

## FEMALE SEXUAL FUNCTION

## Culture and Sexuality: Cognitive—Emotional Determinants of Sexual Dissatisfaction Among Iranian and New Zealand Women

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### ABSTRACT

**Background:** Several studies have demonstrated that culture plays a fundamental role in individuals' beliefs, attitudes, and values toward sexuality, and influences their ability to enjoy sex. It follows that culture may influence sexual satisfaction or dissatisfaction.

**Aim:** To examine and compare cognitive—emotional variables related to women's sexual dissatisfaction in Iran and New Zealand.

**Methods:** In total, 196 Iranian women and 207 New Zealand women participated in the study, answering questionnaires evaluating dysfunctional sexual beliefs, automatic thoughts, emotional and sexual response during sexual activity, as well as sexual satisfaction.

**Outcomes:** Sexual beliefs were measured by the Sexual Dysfunctional Beliefs Questionnaire, thoughts and emotional responses were measured by the Sexual Modes Questionnaire, and sexual satisfaction was measured by the Sexual Satisfaction Index.

**Results:** Findings indicated that in both Iranian and New Zealand women, failure and disengagement thoughts, lack of erotic thoughts, and emotions of fear during sexual activity were significant predictors of sexual dissatisfaction. Besides these common predictors, results also indicated that sexual conservatism and women's sexual passivity beliefs, sexual abuse thoughts, and fear during sexual activity were significant predictors of sexual dissatisfaction in Iranian women. Beliefs of sexual desire and pleasure as a sin; age-related beliefs; and emotions such as sadness, disillusion, and hurt were significant predictors of sexual dissatisfaction in New Zealand women.

**Clinical Translation:** The present findings could facilitate a better understanding of cultural differences in the roles played by dysfunctional sexual beliefs, negative automatic thoughts, and negative emotions during sexual activity, and the value of these beliefs, thoughts, and emotions in predicting sexual dissatisfaction.

**Conclusions:** The strength of this study is in providing an examination of the role of culturally bound beliefs in predicting sexual dissatisfaction in women from different cultural backgrounds. Limitations include the lack of evaluation of psychological and interpersonal variables that may impact on women's sexual dissatisfaction. These findings suggest that there may be a role of culture in shaping beliefs, attitudes, and values toward sexuality; and provide evidence for the effect of cognitive—emotional variables in predicting women's sexual dissatisfaction.

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**Key Words:** Cultural Context; Sexual Beliefs; Automatic Thoughts; Emotional Responses; Sexual Dissatisfaction

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## INTRODUCTION

Beliefs, attitudes, and values related to sexuality differ across societies. Historical roots, philosophical traditions, family structures, and interpersonal relational differences may lead to the adoption of different beliefs regarding sexual activity.<sup>1</sup> For instance, in many traditional Asian societies sexuality is linked to procreation, whereas in modern Western societies sexuality is viewed more as recreational and often focuses on pleasure; these broad differences reveal how differences in belief systems may have significant implications for the individual.<sup>2</sup> In some Asian cultures such as China, sexuality as a subject is taboo and sex education in schools is traditionally minimal. Furthermore, parents and health professionals may be reluctant to discuss sexuality or to provide sexuality information.<sup>3</sup> In this cultural context, pre-marital sex is often forbidden. For women, virginity is often considered as important capital (sometimes assumed, but sometimes subject to a test on the wedding night by the presence of blood), and is seen as an indicator of purity and modesty.<sup>4</sup> Expressions of sexual behavior outside marriage are considered highly inappropriate in some collectivistic and patriarchal Asian cultures.<sup>5,6</sup> For instance, it may mean that if a woman is not a virgin, then no suitors may be interested in her.<sup>7</sup> It may be that in these cultures the expression of sexual behavior, particularly among women, is a threat to the highly interdependent social order as well as to the integrity of the family.<sup>5</sup> Research has shown that those living in some Asian cultures hold more conservative sexual attitudes and beliefs and demonstrate less sexual knowledge than those living in non-Asian cultures.<sup>6</sup> In Iranian society, the traditional culture of sexuality emphasizes purity and chastity underlying the family structure, and there is little official acceptance for freedom in sexual desire or for a removal of traditional moral restraints.<sup>8</sup> Social conduct and religiosity have significant effects on Iranian women's sexuality, and some Muslim women believe that sexual obedience and modesty, and inhibition of sexual expression, are characteristics of an ideal Muslim wife.<sup>9</sup> Studies have indicated that married Iranian women define sexual satisfaction as having no problem with their sex life, being loved by their husband, and the husband's sexual contentment,<sup>10</sup> and that their views are related to more general values and beliefs in life such as self-power gained within the framework of religion via sexual obedience.<sup>11</sup>

Culture plays a fundamental role in beliefs, attitudes, and values toward sex,<sup>12</sup> and these beliefs influence the ability to enjoy sex and thus may also influence sexual satisfaction.<sup>13</sup> Sexual satisfaction encompasses personal and relational components that include perceived compatibility of sexual desire,<sup>14</sup> and sexual beliefs, values,<sup>15</sup> and attitudes.<sup>16,17</sup> Bancroft and colleagues<sup>18</sup> conducted a national survey of U.S. women in heterosexual relationships and focused on a conceptual pattern of sexual satisfaction that included the interaction of factors at the individual, relationship, and broader culture levels (the latter encompassing widely shared beliefs and expectations about sexuality).

