
GYNAECOLOGY

Reliability and Validity of Thai-version of Female Genital Self-image Scale (FGSIS) Questionnaire

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ABSTRACT

Objectives: The female genital self-image scale questionnaire (FGSIS) was constructed to measuring feeling towards female's own genital in a broader spectrum. The purposes of the study were to assessing reliability and validity of the Thai version FGSIS.

Materials and Methods: After the institutional review board approval, 77 Thai women attending the gynecologic outpatient clinic at King Chulalongkorn Memorial hospital were recruited between February and July 2020 in this study. Seven participants drop-out because they did not answer the second questionnaire. The original English-version of FGSIS was translated into Thai version and backward translated by another linguist then the content was validated by the two urogynecologists at our department. After the informed consent were done, the patients were asked to complete the Thai version of FGSIS and female sexual function index (FSFI) questionnaire at first visit and only Thai version of FGSIS questionnaires at 2-week interval were completed and sent back by mail.

Results: Our findings indicated good reliability of the Thai-version of FGSIS (Cronbach's alpha 0.80, test-retest reliability 0.79 (0.67-0.87)). Good correlation was found between the Thai-version of FGSIS and the Thai-version of FSFI (Pearson's correlation coefficient = 0.62).

Conclusion: The Thai-version of FGSIS was found to be reliable and valid. It could be used for evaluating the satisfaction of genital appearance in Thai women for research and clinical use.

Keywords: genital self-image, sexual function, Thai-version questionnaire

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ความเที่ยงและความตรงของแบบสอบถามระดับความรู้สึกที่ผู้หญิงมีต่อภาพลักษณ์อวัยวะเพศหญิงของตน (Female genital self image scale)

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บทคัดย่อ

วัตถุประสงค์: แบบสอบถามระดับความรู้สึกที่ผู้หญิงมีต่อภาพลักษณ์อวัยวะเพศหญิงของตน (Female genital self image scale) ถูกสร้างขึ้นเพื่อตรวจวัดระดับความรู้สึกของผู้หญิงที่มีต่อภาพลักษณ์อวัยวะเพศหญิงของตนเองในบริบทที่หลากหลาย โดยวัตถุประสงค์ของงานวิจัย คือ เพื่อหาความเที่ยงของแบบสอบถามระดับความรู้สึกที่ผู้หญิงมีต่อภาพลักษณ์อวัยวะเพศหญิงของตน (Female genital self image scale) ฉบับภาษาไทย และหาสหสัมพันธ์เทียบกับแบบสอบถามการตอบสนองทางเพศในสตรี (Female sexual function index) ฉบับภาษาไทย

วัสดุและวิธีการ: หลังจากงานวิจัยผ่านการรับรองจากคณะกรรมการจริยธรรมการวิจัย อาสาสมัครจำนวน 77 คนที่เข้ารับการรักษเป็นผู้ป่วยนอกในแผนกนรีเวชกรรม โรงพยาบาลจุฬาลงกรณ์ระหว่างเดือนกุมภาพันธ์ 2020 ถึง กรกฎาคม 2020 (อาสาสมัครจำนวน 7 คนได้ออกจากงานวิจัยเนื่องจากไม่ได้ตอบแบบสอบถามครั้งที่สอง) แบบสอบถามระดับความรู้สึกที่ผู้หญิงมีต่อภาพลักษณ์อวัยวะเพศหญิงของตน (Female genital self image scale) ฉบับภาษาอังกฤษต้นฉบับจะถูกแปลโดยนักภาษาศาสตร์จากสถาบันภาษา จุฬาลงกรณ์มหาวิทยาลัย และแปลกลับเป็นภาษาอังกฤษโดยนักภาษาศาสตร์อีกท่าน โดยมีการตรวจสอบความตรงของแบบสอบถามที่แปลไปกลับโดยนรีแพทย์ทางเดินปัสสาวะจากภาควิชาสูติศาสตร์ นรีเวชวิทยา คณะแพทยศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย โดยผู้เข้าร่วมวิจัยซึ่งได้ให้ความยินยอมเข้าเป็นอาสาสมัครวิจัยจะตอบแบบสอบถามระดับความรู้สึกที่ผู้หญิงมีต่อภาพลักษณ์อวัยวะเพศหญิงของตน (Female genital self image scale) ฉบับภาษาไทย จำนวน 7 ข้อ และแบบสอบถามการตอบสนองทางเพศในสตรี (Female sexual function index) ฉบับภาษาไทย จำนวน 19 ข้อ ในสัปดาห์แรก จากนั้นผู้เข้าร่วมวิจัยจะตอบแบบสอบถามระดับความรู้สึกที่ผู้หญิงมีต่อภาพลักษณ์อวัยวะเพศหญิงของตน (Female genital self image scale) ฉบับภาษาไทยซ้ำอีกครั้งเมื่อครบ 2 สัปดาห์ และส่งกลับทางไปรษณีย์

