

## PSYCHOMETRICS

## Development and Validation of the Chinese Version of The Masturbation Beliefs Scale



Zhengjia Ren, MD, MPH, PhD,<sup>1</sup> Yanhong Liu, MA,<sup>2</sup> and Jianjun Deng, MD, PhD<sup>3</sup>

## ABSTRACT

**Background:** Negative experiences of and beliefs regarding masturbation frequently affect people's psychological well-being and health behaviors, but there is currently no specific assessment tool to measure Chinese people's beliefs about masturbation.

**Aim:** The goal of the present study was to develop a brief scale (the Masturbation Beliefs Scale, BMS) for Chinese university students.

**Methods:** The BMS was developed and administered online to 2 different samples, with a total sample of 3,231 respondents (1,527 males and 1,704 females). The items were formulated based on previous qualitative research data. Exploratory and confirmatory factor analyses were performed.

**Outcomes:** The BMS scale contains 3 dimensions with good internal consistency and construct validity, which can well measure Chinese people's belief about masturbation.

**Results:** The results of the two samples showed that the 17-item culturally based BMS demonstrated good internal consistency and construct validity. Three factors capturing university students' beliefs regarding masturbation emerged. The 3 factors were labeled beliefs about male masturbation (BAMM), beliefs about female masturbation (BAFM), and negative affect toward masturbation (NATM). The participants' culturally based masturbation beliefs were negatively related to independent self-construal and sexual compulsivity. In addition, their culturally based masturbation beliefs consistently predicted their likelihood of premarital sexual behavior.

**Clinical Translation:** Clinicians and researchers could utilize this culturally sensitive instrument to evaluate individuals' experiences of masturbation, which could help clinicians deliver efficacious sex therapy and sexual education to individuals who have misconceptions or phobias regarding masturbation.

**Strengths and limitations:** The scale is an innovative tool that measures culturally relevant beliefs regarding masturbation among Chinese students. A limitation of this study is that several constructs were measured by single questions. This may attenuate the estimated correlation since single items are less reliable than multiple-item scales.

**Conclusion:** The present research demonstrates that a culturally sensitive scale is necessary to understand the culturally based values that influence university students' beliefs regarding masturbation and sexual behavior. **Ren Z, Liu Y, Deng J. Development and Validation of the Chinese Version of The Masturbation Beliefs Scale. Sex Med 2022;10:100501.**

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**Key Words:** Beliefs; Masturbation; Scale development; Factor analysis; Culture

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<sup>1</sup>Department of Clinical Psychology, The Third Affiliated Hospital of Chongqing Medical University, Chongqing, China;

<sup>2</sup>Department of psychology, Hebei University of Chinese Medicine, Hebei, China;

<sup>3</sup>Institute of Developmental Psychology, Beijing Normal University, Beijing, China

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## INTRODUCTION

There has been a spate of research on sexual behavior nationally and internationally, but research that focuses on beliefs related to masturbation is rare. Masturbation is a suboptimal outlet for sexual tension and compensates for the unavailability of partnered sex.<sup>1</sup> Some researchers have stated that masturbation is an effective strategy to improve sexual health, release sexual desire, reduce unwanted pregnancy, prevent sexually transmitted diseases and enjoy the pleasure of sex, which is important for healthy sexual development.<sup>2</sup> Previous studies found that erectile function and erection hardness during masturbation are crucial indicators of male sexual function.<sup>3</sup> However, masturbation, as an important topic in healthy sexual development, has been met with silence and ambivalent attitudes in sexual education in schools as well as in scientific communities worldwide.