Beliefs play a key role in cognitive structures and are in general the result of learning and life experiences.<sup>19</sup> Beliefs related to

sexuality are impacted by cultural background, educational, and societal influence as well as by personal experiences.<sup>20,21</sup> Religious-based education and social expectations may promote conservative beliefs toward sexuality, and thus play a major role in developing dysfunctional sexual beliefs.<sup>21</sup>

Hawton<sup>22</sup> proposed a list of women's beliefs about sexuality that often act as pre-disposing factors for the development of sexual dysfunction, and which reflect a sexual double standard and sexual repression (eg, "any woman who initiates sex is immoral"; "it is wrong to have fantasies during intercourse"; "masturbation is dirty or harmful"). LoPiccolo and Friedman<sup>23</sup> furthered this work and added beliefs relating to the physical appearance and age of women (eg, "a woman's sex life ends with menopause") and women's beliefs about performance (eg, "women who can't have an orgasm quickly and easily have something wrong"; "normal women have an orgasm every time they have sex") that may also contribute to sexual dysfunction. Other studies have indicated that conservative religious beliefs,<sup>23</sup> body image-related beliefs,<sup>24</sup> and beliefs about the role of affection in sex<sup>25</sup> are factors that increase women's vulnerability to experience sexual dysfunction, and hence sexual dissatisfaction.

In summary, research findings suggest that women who present more negative sexual beliefs (in particular conservative, erroneous, or demanding beliefs) are more likely to report having sexual problems.<sup>26,27</sup> Based on these findings, Nobre<sup>28</sup> developed a cognitive-emotional model, proposing that dysfunctional sexual beliefs pre-dispose men and women to develop and maintain sexual difficulties. Abdolmanafi and colleagues<sup>29</sup> reported that sexual beliefs related to sexual desire as a sin (eg, "sex is dirty and sinful"; "experiencing pleasure during sexual activity is not acceptable in a virtuous woman") were a significant factor in women's sexual dissatisfaction. Furthermore, empirical studies regarding specific sexual dysfunctions have shown that female orgasmic disorder is related to body-image beliefs,<sup>27</sup> and vaginismus is associated with beliefs about aging,<sup>27</sup> and a conservative view of sexuality.<sup>30</sup>

According to Beck's<sup>19</sup> cognitive theory, automatic thoughts result from cognitive schemas or core beliefs that are activated in a particular situation. A growing body of research investigating the role of cognitive and emotional factors in sexual health has become available.<sup>31,32</sup> These studies have indicated that individuals with sexual dysfunction focus their attention on negative thoughts rather than on sexually erotic thoughts during sexual activity. It has been reported that in women these thoughts are mostly related to body-image concerns (eg, "I'm getting fat/ugly"; "I'm not feeling physically attractive"), failure and disengagement thoughts (eg, "I'm not getting turned on"; "I'm not satisfying my partner"), thoughts about being abused and disrespected by the partner (eg, "he is abusing me"; "he only wants to satisfy himself"), and lack of erotic thoughts during sexual activity.<sup>28,33-36</sup> Abdolmanafi and colleagues<sup>29</sup> reported corroborating evidence on the role of cognitive factors regarding sexual dissatisfaction. Their findings demonstrated that New Zealand women with more sexual dissatisfaction present significantly fewer erotic thoughts (eg, "my body turns him on"; "these

movements and positions are fabulous”), and more failure and disengagement thoughts during sexual activity. Furthermore, they reported that these thoughts were associated with negative emotions including worry, fear, and lack of pleasure and satisfaction.