ผลการศึกษา: ผลการวิจัยพบว่าแบบสอบถามมีค่าความตรงที่ดี โดยค่าความสอดคล้องของแบบสอบถาม (Cronbach Alpha) อยู่ที่ 0.8 และมีความเที่ยงของการทดสอบซ้ำ (สัมประสิทธิ์สหสัมพันธ์ภายในชั้น (Intraclass correlation) (95% CI)) อยู่ที่ 0.79 (0.67-0.87) ค่าความสอดคล้องสัมประสิทธิ์สหสัมพันธ์เชิงอันดับ (Pearson 's Correlation) เมื่อเทียบกับแบบสอบถามการตอบสนองทางเพศในสตรี (Female sexual function index) ฉบับภาษาไทย อยู่ที่ 0.62

สรุป: แบบสอบถามระดับความรู้สึกที่ผู้หญิงมีต่อภาพลักษณ์อวัยวะเพศหญิงของตน (Female genital self image scale) ฉบับภาษาไทย มีความเที่ยงและความตรงที่ดี เหมาะสมที่จะนำไปใช้เป็นเครื่องมือในการประเมินความพึงพอใจต่ออวัยวะเพศในสตรีไทยทั้งเพื่อการรักษาและงานวิจัยต่อไป

คำสำคัญ: อัตลักษณ์ทางเพศ, สมรรถภาพทางเพศ, แบบสอบถามภาษาไทย

Introduction

Women's sexual esteem is a component of psychological and behavioral aspects of sexual and perceived physical well-being⁽¹⁾. Women's sexual function may be influenced by various factors including relationship-factor, mood, health status sexual esteem and sexual image⁽²⁾. Women, who satisfied with their own body image, report more sexual activity, orgasm and confidence with their sexual life. A negative sexual image, such as menopausal women or pregnant women, relates with impair sexual function⁽³⁾. Women find sexual image to be very important and increase more concern, probably due to the influence of media⁽⁴⁾. Female elective genital cosmetic surgeries have become increasingly popular. Valid scales are necessary to describe the need for or success of treatment such as the female sexual function index (FSFI)⁽⁵⁾. But sexual image may not be always related with sexual function⁽¹⁾. Many women requires genital cosmetic surgery to improve appearance, not for only sexual function. Therefore, specific genital appearance questionnaire is more appropriate evaluation tool in this group.

The female genital self-image scale (FGSIS) questionnaire was developed by Herbenick D, to measure feelings toward her sexual image⁽⁶⁾. The FGSIS composed of 7 questions using 4-point response scale (strongly agree = 4, agree = 3, disagree = 2, strongly disagree = 1). Participant's score on each item were summed for a total sum score ranging from 7 to 28 with higher scores indicating more positive genital self-image. The reliability and validation of many languages of FGSIS was reported^(4,7-11). Up to now, there is no Thai language translation and psychometric test of this questionnaire. The purposes of the study were to translate and assess reliability and validity of the Thai-version of FGSIS for future clinical and research purpose.

Female sexual function index (FSFI)⁽⁵⁾

The FSFI is a multiple trait scoring, self-reported document for assessing female sexual function consists of 19 items that encompass six separate domains

including desire, arousal, lubrication, pain, satisfaction and orgasm. The FSFI was translated and reported for the good reliability and good internal consistency in many languages^(4,7-11). The Thai version of FSFI by Peeyananjarassri et al⁽¹²⁾ was used for correlation with Thai version of FGSIS at the first visit.

Materials and Methods

After the institutional review board (IRB) approved, the study was conducted in general gynecology outpatient clinic and female pelvic medicine and reconstructive surgery division clinic, Faculty of Medicine, King Chulalongkorn Memorial Hospital during February 2020 to July 2020.

Translation process

After permission from the original study's authors, the English version of FGSIS was forward translated into Thai language by a linguist from Language institute, Chulalongkorn University and backward translated by another linguist. Final draft was accomplished after a small group interview and content validation by the two urogynecologists of our department.

