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The Validity and Reliability of the Turkish Version of the Attitudes to Fertility and Childbearing Scale (AFCS)

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Abstract: This study, a descriptive and methodological type of research, was conducted to evaluate the validity and reliability of the Turkish adaptation of the Attitudes to Fertility and Childbearing Scale (AFCS), developed by Söderberg et al. (2015). The sample of this study consisted of 224 women who had not given birth yet and who were between the ages of 20-30. The scale is a Likert-type measuring instrument consisting of 21 items, in three dimensions. Internal consistency analyses were conducted to determine its reliability. After confirming the linguistic validity, expert opinions were obtained for the content validity. Furthermore, the Item Content Validity Index (I-CVI) and the Scale Content Validity Index (S-CVI) were used to assess its content validity. The construct validity was performed using confirmatory factor analysis. As a result of the confirmatory factor analysis carried out for the construct validity, a three-factor structure of the scale was found to have a good level of model fitness indices (RMSEA=.067, SRMR=.075, CFI=.96). As a result of the scale reliability analysis, the internal consistency coefficient was found to be .82 for the total scale and internal consistency reliability coefficients of the sub-scales were found to be .93 for the "importance of fertility for the future" sub-scale, .87 for the "childbearing as a hindrance at present" sub-scale, and .81 for the "social identity" sub-scale. AFCS is a valid and reliable measurement tool that can be used to measure the fertility and childbearing attitudes of women in a fertile age.

1. INTRODUCTION

As their age increases, women's number of follicles and egg quality decreases, which is called a decrease in fertility, i.e. a decrease in ovarian reserve (number of eggs in the ovaries) (Fitzgerald et al., 1998; Coccia & Rizzello, 2008; Alviggi et al., 2009).

Today, circumstances such as women's desire to improve their level of education, their desire to pursue their career, their desire to reach a certain maturity before having children, their inability to find the right partner, and their thought that their independence will be limited may cause them to delay their first pregnancy (Sleebos, 2003; Tydén et al., 2006; Benzies et al., 2006; Proudfoot et al., 2009; Cooke et al., 2012). The increased maternal age, however, poses

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a risk for the health of the mother and her baby and may lead women not to have children at all (Sleebos, 2003; Tydén et al., 2006; Cooke et al., 2012). In addition, success rates of assisted reproductive techniques used to conceive decrease as the age of the women increases (Yoldemir, 2016).

Although having children may seem to be an obstacle in women's current life, motherhood is important for them in the future (Söderberg et al., 2015). There are very few studies examining the fertility and attitudes towards having children (Söderberg et al., 2013; Söderberg et al., 2015). Söderberg et al. (2013) developed the Attitudes to Fertility and Childbearing Scale (AFCS) using a sample of Swedish women. The AFCS was later revised in a larger sample and reduced from 27 items to 21 items (Söderberg et al., 2015). Söderberg et al. (2015) conducted this scale in young women with a high education level. Similarly, it was thought that it would be appropriate to use the AFCS scale in Turkish young women with a high level of education to determine fertility and childbearing attitudes. Moreover, there is no other tool to measure women's attitudes towards childbearing and fertility in Turkish. The aim of this study is to adapt the AFCS to Turkish and examine the reliability and validity of the Turkish version.

2. METHOD

This study is a descriptive and methodological type of research.

2.1. Study Group

The study population consisted of healthy women who were studying at Pamukkale University, Denizli, Turkey. The sample size in a scale development study is expected to be at least 5-10 times the number of items in the scale (Çapık et al., 2003; Özkan & Sevil, 2007). Since the Attitudes to Fertility and Childbearing Scale consists of 21 items, it was determined that it would be appropriate to include at least 210 women in the sample. The sample of the study consisted of 224 women and these women were in the 20-30 age group, who could read and understand Turkish and who had not yet had children. Women who were not in the 20-30 age group, who had children, who could not read or understand Turkish, and who had a health problem that prevented them from giving birth were excluded from the scope of the research.

