

Aging Sexual Knowledge and Attitude Scale: Turkish validity and reliability study

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Abstract

Objectives: It is designed to test the Turkish version of ASKAS's validity and reliability for use with older people, health professionals, and people who influence older people.

Methods: Language and content validity, item analysis, exploratory and confirmatory factor analysis, and internal consistency coefficients were evaluated in this study.

Results: It was decided to omit two items from the scale's knowledge subscale, and the three-factor structure of the attitude subscale was found to be within the range of acceptable fit indices.

Conclusions: The Turkish version of ASKAS was determined to be valid, reliable, and applicable in practice.

Introduction

It is well known that sexuality occupies an important place in the human life cycle (Macleod & McCabe, 2020). It has been demonstrated that recognizing sexuality as a component of general health and medical care for elderly individuals improves their quality of life (Syme & Cohn, 2016). While some of the studies show that there are sexually active individuals even in their 70s and 80s, the frequency of sexual activity is reported to decrease or even disappear with age in most of the studies (Mahieu et al., 2016). There are changes in the way people show their sexuality as they become older. Access to sexual partners, the health of the partner, the older adult's health, and other complications affect how they express their sexuality. During this time, there is an increase in foreplay, external stimulation, and kissing (Syme & Cohn 2016). The expression of sexuality is not limited to sexual intercourse. However, it continues in physical intimacy (e.g., kissing, hugging, and touching) and emotional exchanges of pleasure, love, and values (Chen et al., 2017).

Lack of knowledge about sexuality in old age among health professionals often leads to unsupportive attitudes towards older people's sexuality, which is one of the most critical barriers to older people's sexual expression (Cybulski et al., 2018). Doctors, nurses, and psychologists frequently fail to inquire about sexuality in the elderly (Snyder & Zweig, 2010). Although the causes are unknown, this condition may be caused by health professionals' prejudices and lack of knowledge about aging, personal contact with older adults, or their knowledge and attitudes towards their patients' sexual expression, regardless of age. The restrictive and obstructive attitudes of health professionals towards sexuality in older people are often associated with religious beliefs (Evangelista et al., 2019; Alnuaimi et al., 2020). Low levels of education, inadequate professional training, limited work experience, and low socioeconomic levels reinforce the tendency of health professionals to have negative attitudes toward sexuality in old age (White, 2020). In long-term care settings, restrictive attitudes lead to the repression of sexuality and the inability to safely perform intimate acts for nursing home residents (Aguilar, 2017). Educating nursing home staff, managers, and nursing home residents about this topic has been shown to increase permissive or supportive attitudes toward sexuality (Kapanda et al., 2019). In health care facilities,

nursing homes, or institutions caring for older people, it is essential for managers not to neglect this issue, to organize training for their staff on older people's sexuality, to monitor their staff's attitudes towards this issue, to organize seminars for both service users and service providers, and to develop strategies to support older people's sexual lives in their institutions. Because this neglect can have significant public health implications, many studies have been conducted over 30 years on health professionals' knowledge and attitudes about sexuality in older people (Sinković et al., 2019). However, in Turkey, where older people are 9.5% of the total population, little research has been done on elderly sexuality (Turkish Statistical Institute, 2020). Identifying health care providers' knowledge and attitudes towards older people's sexuality will enable a better understanding of older people's responses to their sexual behaviour and a more accurate identification of potential problems in sex education. They will guide those responsible for action to be taken in this regard.

Method

Aim

This study aims to test the validity and reliability of the Turkish version of ASKAS developed to use with older people, health professionals, and people dealing with older people (e.g., families of older people, volunteers in nursing homes).

Study Design

This study is a methodological study with a cross-sectional design.

Participants and setting

The population of the study consists of physicians and nurses working in hospitals in Turkey. The sample size was set at 5–10 times the number of scale items recommended in the literature (Tabachnick & Fidell, 2013; Tavşancıl, 2014) since the validity and reliability of the ASKAS would be explored in the study (Tabachnick & Fidell, 2013; Tavşancıl, 2014). Since the scale includes 61 items, the plan was to reach at least 305–610 participants. Surveys were shared online in Whatsapp groups with health professionals and on participants' social media accounts (Instagram, LinkedIn, etc.). A total of 326 participants, including 233 physicians and 93 nurses, took part in the study.

