METHODOLOGY

Translation and Psychometric Evaluation of the Female Sexual Resourcefulness Scale (FSRS) in South Korea

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Abstract: Women have less control over decisions about risky sexual behavior and condom use than men. This power imbalance makes women vulnerable when having sexual relationships with their partner. However, no measurement tool has been developed to measure female sexual resourcefulness, which measures women's self-perceived sexual right to self-determination. This study examined the psychometric properties of the Korean version of the female sexual resourcefulness scale (FSRS). Convenience sampling was conducted using social networking services. The participants were 217 women in their early 20s. Validity and reliability were examined using item analysis, factor analysis, and correlation with self-efficacy on condom use and self-efficacy in refusing sex, and Cronbach's alpha. Twelve items were selected for the study. Three factors were extracted through factor analysis, explaining 62.03% of the variance and showing a good model fit in the K-FSRS. Reliability was high, as indicated by a Cronbach's alpha of 0.85. These results indicate that the K-FSRS may be an appropriate instrument for measuring sexual resourcefulness among young Korean women.

Keywords: factor analysis, methodology, sexual behavior, validation study, women

Introduction

Gender norms are defined as widely accepted social norms regarding traits, roles, power, expected behaviors, and status related to masculinity and femininity in a given culture.[1] South Korea, traditionally, women are expected to play a passive role, while men are expected to be proactive and active.[2] Gender and power inequality used to be more severe in South Korea, due to the Confucian values of the male-dominated ideology and patriarchal system. Especially, gender and power inequalities in sexual relationships remain a major social issue: women have less control in sexual relationships than men do.

Traditional gender norms that prevent women from rejecting men in sexual relationship have left women vulnerable to unwanted sex.[3,4] The South Korean double-gender standard continues to exist under the patriarchal system with more permissive standards for men, and strict standards for women in sexual practices.[2] According to a study of unmarried college students in South Korea, women with patriarchal sexual norms experienced difficulties in practicing contraception and had passive sexual behaviors. On the other hand, women with flexible gender norms showed positive attitudes toward high contraceptive practices and contraceptive self-efficacy.[5] Therefore, looking specifically at the double-gender standards as an example of sexual resourcefulness among younger generation will contribute to the understanding of the reproductive health at large.

Some of the important worldwide factors are gender and power in sexual and reproductive health behaviors and outcomes.[6,7] Efforts to improve gender and power equality in sexual relationships continue to be made at all levels, from individual to the national. Men are more dominant than women also in sexual relationships.[8] Previous studies have shown that women have less control over decisions about risky sexual behavior and condom use than men.[8,9] Differences in relationship power can prevent successful negotiations on the use of condoms for safe sex, as decisions vary depending

on whether partners with more power want to use condoms or not.[10] One study found that women with more power in relationships were significantly more likely to consistently use condoms than women with less power in relationships.[11] In this regard, women exposed to these factors have less power in practicing safe sex behavior, because they are less likely to have authoritative influence and control in their relationships. A study by Kim et al[3] also asserted that women with high sexual self-assertion are less likely to have unsafe and risky sex with their partners. However, studies exploring the link between relationship power and condom use in Korea are limited. Since the power imbalance in sex still exists in South Korea, such as men taking the lead in decision-making regarding sexual relationships,[12] it seems necessary to try to understand the power imbalance related to sexual assertiveness.

As mentioned earlier, traditional gender norms and power imbalances in sex can indirectly or directly increase vulnerability to partner violence, as well as reduce contraceptive method use.[13] Sexual violence is often caused by unilateral coercion during a date without the consent of the partner.[4] The domestic dating violence report rate is increasing from 13.0% in 2014 to 19.9% in 2017. It was reported that the suspects of partner violence were mainly men, and those in their 20s experienced more partner violence than other groups.[14] One study found that women with traditional gender norms were more likely to experience sexual assault by their partner due to lower self-efficacy in sexual assertions and relationships.[15] This means that individuals with low sexual assertions are vulnerable to the physical and psychological damage caused by unwanted sexual behavior, and are unable to act or make decisions for themselves during sexual relationships.[16] Therefore, in order to prevent sexual violence during dating, women should have the right to sexual self-determination to protect themselves from unwanted or unsafe sexual experiences.[3]

However, there are limited tools for measuring women's sexual self-determination rights in South Korea. Therefore, the purpose of this study is to translate Humphreys and Kennett's[17] Female sexual resourcefulness scale (FSRS) into Korean to measure the sexual self-determination rights of unmarried women in their 20s in South Korea and evaluate the reliability and validity of the Korean FSRS version. This study can help health care providers to design gender and culturally appropriate interventions in future studies.