2.2. Ethical Aspects of the Study

Permission was obtained from Söderberg to study the Turkish validity and reliability of the AFCS. Ethics committee approval was obtained from Pamukkale University non-interventional clinical research ethics committee. Then, permission from the institution was obtained to be able to carry out the research.

2.3. Data Collection Instruments

A "Personal Information Form" and "AFCS" were used to collect the data for the study.

2.3.1. *Personal information form*

This form includes questions on age, educational status, marital status, place of residence, use of a method of birth control, working status, and the age range that they plan to become pregnant.

2.3.2. *Attitudes to fertility and childbearing scale*

AFCS is used to measure attitudes towards having children and fertility in individuals who have not yet had children (Söderberget et al., 2015). In the validity and reliability study of the original scale, the Cronbach alpha coefficients of the subscales were found between .95 and .86. The scale has 3 sub-scales and include the importance of fertility for the future (items no 1, 2, 3, 4, 5, 6, 7), childbearing as a hindrance at present (items no 8, 9, 10, 11, 12, 13, 14, 15, 16), and social identity (items no 17, 18, 19, 20, 21) (Söderberg et al., 2015). The scale is a Likert-type

scale consisting of 21 items and each item is scored over 5 points. On this scale, point 5 shows the optimal, and point 1 shows the weakest attitude. The lowest and highest scores of the scale are 21 and 105, respectively. Low scores reflect low levels of fertility and attitudes to childbearing. The scale development process is given in the title of validity analyses.

2.4. Data Collection Method

The researcher introduced herself before starting the data collection. An introductory information form and a draft scale form were given to the participating women. The participants filled in the scale themselves and the application time of the scale was approximately 3-5 minutes.

2.5. Data Analysis

For validity and reliability analyses, IBM SPSS Statistics v20 was used and for confirmatory factor analysis, Lisrel version 8.8 program was used. Hotelling T2 analysis was conducted to determine whether the mean item scores of all items in the scale and response bias were equal to each other. The floor and ceiling effects were calculated for the whole scale.

2.5.1. *Item and reliability analyses*

Internal consistency analyses were conducted to determine the reliability of the scale. Item-Total Score Analysis and Pearson Correlation Coefficient were calculated to explain the relationship between the scores obtained from the items in the scale and the total scale score (Table 2). The internal consistency of the scale was calculated using the Composite reliability coefficient, and Cronbach alpha coefficient (Table 3).

2.5.2. *Validity analyses*

The structure, language, and content validity of the scale were evaluated. The scale was translated into Turkish by two linguists who had good command of both English and Turkish. Independently, the researcher also compared the Turkish versions of the scale. The final version of the scale was translated back into English by two different experts in their fields. The scale translated into English and the original scale were compared. Consequently, it was decided that the translation of the scale was appropriate. Then, Turkish linguists reviewed the conformity of the statements and made the necessary recommendations and redactions. In the final stage, eight experts in the field assessed each item on the scale for theoretical suitability.

Expert opinions were obtained for the content validity of the scale. In addition, the content validity index of the scale was calculated. After the Scale Content Validity Index (S-CVI) and Item Content Validity Index (I-CVI) analyses, which were performed in accordance with expert opinions, a draft scale with 21 items was created. The construct validity, however, was performed using confirmatory factor analysis. Principal axis analysis and varimax rotation were performed for CFA (Table 4).

3. RESULTS / FINDINGS

3.1. Study Sample and Sample Properties

Table 1 shows the sociodemographic characteristics of 224 women in the 20-30 age group. The average age of the women was 21.93±1.74. Of the women, 96.9% was single, 96% was a high school graduate, 92% was unemployed, 57.1% was living in the city centre, 78.1% was student, 86.2% had social security, and 72.8% had moderate level of income. Of the women, 98.7% was not using a method of birth control. Of the women, 4.9% was of foreign nationality. Of the women, 95.1% was planning to have children in the future and 86.2% was planning to have children between the ages of 25-29.

