire and arousal, it is considered maladaptive. Moreover, if a dimension of sexual perfectionism is associated with both actions that enhance and disrupt sexual functioning, it is assumed to have a mixed adaptive-maladaptive or ambivalent nature [14, 19, 20, 26, 27]. In light of the previous research findings, both general [28] and sexual perfectionism were related to increased sexual desire in

women [14, 19, 29]. On the other hand, negative relationships between dimensions of sexual perfectionism and domains of sexual functioning have also been proven [20, 26]. Due to these ambiguities, the specific link between perfectionism and sexuality remains inconclusive and requires further investigation [19, 20].

Sexual performance anxiety (SPA) is a common sexual concern that plays a critical role in the onset or recurrence of sexual dysfunction for both men and women [30–32]. Despite its indispensable role in sexual dysfunction, no specific treatment exists for it or comes across development. SPA has been estimated to affect nearly 9–25% of men and 6–16% of women worldwide. Among men, SPA contributes to conditions like premature ejaculation and psychogenic erectile dysfunction (ED). Among women, SPA leads to inhibiting sexual desire [32]. SPA is characterized by an individual's preoccupation with meeting their partner's expectations and overwhelming sensations of inadequacy in sexual performance [33]. Such excessive worry disrupts the normal process of the sexual response cycle, particularly in its early stages of desire, arousal, and orgasm [31]. Women who suffered from SPA demonstrated to be highly concerned about their body image, overlay monitor and evaluate their sexual performance, and often distracted away from sexual activity, which subsequently reduced their sexual desire [33, 34]. Over time, the absence of intrinsic arousal and pleasure intensifies their anxiety and turns the sensations of physical and sexual arousal into fear rather than pleasure [35].

Previous studies that investigated the relationship between perfectionistic traits and sexual function often enrolled college students who were not necessarily engaged in long-term committed relationships, had multiple partners, and included various sexual orientations. These factors limited the reliability of their assessments [13, 14, 19, 20, 26]. In contrast, married women with more profound relational experiences provide more consistent and authentic responses due to years of cohabitation and knowing their partner and their sexuality. As a result, they seem to offer a more reliable foundation for understanding sexual perfectionism within committed relationships. In addition to that, these studies advocated for additional inquiry into the long-term aftermaths of sexual perfectionism [14, 19]. Also, they suggested future research to explore mechanisms like SPA that may underlie the maladaptive dimensions of sexual perfectionism regarding female sexual function [19]. This gap in the literature is significant given the expanding body of research underscored the inevitable association between perfectionistic irrational beliefs, elevated sexual expectations, feelings of inadequacy as a sexual partner, and sexual dysfunctions. Such beliefs proved to stem from oneself, a partner, or societal pressure, which may play a part in increasing SPA and disrupting normal sexual functioning among women of reproductive age [12–15, 19–21, 29, 30, 32, 34–41].

Due to its significance for both clinical practice and research, this study aims to examine the relationship between the dimensions of sexual perfectionism, female sexual function, and SPA among married Iranian women of reproductive age in Gonabad City, Iran. Serving as a foundation for future research, the findings from this study offer a valuable snapshot of the current relationships between perfectionistic tendencies and sexual sequels. Considering all, we hypothesize that: (a) the dimensions of sexual perfectionism will be associated with different domains of female sexual function; (b) the dimensions of sexual perfectionism will be associated with SPA.

Methods

Participants and sampling

During the sampling phase, 621 individuals were invited to participate in the beginning. Among them, 53 were excluded based on the research criteria, while 93 declined to participate. Thereby, 480 participants were included in the study. During the study, 25 individuals chose not to continue participating in the research, leading to their exclusion. Eventually, this cross-sectional study involved 450 married women of reproductive age who met specific eligibility criteria and received care from public healthcare centers in Gonabad City. Inclusion criteria included ages between 16 and 49 years, Iranian nationality, residency in Gonabad city, having sexual activity during the last month, absence of underlying diseases such as diabetes, high blood pressure, heart disease, lung disease, tuberculosis, and epilepsy, no alcohol or drug addiction, no history of mental illness (or under current medical supervision), basic literacy skills to understand and answer questions, access to a mobile phone or tablet with internet, willingness to participate in the research, and not currently pregnant, breastfeeding, or in menopause. Participants were excluded if they declined to take part in the study. Drawing from a similar study and considering the variable of sexual perfectionism [14], a sample size of 415 individuals was initially estimated with a 95% confidence level, 80% test power, and a 0.15 margin of error. A stratified sampling approach was employed to select participants from public healthcare centers, while individuals were chosen using simple random sampling. Specifically, 189 individuals (42%) were recruited from center number 1, 174 individuals (38%) from center number 2, and 87 individuals (20%) from center number 3. Each participant received a link to the study's online questionnaire, accessible through WhatsApp and Telegram. Moreover, participants were assured that the first author was available to address any inquiries. The current study