The Thai-version of FGSIS questionnaires were administered to 77 female participants on a volunteer basis (77 participants with 7 participants dropout, not returning the second questionnaires at two weeks). Inclusion criteria were patients in general gynecology outpatient clinic and The female pelvic medicine and reconstructive surgery division clinic at King Chulalongkorn Memorial hospital, aged 18-65 years, sexually active, and able to read and write in Thai language. Women who were pregnancy, having history of current malignancy of pelvic organ and having evidence of bladder disease and urinary tract infection were excluded.

The Thai-version of FGSIS and Thai-version of FSFI were completed by themselves at clinic and repeated only Thai version of FGSIS at next two weeks and sent back by mail.

Statistical analysis

The mean, standard deviation (SD), median and interquartile range were used for descriptive statistics. Reliability and validity of Thai-version of FGSIS were performed by using weighted kappa, test-retest reliability, Cronbach alpha, Pearson's correlation coefficient with statistically significant at p value less than 0.05. IBM SPSS Statistics for Windows, version 22 statistical software was used for statistical analysis. Sample size estimation was calculated from the "rule of ten" for psychometric test sample size estimation of the questionnaire (13). The Thai version of FGSIS comprised of 7 questions, the patients needed to complete the questionnaire was 70 cases. Seven cases

(10% of 70 cases) were added, in case of dropouts. The total cases required in this study was 77 cases.

Results

Seventy-seven participants were enrolled in this study. Seven participants completed questionnaire only the first visit. The participants' characteristics are shown in Table 1. The mean \pm SD of age of participants was 41.19 ± 11.69 years. Most participants had the body mass index of 18 to 25 kg/m² (67.1%). Most were graduated in Bachelor's degree or higher (71.4%). Most participants were married (74.3%) and in the premenopausal status (74.3%).

Table 1. Patient's characteristics.

Patient 's characteristics (n = 70)		mean \pm SD
Age at informed consent		41.19 \pm 11.69
Number of children		median (IQR)
		0 (0-1)
Body mass index		n (%)
	Less than 18 kg/m ²	5 (7.1%)
	18 to 25 kg/m ²	47 (67.1%)
	25 to 30 kg/m ²	10 (14.3%)
	More than 30 kg/m ²	8 (11.4%)
Education	Primary school	0 (0%)
	Secondary school	20 (28.6%)
	Bachelor's degree or higher	50 (71.4%)
Marital status	Single	17 (24.3%)
	Married	52 (74.3%)
	Divorce or widow	1 (1.4%)
Menopausal status	Pre-menopause	52 (74.3%)
	Post-menopause	18 (25.7%)

SD: standard deviation, IQR: interquartile range

The mean \pm SD of total score of Thai version of FGSIS at first visit and at the 2 weeks interval were 19.97 ± 3.16 and 20.06 ± 2.54 , respectively (Table 2). The Thai-version of FGSIS had the good

test-retest reliability (the intraclass correlation (95% confidence interval) 0.79 (0.67-0.87)) (Table 3). The Cronbach alpha was 0.8. Each item of FGSIS showed the weighted kappa ranged 0.27 to 0.72.

The lowest weighted kappa was 0.27 in the item: “I feel comfortable letting a healthcare provider examine my genitals.” The highest weighted kappa was 0.72 in the item: “I think my genital smell fine”

The Thai version of FGSIS and the Thai version of FSFI correlated well in total scores and in all domains with Pearson’s correlation coefficient of 0.62 (Table 4).

Table 2. Item response of Thai version of FGSIS score (n = 70).