Table 1. *Socio-demographic characteristics of the women (n=224).*

Variables	n	%	Variables	n	%
Education			Situation of wanting to have children		
Literate	9	4.0	Yes	213	95.1
High school	215	96.0	No	11	4.9
Marital status			The age she wants to have a child		
Single	7	3.1	20–24 years old	10	4.5
Married	217	96.9	25–29 years old	193	86.2
Job			30–34 years old	19	8.4
Student	175	78.1	35–39 years old	2	.9
Officer	49	21.9			
Income					
Bad	45	20.1		Mean ± Sd	
Middle	163	72.8	Age*	21.93 ± 1.74	
Good	16	7.1	Number of children she wants *	2.06 ± .40	

*Mean ± standard deviations are given.

3.2. Reliability Analysis

3.2.1. *Item total score analysis*

In the reliability study, item-total score correlations were calculated for the 21-item draft scale. The correlation coefficients of the items varied between .34 and .57 (p<.000) (Table 2).

Table 2. *Item total score analysis of the scale.*

No	Items	Item-Total Correlation	
		r	*p*
1	I look forward to one day become a mother	.49	<.05
2	I can imagine being pregnant and giving birth	.39	<.05
3	Becoming a mother is important to me	.52	<.05
4	I look forward to being pregnant in the future	.49	<.05
5	Having a child is an essential part of life	.55	<.05
6	It is important for me to be able to get pregnant in the future	.56	<.05
7	Being fertile is an important part of my future life	.53	<.05
8	Having children would limit my leisure time activities	.34	<.05
9	Childbearing does not fit into my life right now	.41	<.05
10	I do not want to take the responsibility as a mother now	.43	<.05
11	An unplanned pregnancy would hinder me in my current life	.50	<.05
12	Having children would limit socializing with my friends	.53	<.05
13	Being a mother would take too much of my own time	.48	<.05
14	Having children would limit my study opportunities	.53	<.05
15	I want to take advantage of my freedom before I have children	.45	<.05
16	Having children would limit my career	.40	<.05
17	Being fertile is important to my feeling of femininity	.57	<.05
18	My fertility makes me feel communion with other women	.51	<.05
19	Becoming a mother is important for my identity as a woman	.52	<.05
20	Being fertile is an important part of my present life	.37	<.05
21	It is important for me to be able to get pregnant any time	.39	<.05

3.2.2. *Item total score analysis of the sub-scales*

The correlation coefficients between the sub-scale item scores and the sub-scale total scores of the scale were in the range of .76-.90 in the "Factor 1" sub-scale, .56-.79 in the "Factor 2" sub-scale, and .49-.87 in the "Factor 3" sub-scale, respectively and were found to be statistically significant (p=.000).

3.2.3. *The Scale sub-scales and total score analysis*

In order to examine the alignment of each sub-scale with the scale, correlations of the sub-scale scores and the total score of the scale were calculated. The correlation coefficients of the sub-scales were between .60 and .64 and were statistically significant (p=.000) (Table 3).

Table 3. *Reliability analysis results of the AFCS.*

Factors	Sub-Dimension Total Score Correlation		Cronbach's alpha	Composite Reliability Coefficient	Two half reliability	Guttman Split-half	Spearman Brown	Floor Effect	Ceiling Effect
	r	*p*							
1.Factor (Importance for future)	.60	<.05	.93	.94				.40	20.50
2.Factor (Hindrance at present)	.64	<.05	.87	.80				1.3	4.50
3.Factor (Female identity)	.63	<.05	.81	.83				.40	9.40
Total AFCS			.82		.88	.88	.88	.00	1.30
	Pre-test		Post-test	*p*					
Total AFCS (Test retest)	76.55±13.18		76.68 ± 11.34	.973					
Hotelling T^2	T^2=570.2, p=.000								

3.2.4. *Reliability coefficients*

The total Cronbach alpha coefficient of the scale was determined to be .82. Cronbach alpha coefficients for subscales were .93 for "importance of fertility for the future", .87 for "childbearing as a hindrance at present", and .81 for "social identity" (Table 3).

3.2.5. *Stability coefficient*

To measure the invariance of the scale over time, the test was repeated with 22 women for 15 days after the first application. In the test-retest results, performed to test the relationship between the measurements obtained with a certain time interval and under similar conditions, no significant differences were found between the scores (p=.973) (Table 3).