Methods
Design
This was a methodological study conducted to examine the reliability and validity of the K-FSRS, based on the FSRS developed by Humphreys and Kennett.[17]

Sample
This study investigated a target population of unmarried 20s women. The inclusion criteria for participants were as follows: 1) identifying oneself as female; 2) being aged 20–29 years old; 3) being heterosexual; 4) being able to communicate in Korean; and 5) being able to access the Internet. The number of samples was calculated based on the fact that more than 200 samples were needed to obtain reliable factors for exploratory factor analysis.[18] Anticipating a 30% incomplete and drop-out rate, 228 participants were recruited, but the final sample was 217 due to the incompletion rate.

Measures
Female Sexual Resourcefulness Scale (FSRS)
The original FSRS was developed by Humphreys and Kennett[17] to measure the sexual self-determination rights related to unwanted sexual intercourse in women and it consists of 19 items with one dimension. The items are scored on 6-point Likert scales, and the scores of each item are summed. Higher scores reflect greater control over sexual behaviors one participates in. The Cronbach's alpha in the original study showed good internal consistency at 0.91.

Self-Efficacy on Condom Use
The self-efficacy on condom use was examined by an instrument that was developed by Kang.[19] The instrument consists of 11 items, on 5-point Likert scales, and a higher score reflects higher self-efficacy on condom use. The Cronbach's alpha in the original study was 0.70.

Self-Efficacy in Refusing Sex

The self-efficacy in refusing sex instrument was developed by Basen-Engquist et al[20] to measure the self-efficacy related to sexual behavior in refusing sex, and it was used in the study of Lee.[21] The instrument consists of 9 items, on 5-point Likert scales, and a higher score reflects higher sexual self-efficacy. The Cronbach's alpha in the original study[20] and Lee's study[21] were 0.70 and 0.76.

Translation Procedure

The authors obtained permission to use the instrument from the original author of the FSRS before starting the study, and then translated and applied the K-FSRS to measure women's sexual resourcefulness. The instrument translation procedure was done by the World Health Organization [WHO] instrument translation and application guidelines. The FRFS was translated from English to Korean using the parallel back-translation supplemented with committee review to reflect culture. First, two Korean-American bilingual translators translated the scale from English to Korean. Then, the authors discussed the expressions and vocabulary for the translation, the clarity of translation, and whether they require correction due to cultural differences. Then, another independent translator fluent in English and Korean undertook the task of back-translation. After that, both versions were reviewed by the authors of this study to identify and resolve inconsistencies between the original English and translated Korean versions. Then, two new independent translators native to the original FRFS repeated the procedure. Finally, a committee of authors re-examined the social and cultural aspects of the forward and back translations. After the agreed discussion, there were no minor modifications to account for improved grammar clarity and item equivalence. The instrument was finalized based on the suggestions. Finally, 19 questionnaires of the Korean version of the FRFS (K-FRFS) were produced.

The Validation Process

To create a K-FRFS, the authors explained the goals of the study to an instrument developer and received permission to verify its validity and reliability.

Content Validity

Four experts, two of whom were experts in women's health and sexual behavior and the other two, lecturers who taught nursing, assessed the validity of the content to evaluate the appropriateness of the forward-backward-translated questionnaire. At this stage, pre-testing and cognitive interviewing were processed by the experts not only for clarity and flow but also for social and cultural considerations. Item-level Content Validity Index (I-CVI) was used. According to Polit et al,[22] I-CVI is a method of calculating the ratio of the number of experts who selected 3 points (relevant, but item correction is required) and 4 points (very relevant) among the evaluators for the tool item. If it is more than 0.80, it is evaluated that adequate content validity is secured. No ratings less than 3 were selected (none were deleted). After verifying content validity, the final version of the K-FRFS consisted of 19 items. In addition, some words and phrases were revised to fit Korean culture more appropriately.

Construct Validity

Exploratory Factor Analysis (EFA)

EFA with Varimax rotation was performed below oblique rotations. Data factorability was assessed using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (which should ideally be $\geq$.80). Bartlett's test of sphericity (which should be significant $p < 0.05$) was also performed to evaluate factorability in terms of the magnitude of inter-correlations and sampling adequacy. Subsequently, the scree test of eigenvalues was plotted against factors. Third, the proportion of variance accounted for by a factor was measured using the cumulative proportion (%) of variance. Finally, we check the pattern matrix, which contains the factor loading for each factor of primary interest.