Sexual satisfaction is a component of human sexuality considered to have a positive link to relational satisfaction, overall well-being, physical and psychological health, and quality of life.<sup>37,38</sup> Prevalence of sexual dissatisfaction in women has been reported to range considerably between regions and research studies; for example, 17.1% in Northern Europe, 22.1% in Southern Europe, 31% in the Middle East, 29.7% in East Asia, and 35.9% in Southeast Asia.<sup>39</sup> In Iran, results from studies have shown that 15.2%–50.4% of Iranian women reported sexual dissatisfaction in their relationship, and that 40% of betrayals and infidelity resulted from sexual dissatisfaction.<sup>40</sup> The Second Australian Study of Health and Relationships reported that 16% of women found their regular heterosexual relationships emotionally dissatisfying; and 21% of women reported the sexual activity they engaged in as “not pleasurable.”<sup>41</sup> Despite these findings, little is known about the role of culturally bound beliefs in predicting sexual dissatisfaction in women from different cultural backgrounds. Taking into account the major role of cognitive emotional variables on sexual dissatisfaction and dysfunction, this study aimed to better comprehend cultural differences in the role played by dysfunctional sexual beliefs, negative automatic thoughts, and negative emotions during sexual activity in predicting sexual dissatisfaction in 2 different cultures: Iran and New Zealand.

## METHODS

### Participants and Procedures

A total of 196 Iranian women and 207 New Zealand women participated in this study. For the Iranian sample, participants were recruited in the capital city, Tehran, between February and May 2016. The study was approved by the Ethics Committee of the Tarbiat Modares University in Tehran. Participants were recruited using a convenience sampling method in different regions of the city, including health centers and universities. After agreeing to participate in the study and signing the informed consent form, the participants were asked to complete the Iranian version of the Sexual Dysfunctional Beliefs Questionnaire (SDBQ), the Sexual Modes Questionnaire (SMQ), and the Sexual Satisfaction Index in a private location. No incentives were offered. For the New Zealand sample, participants were recruited from different regions of New Zealand between June and October 2015 using online advertising via social network sites and by flyers inviting people to complete an online survey after reading a participant information sheet and giving their consent by checking a box before they could progress with the survey questions. The study was approved by the Human Research Ethics Committee of the University of Auckland

(Auckland, New Zealand). This study was part of a PhD dissertation in psychology that was supported by Tarbiat Modares University in Tehran. Potential participants were excluded if they were not currently in a relationship with a partner, if they had not been sexually active in the past year, or if they were younger than 18 years of age. The demographic characteristics of each sample are shown in Table 1.

The Mann-Whitney *U* test was used to test between group differences in socio-demographic variables (Table 2).

The Mann-Whitney *U* test showed that there were significant differences between New Zealand and Iranian participants in terms of age and frequency of sexual activity (ie, Iranian women were older and more sexually active); however, no group difference was found in terms of education.

## MAIN OUTCOME MEASURES

### Sexual Satisfaction Index

The Sexual Satisfaction Index<sup>42</sup> is a 25-item measure assessing general satisfaction with the sexual component of one's current relationship, and includes both positively and negatively worded items. Scoring converts raw scores to a 100-point scale and higher scores are indicative of sexual dissatisfaction. This measure has shown excellent reliability (.92 Cronbach alpha value) and good discriminant validity (individuals presenting with vs without sexual problems).<sup>43</sup> The English-language version was

**Table 1.** Socio-demographic characteristics of the 2 samples

	New Zealand women		Iranian women	
	<i>n</i>	%	<i>n</i>	%
Age				
18–25 y	98	47.3	24	12.1
26–35 y	70	33.8	100	50.5
36–45 y	24	11.6	47	23.7
46–55 y	9	4.3	19	9.6
56–65 y	6	2.9	8	4
Educational levels				
Less than high school	7	3.4	11	5.6
High school and college graduate	66	31.9	44	22.2
Bachelor's degree	85	40	76	38.4
Master or post-graduate degree	36	17.4	60	30.3
PhD	13	6.3	7	3.5
Sexually active relationship				
Under 1 y	45	21.7	8	4
1–2 y	44	21.3	18	9.1
3–5 y	50	24.2	35	17.7
6–10 y	38	18.4	35	17.7
11–15 y	14	6.8	32	16.2
16–20 y	8	3.9	24	12.1
Over 21 y	8	3.9	46	23.2

**Table 2.** Mann-Whitney test: sample differences in age, education, and active sexual life

Variable	N	Mean rank	Sum of ranks	Mann-Whitney <i>U</i>	Z	Significance
Age	198	242.44	48,002.5	12,684.5	−7.017	.000
	207	165.28	34,212.5			
Education	198	213.34	42,241	18,446	−1.829	.067
	207	193.11	39,974			
Sexually active relationship	198	255.12	50,513	10,174	−8.876	.000
	207	153.15	31,702			

used with the New Zealand sample, and a Persian-language version of the questionnaire was used with the Iranian sample, demonstrating good reliability and validity.<sup>37</sup> The Cronbach alpha for the current study in both the New Zealand and Iranian samples was .92.