3.2.6. *Hotelling's T^2 test*

Hotelling T^2 analysis was conducted to determine whether the mean item scores of all items in the scale and response bias were equal to each other. It was found that the item averages were different and there was no response bias (Hotelling T^2=570.2, p=.000) (Table 3).

3.2.7. *Ceiling and floor effect of scale*

The floor and ceiling effects were calculated for the whole scale. The floor effect of the scale was .00 and the ceiling effect was 1.3. The floor effect of Factor 1 was .40, the ceiling effect

was 20.5, the floor effect of Factor 2 was 1.3, and the ceiling effect was 4.5, while the floor effect of Factor 3 was .40 and the ceiling effect was 9.4 (Table 3).

3.3. Validity Analyses

3.3.1. *Linguistic and content validity*

After the linguistic validity of the draft scale was ensured, expert opinions of eight experts in their fields were obtained. Eight experts rated each item as '1= *not relevant*', '2= *slightly relevant'*, '3= *highly relevant'*, and '4= *highly relevant'*. Then, the experts were asked to give suggestions for responses other than 'highly relevant'. In the expert opinion assessment, all the items were above .78 (I-CVI=.88-1) and the scale validity index was found to be .99. In accordance with the analysis results, no item was removed or changed from the scale. Content validity of the scale was provided by 21 items.

Items not answered by women were identified in the pilot study. After the pilot application, it was decided that data were to be collected through a 21-item draft scale.

3.3.2. *Construct validity*

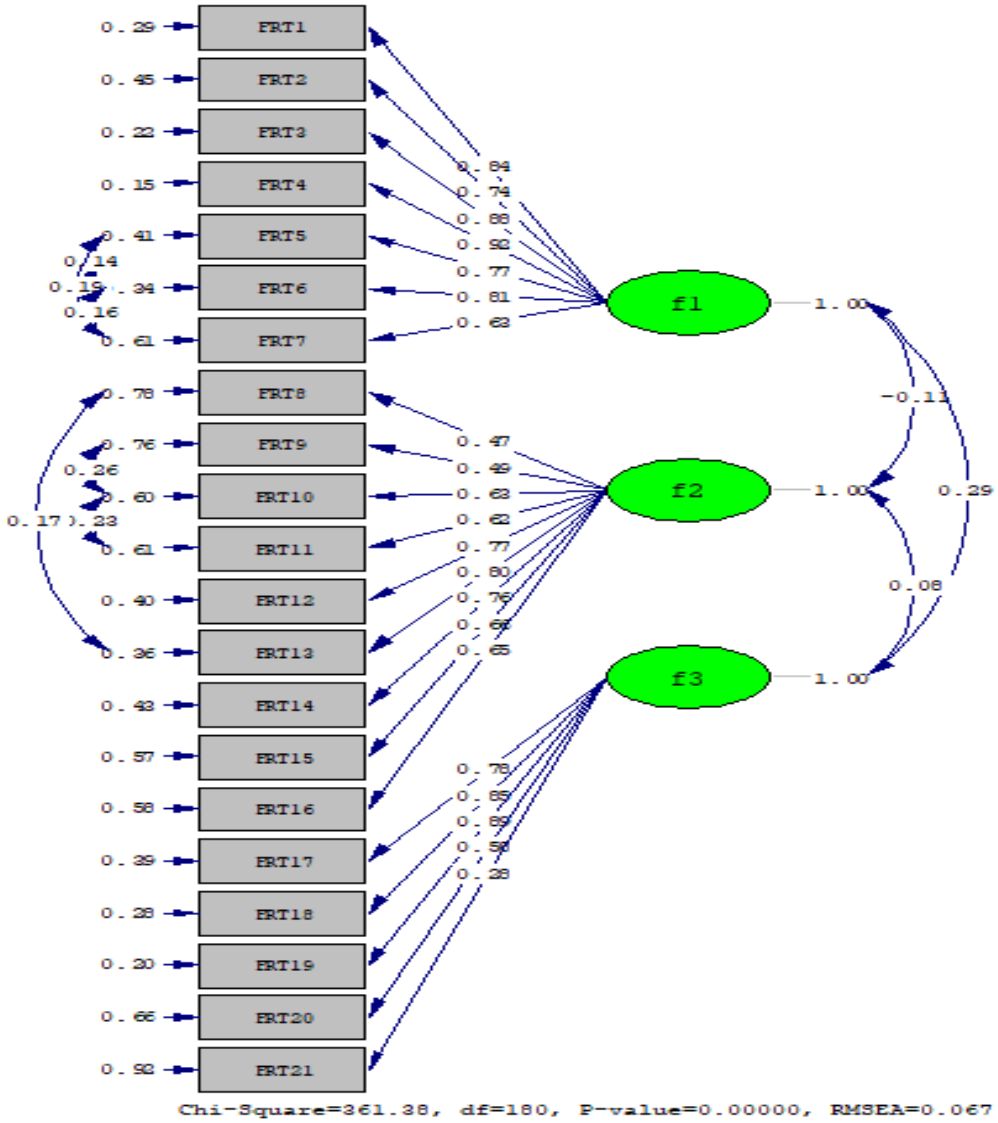
3.3.2.1. Confirmatory Factor Analysis. Model fitness of the AFCS in Turkish culture was investigated by the first level CFA. Scale factor loads were found to be between .28 and .92 as a result of the analysis. Factor loading values of the Attitudes to Fertility and Childbearing Scale were in the range of .63-.92 in the "importance of fertility for the future" sub-scale, .47-.80 in the "childbearing as a hindrance at present" sub-scale, and .28-.89 in the "social identity" sub-scale. Modifications were made among some items in the same sub-dimension. These items are located under the same structure and measure the same value (Figure 1). According to the findings of the confirmatory factor analysis, it was determined that the scale was compatible with the model (Table 4).