Data Collection Process

The data were obtained between January and May 2021 by asking doctors and nurses to complete an online questionnaire created by the researchers and disseminating it on various social media platforms. The online data collection tool consists of three pages. The first page of the data collection instrument informs health care professionals about the research's purpose, scope, and ethical aspects. When participants tick the checkbox, those who agree to provide data can proceed to other pages of the data collection tool. There is a sociodemographic form on the second page, and on the third page, there is the Aging Sexual Knowledge and Attitudes Scale (ASKAS).

Data collection instrument

A sociodemographic form and ASKAS were used to collect data. The researchers' sociodemographic form includes questions about the participants' personal and professional characteristics such as age, gender, marital status, education level, occupation, and institution.

The Aging Sexual Knowledge and Attitudes Scale (ASKAS): The questions consist of two parts to measure sexual knowledge and attitudes through the use of age-related changes in sexuality and the use of items that address the context of sexuality for older people (White, 1982). The attitude section of the test assesses attitudes toward sexuality among the elderly and especially in nursing homes. ASKAS was developed specifically for older people and people who work with or care for older people and has not yet been adapted into Turkish. The scale consists of 2 parts and a total of 61 items. The first part is the "Knowledge subscale (35 items)", the second part is the "Attitude subscale (26 items)". While the first part of the original scale is scored with three options as "1 = Right, 2 = Wrong, 3 = I don't know", the second part is scored with "1 = Strongly Disagree, 7 = Strongly Agree" in 7-point Likert format. Eight incorrect items in the knowledge section and eleven incorrect items in the attitude section are reverse scored. The total score obtained from the first part of the scale is a minimum of 35 and a maximum of 105, with a low score indicating a high level of knowledge. In the second section, the total score can range between 26 to 182, with a low score indicating a positive attitude. In the original study, Cronbach's alpha's internal consistency coefficient was reported as 0.91 for the knowledge subscale of the scale and 0.76 for the attitude subscale.

Data analysis and study process

The researchers analysed the research data. For data analysis, the Statistical Package for Social Science (SPSS) 22 program was used. The LISREL 8.7 program was also used for confirmatory factor analysis. Data were obtained during this phase using a Kuder-Richardson analysis, Content Validity Index, Pearson Correlation Analysis, Item Analysis, and Confirmatory Factor Analysis. The statistical results obtained were considered significant with a confidence interval of 95% and a value of $p < 0.05$. Figure 1 shows the steps taken during the research process.

Limitations

Because knowledge-based factor analysis was not performed in the original study, and the factor structures were not confirmed, factor analysis was also not performed in this study.

Ethical Considerations

Ethics approval was obtained from the Ethics Committee of the Social and Human Sciences of Istanbul University Cerrahpaşa dated 09.12.2020 and numbered 161408. The first page of the online questionnaire sent to healthcare professionals provided information about the objective and scope of the study. An informed consent form was presented. Volunteers were asked to tick the checkbox before they started answering the questionnaire. Thus, data were only collected from those who volunteered to

provide data. For conducting the validity and reliability study of the ASKAS used in the study by adapting it to the Turkish language, permission was obtained from the first author, White, via email.

Results

The results section is divided into four main areas:

- i. Participant characteristics,
- ii. Validity analyses of ASKAS_TR,
- iii. Psychometric properties of the knowledge scale,
- iv. Psychometric properties of the attitude scale.

1. Participant characteristics

71.5% of the participants are physicians, and 28.5% are nurses. It was found that the mean age of all participants was 42.13 ± 11.5 years (min-max:21–70). They were mostly male (55.2%), married (67.8%), and worked in a public hospital (38.0%).

2. ASKAS_TR *Validity Findings*

2.1. Language validity

The original form of ASKAS was first translated into Turkish in the research. A linguist and a professional translator worked on the translation. After the researchers made the necessary arrangements, the scale was back-translated into English by an academician and another professional translator proficient in Turkish and English.

2.2. Scope validity index

After completing the translation, the expert opinion phase was initiated to test the language validity of the scale. Davis technique (Davis, 1992) was used to calculate the content validity index of the scale. The scale was sent to 21 experts, composed of nurses and academics experts in the field, but 12 of these experts returned. The Content Validity Index (CVI) was calculated by analysing expert opinions. The content validity rates of the items ranged from 0.85 to 1.00. The total CVI of the scale was calculated as 0.92 (Table 1). The items of the scale were rearranged and finalized by the researchers in accordance with the expert opinions.