was conducted utilizing the Porsline Electronic Platform, with informed consent being obtained from all participants on the initial page before the survey. The design of the Porsline Electronic Platform mandated participants to complete all questions before advancing to the subsequent page. Consequently, we did not have missing data. Additionally, the platform automatically excluded incomplete responses, ensuring no incidence of empty values in our dataset. The study protocol underwent review and approval by the school's ethics committee and the Research Ethics Committee (REC) of Gonabad University of Medical Sciences, Iran.

Measures

Sociodemographic and obstetric questionnaire

Table 1 represents presents the sociodemographic and obstetric characteristics of the participants. This questionnaire had a straightforward nature and was frequently used in various studies. Therefore, no test was conducted to confirm its reliability.

Multidimensional sexual perfectionism questionnaire (MSPQ)

In light of Stoeber's argument, Snell's multidimensional model of sexual perfectionism had a fifth dimension named "partner's self-oriented sexual perfectionism," which needed to be excluded. Accordingly, Stoeber questioned whether perceptions of others' self-oriented perfectionism accurately reflect an individual's sexual perfectionism. Consequently, this dimension was excluded from our study. After removing the partner's self-oriented sexual perfectionism dimension from Snell's MSPQ, Stoeber (2013) revised the instrument to focus on four distinct forms of sexual perfectionism. Using this updated version, we measured the following four facets of sexual perfectionism: self-oriented sexual perfectionism (e.g., "I always feel the need to be a "perfect" sexual partner"), partner-oriented sexual perfectionism (e.g., "I expect nothing less than perfectionism from my sexual partner"), partner-prescribed sexual perfectionism (e.g., "My partner expects me to be a perfect sexual partner"), and socially-prescribed sexual perfectionism (e.g., "If I am "perfect" as a sexual partner, then society will consider me to be a good partner"). Each category comprises six items, resulting in 24 items in the revised scale.

Table 1 Sociodemographic and obstetric characteristics of participants

Variable		Mean (SD)	*N*	%
Woman's age		30.84 (5.90)	----	----
Partner's age		35.70 (6.24)	----	----
Number of children		1.41 (0.90)	----	----
Sexual intercourse per week		2.28 (1.25)	----	----
Last delivery date (In year)		3.81 (3.68)	----	----
Marriage duration (In years)		15.74 (5.77)	----	----
Women's job	Household	----	265	58.9
	Employee		98	21.8
	Other		87	19.3
Partner's job	Self-employed	----	222	51.6
	Employee		179	39.8
	Other		39	8.9
Female educational level	High school or less	----	120	26.7
	Bachelor		265	58.9
	Master or Higher		65	14.4
Male educational level	High school or less	----	162	36.0
	Bachelor		203	45.1
	Master or Higher		85	18.9
Family's revenue level	Less than enough	----	63	14
	Enough		356	79.1
	More than enough		31	6.9
Contraceptive method	Oral Contraceptives Pills	----	17	3.8
	DepoProvera or Cyclofem		3	0.7
	Intra Uterine Devices		20	4.4
	Condom		175	38.9
	Tubectomy		5	1.1
	Vasectomy		4	0.9
	Withdrawal		168	37.3
	None		58	12.9

Responses are rated on a five-point scale ranging from 0 (Not at all characteristic of me) to 4 (Very characteristic of me). The cumulative scores for each dimension provide an overall measure of sexual perfectionism, ranging from 0 to 96. Higher scores indicate stronger tendencies toward a specific dimension of sexual perfectionism [20, 25]. MSPQ was previously validated by Snell & Rigdon, Stober et al. [19, 20, 25, 27]