Studies indicate that masturbation, a normal behavior, is considered pathological, immoral, insane, unhealthy, and even unethical among the social masses due to varied social, cultural, and religious traditions.<sup>4,5</sup> Pascoal and colleagues noted that men and women tend to internalize mainstream negative beliefs and ideas about sexuality from their sociocultural background.<sup>6</sup> These internalized beliefs are not only reflected in their negative attitudes, feelings, and experiences about masturbation but also deeply affect their daily sexual practices and sexual health. Such evidence is well established in the literature: individuals' negative beliefs toward masturbation have been linked to higher sexual inhibition, less sexual desire, less masturbation frequency, depression, negative effects immediately postmasturbation, sexual dissatisfaction with a partner, psychological disturbance, erectile dysfunction, and other sexual dysfunctions.<sup>7-9</sup> More importantly, cultural values play a pivotal role in sexual concepts and may cause pathology by creating negative beliefs and feelings that interfere with normal sexual function. For instance, Dhat syndrome represents a conglomeration of multiple psychosomatic symptoms related to semen loss. It is a culture-bound syndrome related to masturbation in India, where the culture regards sexual activity as a duty rather than a pleasurable activity and holds that the loss of semen could damage one's health; this belief often leads to guilt and anxiety about semen loss due to masturbation.<sup>10</sup> Ajish G Mangot et al. (2017) found that more than half of Indian medical interns believe that semen loss can cause a reduction in the size of the penis and physical weakness and can decrease sexual prowess.<sup>11</sup> Negative beliefs regarding masturbation also prevail in China. According to Chinese culture, masturbation can cause shenkui (ie, kidney insufficiency or weakness) and neurasthenia and can even reduce longevity. Therefore, concerns regarding energy or kidney deficiency resulting from the excessive excretion of semen can result in feelings of panic regarding masturbation and attempts to abstain from it.<sup>12,13</sup> Colonnello and Jannini proposed that according to the Chinese philosophical concept of yin and yang, women are regarded as an inexhaustible source of yin (ie, negative, passive, weak, destructive, cold forces identified with the female figure

and the night), while men are thought to possess only a limited supply of yang (ie, positive, active, strong, constructive, warm forces identified with the male figure and the day) and that masturbation could cause a loss of yang, which might jeopardize the male's vitality.<sup>14</sup> In Taoist medical philosophy, jing (精; ie, sperm, spiritual energy) resides in the kidneys. Loss of sperm is believed to damage one's health because the reproductive and sexual systems are linked with this spiritual energy, whose loss could result in a sexual performance-related syndrome called shenkui (ie, 肾亏; kidney deficiency).<sup>14</sup> This problem. Influenced by these internalized beliefs, an increasing number of individuals have joined an online community that advocates that masturbation is evil, unhealthy, and immoral and thus must be avoided.<sup>15,16</sup> Xie and Zeng (2011) conducted a study involving 251 Chinese high school students from the Jino ethnic subgroup and found that approximately 45.8% claimed that masturbation was abnormal and 21.5% claimed that masturbation was obscene and harmful.<sup>17</sup> Jiao et al. found that masturbation is associated with anxiety, somatic and hysteric symptoms, fatigue, urination discomfort, urethral burning-like pain, and other psychological and reproduction health conditions in Chinese university students.<sup>18</sup> Moreover, negative beliefs regarding masturbation fueled by cultural ideology may affect individuals' wellbeing and health behaviors.<sup>19,20</sup>

Beliefs about masturbation have been studied in Western cultural contexts. The most significant problem with the application of Western-developed scales to Chinese studies is the lack of cultural sensitivity and the failure to capture constructs in Chinese contexts. These scales may insufficiently assess beliefs toward masturbation in respondents who are deeply influenced by Taoism and Chinese traditional philosophy. We chose to conduct qualitative assessments to explore features of participants' knowledge, experiences, motivations, and beliefs that might have been overlooked in previous research. For this reason, our work on developing a masturbation scale is grounded in a phenomenographical perspective to understand masturbation from an "insider's" perspective, which can be achieved in qualitative research through conversations with participants, and to develop hypotheses to determine core themes and create items for a multidimensional scale.<sup>21</sup> We further explored the validity and reliability of this new multidimensional scale. This study considers the following research questions: (1) What are the Chinese beliefs about masturbation? (2) What is the scale's reliability, construct validity, and concurrent validity?

## STUDY 1

### Methods

This study seeks to provide in-depth understanding of Chinese individuals' experiences of and beliefs regarding masturbation by adopting a mixed-methods paradigm. A qualitative interview was conducted first to obtain key information from the participants in a specific sociocultural context that can be used to explore concepts and identify hypotheses.<sup>21</sup> Purposeful sampling