### Sexual Dysfunctional Beliefs Questionnaire

The SDBQ-Female Version<sup>8</sup> is a 40-item self-report instrument assessing sexual beliefs in women. This measure includes a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The SDBQ-Female Version evaluates 6 dimensions: body image—related beliefs (eg, “an ugly woman is not capable of sexually satisfying her partner”); age-related beliefs (eg, “after menopause women can’t reach orgasm”); sexual desire and pleasure as a sin (eg, “sex is dirty and sinful”); sexual conservatism (eg, “oral sex is one of the biggest perversions”); motherhood primacy (eg, “sex is meant only for procreation”); and affection primacy (eg, “love and affection from a partner are necessary for good sex”). An English-language version of the questionnaire was used for New Zealand women; a Persian-language version of questionnaire was used for Iranian women.<sup>44</sup> The previous research conducted during the validation of the SDBQ identified 6 dimensions in the Iranian female version: sexual conservatism and women’s sexual passivity (eg, “sex should happen only if a man initiates”); beliefs about masturbation (eg, “masturbation is not a proper activity for respectable women”); body-image beliefs; sexual desire and pleasure as a sin; age-related beliefs; and denying affection primacy (eg, “a successful professional career implies control of sexual behavior”).<sup>44</sup> Scores were computed as sums, and higher scores were associated with more dysfunctional sexual beliefs. In

past research,<sup>8,44</sup> this measure has shown excellent test-retest reliability, internal consistency, and discriminant validity. Internal consistency of the measure in the current study was satisfactory and Cronbach alpha was .88 and .97 in the Iranian and New Zealand samples, respectively.

### The SMQ

The SMQ-Female Version<sup>34</sup> is a 33-item self-report measure assessing automatic thoughts, emotional responses, and sexual responses during sexual activity. The automatic thoughts subscale includes 33 items that assess automatic thoughts and images presented during sexual activity. Participants rate the frequency (eg, from 1 [never] to 5 [always]) at which they have experienced specific automatic thoughts during sexual activity. The SMQ-Female Version comprises the following dimensions: sexual abuse thoughts; failure and disengagement thoughts; partner’s lack of affection; sexual passivity and control; erotic thoughts; and low self-body image thoughts. An English-language version of the questionnaire was used for New Zealand women, and a Persian-language version of the questionnaire was used for the Iranian cohort.<sup>45</sup> The Iranian version of the SMQ had a similar dimensional structure to the English-language version.

The emotional response component subscale is composed of 33 items assessing emotions during sexual activity. A list of 10 emotions is presented (ie, worry, sadness, disillusion, fear, guilt, shame, anger, hurt, pleasure, and satisfaction) and participants are asked to indicate their emotions for each automatic thought. Psychometric studies indicated excellent test-retest reliability and internal consistency.<sup>34,45</sup> In the present study, the overall Cronbach alpha coefficients for the SMQ in the New Zealand and Iranian samples were .97 and .93, respectively.

**Table 3.** Correlations between dysfunctional sexual beliefs and sexual dissatisfaction (Iranian women) (N = 196)

No.	Variable	1	2	3	4	5	6	7
1	Sexual conservatism and women’s sexual passivity	1						
2	Masturbation-related beliefs	.34*	1					
3	Age-related beliefs	.54*	.32*	1				
4	Sexual desire and pleasure as sin beliefs	.68*	.50*	.49*	1			
5	Denying affection primacy	.22*	.47*	.14 <sup>†</sup>	.29*	1		
6	Body-image beliefs	.46*	.25*	.41*	.37*	.07	1	
7	Sexual dissatisfaction	.55*	−.12	.38*	.29*	−.12	.33*	1

\**P* < .01.†*P* < .05.

**Table 4.** Correlations between negative automatic thoughts and sexual dissatisfaction (Iranian women) (N = 196)

No.	Variable	1	2	3	4	5	6	7
1	Failure and disengagement thoughts	1						
2	Low self-body image thoughts	.65*	1					
3	Sexual abuse thoughts	.79*	.54*	1				
4	Sexual passivity and control	.49*	.32*	.34*	1			
5	Lack of erotic thoughts	.47*	.35*	.45*	.23*	1		
6	Partner's lack of affection	.72*	.52*	.76*	.42*	.40*	1	
7	Sexual dissatisfaction	.74*	.53*	.74*	.36*	.62*	.62*	1

\* $P < .01$ .

### Statistical Analysis

In order to assess the ability of sexual beliefs, automatic thoughts, and emotions to predict women's sexual dissatisfaction in Iran and New Zealand, 2 hierarchical regression analyses were conducted. Firstly, Pearson correlation coefficients between all variables were calculated for each sample. Secondly, those variables that showed a statistically significant association with sexual dissatisfaction in each sample were included in the hierarchical regression analyses, to test which variables were the strongest statistical predictors of sexual dissatisfaction. Following Nobre's<sup>28</sup> cognitive model (Nobre, 2009), a 3-stage hierarchical multiple regression was conducted including sexual beliefs in step 1, automatic thoughts in step 2, and emotional responses in step 3.