Table 4. *Findings about first level confirmatory factor analysis.*

Fit indices	Values obtained from the scale	Results
χ^2/df	2.00	Good fit
RMSEA	.067	Acceptable fit
SRMR	.075	Acceptable fit
CFI	.96	Good fit
GFI	.87	Acceptable fit
NFI	.93	Acceptable fit
NNFI	.95	Good fit
IFI	.96	Good fit
RFI	.91	Acceptable fit

RMSEA: Root Mean Square Error of Approximation, SRMR: Standardized Root-Mean-Square Residual, CFI: Comparative Fit Index, GFI: Goodness of Fit Index, NFI: Normed Fit Index, NNFI: Non-Normed Fit Index, IFI: İncremental Fit Index, RFI: Relative Fit Index

Figure 1. *Confirmatory factor analysis related to AFCS.*



4. DISCUSSION and CONCLUSION

This study was conducted to evaluate the validity and reliability of the Turkish adaptation of the AFCS in order to determine the attitudes of women who did not have children about childbearing and fertility.

4.1. Validity Analyses

During the Turkish adaptation of the AFCS, developed by Söderberg et al. (2015), expert opinions were first taken to ensure its linguistic validity. Content validity of the scale was evaluated after linguistic validity was performed. Eight experts were consulted for content validity. The content validity analysis was performed by expert evaluations. If there are six or more experts in the content validity analysis, it is recommended that the I-CVI should not be lower than .78 and the S-CVI should be .90 or higher (Polit & Beck, 2006). As a result of the analysis, I-CVI was above .78 and S-CVI was found to be .99. Thus, content validity of the items in the scale was accepted. According to this result, it was concluded that the scale had sufficient content to identify the attitudes to fertility and childbearing of young women who had no children yet.

As a result of the confirmatory factor analysis, it was revealed that the factor loads of the scale

varied between .28 and .92. In order to look at whether an item is related to the conceptual structure, one needs to look at the factor load of that item. It was stated by Tavşancıl (2010) that factor loads ranging from .30 to .40 can be taken as the lower threshold point. All factor loadings (except for the 21st item) were above .30 (Figure 1). The 21st item is believed to be important for the scale. It was therefore decided to keep it on the scale. Moreover, model fitness indicators, RMSEA=.067, χ^2/df=2.00, SRMR=.075, CFI=.96, GFI=.93, NFI=.95, NNFI=.96, IFI=.87, and RFI=.91show that the model has a good fit.