was used to locate information-rich interview subjects in regard to their experiences of and beliefs regarding masturbation. The interview transcripts were analyzed using the constant comparative method to identify the common themes related to individual's experiences and beliefs regarding masturbation.<sup>22</sup> The interviews ranged in duration from 30 to 90 minutes, with an average length of 51 minutes. The researchers used the inductive approach to develop themes through close examination of the data from transcripts to identify common themes or patterns that emerged repeatedly. The data analysis process consisted of the following steps. The first step was to become familiar with the data; the second step involved generating the initial codes; and the third step involved grouping codes into themes and then reviewing, revising and finalizing the major themes.<sup>23</sup> Three major themes emerged from the data: beliefs regarding female masturbation, beliefs regarding male masturbation, and negative affect toward masturbation. Then, the proposed scale items were adopted from clients with phobias regarding masturbation from the qualitative interview. The initial 28 items addressed experiences of masturbation. To ensure the content validity and improve clarity, 3 psychologists, 2 psychiatrists, and 2 urologists worked together to review the items. After the items were reviewed and any items were redundant, unclear, or irrelevant were removed, 21 items were left in the initial item pool. For all 21 items, a 5-point response scale ranging from 1 (strongly disagree) to 5 (strongly agree) was used to increase the response rate and response quality and to reduce respondents' "frustration level".<sup>24</sup> All items were positively worded. A short

demographic questionnaire was developed to gather information from the participants, namely, their age, gender, grade, family income, place where they grew up (village, town or city), and sibling status (only child or have siblings).

The devised scale was then sent to the participants. A total of 1,645 students (70.3% male, 29.7% female) aged between 16 and 26 years from one technological university took part in this cross-sectional study. The participants were invited to complete a survey on "beliefs about masturbation in university students" and were informed that the research aimed to evaluate their attitudes toward and experiences of masturbation, that the questions would be of a sexual nature and that they could decide whether they wanted to continue to the questionnaire. If the students were willing to participate in the study, then they provided consent and completed the questionnaires anonymously. They could stop or quit the study without facing any repercussions at any time. For this cross-sectional study, the students were invited to complete the questionnaires online either during the break in their courses or after they returned home. This administration approach allowed participants to complete the questionnaire in comfort and privacy at the places and times of their choosing. Due to the recruitment methodology, the response rate was not determined. The sample characteristics are shown in Table 1. The study was approved by the Institutional Review Board of Hebei University of Chinese Medicine, and all protocols were carried out in accordance with the Declaration of Helsinki. Given that the quantitative

**Table 1.** Demographic characteristics of the participants

Overall	N (%) <sup>*</sup>		N (%) <sup>†</sup>	
	1645 (100)		1586 (100)	
Gender	Male	Female	Male	Female
	1156 (70.3)	489 (29.7)	371 (23.4)	1215 (76.6)
Mean age (M+SD)	18.92 + 1.10	18.97 + 1.09	19.64 + 1.21	19.38 + 1.13
Annual household income (CHN\$)				
≤\$50000	477 (41.3)	202 (41.3)	142 (38.3)	546 (44.9)
\$50001-\$100000	400 (34.6)	162 (33.1)	132 (35.6)	419 (34.5)
\$100001-\$200000	194 (16.8)	88 (18)	62 (16.7)	191 (15.7)
>\$200000	85 (7.4)	37 (7.6)	35 (9.4)	59 (4.9)
Education				
Freshman	928 (80.3)	325 (66.5)	139 (37.5)	446 (36.7)
Sophomore	122 (10.6)	67 (13.7)	156 (42)	478 (39.3)
Junior and above	106 (9.2)	97 (19.8)	76 (20.5)	291 (24)
Sibling status				
Only child in family	469 (40.6)	138 (28.2)	137 (36.9)	249 (20.5)
Has siblings	687 (59.4)	351 (71.8)	234 (63.1)	966 (79.5)
Area where student grew up				
City	255 (22.1)	106 (21.7)	79 (21.3)	216 (17.8)
Town	307 (26.6)	145 (29.7)	103 (27.8)	297 (24.4)
Village	594 (51.4)	238 (48.7)	189 (50.9)	702 (57.8)

<sup>\*</sup>Demographic characteristics of the participants in the exploratory factor analysis (N = 1645)

<sup>†</sup>Demographic characteristics of the participants in the confirmatory factor analysis (N = 1586)

study was conducted anonymously, if the participants volunteered to participate after reading our study introduction, it would be regarded as their consent to participate in the study, and they could also withdraw from the study at any time. For the participants of qualitative interview, they completed informed consent and completed the interview after they were familiar with our purpose. The confidentiality and privacy of the participants were maintained.