Confirmatory Factor Analysis (CFA)

Confirmation factor analysis was performed on the two factors extracted by exploratory factor analysis. All items were loaded to factors (above >0.30 indicates fair loadings).[23] The popular indices of model fit included model chi-square, df

and its *p*-value (should not be significant), Steiger-Lind root means square error of approximation and its 90% *CI* (between 0.06 and 0.10 indicates adequate fit to the model), and Bentler comparative fit index (>0.95 indicates good model fit).

Criterion Validity

In this study, the K-FRFS was compared with the self-efficacy on condom use[19] and self-efficacy in refusing sex.[21]

Internal Consistency Reliability

The item-total correlation method was used to measure each questionnaire. Cronbach's alpha was measured to estimate internal consistency and average measures of Intraclass Correlation Coefficient (ICC) were obtained using interrater reliability analyses.[24]

Procedures

The study was conducted in compliance with the principles of the Declaration of Helsinki and its later amendments[25] and was approved by the H University Institutional Review Board in Korea (HIRB-2021-076). The data collected during December 2021. We employed this sampling technique to recruit respondents mainly using social network services (SNSs). Participants were recruited using convenience sampling, also referred to as non-probabilistic sampling.[26] We used posted our advertisement online and recruited respondents who met our selection criteria from those who viewed the posts. The information sheet was posted on the first page of the survey, detailing the basic eligibility requirements and instructing students to click on the link if they were willing to participate.

Data Analyses

Statistical analyses were performed using SPSS/AMOS Win 25.0 program (IBM Corp., Armonk, NY).

Results
General Characteristics of Participants

Participants were 217 unmarried women in their 20s in South Korea (shown in Table 1). The mean age of the participants was 26.19 ± 5.67 years. About 68.7% of participants (n = 149) were living with their family, and 23% (n = 50) were living alone. Seven out of ten (69.6%, n = 151) participants were currently dating, and 65% (n = 141) of them had had one sexual partners in the last 3 months. A total of 88% of participants (n = 191) had had their first sexual intercourse after nineteen years old. More than half of the participants (52.1%, n = 113) responded regarding their sexual tolerance; the degree of tolerance for kissing, caressing, and sexual intercourse according to the level of physical contact; was average followed by conservative (26.7%, n = 58).

Validity Test for K-FSRS
Content Validity

Analyzing the evaluation of five experts, I-CVI (Item-level Content Validity Index) was in the range of 0.85 to 1.00, and the mean I-CVI was 0.92.

Construct Validity 1: Item Analysis for Internal Consistency

The item-to-total correlations of K-FSRS were considered reasonable (Table 2). Like the original tool, since the Cronbach alpha values of "Alpha if item deleted" were lower than when all items were kept, we selected all 19 items.

Construct Validity 2: EFA to Identify Hypothesized Components

EFA with varimax rotation on the items of K-FSRS yielded three factors that explained the results and accounted for 62.03% of the variance. Prior to this, 19 items, such as original tools, were put into EFA, but we removed 5 items (#1, #4, #11, #12, #16) because it was not loaded or reduplicated in any of the derived factors.[22] In addition 2 items (#17, #18) were removed because at least 3 items should be loaded in order for factors to be persuasive. Rest of 12 items showed to be good quality items and we run parallel analysis to confirm that it also displays total of three factors.

Table 1 Characteristics of Participants (N = 217)

Characteristic	Category	n	(%)	Mean ± SD (Min-Max)
Age				26.19±5.67 (20–29)
Current resident	Alone	50	23.0	
	Family (Parents, brothers/sisters, or relatives)	149	68.7	
	Roommate (same-sex)	8	3.7	
	Roommate (opposite sex)	10	4.6	
Currently dating	Yes	151	69.6	
	No	66	30.4	
Number of sexual partners in the last 3 months	No	58	26.7	
	One	141	65.0	
	Two	15	6.9	
	Three to Four	3	1.4	
Age of first sexual intercourse	13–18 years (middle and high school years)	26	12.0	
	>19 years	191	88.0	
Sexual tolerance	Conservative	58	26.7	
	Average	113	52.1	
	Open	46	21.2	
Socioeconomic level	Low	32	14.7	
	Average	169	77.9	
	High	16	7.4	
Job	Student	34	15.7	
	Employee (contract worker)	29	13.4	
	Employee (regular employee)	111	51.2	
	Job-seeking students/unemployed	36	16.6	
	Etc.	7	3.2	