In accordance with the statistically significant results, it has been concluded that the scale has the content and construct validity. The reason for the high content and construct validity of the scale is thought to be sufficient language validity and high social adaptation. In addition, the experts whose opinions were obtained included nursing faculty members with many years of experience on the subject. It is believed that obtaining the opinions of appropriate experts on the subject also affected the results.

4.2. Reliability Analyses

The relationship between the total score of the test and the scores of the scale items was determined by the item total-score analysis. Item total score correlations should not be negative and should be above .25 (Kalaycı, 2010). Pearson correlation coefficients of all items in the scale were determined between .34 and .57 by item analysis. The fact that all the items in the scale were greater than .25 correlation value and the analysis results showed that the items were understandable and clear.

The total Cronbach alpha internal consistency reliability coefficient of the scale is .82. As a result of this value, it can be said that the scale has a high reliability (Eser & Baydur, 2007). In the study by Söderberg et al. (2015), the internal consistency coefficients of the sub-scales ranged from .862 to .945. In this study, the Cronbach's alpha internal consistency reliability coefficients of the sub-scales were found to be .93 for the "importance of fertility for the future" sub-scale, .87 for the "childbearing as a hindrance at present" sub-scale, and .81 for the "social identity" sub-scale. The reliability of the scale was also assessed using the two split-half method. According to the split-half test result, the correlation value between the two halves of the scale was found as .88. Based on these results, a strong and significant relationship was found between the two halves. The Guttman split-half and the Spearmen-Brown coefficients were > .88. The obtained analysis results proved the reliability of the scale as high (Şencan, 2005; Rattray & Jones, 2007; Nunnally & Bernstein, 2010; Çam & Baysan-Arabacı, 2010). As a result, it is seen that internal consistency of the sub-scales and the scale was confirmed.

With the Hotelling T^2 test, bias in responses to the scale items was evaluated. In the Hotelling T^2 test (Hotelling T^2=570.2, p=.000) item score averages were found to be different. This result shows that the participating women who responded to the scale items were not biased and perceived the items in the same way, which is an important issue that has an impact on the reliability of the scale (Özdamar, 2002; Şencan, 2005). According to these results, it was concluded that women were not biased when filling in the scale.

Determining the floor and ceiling effect of the scale is important in validity and reliability studies, while these values should not exceed 20% (Rattray & Jones, 2007; Şencan, 2005). In this study, it can be said that it is a reliable scale since the floor and ceiling effect of the scale does not exceed 20%.

The AFCS consists of three sub-scales; namely, the "social identity", "childbearing as a hindrance at present" and "importance of fertility for the future" sub-scale. The 21-item Likert-type scale is scored over 5 points. On this scale, point 5 shows the optimal and point 1 shows the weakest attitude. The lowest and highest scores of the scale are 21 and 105, respectively. Low scores reflect low levels of fertility and attitudes to childbearing. As a result, the Turkish

version of AFCS is a valid and reliable measurement tool that can measure the attitudes of young women in the 18-30 age group with no children yet towards childbirth and fertility.

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Declaration of Conflicting Interests and Ethics

The authors declare no conflict of interest. This research study complies with research publishing ethics. The scientific and legal responsibility for manuscripts published in IJATE belongs to the authors. **Ethics Committee Number**: Ethics Committee for Non-Interventional Investigations of the University of Pamukkale, 60116787-020/68045.

Authorship Contribution Statement

Sinem Goral Turkcu: Investigation, Methodology, Resources, Visualization, Software, Formal Analysis, and Writing the Original Draft. **Sevgi Ozkan**: Methodology, Supervision, and Validation. **Pinar Sercekus:** Methodology, Supervision, and Validation. **Erkan Alatas:** Supervision, and Validation.