## Statistical Analysis

First, the factor structure and reliability of the developed 21-item instrument were assessed. After the completion of the data screening using SPSS version 22.0 (SPSS Inc., Chicago, IL, USA), an exploratory factor analysis (EFA) (exploratory maximum likelihood factor analysis) was performed to evaluate the initial factor structure of the scale by using SPSS version 22.0 (SPSS Inc., Chicago, IL, USA). Oblique rotation (normalized direct oblimin rotation) was used, as there was strong reason to believe that the factors would be correlated (as the factors were related dimensions of the underlying construct of interest), and factor loadings below .40 were suppressed based on Brown's recommendation.<sup>25</sup>

## RESULTS

The initial solution produced three factors with eigenvalues above 1 that explained 71.04% of the variance. A total of 3 items that either cross-loaded or did not loadings were eliminated: (1) Female masturbation increases libido (女性自慰会让性欲增强); (2) Masturbation can be demoralizing (自慰会让人精神萎靡不振); and (3) Female masturbation can lead to gynecological diseases (女性自慰会导致妇科疾病).

The result was an interpretable, three-factor solution accounting for 71.04% of the variance. Each of the 17 items had moderate to high factor loadings ranging from .478 to .867. The first factor, labeled beliefs about male masturbation (BAMM), contained 8 items, with factor loadings ranging from .478 to .826. The second factor, labeled beliefs about female masturbation (BAFM), contained 4 items, with factor loadings ranging from .799 to .849. The third factor, negative affect toward masturbation (NATM), contained 6 items, with factor loadings ranging from .634 to .867. The items and their factor loadings are shown in Table 2. The reliability estimates for each factor were high— $\alpha=.914$  for Factor 1,  $\alpha=.926$  for Factor 2, and  $\alpha=.914$  for Factor 3—revealing the high internal consistency of each subscale. The Cronbach's alpha for the overall scale was .939, also indicating the excellent reliability of the overall scale. No corrected item—subscale correlation values fell below .30; thus, all 17 items were retained to be included in the final scale. In line with Covert and Craiger's (2000) recommendations, we included the 2 indices considered most important for determining model fit: the root mean square error of approximation (RMSEA) and the comparative fit index (CFI). We also considered the goodness-

**Table 2.** Items and factor loadings

Items	Factor		
	MBTM	NATM	FBTM
1. 男性自慰会影响降低免疫力 (Male masturbation can lower one's immunity)	.700		
2. 一滴精十滴学, 自慰伤身 (One drop of semen is equal to ten drops of blood, and masturbation is harmful to the body)	.769		
3. 男性自慰会导致肾亏 (Male masturbation can lead to <i>shenkui</i> )	.829		
4. 自慰会影响以后夫妻生活质量 (Masturbation can affect the quality of a couple's sex life in the future)	.795		
5. 男性自慰会影响以后生育功能 (Male masturbation can affect later reproductive function)	.715		
6. 男性自慰会影响精子质量 (Male masturbation will affect the quality of sperm)	.771		
7. 精液的流失会导致阳气的衰竭 (The loss of semen can lead to the depletion of Yang/Qi invigoration)	.762		
8. 男性自慰会让性欲减弱 (Male masturbation reduces libido)	.480		
10. 女性自慰会影响以后怀孕 (Female masturbation can affect later pregnancy)			.822
11. 女性自慰会影响以后的夫妻生活 (Female masturbation will affect the future of the couple's sex life)			.802
12. 女性自慰会影响以后生育功能 (Female masturbation will affect later reproductive function)			.852
13. 女性自慰会影响卵子质量 (Female masturbation affects egg quality)			.808
17. 自慰是一种让人非常可耻的行为 (Masturbation is a very shameful act)		.855	
18. 自慰是一种不道德的行为 (Masturbation is an immoral act)		.871	
19. 自慰是一种恶习, 需要戒除 (Masturbation is a vice that needs to be given up)		.770	
20. 自慰是一意志力/自控力薄弱的体现 (Masturbation is a sign of weak willpower/self-control)		.684	
21. 自慰是一种罪恶的行为 (Masturbation is a sinful act)		.846	

BAMM = Beliefs about male masturbation; BAFM = beliefs about female masturbation; NATM = negative affect toward masturbation.

of-fit index (GFI), which is commonly considered in confirmatory factor analyses (CFAs).<sup>26</sup> CFI and GFI values greater than .95 indicate a good fit, and values greater than .90 are considered satisfactory.<sup>27</sup> For the RMSEA, values of .05 or less indicate a close fit, and values of up to .08 represent reasonable errors of approximation.<sup>25</sup> The fit indices for the three-factor solution also indicated a good fit, with the following values: RMSEA=.045, NNFI=.985, and CFI=.989 (the RMSEA, nonnormed fit index (NNFI), and CFI are statistics measuring the level of acceptable fit of the model). The values on this initial scale showed scores within the thresholds, indicating an acceptable fit.