Table 1
Information domains point-biserial
correlation and Cronbach's Alpha

Items no	P_{rp}	Cronbach's Alpha
1	0.280	0.800
2	0.377	0.798
3	0.227	0.805
4	0.270	0.803
5	0.435	0.797
6	0.426	0.796
7	0.311	0.800
8	0.234	0.801
9	0.357	0.798
10	0.357	0.799
11	0.376	0.799
12	0.508	0.791
13	0.521	0.793
14	0.353	0.798
15	0.023	-
16	0.204	0.805
17	0.075	-
18	0.438	0.795
19	0.385	0.798
20	0.262	0.803
21	0.354	0.799
22	0.300	0.800
23	0.464	0.794
24	0.384	0.797
25	0.229	0.803
26	0.275	0.801

Items no	P _{rp}	Cronbach's Alpha
27	0.542	0.791
28	0.435	0.795
29	0.379	0.797
30	0.494	0.793
31	0.414	0.796
32	0.355	0.799
33	0.457	0.794
34	0.477	0.792
35	0.448	0.794

2.3. Pilot Study

A pilot study was conducted with 15 nurses to determine which ASKAS items were most appropriate and problematic in psychometric properties. In the pilot study, nurses who accepted the application were given a questionnaire. While they were filling out the questionnaire, they were expected to be with them, and they were asked to return the items they had difficulty understanding. Then they noted the items they considered problematic and received their suggestions for these items. Following the pilot study, the meanings of each item were clarified, and spelling problems were fixed by the research team reviewing the items in accordance with the expert and nurse opinions.

3. Psychometric properties of the knowledge scale

3.1. Item analysis

First, the discrimination measurement of the items in the information domain was performed using the point-biserial correlation (r_{pb}). This method is based on the correlation between the score of one item and the total score (raw score) for all items. Two items (items 15 and 17) having an r_{pb} score of less than 0.20 were eliminated from the scale after the analyses (Table 1).

Second, P values were evaluated as a measure of difficulty. The proportion of total people who answered the item correctly is the P-value (true/false) of any binary item. The item was not removed from the scale since the difficulty (P values) of the items in the information domain ranged from 0.21 to 0.81.

3.2. Reliability

Item reliability was examined using the Kuder-Richardson-20 coefficient as an indicator of internal consistency, with coefficients above 0.70 considered noteworthy. The 33-item knowledge domain's Kuder-Richardson-20 internal consistency coefficient was found to be 0.80. Item Cronbach's alpha coefficients ranged from 0.791 to 0.805. The final version of the knowledge domain has 33 items after all of these analyses. 1 point was awarded for correct answers, 2 points for incorrect answers, and 3 points for the "I do not know" answer to obtain the total score for the knowledge domain. The average score of the knowledge domain was 50.29 ± 10.77 (min-max = 36–87). High scores indicate low sexual knowledge in old age.

4. Psychometric properties of the attitude scale

4.1. Confirmatory Factor Analysis

A confirmatory factor analysis was performed to assess whether the ASKAS TR attitude domain's one-domain structure of 26 items was compatible with the Turkish sample. As a result of the research, no item values below 0.20 were found. However, it was found that the model with a single factor structure was not appropriate, and the goodness of fit indices was calculated as follows: $\chi^2 = 2327.57$, $df = 299$, $RMSEA = 0.144$, $GFI = 0.64$, $CFI = 0.58$, $IFI = 0.58$ (Table 2).

Table 2
ASKAS_TR Attitude Subscale validity-reliability analysis stage and results

Item No	Step 1	Step 2	Step 3						Step 4		
	FL/CFA (1)	ITSC	FL/EFA						FL/CFA (2)		
			F1	F2	F3	F4	F5	F6	F1	F2	F3
36	0.26	0.27						0.82			0.21
37	0.21	0.26				0.61					0.33
38	0.56	0.62	0.42			0.38					0.67
39	0.47	0.48	0.45			0.43					0.51
40	0.21	0.22				0.77					0.28
41	0.40	0.43				0.44		0.40			0.46
42	0.86	0.78	0.87						0.84		
43	0.90	0.84	0.86						0.89		
44	0.55	0.56	0.56						0.54		
45	0.76	0.74	0.72						0.77		
46	0.70	0.70	0.70						0.72		
47	0.20	0.30					0.74				0.30
48	0.26	0.28					0.76				0.30
49	0.87	0.82	0.85						0.90		
50	0.43	0.55		0.77						0.60	
51	0.44	0.57		0.81						0.67	
52	0.43	0.55			0.90						0.47
53	0.46	0.58			0.89						0.51
54	0.60	0.69		0.65						0.76	
55	0.46	0.59		0.68						0.74	
56	0.68	0.73	0.57						0.67		