Therefore, when the remaining 12 items were put into EFA, Bartlett's test of sphericity was showed as statistically significant (χ^2=942.303, df= 66, p <0.001), and the Kaiser–Meyer–Olkin measure (KMO) was 0.841, which was adequate for factor analysis (Table 3). Factors with an eigenvalue of 1 or more were extracted and considered a marked decline in the slopes of the scree plot when we run with JASP software (version 0.16.1).

The final version of the K-FSRS scale, consisting of a 12-item rotation factor loading, formed with three factors with a loading range of 0.96 to 0.52 (Table 4). The first factor, which contains five items, could be interpreted as a dimension of "Adjust to situation" (eigenvalue, 4.542; variance explained, 37.852%). The second factor, which consist of three items was related to a dimension of "Use of rejection skills" (eigen value, 1.717; variance explained, 14.311%). Lastly, the third factor that involve four items was titled as "Think about coping strategies" (eigen value, 1.184; variance explained, 9.868%) (Table 4).

Table 2 Internal Consistency (N = 217)

Item	Content	Item-Total Correlation	Alpha If Item Deleted
FSRS1	When I am in the middle of sexual play and am aroused, but do not want the activity to profess any further, I am often able to change my aroused feelings so that I am able to prevent the activity from progressing.	0.443	0.855
FSRS2	I often give in to unwanted sexual activity.	0.507	0.852
FSRS3	When I feel upset while engaged in unwanted sexual activity, I try not to think about it.	0.431	0.855
FSRS4	When I am faced with unwanted sexual activity/advances, I have no difficulty leaving the situation.	0.432	0.855
FSRS5	While engaged in unwanted sexual activity, I think I am making a mistake, but I am at a loss to do anything about it.	0.538	0.851
FSRS6	I usually consent to unwanted sexual activity when my partner is pressuring me.	0.588	0.849
FSRS7	When I am experiencing unwanted sexual activity/advances, I prefer to not think about it and go along with the activity instead.	0.623	0.847
FSRS8	If I was in the middle of sexual play which I no longer wanted to continue, I could tell him to stop.	0.587	0.848
FSRS9	When I have become aroused from sexual play, but do not want to continue any further, I am able to resist engaging in the sexual activity by thinking about the good reasons for stopping.	0.600	0.848
FSRS10	Although I feel bad about hurting my partner's feelings, I am able to let him know when I am uncomfortable with a sexual situation.	0.564	0.850
FSRS11	I feel good about myself when I resist unwanted sexual advances.	0.268	0.861
FSRS12	When experiencing unwanted sexual activity/advances, I often tell myself that I can do something about it.	0.648	0.848
FSRS13	When I am about to engage in unwanted sexual activity, I tell myself to stop and think before I do anything.	0.465	0.854
FSRS14	I consider my actions very carefully when deciding whether or not to participate in unwanted sexual activity.	0.369	0.857
FSRS15	I always have a back-up plan for when I am faced with unwanted sexual advances/activity that get out of control.	0.371	0.858
FSRS16	It takes a lot of effort on my part to bring unwanted sexual advances/activity to a halt.	0.176	0.866
FSRS17	When presented with unwanted sexual advances/activity, I base my arousal and how I feel in the moment, even if I know I will regret it later.	0.303	0.861
FSRS18	When engaging in unwanted sexual activity, I try to divert my thoughts form how uncomfortable I feel.	0.403	0.856
FSRS19	I plan in advance how far I want to go with any sexual activity, and am able to stop the activity before it goes too far.	0.508	0.852

Construct Validity 3: Appropriateness of CFA

The K-FSRS goodness-of-fit were $\chi2 = 71.426$ (df =51, $p = 0.03$), RMSEA = 0.043 (90% CI: 0.0.014, 0.065), and CFI = 0.98 (Table 5). The findings indicate that the model with 12 items is a good fitting model that it suitably explains our model by meeting all the recommended level criteria (Table 5, Figure 1).