## STUDY 2

### Methods

A subsequent study was conducted with a different sample to examine the reliability, construct and convergent validity and to validate the scale structure and determine the best-fitting model

from the factor solutions analyzed through EFA. A total of 1,568 students (23.4% male, 76.6% female) aged between 16 and 28 years from one medical university took part in this study. The setting of the investigation and the ethical requirements for the second study were the same as those in study 1. Criterion-related validity was addressed by assessing the relationships of the participant scores on the new instrument to the participant scores on the self-construal, sexual compulsivity, and premarital sex measures. We expected there to be weak to moderate relationships between the scores. The study was approved by the Institutional Review Board of Hebei University of Chinese Medicine.

**Psychosocial Measures**

**Self-construal.** One variable tested was the perceived sense of independence, that is, the extent to which an individual makes decisions based on his or her own choice. Each subject rated himself or herself from 1 (completely not based on my own choice) to 10 (completely based on my own choice).

**Sexual behavior.** One item asked whether (yes or no) the respondent engaged in premarital sexual behavior: (1) Have you had sexual intercourse before?

**Sexual compulsivity.** One item assessed the respondent’s degree of sexual compulsivity. The item asked the respondents to evaluate themselves regarding the extent to which they often had sexual urges that they wanted to satisfy. The evaluation ranged from 1 (totally do not have such impulses) to 10 (have very strong impulses).

**Statistical Analysis**

To validate the scale structure and determine the best-fitting model from the factor solutions analyzed through the EFA, we conducted CFAs by using Amos version 7.0 (SPSS Inc., Chicago, IL, USA). The participants’ scores for self-construal, sexual compulsivity, and premarital sex on the new instrument were calculated. Pearson correlations were used to evaluate the effect size at a significance level of  $P < .05$ .

**RESULTS**

**Confirmatory Factor Analysis (CFA)**

The EFA showed that the questionnaire had a three-dimensional structure. To further verify the fit between the data and the theoretical model, MPLUS7.0 was applied to carry out CFA and the maximum likelihood estimation method. The  $X^2$  statistic for the model was significant,  $X^2 (122) = 544.290$ ,  $P < .001$ , with an acceptable  $X^2/df$  ratio (4.461). Moreover, the fit indices (CFI = 0.979, TLI = 0.970, and SRMR = 0.043) indicated a good model fit, whereas RMSEA=0.047 indicated a good model fit. Finally, both factors as well as the sum scores of the subscales and the whole scale indicated excellent reliability in the current sample (BAMM subscale: Cronbach’s alpha = 0.895; BAFM subscale: Cronbach’s

**Table 3.** Associations of the masturbation scale with the hypothesized correlates

	BAMM	BAFM	NATM	Whole scale
Compulsivity	.012	-.112 <sup>†</sup>	-.232	-.123 <sup>†</sup>
Self-Construal	-.079*	-.070*	-.104 <sup>†</sup>	-.104 <sup>†</sup>

\* $P < .01$ .

<sup>†</sup> $P < .001$ . N = 1586.

BAMM = Beliefs about male masturbation; BAFM = beliefs about female masturbation; NATM = negative affect toward masturbation.

alpha = 0.904; NATM subscale: Cronbach’s alpha = 0.919; whole scale: Cronbach’s alpha = 0.922).

**Associations with the Hypothesized Correlates**

The relationships between the selected variables and the three subscales are summarized in Table 3. The hypothesized correlates are shown in Table 3.

**Independent self-construal.** As hypothesized, the scores of the whole scale ( $r = -.104$ ,  $P < .001$ ), the BAMM subscale ( $r = -.079$ ,  $P < .01$ ), the BAFM subscale ( $r = -.07$ ,  $P < .01$ ), and the NATM subscale ( $r = -.104$ ,  $P < .001$ ) were negatively associated with independent self-construal. A greater independent self-construal was associated with less negative beliefs about and experiences of masturbation.