Female sexual function
Our study employed Rosen's Female Sexual Function Index (FSFI) to assess six domains of sexual function over the past four weeks. The FSFI consists of 19 items: assessing Desire (2 items), Arousal (4 items), Lubrication (4 items), Orgasm (3 items), Satisfaction (3 items), and Pain (3 items). Participants rated each item on a five-point scale across various categories. According to Rosen (2000), domain scores are calculated by summing individual item scores within each domain and multiplying by the respective domain factor. The full-scale score is obtained by summing scores across all domains. Each domain has a maximum score of 6, while the total scale has a maximum of 36. A total score of 26 or lower is the cut-off for the scale. Higher scores within each domain indicate better functioning (e.g., increased desire, arousal, reduced pain). A score of 0 in any domain suggests no sexual activity in the preceding four weeks [42]. Keeping Meyer-Bahalburg and Dolezal's concerns in mind [43], participants who reported no sexual activity during this timeframe were excluded from the analysis. The validity and reliability of FSFI have been proven by Rosen and Mohammadi et al. [42, 44].

Sexual performance anxiety (SPA)
To measure SPA, we used the Brief Sexual Performance Anxiety Scale (BSPAS), developed and validated by Kochenour and Griffith (2020). This 8-item instrument measures SPA on a 4-point scale from 0 (No Anxiety) to 4 (Extreme Anxiety). The total score ranges from 0 to 32, with higher scores indicating greater intensity of SPA [43].

Validity and reliability of measures
Prior to our study, the validity and reliability of the MSPQ and BSPAS were confirmed within the Iranian female population. A comprehensive content validity assessment was conducted using both qualitative and quantitative methodologies to ensure the accuracy of these questionnaires. Following Brislin's principle, two proficient translators meticulously translated the questionnaires from English to Persian to ensure qualitative validation [45]. Subsequently, the translated texts were thoroughly reviewed for quality by another expert translator, creating a unified Persian version for each questionnaire. A second independent translator unfamiliar with the original questionnaires translated them back into English to ensure accuracy. Following that, the translated English versions were evaluated for conceptual consistency and translation quality through consultations with an English language expert. Moreover, ten professionals in psychology, reproductive health, and health education reviewed the questionnaires and provided constructive feedback. Quantitative content validity was assessed by calculating the content validity ratio (CVR) and content validity index (CVI), with a CVR value above 0.62, indicating that the item should be retained [46]. The internal consistency reliability of the MSPQ and BSPAS was evaluated using Cronbach's alpha coefficient based on responses from 20 participants. The Cronbach's alpha values were 0.87 for the MSPQ and 0.88 for the BSPAS, demonstrating the reliability of both instruments.

Data Analysis
Descriptive statistics were used to present continuous variables as means ± standard deviations (SD) and categorical variables as frequencies (percentages). The normality of the distribution of quantitative variables was assessed using the Kolmogorov–Smirnov test. Following statistical best practices, Pearson correlations were calculated for normally distributed variables, while Spearman correlations were used for non-normally distributed variables. In preparation for the regression analyses, the assumptions of linearity, normality, homoscedasticity, and independence of residuals were rigorously checked. Normality was verified using the Kolmogorov–Smirnov test, while plots of standardized residuals against predicted values were examined to confirm linearity and homoscedasticity. Multicollinearity was assessed using variance inflation factor (VIF) values, with all results falling within acceptable ranges, indicating no multicollinearity concerns. A hierarchical linear model was employed to control for potential confounders like age. In this model, age was entered in Block 1, followed by the dimensions of sexual perfectionism in Block 2, enabling us to control the influence of age. All statistical analyses were conducted using SPSS version 26, and a P-value of less than 0.05 was considered statistically significant.

Results
The sociodemographic characteristics of participants are presented in Table 1.

Descriptive statistics
According to the Kolmogorov-Smirnov test, none of the dimensions of sexual perfectionism, sexual function, or SPA followed a normal distribution. As a result, a non-parametric Spearman correlation test was employed to examine the relationships between these variables, with

significance set at $p<0.05$. Table 2 displays the means, Cronbach's α coefficients, and Spearman correlation coefficients for sexual perfectionism, sexual function, and SPA. Participants reported elevated self-oriented sexual perfectionism $M=12.9$, $SD=4.51$. The mean FSFI score was $M=27.05$, $SD=4.51$, and the mean SPA score was $M=10.88$, $SD=7.13$ (Table 2).