Table 3 Results of KMO and Bartlett's Test of Sphericity with 12 Items (N = 217)

KMO Measure of Sampling	Bartlett's Test of Sphericity	
0.841	Approx x^2	942.303
	df	66
	p	<0.001

Table 4 Final Pattern Matrix from the EFA

Sub-Category	Item	Factor			M± SD
		1	2	3	
Adjust to situation	FSRS2	0.657			4.8940±1.475
	FSRS3	0.522			4.3779±1.810
	FSRS5	0.682			4.6590±1.754
	FSRS6	0.770			4.9355±1.542
	FSRS7	0.785			4.8664±1.579
Sub-total					4.7465±0.930
Use of rejection skills	FSRS8		0.734		4.47±1.815
	FSRS9		0.959		4.41±1.604
	FSRS10		0.620		4.66±1.456
Sub-total					4.5161±1.208
Think about coping strategies	FSRS13			0.685	3.98±1.680
	FSRS14			0.698	4.50±1.529
	FSRS15			0.679	3.56±1.932
	FSRS19			0.516	4.29±1.533
Sub-total					4.0829±0.947
Total					4.4677±0.610
Eigen value		4.542	1.717	1.184	
Total variance explained proportion (%)		37.852	14.311	9.868	
Cumulative proportion (%)		37.852	52.163	62.031	

Table 5 Model's Goodness of Fit

Model	x^2	df	Chi-Square p-value	RMSEA (90% CI)	CFI
Recommended level criteria			<0.05	<0.10	>0.95
Three factor model results	71.426	51	0.031	0.043 (0.014, 0.065)	0.977
Single factor model results	339.347	54	<0.001	0.156 (0.141, 0.173)	0.682
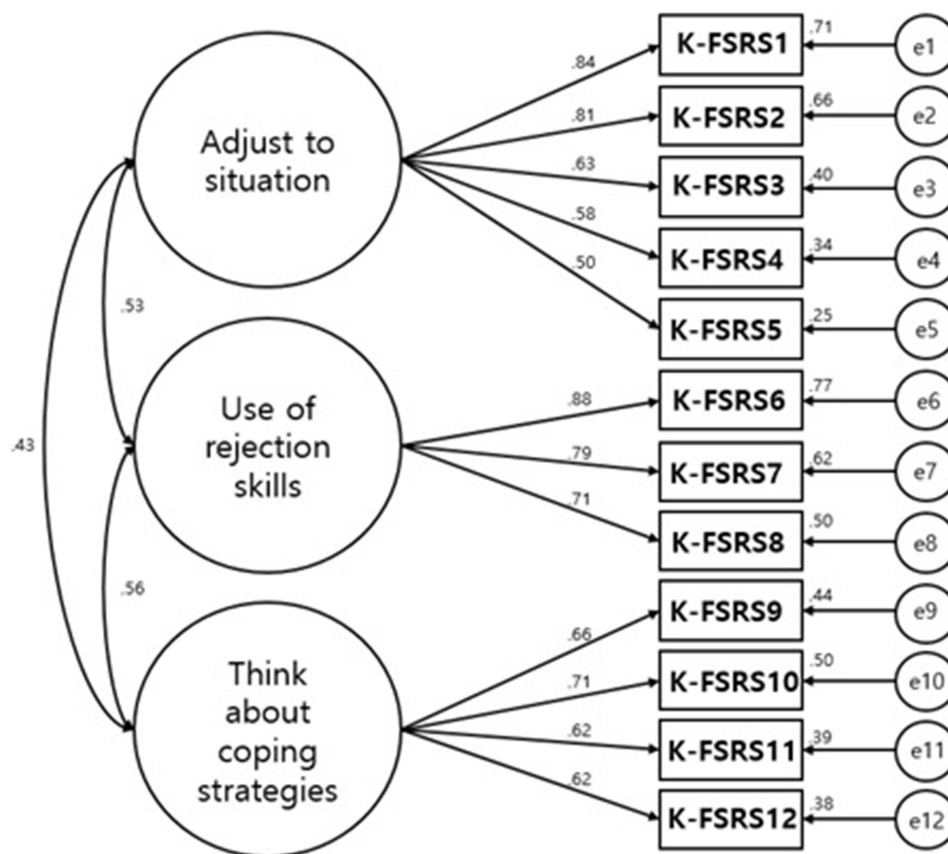
Figure 1 Path diagram with standardized estimates.

From the path diagram for a CFA model, we can see that all items are highly loaded to each factors, they were all above 0.4. Highest factor loading item was item FSRS 9 (0.88), followed by FSRS 7 (0.84) and FSRS 6 (0.81). The lowest factor loading item was FSRS 3 (0.50), followed by FSRS 2 (0.58).