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5. REFERENCES

Alviggi, C., Humaidan, P., Howles, C.M., Tredway D., & Hillier, S.G. (2009). Biological versus chronological ovarian age: implications for assisted reproductive technology. *Reproductive Biology and Endocrinology,* 2009, *7*(101), 1-13. https://doi.org/10.1186/1477-7827-7-101

Benzies, K., Tough, S., Tofflemire, K., Frick, C., Faber, A., & Newburn-Cook, C. (2006). Factors influencing women's decisions about timing of motherhood. *Journal of Obstetric, Gynecologic & Neonatal Nursing, 35*(5), 625-633. https://doi.org/10.1111/j.1552-6909.2006.00079.x

Coccia, M.E., & Rizzello, F. (2008). Ovarian reserve. *Annals of the New York Academy of Sciences, 1127*, 27-30. https://doi.org/10.1196/annals.1434.011

Cooke, A., Mills, T.A., & Lavender, T. (2012). Advanced maternal age: delayed childbearing is rarely a conscious choice: a qualitative study of women's views and experiences. *International Journal of Nursing Studies, 49*(2012), 30-39. https://doi.org/10.1016/j.ijnurstu.2011.07.013

Çam, M.O., & Baysan-Arabacı, L. (2010). Qualitative and quantitative steps on attitude scale construction. *Hemşirelikte Araştırma Geliştirme Dergisi,12*(2), 59-71.

Çapık, C., Gözüm, S., & Aksayan, S. (2018). Intercultural scale adaptation stages, language and culture adaptation: Updated guideline. *FNJN Florence Nightingale Journal of Nursing*, *26*(3), 199-210.

Eser, E., & Baydur, H. (2007). *Sağlıkla ilgili yaşam kalitesi ölçeklerinin kültürel uyarlaması* [*Cultural adaptation of health-related quality of life scales*]. 2. Sağlıkta yaşam kalitesi kongresi kongre öncesi kurslar kitabı. https://www.saykad.net/p/2ulusal-saglkta-yasam-kalitesi-kongresi.html

Fitzgerald, C., Zimon, A.E., & Jones, E.E. (1998). Aging and reproductive potential in women. *Yale Journal of Biology and Medicine*, *71*(1998), 367-381.

Kalaycı, Ş. (2010). *Factor analizi*: *SPSS uygulamalı çok değişkenli istatistik teknikleri* [*Factor analysis: SPSS applied multivariate statistical techniques*]. Asil Yayın Dağıtım Ltd. Şti.

Nunnally, J.C., & Bernstein, I.H. (2010). *Psychometric theory.* Mc Graw Hill India.

Özdamar, K. (2002). *Paket programlar ile istatistiksel veri analizi* [*Statistical data analysis with package programs*]. Kaan Kitabevi.

Özkan, S., & Sevil, Ü. (2007) The study of validity and reliability of inventory of functional status after childbirth. *TSK Halk Sağlığı Bülteni, 6*(3), 199-208.

Polit, D.F., & Beck, C.T. (2006). The content validity index: Are you sure you know what's being reported? Critique and recommendations. *Research in Nursing & Health, 29*(5), 489-497. https://doi.org/10.1002/nur.20147

Proudfoot, S., Wellings, K., & Glasier, A. (2009). Analysis why nulliparous women over age 33 wish to use contraception. *Contraception, 79*(2), 98-104. https://doi.org/10.1016/j.contraception.2008.09.005

Rattray, J., & Jones, M.C. (2007). Essential elements of questionnaire design and development. *Journal of Clinical Nursing*, *16*, 234-243. https://doi.org/10.1111/j.1365-2702.2006.01573.x

Sleebos, J.E. (2003). *Low fertility rates in OECD countries: facts and policy responses*. In OECD Labour Market and Social Policy Occasional Papers. 2003. http://ideas.repec.org/p/oec/elsaaa/15-en.html

Söderberg, M., Lundgren, I., Christensson, K., & Hildingsson, I. (2013). Attitudes toward fertility and childbearing scale: an assessment of a new instrument for women who are not yet mothers in Sweden. *BMC Pregnancy and Childbirth, 13*, 197. http://www.biomedcentral.com/1471-2393/13/197