Correlations between sexual perfectionism and female sexual function

The Spearman correlation analysis supported our initial hypothesis, showing significant correlations between the dimensions of sexual perfectionism and female sexual function (Table 2). Each dimension of sexual perfectionism demonstrated distinct relationships. Self-oriented sexual perfectionism positively correlated with sexual desire, arousal, lubrication, orgasm, satisfaction, and the Total FSFI score. Partner-oriented sexual perfectionism showed positive correlations with sexual desire, arousal, and orgasm. In contrast, partner-prescribed sexual perfectionism negatively correlated with lubrication, satisfaction, pain, and the Total FSFI. Socially prescribed sexual perfectionism had a positive correlation with desire but a negative correlation with pain and the Total FSFI (Table 2).

Correlations between sexual perfectionism and SPA

The Spearman correlation analysis validated our secondary hypothesis, revealing significant correlations between the dimensions of sexual perfectionism and SPA. Specifically, only partner-prescribed and socially-prescribed sexual perfectionism showed statistically significant positive correlations with SPA (Table 2).

Regression analysis

Due to the substantial intercorrelations among the four dimensions of sexual perfectionism (Table 2), where a woman exhibiting high levels in one dimension often showed increased levels in the other dimensions, a hierarchical linear model was employed to account for their shared variance [47]. This approach was used to differentiate the unique relationships that each dimension of sexual perfectionism has with both female sexual function and SPA. Subsequently, hierarchical regression analyses were conducted in successive stages for each dependent variable. Furthermore, while our analysis did not reveal a statistically significant correlation between age and the dimensions of sexual perfectionism, we decided to control for age due to its potential influence [14, 19] and experts' recommendations in the field of perfectionism [21]. Therefore, in Step 1, age was introduced as a control variable. In Step 2, the four dimensions of sexual perfectionism were introduced simultaneously as independent variables while controlling for age. For clarity and simplicity in presenting the results, the influence of the control variable (age) was excluded, and the outcomes of Step 2 are shown in Table 3.

The final adjusted model of stepwise regression analyses indicated that self-oriented sexual perfectionism exhibited a more significant positive regression coefficient on desire ($\beta=0.187$, $p<0.001$), arousal ($\beta=0.291$, $p<0.001$), lubrication ($\beta=0.215$, $p<0.001$), orgasm ($\beta=0.277$, $p<0.001$), satisfaction ($\beta=0.289$, $p<0.001$), pain ($\beta=0.145$, $p<0.01$), and Total FSFI ($\beta=0.316$, $p<0.001$). Partner-oriented sexual perfectionism showed a positive coefficient for satisfaction ($\beta=0.020$, $p<0.05$). In contrast, partner-prescribed sexual perfectionism showed negative coefficients for several domains, including desire (β = -0.128, $p<0.05$), arousal (β = -0.185, $p<0.001$), lubrication (β = -0.220, $p<0.001$), orgasm (β = -0.132, $p<0.01$), satisfaction (β = -0.162, $p<0.01$), pain (β = -0.128, $p<0.05$), and Total FSFI (β = -0.210, $p<0.001$). Socially-prescribed sexual perfectionism had a positive coefficient for desire ($\beta=0.122$, $p<0.05$) and a negative

Table 2 Mean, standard deviation, and correlations between sexual perfectionism, female sexual function, and SPA

Variable	M (SD)	α	Correlation			
			1	2	3	4
Self-oriented SP (1)	12.9 (4.51)	0.83	-			
Partner-oriented SP (2)	9.95 (5.28)	0.87	0.433**	-		
Partner-prescribed SP (3)	9.00 (5.53)	0.87	0.297**	0.374**	-	
Socially-prescribed SP (4)	6.59 (6)	0.92	0.203**	0.357**	0.362**	-
Total FSFI	27.05 (4.51)	0.70	0.267**	0.096*	-0.118*	-0.059*
Desire	3.69 (0.72)	0.82	0.202**	0.139**	-0.007	0.135**
Arousal	4.18 (1.04)	0.78	0.259**	0.109*	-0.089	-0.019
Lubrication	4.54 (0.86)	0.71	0.169**	0.066	-0.149**	-0.073
Orgasm	4.74 (1.14)	0.80	0.247**	0.103*	-0.058	-0.060
Satisfaction	4.96 (1.15)	0.91	0.233**	0.054	-0.100*	-0.077
Pain	4.95 (1.07)	0.90	0.087	-0.018	-0.118*	-0.116*
SPA	10.88 (7.13)	0.88	0.050	0.085	0.193**	0.210**