We additionally run Chi-square difference statistic to address and compare whether a model based on the previous EFA is supported of if a single factor measurement model is supported. The results indicated a significant improvement in fit with the hypothesized model compared to the independence model. The difference between the two Chi-square values were X^2_{diff} (3, N = 217) = 267.921, $p < 0.05$ (Table 5).

Criterion Validity

The relationship between K-FSRS and self-efficacy on condom use[19] and self-efficacy in refusing sex[21] was examined. The K-FSRS score and self-efficacy on condom use showed a significant positive correlation ($r = 0.566$, $p < 0.001$). In addition, K-FSRS scores and self-efficacy in refusing sex scores were positively correlated ($r = 0.445$, $p < 0.001$) (Table 6).

Reliability in K-BAS

The Cronbach's α values were 0.85 for the 12 items on the K-FSRS scale. The reliability values of each dimension were 0.81 for "Adjust to situation (1st factor)", 0.83 for "Use of rejection skill (2nd factor)", and 0.75 for "Think about coping strategies (3rd factor).

The average measure of ICC was 0.846, which showed that each item measured for the participants (n = 217) of this study was 84.6% consistent (95% CI = 0.814–0.875), and was therefore statistically significant (p < 0.001).

Table 6 Correlations Among the Measures of Study

	FSRS (1)	Self-Efficacy on Condom Use (2)	Self-Efficacy in Refusing Sex (3)
1	-		
2	0.566 (<.001)	-	
3	0.445 (<.001)	0.640 (<.001)	-
M± SD	4.4677±0.78131 53.6129±9.37577	2.4767±0.39099 22.2903±3.51894	3.8404±0.53361 42.2442±5.86975

Discussion

This study aimed to validate a scale that can be used to measure sexual self-determination rights related to unwanted sexual intercourse developed by Humphreys and Kennett[17] in women by Korean women. Women who were highly sexually resourceful were less likely to give in to unwanted sexual activities. Also, higher sexual resourcefulness uniquely correlated with higher learned resourcefulness, higher sexual self-efficacy, and fewer reasons for consenting to unwanted sexual activity. That is, it is important to suggest that women with lower sexual resourcefulness are at higher risk associated with unwanted sexual behavior. However, in non-Western countries, especially East Asian countries, there has not been much discussion on or examination of this and no appropriate tool exists to measure sexual resourcefulness in South Korea. The twenties, a period of young adulthood, is a period in which sexual identity, autonomy, and independence are formed, especially when gender norms are formed.[27]

People in their 20s, during a period of active sexual behavior, have had more than one sexual partner in the past year.[28] Nevertheless, it was found that women had low self-efficacy and sufficient information about sex. For example, there is a lack of knowledge about sexual health and contraception and mainly males talk about their responsibility for contraception and testing for STDs in their sexual behavior.[28] This suggests that women's right to sexual self-determination is low. Therefore, in order to mediate sexual resourcefulness for women, a tool to measure it must be developed.

In the case of South Korea, which is included in the Asian culture, not the Western culture, studies related to sex mainly focused on sexual knowledge, sexual attitudes, and education.[29] However, most studies have focused on measuring fragmentary variables or identifying the effects of interventional studies; however, significant studies on the right to sexual resourcefulness have not been conducted.[29] Understanding the sexual self-determination rights of women during this period is essential as a basis for future intervention studies.

This study aimed to apply K-FSRS to Korean women and confirmed the validity and reliability of the Korean version. The K-FSRS has the advantage of being able to easily measure the degree of sexual resourcefulness for Korean women with a total of 12 items. For this purpose, the tool developed in the previous study of Western[17] was applied to Korean. In order to reflect the tools developed abroad in Korean culture and awards, social and cultural differences were reflected in the translation and reverse translation process. This study, a number of experts and 217 women in their 20s participated in this study to verify validity and reliability. As a result, K-FSRS was completed as a tool of 19 items with the final three sub-factors. The sub-domains of this tool are "Adjust to situation", "Use of rejection skills", and "Thinks about coping strategies". In the case of the original tool, it was a one-dimensional scale with no sub-regions, but in this study, it was found to consist of a total of three sub-factors. This is thought to be due to cultural and linguistic differences. In particular, this study is significant in that Asian women play a more passive role than Western women in sexual situations.