Söderberg, M., Christensson, K., Lundgren, I., & Hildingsson, I. (2015). Women's attitudes towards fertility and childbearing - A study based on a national sample of Swedish women validating the Attitudes to Fertility and Childbearing Scale (AFCS). *Sexual & Reproductive Healthcare, 6*(2), 54-58. https://doi.org/10.1016/j.srhc.2015.01.002

Şencan, H. (2005). *Sosyal ve davranişsal ölçümlerde güvenilirlik ve geçerlilik* [*Reliability and validity in social and behavioral measures*]. Seçkin Yayıncılık.

Tavşancıl, E. (2010). *Tutumların ölçülmesi ve SPSS ile veri analizi* [*Measuring attitudes and data analysis with SPSS*]. Nobel Yayın Dağıtım.

Tydén, T., Svanberg, A.S., & Karlström, P.O. (2006). Female university students' attitudes to future motherhood and their understanding about fertility. *The European Journal of Contraception & Reproductive Health Care*, *11*(3), 181-189. https://www.tandfonline.com/loi/iejc20

Yoldemir, T. (2016). Fertility in midlife women. *Climacteric, 19*(3), 240-246. https://doi.org/10.3109/13697137.2016.1164133

6. APPENDIX

Attitudes to Fertility and Childbearing Scale (AFCS)

Chapter 1 . Fertilite ve Çocuk Doğurmaya Yönelik Tutumlar Ölçeği (FÇDYTÖ)

Sayın Katılımcı,
Bu ölçek, fertilite ve çocuk doğurmaya yönelik tutumları belirlemeye yönelik ifadeleri içeren 21 maddeden oluşmaktadır. Lütfen her maddeyi dikkatlice okuyup 1 ile 5 arası derecelerden birini işaretleyiniz. Katkılarınızdan dolayı teşekkür ederiz.

(1 = tamamen katılmıyorum……..5 =tamamen katılıyorum).

Chapter 2	1	2	3	4	5
GELECEK İÇİN DOĞURGANLIĞIN ÖNEMİ					
1. Bir gün anne olmayı çok istiyorum.					
2. Hamile olduğumu ve çocuk doğurduğumu hayal edebiliyorum.					
3. Anne olmak benim için önemlidir.					
4. Gelecekte hamile kalmayı çok istiyorum.					
5. Çocuk sahibi olmak hayatın önemli bir parçasıdır.					
6. Gelecekte hamile kalabilmek benim için önemlidir.					
7. Doğurgan olmak gelecekteki yaşamımın önemli bir parçasıdır.					
ÇOCUK SAHİBİ OLMANIN GETİREBİLECEĞİ SINIRLAMALAR					
8. Çocuk sahibi olmak boş zaman aktivitelerimi sınırlar.					
9. Çocuk doğurmak şu anki yaşam şeklime uygun değil.					
10. Şu anda anne olmanın sorumluluklarını üstlenmek istemiyorum.					
11. Planlanmamış bir gebelik şu anki yaşamımı zorlaştırır.					
12. Çocuk sahibi olmak arkadaşlarımla olan sosyal yaşamımı sınırlar.					
13. Anne olmak kendime ayıracağım zamanı sınırlar.					
14. Anne olmak öğrenim görme fırsatımı sınırlar.					
15. Çocuk sahibi olmadan önce özgürlüğümün tadını çıkarmak istiyorum.					
16. Çocuk sahibi olmak kariyerimi engeller.					
KADINSAL KİMLİK					
17. Doğurgan olmak kadın olduğumu hissetmem için önemlidir.					
18. Doğurgan olabilmem diğer kadınlar gibi hissetmemi sağlıyor.					
19. Anne olmak, kadınlık kimliğim için önemlidir.					
20. Doğurgan olmak şu anki yaşamımın önemli bir parçasıdır.					
21. İstediğim herhangi bir zamanda hamile kalabilmek benim için önemlidir.					