FL/CFA: Factor load in Confirmatory Factor Analysis, ITSC = Item-total score correlation, FL/EFA = Factor load in Exploratory Factor Analysis, ICC = Internal consistency coefficient, (1) = First analysis result, (2) = Second analysis result, df = degrees of freedom, RMSEA = Root mean square error of approximation, GFI = Goodness of fit index, CFI = Comparative fit index, IFI = Incremental Fit Index

Item No	Step 1	Step 2	Step 3	Step 4
	FL/CFA (1)	ITSC	FL/EFA	FL/CFA (2)
57	0.34	0.43	0.62	0.55
58	0.54	0.60	0.42	0.39
59	0.46	0.55	0.58	0.60
60	0.48	0.47	0.55	0.46
61	0.64	0.63	0.70	0.69
$\chi^2 = 2327.57$ df:299 RMSEA = .0144 GFI = .064 CFI = 0.58 IFI = 0.58 KMO = 0.87; $\chi^2 = 4699.892$; $p < 0.001$ Explained variance (%) Factor 1 = %32.809 Factor 2 = %9.170 Factor 3 = %6.729 Factor 4 = %5.283 Factor 5 = %4.889 Factor 6 = %3.888 Toptal = 62.768 $\chi^2 = 847.81$ df = 293 RMSEA = 0.076 GFI = 0.83 CFI = 0.87 IFI = 0.87				
<i>FL/CFA: Factor load in Confirmatory Factor Analysis, ITSC = Item-total score correlation, FL/EFA = Factor load in Exploratory Factor Analysis, ICC = Internal consistency coefficient, (1) = First analysis result, (2) = Second analysis result, df = degrees of freedom, RMSEA = Root mean square error of approximation, GFI = Goodness of fit index, CFI = Comparative fit index, IFI = Incremental Fit Index</i>				

4.2. Item analysis

When it was determined that the fit indices did not confirm the original scale structure, item analysis was performed with the overall scale. For the correlation coefficient, a value of 0.20 was assumed to be the lower limit, and the study was continued without removing the item. The item-total score correlation values of the attitude domain scale items were 0.22 at the lowest and 0.84 at the highest. The analyses were continued with 26 items (Table 2).

4.3. Exploratory factor analysis

Before ASKAS_TR factor analysis was adapted into Turkish, the Kaiser Meyer Olkin (KMO) sampling adequacy test and Bartlett's sphericity test were used to evaluate the sampling adequacy and suitability of the factor correlation matrix. The KMO value was 0.87, and the result of Bartlett's test was $\chi^2 = 4699.892$, which was highly statistically significant ($df = 325$; $p < 0.001$).

The exploratory factor analysis with principal components analysis and varimax rotation revealed that the 26 items in the attitude subscale were divided into six factors, each with an eigenvalue greater than one and explaining 62.77% of the total variance. The factor loadings of the items of the first factor ranged from 0.42–0.87, and the factor loadings of the items of the second factor ranged from 0.58–0.80. However, because a total of four items (item nos. 38, 39, 41, and 58) were close in importance and had high factor loadings in the same factors (indicating overlap), these four items and two items in factors 3, 4, 5, and 6 were combined to form a single factor (Table 2).

4.4. Confirmatory factor analysis

The CFA was performed again to assess the compatibility of the 3-factor structure identified after the exploratory factor analysis. Factor loadings between 0.21 and 0.90 were obtained as a result of the CFA analysis. $\chi^2 = 847.81$, $df = 293$, RMSEA = 0.076, GFI = 0.83, CFI = 0.87, IFI = 0.87 were found to be the goodness of fit indices.

4.5. Internal Consistency Analysis

Cronbach alpha analysis, commonly used in Likert-type scales, was performed to determine the internal consistency of the measures obtained from ASKAS_TR. The Cronbach's alpha value for the total scale was 0.91 and for the sub-scales was 0.73-0.78-0.90 (Table 3).