**Sexual compulsivity.** Sexual compulsivity was negatively associated with the scores of the BAFM subscale ( $r = -.112$ ,  $P < .001$ ), the NATM subscale ( $r = -.232$ ,  $P < .001$ ), and the whole scale ( $r = -.123$ ,  $P < .001$ ). Higher levels of negative beliefs about and negative affect toward masturbation were associated with less sexual compulsivity.

**Premarital sex:** Table 4 presents the associations between the subscale scores and the correlates of premarital sexual behavior. The results indicated that university students with higher levels of negative affect toward masturbation were less likely to have premarital sex.

**DISCUSSION**

In recent decades, globalization has led to more liberal attitudes toward sexuality. This study has shown that irrational beliefs regarding and affect toward masturbation still prevail in Chinese university students. The questionnaire developed in the present study was specifically designed to evaluate Chinese people’s attitudes and beliefs regarding masturbation. The results from the BAFM subscale, BAMM subscale and NATM subscale show that characterizations of masturbation are still deeply influenced by both traditional concepts of maintaining health and traditional sexual ethics and values. Previous researchers have demonstrated that culture plays a fundamental role in individuals’ beliefs and attitudes about and affect toward sexuality and shapes individuals’ cognition and emotions regarding their experiences toward sexuality.<sup>28,29</sup>

**Table 4.** Binary logistic regression model to predict abstinence from premarital sex

		<i>P</i>	OR	95% C.I.	
Grade	Freshman	.043			
	Sophomore	.051	.661	.436	1.001
	Junior and above	.014*	.508	.297	.870
Gender	Male				
	Female	.000 <sup>‡</sup>	3.048	2.197	4.230
Area where student grew up	City	.620			
	Town	.340	.790	.488	1.281
	Village	.617	.885	.550	1.426
Sibling	Only child in family				
	Has siblings	.915	1.021	.696	1.498
Annual household income	50000 RMB below	.498			
	50001-100000 RMB	.561	.898	.625	1.290
	100001-200000 RMB	.132	.700	.440	1.114
	200000 above RMB	.456	.784	.413	1.487
Age		.002 <sup>†</sup>	.765	.646	.905
Male		.165	.974	.939	1.011
	Female	.063	1.065	.997	1.138
Emotional		.000 <sup>‡</sup>	1.090	1.040	1.142
Constant		.000	343.881	.000	

\**P* < .05.<sup>†</sup>*P* < .01.<sup>‡</sup>*P* < .001. N = 1586

The current study indicates that individuals with a more independent self-construal are less likely to be influenced by traditional sexual ethics and values and a traditional philosophy of maintaining good health in relation to masturbation. Values and traditions regarding sexual meaning, ritual, and practice are essential parts of many cultures that shape behavior by inhibiting liberal sexuality. Individuals have a strong identity with their lived cultures, and such beliefs and affect are profoundly affected by this identity, which influences the behavior and practices of individuals. The current study found that masturbation beliefs and affect restrict sexual practices, such as premarital sex, through their influence on affect, including guilt and anxiety.

The current study confirms that higher negative affect toward masturbation is correlated with lower premarital sexual behavior. In this study, college students who were influenced by traditional sexual culture tended to be more conservative in their sexual behavior such as premarital sexual behavior. The study findings are consistent with those of a previous study that found that individuals influenced by traditional culture were more likely to have sexually conservative attitudes and behavior and initiate sexual intercourse at a later age.<sup>30</sup> Previous research involving Indian and Turkish participants claimed that individuals who are more conservative are more likely to be negative toward masturbation and premarital sexual behaviors.<sup>31,32</sup> Previous studies have also shown that teens with conservative sexual attitudes are less likely to engage in premarital sex. The current study also found that adolescents with conservative sexual beliefs regarding masturbation were less likely to engage in premarital sex. It is not difficult to find that these traditional limitations affect individuals'

attitudes, feelings, and behavior toward sex. The current study found that a higher level of negative affect toward masturbation is related to a lower level of sexual compulsivity and that a sense that masturbation is immoral and evil toward may discourage an individual's erotic practices and regulate his or her drives and compulsivity.