Factor 1 is "Adjust to situation", which exhibits characteristics such as conformity, obedience, and submission to undesirable situations. These traits are sometimes thought to be due to power imbalance,[12] and low sexual resourcefulness due to power imbalance could serve as a factor that increases the risk of sexual activity. Various factors have a complex effect on the norm related to sexual behavior.[27] For example, institutional, individual, social,

and resources aspects affect power, and social and gender norms affect power and ultimately sexual health.[27] In addition, it is known that women with low sexual volunteering are more likely to engage in unwanted sexual activity.[30] In the case of women who support traditional gender roles, it was also found that they consent to unwanted sexual behavior. Therefore, in order to solve this problem, it will be necessary to overcome the established gender inequality in South Korea. For this, it will be important to provide education on gender inequality, including education on gender norms. Indeed, gender inequality can cause changes in women's sexual behavior by leading them to play decision-making roles in sexual relationships. This, in turn, exposes them to violent behavior or unwanted sexual advances, which can have negative consequences for their reproductive health.[31]

Factor 2 is "Use of rejection skills" and includes items of rejection and resistance in unwanted situations. Women in their 20s face various barriers to sexual well-being, such as a lack of autonomy.[28] In these difficult situations, it is important to use the appropriate skills well to overcome the situation.[32] In the case of women, it was found that the self-efficacy in communicating about contraception in sexual situations was lower than that of men.[33] Therefore, it is necessary to educate women on refusal skills so that they are prepared for situations where they actually need to refuse; this will enhance their sexual self-determination.

Factor 3 is "Think about coping strategies" and includes items to consider, think, consider, and judge. In other words, it represents the experience of contemplating a sexual situation that women themselves do not want and rehearsing for the situation in advance. It suggests that sexual resourcefulness can be positively affected if adequate coping skills and strategies are used through adequate self-reflection and planning.[32] In other words, it will be helpful for sexual resourcefulness to reflect on the situation through sufficient education and practice and to think about how to deal with it in advance, suggesting that the right to sexual resourcefulness can be improved through training. In fact, high-quality sex education can increase sexual self-efficacy and sexual satisfaction.[34] Soon it will have a positive effect on the right to sexual resourcefulness. Importantly, the way sex education is delivered should provide opportunities for women to train themselves.

To measure criterion validity, we used self-efficacy on condom use[19] and self-efficacy in refusing sex[20] tools to examine the correlation with K-FSRS. As a result, it was confirmed that the correlation coefficient was 0.566 and 0.445, respectively, which fell within the recommended range.[35] Self-efficacy is a factor influencing sexual resourcefulness,[30,36] and previous studies have shown that sexual resourcefulness and sexual behavior are closely related.[30] In fact, it was found that the higher the self-efficacy, the more cases of rejection in unwanted situations.

This study is meaningful in that it verified the validity and reliability of a measurement tool for sexual resourcefulness for Korean women. In the case of women, in a previous study,[33] 65% of participants responded that they had experienced unwanted sexual intercourse or sexual violence, and in fact, Asian students showed lower sexual communication and self-efficacy than other students.[33] In other words, it suggests that this study is meaningful because it indicates the need to measure the sexual resourcefulness of Asian women.

Limitations and Strengths

Our study faced some limitations in that we had a sample which only included heterosexual young Korean women. Therefore, future studies should include participants of diverse genders, ages, sexual orientations, and regional and ethnic backgrounds A successive large-scale study including LGBTQ population should be conducted. In addition, although the adapted K-FSRS was found to be valid and reliable, this study relied on self-reports to measure sexual resourcefulness. Future research should include a mixed approach which uses both quantitative and qualitative methods to better understand power dynamics related to gender-related sexual and reproductive-health behaviors. These limitations may restrict the generalizability of our findings in the present study.

However, the results of this study supplemented our knowledge of power imbalances with respect to gender in the sexual behavior of young Korean women. These findings provide several implications for practice, and consequently, it may be concluded that the K-FSRS is a valuable tool to measure sexual resourcefulness.

Conclusion

This study attempted to validate the FSRS and determine whether it could be modified to create K-FSRS. In addition, the findings of this study suggest that the K-FSRS was adequately valid and reliable in this participant group, that is, Korean women in their 20s. Thus, we could conclude that this study corroborated the utility of the K-FSRS in measuring sexual resourcefulness in Korean young women and contributes to the examination of FSRS across diverse populations.

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Disclosure

The authors report no conflicts of interest in this work.

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