Table 3
Cronbach Alpha results of the sub-scales of the attitude dimension of the scale

Factor name	Items	Cronbach's Alpha
Behavioral attitude of caregivers towards sexual life of the elders	36,37,38,39,40,41,47,48,52,53,58	0.73
Cognitive attitudes of caregivers towards sexual life of the elders	50,51,54,55,57,59	0.78
Emotional attitudes of the caregivers towards sexual life of the elders	42,43,44,45,46,49,56,60,61	0.90

Discussion

At the present time, with the aging population, sexuality has become an essential concept in elderly individuals (Sinković et al., 2019). This study investigated the validity and reliability of the Turkish version of ASKAS, which was developed to be used by healthcare professionals and their relatives caring for the elderly or nursing home staff. The study results show that ASKAS_TR is valid, reliable, and usable in

practice for Turkish society. The original English version of ASKAS was translated into Turkish at the first phase of the research. Although there is no standard for translating scales in cross-cultural studies (Cha et al., 2007), a systematic translation process consisting of different phases was followed. These phases were used to reduce differences arising from cross-cultural psycholinguistic features, the method recommended by WHO for adapting instruments developed in different languages (World Health Organization, 2021). The ability to accurately and completely measure the property that a measurement tool aims to measure is referred to as validity. This study's content validity results reveal that expert opinions are in consensus and that the language and content validity criteria are met (Karaahmetolu & Alpar, 2017). A CVI value above 0.80 is considered sufficient (Polit, Beck, 2012). While the content validity ratios of the items ranged from 0.85 to 1.00, the total CVI score for the scale was 0.92.

In assessing the psychometric properties of the knowledge subscale of the scale, item analyses and reliability studies were conducted. In the item analysis, two items were eliminated according to the total score correlation. According to Nunnally's (1967) guidelines, items with excessively high P values, e.g., below 0.20 or above 0.80, are excluded from the scale. No items in the knowledge domain were excluded since their difficulty (P values) ranged from 0.21 to 0.81. In the reliability analysis, the Kuder-Richardson-20 coefficient was used. The Kuder-Richardson-20 coefficient can be considered a coefficient for items scored separately as Cronbach (for example, true/false). The Kuder-Richardson formulas are called internal consistency coefficients because they are based on the assumption that each item of the test measures the same variable or that the test measures are homogeneous (Ercan & Kan, 2004). KR-21 is used in tests without item analysis, and the item difficulty of the test items is assumed to be equal. As a result, the coefficient calculated using the KR-21 method is considered the lowest limit of reliability. Suppose a test's KR-20 or KR-21 reliability is high. In that case, it can be assumed that all of the items measure the same efficacy (the test is one-dimensional) and that the test scores are free of random errors (Karakoç & Dönmez, 2014). Since the internal consistency coefficient Kuder-Richardson - 20 in this study was 0.80, the final version of the knowledge domain consisted of 33 items. The knowledge domain's mean score was found to be 50.29 ± 10.77 . The score of the knowledge subscale in the original scale was 64.19 ± 17.25 (White, 1982), 49.00 ± 8.00 in the study conducted with gynecologists in New York (Langer-Most & Langer, 2010), 65.21 ± 12.32 in the study conducted with persons over 60 years of age in Poland (Cybulski et al., 2018), and 22.8 ± 4.69 in the study conducted with caregivers of elderly persons in Australia (Chen et al., 2017). As can be seen, the results of the ASKAS knowledge sub-domains differ from each other in the studies conducted in different regions and samples.

As part of the validity and reliability study of the attitude subscale of the scale, a confirmatory factor analysis, an item analysis, an exploratory factor analysis, and an internal consistency analysis were conducted. Construct validity evaluates how accurately a measurement instrument can measure an abstract concept, behaviour, and dimension that cannot be directly observed and are difficult to measure but are theoretically explained (Güleç & Kavlak, 2013). An exploratory factor analysis was conducted in the study to assess the construct validity of the attitude subscale of the scale. Before conducting factor analysis, various analyses are performed to evaluate whether the sample is large enough. The KMO sampling adequacy test was used in this study. It reports good sampling adequacy with a value between

0.80 and 0.90 of the KMO test score (Karaahmetoğlu & Alpar, 2017). The significant results of Bartlett's test, another sampling adequacy test, show that the correlation matrix of the scale items is sufficient for factor analysis (Polit & Beck, 2012). The KMO value of 0.87 in this study indicated that the sample was enough for factor analysis. The important results of Bartlett's test showed that the items had a sufficient correlation matrix.