## RESULTS

### Cognitive–Emotional Model of Sexual Dissatisfaction in Iranian Women

Pearson correlation coefficients between sexual dissatisfaction and sexual beliefs, negative automatic thoughts, and emotional responses were calculated (Tables 3–5, respectively).

Results from Table 3 indicated sexual dissatisfaction was significantly correlated with sexual conservatism and women's sexual passivity ( $r = .55$ ,  $P < .01$ ), age-related beliefs ( $r = .38$ ,

$P < .01$ ), body-image beliefs ( $r = .33$ ,  $P < .01$ ), and sexual desire and pleasure as sin beliefs ( $r = .29$ ,  $P < .01$ ).

It is evident from Table 4 that sexual dissatisfaction was significantly correlated with all of the dimensions of negative automatic thoughts, with coefficients ranging from .36 ( $P < .01$ ) to .74 ( $P < .01$ ).

Table 5 shows that sexual dissatisfaction was significantly correlated with all of the emotional responses except for hurt, with coefficients ranging from .14 ( $P < .05$ ) to .68 ( $P < .01$ ).

As indicated earlier, a 3-stage hierarchical multiple regression was conducted, with sexual dissatisfaction as the dependent variable and all significantly correlated cognitive and emotional dimensions as predictors. Dysfunctional sexual beliefs were entered at step 1 of the regression, negative automatic thoughts were entered at step 2, and emotional responses were entered at step 3. Hierarchical multiple regression showed that, among the 4 dysfunctional sexual beliefs entered at step 1, sexual conservatism and women's sexual passivity, and sexual desire and pleasure as sin beliefs, were significant predictors of sexual dissatisfaction ( $F = 24.25$ ,  $P < .001$ ), accounting for 34% of variation in sexual dissatisfaction. When negative automatic thoughts were added to the equation at step 2, there were statistically significant changes in  $R^2$  ( $F = 47.33$ ,  $P < .001$ ) and the model now explained 72% of the variance, with failure and disengagement thoughts, sexual abuse thoughts, and lack of erotic thoughts significantly predicting sexual dissatisfaction. Emotional

**Table 5.** Correlations between emotional responses and sexual dissatisfaction (Iranian women) (N = 196)

No.	Variable	1	2	3	4	5	6	7	8	9	10	11
1	Worry	1										
2	Sadness	.46*	1									
3	disillusion	.38*	.63*	1								
4	Fear	.15 <sup>†</sup>	.27*	.20*	1							
5	Guilt	.16 <sup>†</sup>	.20*	.23*	.33*	1						
6	Shame	.21*	.19*	.18 <sup>†</sup>	.37*	.20*	1					
7	Anger	.41*	.54*	.63*	.41*	.41*	.32*	1				
8	Hurt	.07	-.07	-.10	.04	-.02*	.09	-.01	1			
9	Pleasure	-.20*	-.08	-.14	-.16 <sup>†</sup>	-.12	-.14 <sup>†</sup>	-.30*	-.31*	1		
10	Satisfaction	.06	-.09	-.11	.03	-.03	.08	-.03	.99*	-.31*	1	
11	Sexual Dissatisfaction	.42*	.56*	.63*	.25*	.31*	.18 <sup>†</sup>	.68*	-.12	-.38*	-.14 <sup>†</sup>	1

\* $P < .01$ .<sup>†</sup> $P < .05$ .

**Table 6.** Hierarchical regression analysis assessing sexual dysfunctional beliefs, negative automatic thoughts, and emotional responses as predictors of Iranian women's sexual dissatisfaction