*$p<0.05$, **$p<0.01$, ***$p<0.001$, SP = Sexual Perfectionism, SPA = Sexual Performance Anxiety, Mean, Standard Deviation, α Cronbach's coefficient

Table 3 Summary of hierarchical regression: multidimensional sexual Perfectionism Predicting female sexual function and SPA

Sexual perfectionism	Dependent Variable							
	Total FSFI	Desire	Arousal	Lubrication	Orgasm	Satisfaction	Pain	SPA
Self-oriented SP β	0.316***	0.187***	0.291***	0.215***	0.277***	0.289***	0.145**	-0.025
Partner-oriented SP β	0.062	0.064	0.066	0.078	0.065	0.020*	0.002	0-0.019
Partner-prescribed SP β	-0.210***	-0.128*	0-0.185***	-0.220***	-0.132**	-0.162**	-0.128*	0.152**
Socially-prescribed SP β	-1.395	0.122*	0-0.032	-0.066	-0.092	-0.083	-0.102*	0.173**
F-value	12.039	6.254	10.381	7.738	8.608	9.023	3.761	8.041
R^2	0.119	0.066	0.105	0.080	0.088	0.082	0.041	0.083

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$, SP = Sexual Perfectionism, SPA = Sexual Performance Anxiety, β = standardized regression coefficient, adjusted R^2 represents the proportion of variance in SP after controlling for women's age

regression coefficient for pain (β = -0.102, $p<0.05$). Both partner-prescribed and socially-prescribed sexual perfectionism had positive coefficients for SPA (β=0.152, $p<0.01$), (β=0.173, $p<0.01$) respectively (Table 3).

Discussion

This study is the first to examine the relationship between dimensions of sexual perfectionism, sexual function, and SPA among Iranian married women of reproductive age in Gonabad City, Iran. The results demonstrated that self-oriented sexual perfectionism was positively associated with various domains of female sexual functioning, including desire, arousal, lubrication, orgasm, satisfaction, Total FSFI, and pain, suggesting its mixed adaptive-maladaptive (ambivalent) nature. We also found that partner-oriented sexual perfectionism was solely positively associated with satisfaction, suggesting its adaptive nature. Previous studies proposed that both self-oriented and partner-oriented sexual perfectionism had an ambivalent nature. However, their proposal regarding the ambivalent nature of these two dimensions could be attributed to examining other aspects of sexuality, such as sexual esteem and sexual problems with self-blame, in addition to sexual function [20, 26]. Such instruments were not measured in our study.

Our findings demonstrated that partner-prescribed sexual perfectionism was negatively associated with all domains of female sexual functioning, including desire, arousal, lubrication, orgasm, satisfaction, pain, and Total FSFI, and positively associated with SPA. Accordingly, our finding suggests that partner-prescribed sexual perfectionism had an ambivalent nature concerning sexual functioning in women. These findings were not consistent with previous research, which identified partner-prescribed sexual perfectionism as the most maladaptive dimension of sexual function, showing negative associations with arousal, lubrication, and satisfaction, as well as a positive association with sexual anxiety [19]. Our results showed the ambivalent nature of socially prescribed sexual perfectionism, which was positively associated with desire and SPA while negatively associated with pain. Past studies recognized that partner-prescribed and socially-prescribed sexual perfectionism were the most maladaptive forms of sexual perfectionism that were both associated with escalating sexual anxiety [14, 19, 38].