Exploratory factor analysis involves rotation to clarify independence and interpretation. Varimax rotation, one of the most commonly used vertical rotation techniques, was used in this study. The higher the total variance explained by the factors resulting from the analysis, the stronger the factor structure of the scale. While single-factor analyses should explain at least 30% of the total variance, this rate should be higher in multifactorial structures (Ayre & Scally, 2014). This scale's three factors explained a considerable portion of the total variance (62.77%). Therefore, the factor structure demonstrates that it is appropriate. In factor analysis, three basic criteria are considered. The first is that items must have high loadings for the factor to which they belong (Lawshe, 1975). The bounds on the factor loadings that explain the correlations of the items with the factors are not clear, but it has been reported that the lowest acceptable factor loading is 0.20 (Strickland, 2003). Because the lowest factor loading in this study was 0.22, no item was removed from the scale. The second criterion is that the items have high loadings for one factor and low loadings for the other factors. When this criterion is met, it is possible to examine independent structures. The loadings are expected to be as high as possible, yet how much difference can be ignored is debatable. The difference between the two-factor loadings is expected to be at least 0.10 (Tavakol & Dennick, 2011). There was no exploratory factor analysis in the original form of the scale or studies of validity and reliability. Also, the attitude dimension of the scale was used as a one-dimensional scale.

It is recommended to create new covariances for those with high covariance among the scale items that reduce the fit to improve the fit indices model in scale-fitting studies (Mishra et al., 2019). The error covariance among the scale items was assigned in the study in accordance with the change suggestions. However, the increasing error covariance shows that the model is losing more and more of its confirmatory properties. Therefore, defining more than two or three covariances may cast doubt on the goodness of the model. However, this does not eliminate the validity of the established model (Akgul, 2005). In this study, covariance assignment was made between items that significantly affect the model's structure and have similar theoretical meanings.

Measurement invariance between groups or populations is tested using confirmatory factor analysis (Brown, 2015). In this study, confirmatory factor analyses were conducted to test the construct identified in the original study. In analysis, many indices can be used for evaluation by determining model fit using various fit indices, but there is no absolute consensus on which values should be reported (Costello & Osborne, 2005). A chi-square degree of freedom (χ^2/df) of less than two is normal, and less than five is acceptable. An RMSEA value of less than 0.05 is normal, and less than 0.08 is acceptable. GFI, CFI, and IFI values above 0.95 are considered normal and above 0.90 acceptable (Costello & Osborne, 2005). In the study, the following values were obtained: χ^2/df : 2.89, CFI: 0.87, RMSEA: 0.076, GFI: 0.83, and IFI:

0.87 with a three-factor structure. The six-factor results of this study showed that the original scale structure did not have an acceptable fit, while the three-factor structure had an acceptable level of fit.

The Cronbach's alpha coefficient, which indicates the internal consistency of measurements, is generally considered highly reliable in the range of 0.60–0.80 and highly reliable in the range of 0.80–1.00 (Tavşancıl, 2014). The alpha coefficients for the total scale and the subscale "Emotional Attitude of Caregivers towards Sexual Life of the Elderly" were highly reliable. At the same time, the subscales "Behavioural Attitudes of the Caregivers towards Sexual Life of the Elderly" and "Cognitive Attitudes of the Caregivers towards Sexual Life of the Elderly" were reliable. The Cronbach's alpha coefficient for the scale total was 0.86 in the original version of the scale. The Cronbach alpha coefficient of the scale was 0.90 in the study conducted with students in a nursing school in Israel (Gewirtz-Meydan et al., 2018), 0.93 in the study with nurses in Brazil (Evangelista et al., 2019), 0.87 in the study with nurses in Belgium (Mahieu et al., 2016), and 0.92 in the study with older people in the United States (Syme & Cohn, 2016). In this study, the scale's internal consistency was found to be highly reliable, in line with the literature.

Conclusion

This study shows that the Turkish version of ASKAS is suitable for use with older people, healthcare professionals, and people dealing with older people. Since the scale was adapted for the first time in Turkey, it can be recommended to study it in different sample groups, discover new structures and use it to evaluate the existing structure. The scale's usage in clinics and community-based studies could provide objectivity in determining older people's knowledge and attitudes towards sexuality, which is often considered taboo. The results of these studies can be used as a basis for developing education and training programs for health professionals, older people and their caregivers, and nurses. Nurses who stay with patients for a long time and provide their treatment and care in health care facilities and especially in nursing homes must be more sensitive to this issue and respect the sexual life of older people. In addition, they must be able to answer the questions of the elderly, not judge and cooperate with the doctor when necessary. For this reason, it is essential that care managers address this issue.