Variables	Step 1					Step 2					Step 3				
	B	SE B	$\beta$	t	P value	B	SE B	$\beta$	t	P value	B	SE B	$\beta$	t	P value
Sexual conservatism and women's sexual passivity	1.83	.28	.57	6.51	.000	.62	.21	.19	2.97	.003	.62	.21	.19	2.97	.003
Age-related beliefs	.84	.48	.13	1.76	.080	.43	.32	.06	1.33	.184	.48	.32	.07	1.52	.131
Sexual desire and pleasure as sin beliefs	-1.29	.57	-.19	-2.28	.024	-.42	.39	-.06	-1.06	.292	-.23	.40	-.03	-.59	.554
Body-image beliefs	.97	.75	.09	1.29	.199	.01	.51	.01	.01	.997	.03	.50	.01	.06	.954
Failure and disengagement thoughts						.80	.28	.22	2.87	.005	.60	.30	.20	1.96	.05
Low self-body image thoughts						.19	.31	.03	.61	.540	-.10	.34	-.02	-.29	.770
Sexual abuse thoughts						1.41	.31	.33	4.59	.000	.96	.40	.23	2.43	.016
Sexual passivity and control						-.22	.37	-.03	-.58	.562	.28	.42	.03	.66	.511
Lack of erotic thoughts						1.45	.26	.26	5.63	.000	1.58	.34	.29	4.59	.000
Partner's lack of affection						.15	.36	.03	.42	.672	.01	.42	.01	.01	.993
Worry											.64	.49	.06	1.32	.190
Sadness											.55	.57	.06	.96	.337
Disillusion											1.04	.93	.07	1.11	.267
Fear											3.28	1.48	.11	2.22	.028
Guilt											1.69	2.76	.03	.61	.540
Shame											-1.80	1.76	-.05	-1.02	.310
Anger											2.46	1.36	.14	1.80	.073
Pleasure											.67	.87	.05	.77	.440
Satisfaction											.02	.62	.01	.03	.972
R <sup>2</sup>	.34					.72					.75				
F	24.25					47.33					27.23				

**Table 7.** Correlations between dysfunctional sexual beliefs and sexual dissatisfaction (New Zealand women) (N = 207)

No.	Variable	1	2	3	4	5	6	7
1	Sexual conservatism	1						
2	Sexual desire and pleasure as a sin	.92*	1					
3	Age-related beliefs	.86*	.81*	1				
4	Body-image beliefs	.93*	.96*	.83*	1			
5	Denying affection primacy	.62*	.70*	.52*	.66*	1		
6	Motherhood primacy	.80*	.75*	.74*	.76*	.45*	1	
7	Sexual dissatisfaction	.13	.18 <sup>†</sup>	.15 <sup>†</sup>	.11	.17 <sup>†</sup>	.14	1

\* $P < .01$ .† $P < .05$ .

responses were entered at step 3, with the result that the equation now explained 75% of variance in sexual dissatisfaction; a significant change in  $R^2$  ( $F = 27.23$ ,  $P < .001$ ). At this step fear was the only significant predictor. When all independent variables were included in step 3 of the regression model, the most important predictors of sexual dissatisfaction were as follows: lack of erotic thoughts; sexual conservatism and women's sexual passivity; sexual abuse thoughts; fear; and failure and disengagement thoughts. As indicated above, they together accounted for 75% of the variance of sexual dissatisfaction. The results are shown in Table 6.

### Cognitive–Emotional Model of Sexual Dissatisfaction in New Zealand Women

Analyses (correlations and regression) were then performed for the New Zealand women.

Pearson correlation coefficients between sexual dissatisfaction and sexual beliefs, negative automatic thoughts, and emotional responses were calculated (Tables 7–9, respectively).

Results from Table 7 indicated sexual dissatisfaction was significantly correlated with sexual desire and pleasure as a sin ( $r = .18$ ,  $P < .05$ ) age-related beliefs ( $r = .15$ ,  $P < .05$ ), and denying affection primacy ( $r = .17$ ,  $P < .05$ ).

It is evident from Table 8 that sexual dissatisfaction was significantly correlated with all of the dimensions of negative automatic thoughts except for sexual passivity and control, with coefficients ranging from .15 ( $P < .05$ ) to .42 ( $P < .01$ ).

Table 9 shows that sexual dissatisfaction was significantly correlated with all of the emotional responses except for worry,

pleasure, and satisfaction, with coefficients ranging from .16 ( $P > .05$ ) to .40 ( $P < .01$ ).

The hierarchical multiple regression (Table 10) revealed that among the sexual dysfunctional beliefs entered at step 1, denying affection primacy was the only significant predictor of sexual dissatisfaction ( $F = 2.58$ ,  $P > .05$ ), accounting for 4% of variation in sexual dissatisfaction. When negative automatic thoughts were added to the equation at step 2, there were statistically significant changes in  $R^2$  ( $F = 9.39$ ,  $P < .01$ ) and the model now explained 30% of the variance, with failure and disengagement thoughts and lack of erotic thoughts significantly predicting sexual dissatisfaction. Emotional responses were entered at step 3, with the result that the equation now explained 47% of variance in sexual dissatisfaction; a significant change in  $R^2$  ( $F = 10.04$ ,  $P < .01$ ). It is worth noting that at this step sadness, disillusion, fear, and hurt were significant predictors of sexual dissatisfaction. When all independent variables were included in step 3 of the regression model, the most important predictors of sexual dissatisfaction were as follows: sexual desire and pleasure as a sin; age-related beliefs; failure and disengagement thought; lack of erotic thought; sadness; disillusion; fear; and hurt. As indicated above, they together accounted for 47% of the variance of sexual dissatisfaction.