To further explain our results, modern theories have attributed the adaptivity versus the maladaptation of perfectionism to its alignment with perfectionistic strivings (PS) and perfectionistic concerns (PC) [48, 49]. Perfectionistic strivings are associated with the constructive, goal-driven side of perfectionism, where individuals aim for high standards in a positive way. In contrast, perfectionistic concerns involve more harmful elements, such as fear of failure, self-criticism, and an obsession with making mistakes [48, 49], which, in turn, can trigger concurrent feelings of anxiety [50]. From this standpoint, while both self-oriented and partner-oriented sexual perfectionism are linked to apprehensions about committing sexual errors during sexual encounters [20], women seemed to find sexual satisfaction in these aspirations and concerns. Along the same lines, this sense of satisfaction can be achieved by acknowledging the constructive, goal-oriented aspects of perfectionism, mainly through self-oriented and partner-oriented sexual perfectionism. On the other hand, accelerating concerns about avoiding mistakes during intercourse and fears of facing adverse reactions from a partner or others to sexual imperfections, socially prescribed and partner-prescribed sexual perfectionism disrupt the female sexual response cycle [14, 19]. Undoubtedly, the maladaptive nature of these dimensions can be attributed to women's enduring concern regarding the criticism and approval of significant others [51] and their partners to a large extent, which in turn gives rise to their anxiety symptoms [50].

Cognitive distractions, in the context of both sexual and nonsexual, provide a theoretical perspective through which we can interpret our research findings more

clearly. In the same vein, the results of a systematic review identified several critical cognitive processing factors relevant to sexual functioning in either gender. Accordingly, sexual function can be disrupted by cognitive distraction, attentional focus, sexual cognitions, automatic thoughts, and perceived performance pressures [41]. Masters and Johnson (1970) introduced the phenomenon of "Spectatoring" or "Hypervigilance" as having cognitive distractions associated with self-focus and critical self-monitoring during sexual performance [33]. This circumstance results in the augmentation of SPA and a loss of attention to erotic cues originating from a sexual partner [31, 33]. The phenomenon of "Spectatoring" in women includes a sense of self-evaluation of appearance and self-consciousness during sex. Hence, the woman becomes an observer rather than a participant during sexual activity [52]. Sharifi et al. authenticated that Iranian married women often experience SPA as a consequence of intrusive thoughts during intercourse and too much focus on their husbands' reactions to gauge satisfaction [53]. Moreover, Kluck et al. inferred that partner-prescribed sexual perfectionism and socially-prescribed sexual perfectionism might contribute to female sexual dysfunction by increasing the phenomenon of "Spectatoring" or "Hypervigilance." In line with this, these two dimensions have led to poor sexual functioning by increasing self-consciousness about appearance during sexual activity, as seen in college-aged women. Conversely, partner-oriented sexual perfectionism was negatively related to concerns about body appearance during sexual activity [14]. Given this association, partner-oriented sexual perfectionism might contribute to women's increased satisfaction in alignment with our findings.

Regarding the positive association of self-oriented sexual perfectionism with pain and the negative association of partner-prescribed and socially prescribed sexual perfectionism with pain, we can only speculate on the possible underlying reason. On this matter, female sexual pain stems from a combination of factors [54, 55], including the adverse influence of societal narratives surrounding sexuality and the expectation that women should prioritize fulfilling men's sexual desires [55]. During instances of pain, the partner is often present, triggering and observing the woman's discomfort. Concomitantly, the unknowing reactions of partners are likely to play important roles in either provoking distress or perpetuating and intensifying sexual pain. Thus, partner's negative and overly solicitous responses to pain have been correlated with heightened pain intensity in women [54, 56–59].

The inconsistency observed between the findings of the present study and those of earlier research may stem from several factors. Compared to women of Western liberal cultures, Iranian women live in an Islamic society. In the context of Islamic and religious culture, discussions about sexuality are considered taboo, and explicit sexual dialogue about sexual issues or preferences with their partners is less common [60–63]. In parallel, the primary identified barriers to sexual talk with the spouse among Iranian married women were shyness, fear of stigmatization as promiscuous, rejection, expectations the spouse will read minds, lack of opportunities, and failure to gain sexual conversation skills in adolescence [60]. Relying on coping mechanisms to manage feelings of dependency, Iranian married women comply with their husband's derogatory sexual requests, such as oral and anal sex. Despite this unwillingness to submit to such sexual requests, they hesitate to express their anxiety due to fear of conflict, rejection, and abandonment [53]. In light of previous findings, watching pornographic movies contributed to the husband's unrealistic sexual expectations of the wife in the Iranian community [62].