The results from the BAFM subscale show that the participants were concerned that female masturbation behaviors would interfere with the function of procreation. These results reveal that sexual behavior is seen as correlated with procreation behavior and that female masturbation is perceived to influence the quality of egg and thus a woman's ability to become pregnant, which suggests that attitudes toward women's sexuality are more concerned about ethical sexual issues, such as virginity and pregnancy. More importantly, negative beliefs about masturbation may also be found in other cultures, including that women are not expected to derive pleasure from sex, that sex should only be about procreation for women and that women's sexuality is meant for the purpose of procreation, not for women to enjoy the satisfaction of sexual drives; such beliefs have been deeply shaped by male norms, which reflects a sexual double standard and sexual repression.<sup>33,34</sup>

The myth about male masturbation that has predominated in Chinese culture is that emission after masturbation could influence one's longevity and immortality, as men's seminal essence is deemed highly precious, and thus, individuals are supposed to avoid losing it; this ideology was deeply shaped by Taoist philosophy.<sup>35</sup> Previous research found that some individuals who came to the hospital or consulted the internet asked for help or

strategies to eliminate masturbation, as they believed that such practices would damage their health and eradicate their spirit.<sup>36</sup>

In the absence of comprehensive and pervasive sex education in China, a large proportion of Chinese people obtain sexual knowledge from informal sources, such as pornographic books, magazines, movies, and television programs and word of mouth, which may promote the spread of folk beliefs about masturbation. As discussed earlier, Chinese people's attitudes toward sex reflect a mixture of traditional folk concepts and contemporary gender role stereotypes. The current study emphasizes the importance and need for sexual knowledge education in universities. Myths and misunderstandings about masturbation could be modified through open discussions or education, which could promote healthy sexual attitudes and sexual practice.

## LIMITATIONS

The scale is an innovative tool for measuring culturally relevant beliefs regarding masturbation in Chinese students. First, the scale was developed based on the Chinese context, and the scale should be used with caution when generalizing to other populations and cultures. Second, the questionnaire only measured Chinese people's negative feelings and beliefs about masturbation but did not explore positive feelings and beliefs about masturbation. Future research should further explore positive feelings and beliefs about masturbation. Third, regarding the examination of associations with external constructs, a limitation of this study is that many constructs were measured using single questions. Since single items are less reliable than multiple-item scales, this method of measurement may have attenuated the estimated correlations. Due to the limitations of the use of an online survey covering multiple topics, the present study was unable to measure every construct with a multiple-item scale. The results from this study should therefore be supplemented with additional studies that use more rigorous measures.

## IMPLICATIONS FOR THERAPISTS

The current study provides initial evidence suggesting that the proposed scale may be used to screen beliefs and attitudes regarding masturbation among the public. It can also be used to assess the severity of beliefs regarding and the negative affect of masturbation when clients report a phobia regarding masturbation or general sexual dysfunction that may be related to such a phobia. Based on the evaluation of the scale, other clinicians and educators can identify potential misconceptions toward masturbation, and educators or therapists can address or dispel myths regarding masturbation by providing health education or counseling services based on the evaluation results. The scale can help cognitive therapists or andrologists identify potential false or irrational sexual beliefs or myths regarding masturbation, which can help clinicians address the targeted issues. The scale could be administered at various points throughout the course of therapy to

identify therapeutic changes among patients with masturbation phobia. Clinicians in other countries can also attempt to modify the Chinese culture-related items to fit the local cultural context to measure beliefs regarding masturbation in the local population.

## CONCLUSION

The current scale can be helpful for evaluation common myths about sex and negative beliefs about masturbation in the Chinese population. In view of the culture-specific beliefs, gender role stereotypes, and social contexts in Chinese communities, we hold that clinicians should evaluate their patients in light of the cultural context and assess distressing beliefs about masturbation regardless of whether patients have recognized dysfunction. Both clinicians and researchers should develop culturally sensitive assessment skills and instruments to evaluate individuals' experiences of masturbation, which can help clinicians deliver efficacious psychotherapy and sexual education to individuals who have misconceptions or phobias about masturbation. Further investigation of the applicability of the developed measure to populations other than university students and other countries and cultures is needed. In addition, the scale was tested for reliability only with respect to its internal consistency and for criterion validity. Future studies are needed to assess the other psychometric properties of the scale, such as the test–retest reliability and convergent validity.

**Corresponding Author:** Zhengjia Ren, Department of Clinical Psychology, The Third Affiliated Hospital of Chongqing Medical University, Chongqing, 401120, China.; E-mail: [renzhengjia@hotmail.com](mailto:renzhengjia@hotmail.com)

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The first author Zhengjia REN design the research and wrote the first draft of the article. Yanhong Liu collected the data. Jianjun Deng analyzed the data. All authors contributed to the subsequent revision of the article and approved the final manuscript for publication.

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