## DISCUSSION

The concept of sexual dissatisfaction refers to a multidimensional experience involving thoughts, feelings, personal and socio-cultural attitudes, beliefs, and values that influence the

**Table 8.** Correlations between negative automatic thoughts and sexual dissatisfaction (New Zealand women) (N = 207)

No.	Variable	1	2	3	4	5	6	7
1	Sexual abuse thoughts	1						
2	Failure and disengagement thought	.89*	1					
3	Partner's lack of affection	.88*	.82*	1				
4	Sexual passivity and control	.86*	.78*	.83*	1			
5	Lack of erotic thought	.63*	.64*	.58*	.51*	1		
6	Low self-body image thought	.62*	.65*	.56*	.58*	.47*	1	
7	Sexual dissatisfaction	.18 <sup>†</sup>	.28*	.15 <sup>†</sup>	.13	.42*	.25*	1

\* $P < .01$ .† $P < .05$ .

**Table 9.** Correlations between emotional responses and sexual dissatisfaction (New Zealand women) (N = 207)

No.	Variable	1	2	3	4	5	6	7	8	9	10	11
1	Worry	1										
2	Sadness	.52*	1									
3	Disillusion	.23*	.29*	1								
4	Fear	.42*	.44*	.31*	1							
5	Guilt	.46*	.47*	.14 <sup>†</sup>	.55*	1						
6	Shame	.37*	.47*	.20*	.50*	.76*	1					
7	Anger	.40*	.59*	.49*	.53*	.43*	.48*	1				
8	Hurt	.38*	.53*	.50*	.67*	.48*	.48*	.71*	1			
9	Pleasure	.07	.14 <sup>†</sup>	.10	.33*	.17 <sup>†</sup>	.17 <sup>†</sup>	.16 <sup>†</sup>	.27*	1		
10	Satisfaction	.16 <sup>†</sup>	.21*	.16 <sup>†</sup>	.36*	.20*	.18*	.23*	.36*	.55*	1	
11	Sexual dissatisfaction	.02	.20*	.33*	.28*	.16 <sup>†</sup>	.22*	.35*	.40*	-.02	-.05	1

\* $P < .01$ .<sup>†</sup> $P < .05$ .

ability to enjoy sex.<sup>46</sup> The present study suggests that dysfunctional sexual beliefs, automatic thoughts, and emotional responses during sexual activity interfere with women's sexual satisfaction. The results of this study confirm the hypothesis that dysfunctional sexual beliefs act as pre-disposing factors for sexual dissatisfaction in different cultures, promoting negative automatic thoughts and emotions that interfere with sexual satisfaction. The findings further indicate that dysfunctional beliefs, negative automatic thoughts, and emotions vary across cultures. There are also some cultural specificities regarding the impact of these cognitive dimensions on sexual dissatisfaction—particularly in sexual dysfunctional beliefs.

Results indicated that Iranian women with sexual beliefs related to sexual conservatism and women's sexual passivity (eg, "sex is meant only for procreation") are more likely to report sexual dissatisfaction. In New Zealand women however, it was sexual beliefs related to sexual desire and pleasure as a sin (eg, "experiencing pleasure during sexual activity is not acceptable in a virtuous woman") and age-related beliefs (eg, "as women age the pleasure they get from sex decreases") that were most associated with sexual dissatisfaction. In Iranian society, women's sexual beliefs are strongly determined by religious and traditional teaching. These communicate that a woman's sexual role may be seen as a preserver of the sexual relationship, and women may be expected to avoid expressing their sexual preferences in sexual relations and instead to satisfy their husbands on any sexual occasion.<sup>47</sup> Furthermore, strict moral and rigid social conduct shape sexual beliefs, and restrained sexuality is considered as a value in Iranian women.<sup>48</sup> According to the traditional view, a "good" woman is passive, dependent, and submissive in response to sexual initiation from a man,<sup>13</sup> and women's sexuality has been reduced to marriage and reproduction.<sup>49</sup> Nobre<sup>28</sup> found that sexually conservative beliefs (eg, "masturbation is not a proper activity for respectable women"; "oral sex is one of the biggest perversions"; "the best gift a woman could bring to marriage is her virginity"; "orgasm is possible only by vaginal intercourse") are associated with sexual desire problems in

women. In addition, women with sexual desire problems have been found to more frequently report beliefs related to sexual desire as a sin and age,<sup>27</sup> which our findings from the New Zealand sample confirm. In short, the findings of the current study are in line with previous studies regarding the role of sexual beliefs in sexual problems and sexual dissatisfaction.<sup>29,50,51</sup>