Declarations

Ethical Approval and Consent to participate: Ethics approval was obtained from the Ethics Committee of the Social and Human Sciences of Istanbul University Cerrahpaşa dated 09.12.2020 and numbered 161408. All participants gave informed consent for the research, and that their anonymity was preserved.

Consent for publication: All authors have approved the manuscript and agree with submission to the Springer Nature.

Availability of supporting data: Not applicable

Competing interests: No conflict of interest has been declared by the authors.

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Authors' contributions:

The conception and design of the study: HAK, BY

Acquisition of data: HAK, BY, CA, HA

Analysis and interpretation of data: HA, HAK, BY

Drafting the article: HAK, BY, CA

Revising it critically for important intellectual content: HA, CA

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Figures

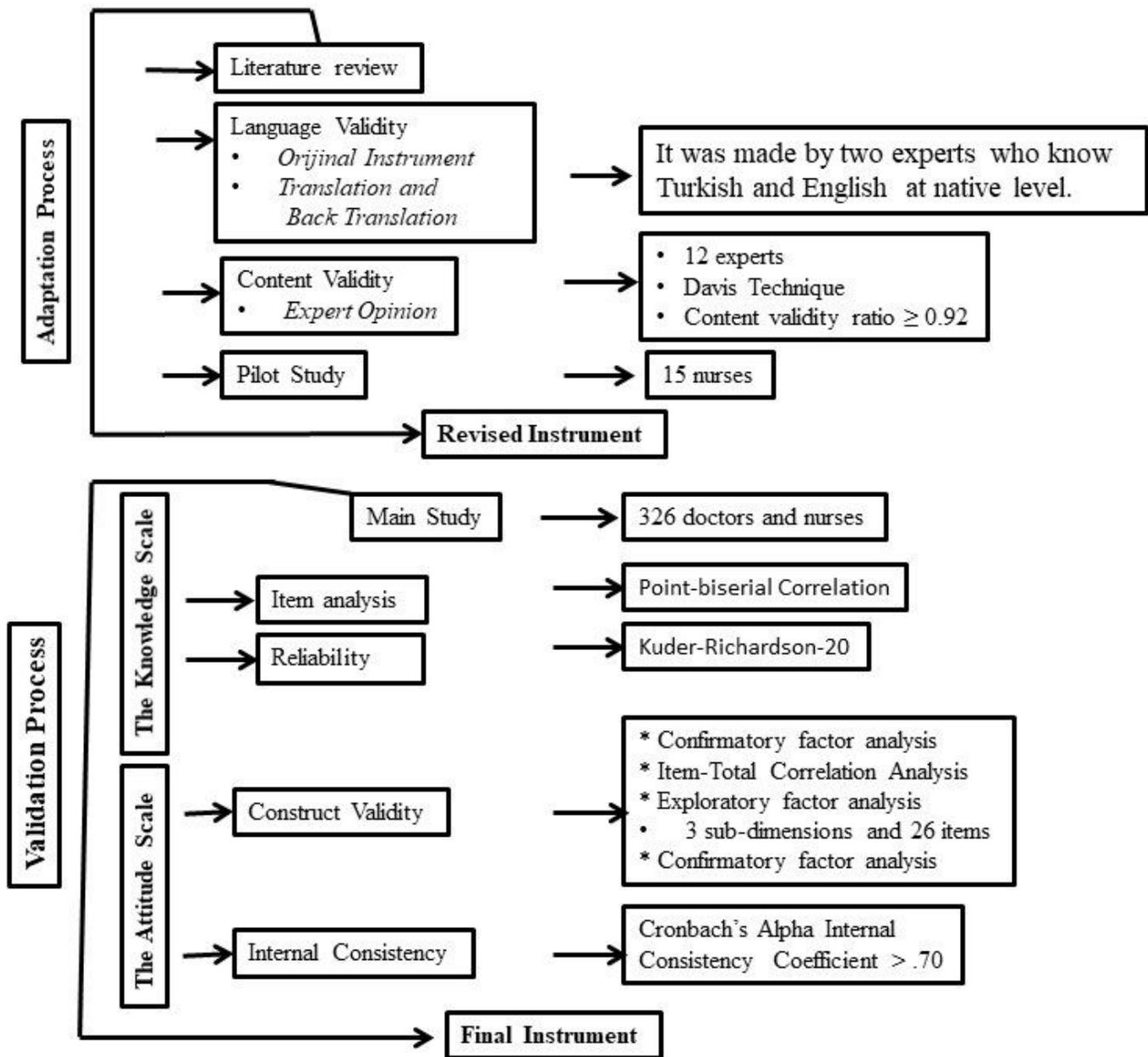


Figure 1

Research process

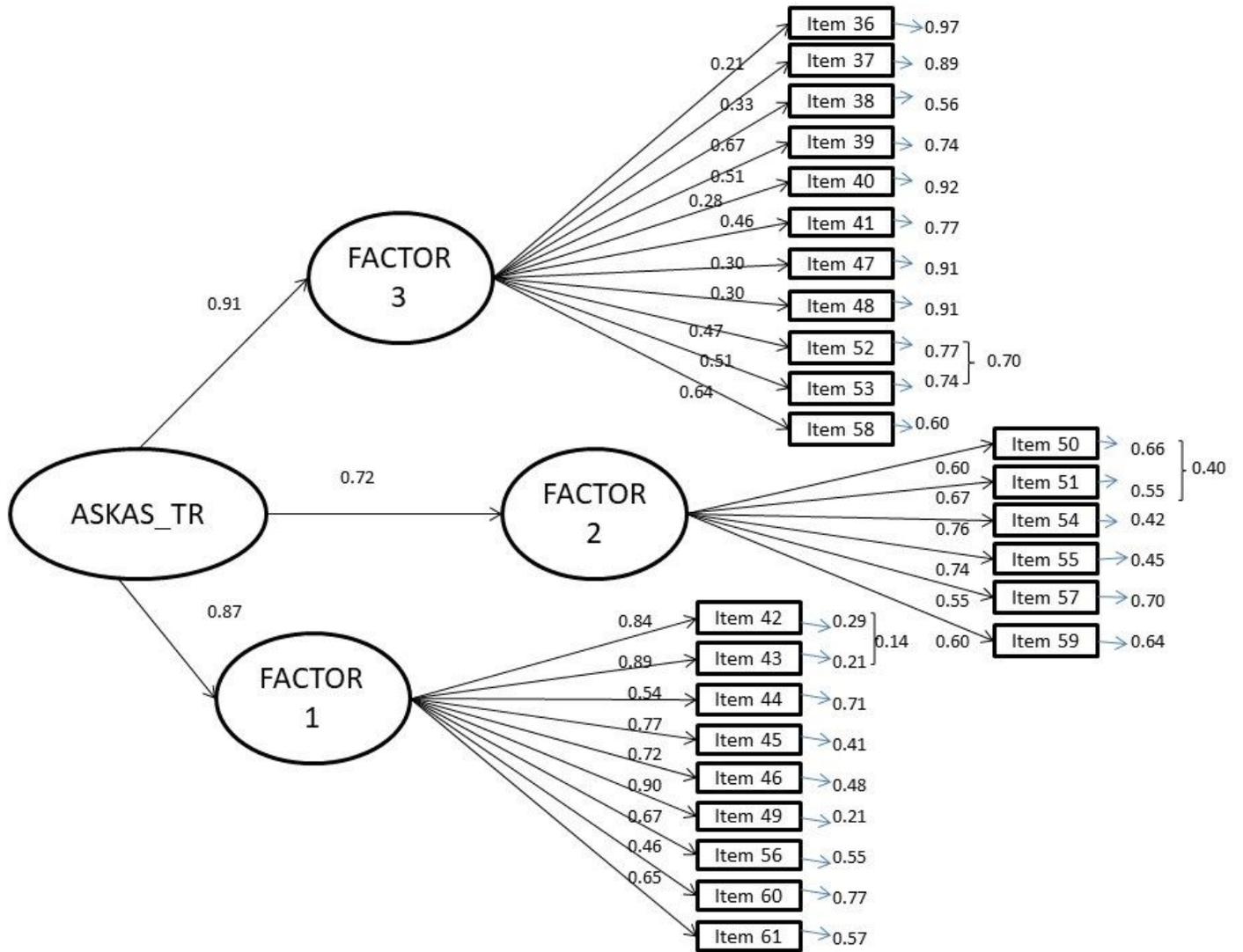


Figure 2

Exploratory factor analysis results