To recapitulate, all the previously mentioned information is interconnected. We suggest that for sexually perfectionist women, sexual activity goes beyond mere experience of engagement, affection, or closeness and incorporates a blend of personal, interpersonal, sociocultural, and psychological elements. Thereby, additional theoretical frameworks or empirical studies are warranted to corroborate, substantiate, and broaden the understanding and interpretations of our findings. Although designing an academic curriculum is beyond the scope of this study, we believe that training programs are essential for educating sexologists, psychologists, psychiatrists, and other healthcare providers on the complex relationship between perfectionistic traits and women's sexuality and marital relationships. Investigating the origins of these fanciful and unrealistic expectations is also crucial [14, 29, 64]. Yet, if the perceived unrealistic sexual expectations of their husbands are validated, these women may benefit from counseling aimed at improving their communication about sex [13, 14]. Otherwise, psychodynamic group therapy would be beneficial for overcoming the negative attitudes and self-critical thoughts associated with perfectionism [65].

To highlight some of the strengths of the current study, we examined a larger sample of married women of reproductive age, providing a more robust indication of the relationship between sexual perfectionism and female sexual function compared to prior studies [14, 18–20]. Using Snell's MSPQ provided us with the advantage of distinguishing two specific forms of perfectionism in the context of sexuality: partner-prescribed and socially-prescribed sexual perfectionism [17, 20]. Additionally, our study complements existing research, as we were the first to employ the BSPAS, offering a unique contribution by specifically examining the relationship between sexual perfectionism and SPA [14, 19, 20].

Limitations and future directions

The present study has several limitations, including its cross-sectional and correlational nature. In that spirit, using brief self-report tools for measuring is inconclusive in capturing the origins of a person's intrinsic behavior and other conscious or unconscious factors that may contribute to their beliefs about how they should act in sexual situations [13]. Second, due to socio-cultural limitations in Iran, other aspects of sexuality [66] that might indirectly affect sexual function [14] could not be measured. Third, for study purposes, we only recruited women of reproductive age, ignoring women of other age groups and men. Fourth, recruiting only residing women in Gonabad City questions the fact that the present study could be generalized to all Iranian women of reproductive age. Lastly, we confirm that the absence of a prior comprehensive assessment of the internal structure of the MSPQ and BSPAS is a limitation of our study. Future research should evaluate the psychometric properties of these instruments, including calculating ordinal alpha, to ensure an authentic assessment of their reliability across diverse populations. Additionally, we recommend that future studies extend this research to other gender populations beyond reproductive age, to measure potential gender differences. We also suggest studying both couples to examine the unique associations between perfectionistic tendencies and marital sexual life.

Conclusions

In essence, the research underscores the associations between various dimensions of sexual perfectionism and domains of female sexual function and SPA among Iranian women. Save for pain, self-oriented sexual perfectionism exerted a positive association across all domains of sexual function, while partner-oriented sexual perfectionism was only associated with heightened satisfaction. Conversely, partner-prescribed sexual perfectionism was associated with worsened sexual functioning in all domains except for pain. Socially-prescribed sexual perfectionism was associated with improved desire but an escalation in pain. Ultimately, partner-prescribed and socially-prescribed sexual perfectionism were found to have the most significant positive association with SPA. These findings emphasize the importance of educational training for healthcare professionals to prepare them to diagnose and manage the complexities of sexual perfectionism within the context of marital relationships. By doing so, they will better understand and address these individuals' complaints and guide them toward appropriate solutions.

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Author contributions
Fatemeh Sadat Hosseini: Conceptualization and design, data curation, formal analysis, investigation and sampling, validation, methodology, resources, writing original draft preparation, review & editing, project administration. Nasim Khajavian: Formal analysis, methodology, and resources.

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Data availability
Availability of data and materialsThe data supporting the results of this study are available from Nasim. Khajavian upon reasonable request.

Declarations

Ethics approval and consent to participate
Following the Declaration of Helsinki, the study was reviewed and approved by the school's ethics committee, adhering to the ethical guidelines of the Research Ethics Committee (REC) of Gonabad University of Medical Sciences, Iran, under ethics approval number IR.GMU.REC.1400.080. Informed consent was obtained on the initial page, providing comprehensive information on the study's purpose, procedures, voluntary participation, anonymity, the innocuous nature of the study, and the participant's right to withdraw at any time.

Consent for publication
Not applicable.

Competing interests
The authors declare no competing interests.

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