In the present study, negative automatic thoughts exerted a considerable impact on sexual dissatisfaction. Failure and disengagement thoughts (eg, "how can I get out of this situation?"), sexual abuse thoughts (eg, "he only wants to satisfy himself"), and lack of erotic thoughts (eg, "making love is wonderful") were the most important predictors of sexual dissatisfaction in both Iranian and New Zealand women. This confirms findings from previous studies, which have shown the role of negative automatic thoughts in sexual dysfunction<sup>27,28,35</sup> and sexual dissatisfaction.<sup>29</sup> Some research has hypothesized that difficulties in processing sexual erotic stimuli during sexual activity create a lack of erotic thoughts, accompanied by an increased attentional focus on failure and disengagement thoughts.<sup>27</sup> Moreover, the tendency to display failure and disengagement thoughts, as well as a failure to focus on erotic stimuli, promotes a decrease in sexual satisfaction.<sup>28</sup> In line with previous studies, failure and disengagement thoughts, sexual abuse thoughts, and lack of erotic thoughts have been demonstrated in this study as the most important predictors of women's sexual desire<sup>51</sup> and sexual dissatisfaction.<sup>29</sup>

The findings from the present study indicate a significant influence of emotional responses during sexual activity upon sexual satisfaction; a finding in line with previous studies.<sup>27,29,36,45</sup> In the current study fear was the only important predictor of sexual dissatisfaction in Iranian women; while sadness, disillusion, fear, and hurt had significantly impacted New Zealand women's sexual dissatisfaction. Previous research findings have reported the role of fear as one of the main predictors of vaginismus and pain disorders; with individuals with pain disorders reporting more low self-esteem and body image, traumatic sexual experiences, and fear responses.<sup>29</sup> Notwithstanding the different emotional response patterns



**Table 10.** Hierarchical regression analysis assessing sexual dysfunctional beliefs, negative automatic thoughts, and emotional responses as predictors of New Zealand women's sexual dissatisfaction

Variables	Step 1					Step 2					Step 3				
	B	SE B	$\beta$	t	P value	B	SE B	$\beta$	t	P value	B	SE B	$\beta$	t	P value
Sexual desire and pleasure as a sin	-.77	.41	-.28	-1.90	.059	-1.47	.47	-.54	-3.15	.002	-1.65	.44	-.60	-3.70	.000
Age-related beliefs	1.37	.74	.23	1.85	.065	.97	.64	.17	1.51	.133	1.36	.58	.23	2.35	.020
Denying affection primacy	1.12	.52	.22	2.18	.031	-.13	.49	-.02	-.27	.789	-.37	.47	-.07	-.79	.432
Sexual abuse thoughts						-.11	.46	-.05	-.25	.804	-.19	.43	-.08	-.44	.662
Failure and disengagement thought						1.72	.69	.37	2.49	.014	1.92	.63	.41	3.03	.003
Partner's lack of affection						-.29	.52	-.08	-.56	.578	-.35	.47	-.09	-.73	.466
Lack of erotic thought						2.30	.42	.46	5.53	.000	2.40	.39	.48	6.13	.000
Low self-body image thought						.66	.55	.10	1.21	.227	.71	.53	.11	1.35	.177
Sadness											-1.17	.49	-.19	-2.39	.018
Disillusion											1.15	.48	.16	2.36	.019
Fear											1.74	.68	.21	2.57	.011
Guilt											-1.26	.72	-.16	-1.76	.080
Shame											.10	.66	.01	.15	.878
Anger											-.05	.92	-.00	-.05	.958
Hurt											1.83	.72	.26	2.54	.012
R <sup>2</sup>	.04					.30					.47				
F	2.58					9.39					10.04				

shown by Iranian and New Zealand women in the current study, it appears that negative emotional responses (eg, sadness, disillusion, and hurt) may exhibit an inhibitor effect over the sexual response, decreasing sexual satisfaction. This confirms the finding by Abdolmanafi and colleagues,<sup>29</sup> who found that negative emotions such as worry, fear, and lack of pleasure and satisfaction play a pivotal role in women's sexual dissatisfaction.

The present study had some limitations. These findings only examined cognitive—emotional variables and do not include other variables that may exert an important impact on women's sexual dissatisfaction (eg, psychological variables, relationship variables, individual characteristics, medical status). In addition, these findings did not include other types of relationships (eg, dating relationship, extra-dyadic, homosexual relationship), so we cannot conclude that these associations would be present in other types of relationships. We recommend that there should be replication of the study, using larger samples and focusing on other different cultures, in order to verify the findings reported here.

Despite these limitations, the present study supports the effect of cognitive—emotional variables on women's sexual dissatisfaction in different cultures. The present findings have important implications for the assessment of sexual dissatisfaction, by helping to better comprehend the role of cultural sexual beliefs and highlight the role of culture in shaping beliefs, attitudes, and values toward sexuality.

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