Item	Visit	
	Week 0 (n (%))	Week 2 (n (%))
1. I feel positively about my genital		
Strongly disagree	1 (1.4%)	0 (0%)
Disagree	12 (17.1%)	8 (11.4%)
Agree	45 (64.3%)	53 (75.7%)
Strongly agree	12 (17.1%)	9 (12.9%)
2. I am satisfied with the appearance of my genital		
Strongly disagree	0 (0%)	0 (0%)
Disagree	17 (24.3%)	8 (11.4%)
Agree	41 (58.6%)	55 (78.6%)
Strongly agree	12 (17.1%)	7 (10%)
3. I would feel comfortable letting a sexual partner look at my genitals		
Strongly disagree	5 (7.1%)	1 (1.4%)
Disagree	20 (28.6%)	17 (24.3%)
Agree	39 (55.7%)	47 (67.1%)
Strongly agree	6 (8.6%)	5 (7.1%)
4. I think my genital smell fine		
Strongly disagree	1 (1.4%)	0 (0%)
Disagree	8 (11.4%)	8 (11.4%)
Agree	51 (72.9%)	56 (80%)
Strongly agree	10 (14.3%)	6 (8.6%)
5. I think my genitals work the way they are supposed to work		
Strongly disagree	2 (2.9%)	1 (1.4%)
Disagree	11 (15.7%)	9 (12.9%)
Agree	45 (64.3%)	51 (72.9%)
Strongly agree	12 (17.1%)	9 (12.9%)
6. I feel comfortable letting a healthcare provider examine my genitals		
Strongly disagree	2 (2.9%)	2 (2.9%)
Disagree	15 (21.4%)	17 (24.3%)
Agree	43 (61.4%)	48 (68.6%)
Strongly agree	10 (14.3%)	3 (4.3%)
7. I am not embarrassed about my genitals		
Strongly disagree	3 (4.3%)	2 (2.9%)
Disagree	28 (40%)	27 (38.6%)
Agree	34 (48.6%)	40 (57.1%)
Strongly agree	5 (7.1%)	1 (1.4%)

FGSIS: female genital self-image scale

Table 3. Reliability of Thai version FGSIS score.

Item	Weighted 's kappa (95%CI)
1. I feel positively about my genital	0.60 (0.39-0.80)
2. I am satisfied with the appearance of my genital	0.59 (0.37-0.80)
3. I would feel comfortable letting a sexual partner look at my genitals	0.63 (0.42-0.83)
4. I think my genital smell fine	0.72 (0.51-0.93)
5. I think my genitals work the way they are supposed to work	0.51 (0.29-0.74)
6. I feel comfortable letting a healthcare provider examine my genitals	0.27 (0.01-0.53)
7. I am not embarrassed about my genitals	0.45 (0.26-0.63)

FGSIS: female genital self-image scale, CI: confidence interval

Table 4. Correlation of Thai version FGSIS score with other measurement.

Measurement	Correlation coefficient	
	Pearson's correlation coefficient	p value
FGSIS score vs FSFI score		0.62
FGSIS score VS FSFI (Desire domain)	0.64	< 0.05
FGSIS score VS FSFI (Arousal domain)	0.51	< 0.05
FGSIS score VS FSFI (Lubrication domain)	0.57	< 0.05
FGSIS score VS FSFI (Orgasm domain)	0.56	< 0.05
FGSIS score VS FSFI (Satisfaction domain)	0.48	< 0.05
FGSIS score VS FSFI (Pain domain)	0.54	< 0.05

FGSIS: female genital self-image scale, FSFI: Female Sexual Function Index

Discussion

From our study, we found the good reliability of Thai version of FGSIS (test-retest reliability 0.79 (0.67-0.87)) with the good internal consistency (Cronbach's alpha coefficient 0.80). These results were found similarly to the other languages versions^(5,8,14). We also found the good correlation of Thai-version of FGSIS with the Thai-version of FSFI (Cronbach's alpha coefficient 0.62). But there were reported the better (excellent) correlation between the FSFI and FGSIS in other languages (Cronbach's alpha coefficient 0.81-0.95)^(8,10,14,15). The better correlation of FSFI and FGSIS in other languages translation can be explained by the differences on the cultures and the partner-related factors rather than only self-sexual image of women. Thai cultures about the sexual image perceptions may be different from other countries' cultures.

The good instrument for evaluating the female

genital image is important for clinical use for the follow-up and to reflect the response after the treatment. The good questionnaire to evaluate the satisfaction of the genital appearance will be useful for both clinical use and the research purpose of the medical and surgical treatment concerning the genital appearance. From our study, we confirm the good reliability and validity of the Thai version of FGSIS questionnaire. It can be used for evaluating the satisfaction of genital appearance in Thai women.

Strengths of this study

This study was conducted with the strict validated process with the development process fully compatible with standard protocol. The questionnaire translation was done by experienced linguists. The content validation was done by two urogynecologists to confirm that the translation version still represented the theoretical construct of the original version.

Limitation of this study

The study of responsiveness was not included in our study. Therefore, further studies in women before and after the treatment for genital appearance such as medical treatment or genital cosmetic surgery are advocated.

Conclusion

The Thai-version of FGSIS was found to be reliable and valid. It could be used for evaluating the satisfaction of genital appearance in Thai women for research and clinical use.

Potential conflicts of interest

The authors declare no conflict of interest.

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