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Attitude Towards Early Marriage Scale (Atems): Validity and Reliability Study

Erken Yaşta Evliliklere Yönelik Tutum Ölçeği (EYEYTO): Güvenilirlik ve Geçerlilik Çalışması

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Abstract: Early marriage or child marriage generally refers to the case of being married before the age of 18. Early marriages are described as a woman or man being forced to marry before the age of 18 when they do not feel physiologically or psychologically ready to take on marital or parental responsibilities. The aim of the study is to develop a reliable and valid instrument assessing university students' attitudes towards early marriage and investigate the instrument's validity and reliability. The study was conducted with the data collected from 883 students studying at the Faculty of Health Sciences, Kırıkkale University. KMO and Bartlett's Test, exploratory and confirmatory factor analyses were conducted to examine the scale's validity and the results of the exploratory factor analysis used for construct validity indicated a construct that explained 55.599% of the total variance with factor load values ranging between .356 and .633. The fit indices from the results of the confirmatory factor analysis were calculated as; RMSEA= 0,069; GFI= 0.889; AGFI= 0.869. The scale consists of 23 items collected under 4 factors. These factors are Social Structure, Subjective Judgement, General Judgements and Effects on the Person. Cronbach coefficient for the total of the 23-item scale under four factors was calculated as Cronbach $\alpha = 0.871$. In light of the findings, it can be said that the Attitude towards Early Marriage Scale (ATEMS) has high validity and reliability, adequately strong in terms of measuring the items and is a sufficient scale to determine the level of the construct it is expected to measure.

Structured Abstract: Early marriages are especially to the disadvantage of female children, violate their educational rights and increase their risk of being exposed to domestic violence. University students as the education population of the society have a major role in shaping future societies. Hence, their attitudes are of

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great importance in terms of the society they live in. In this regard, university students' perspective on early marriage as a social problem is quite significant. Accurate, reliable and authentic evaluations should be made in order for the conducted studies to be effective. Thus, the present study aims to develop an instrument measuring attitudes towards early marriage.

Method: The study group consists of students studying at different departments of the Faculty of Health Sciences of Kırıkkale University during 2019-2020 academic year. Students were informed about the aim of the study and their voluntary participation was taken into consideration. The data for the study was collected from 883 students studying at the Faculty of Health Sciences of Kırıkkale University. The "Attitude towards Early Marriage Scale" items were developed through an item pool of 32 items which was formed on the basis of the review of relevant literature. The pilot scale consisting of 32 items was reviewed by 2 experts from the field of social services and 2 experts from the field of sociology. Each item included in the pilot form was rated as 5-point Likert-type with the options of "Strongly Disagree", "Disagree", "Undecided", "Agree" and "Strongly Agree". KMO and Bartlett's Test, exploratory and confirmatory factor analyses were conducted to examine the scale's validity and the results of the exploratory factor analysis used for construct validity indicated a construct that explained 55.599% of the total variance with factor load values ranging between .356 and .633. The fit indices from the results of the confirmatory factor analysis were calculated as; RMSEA= 0,069; GFI= 0.889; AGFI= 0.869. The scale consists of 23 items collected under 4 factors. These factors are Social Structure, Subjective Judgement, General Judgements and Effects on the Person. Cronbach coefficient for the total of the 23-item scale under four factors was calculated as Cronbach $\alpha = 0.871$.

Findings: KMO and Bartlett's Test, exploratory and confirmatory factor analyses were conducted to examine the scale's validity and the results of the exploratory factor analysis used for construct validity indicated a construct that explained 55.599% of the total variance with factor load values ranging between .356 and .633. The fit indices from the results of the confirmatory factor analysis were calculated as; RMSEA= 0,069; GFI= 0.889; AGFI= 0.869. The scale consists of 23 items collected under 4 factors. These factors are Social Structure, Subjective Judgement, General Judgements and Effects on the Person. Cronbach coefficient for the total of the 23-item scale under four factors was calculated as Cronbach $\alpha = 0.871$.

Conclusion: This study aimed to develop a reliable and valid instrument which can be used to determine university students' attitudes towards early marriage. Firstly, the relevant literature was surveyed while developing the Attitude towards Early Marriage Scale. The 32 items from the item pool were decreased to 30 at the end of the pilot study, then, out of those 30 items, 7 were omitted from the scale as their factor loads remained below .30; resulting in a finalized scale made up of 23 items. Exploratory and confirmatory factor analyses were implemented to determine the construct validity of the scale. The scale explains 52,971% of the total variance regarding the construct that needs to be explained. The results of the exploratory factor analysis revealed that the scale developed to determine university students' attitudes towards early marriage has a construct where the items are collected under four factors. The high scores received from the scale can be said to reflect an individual's negative attitudes toward early marriage. In terms of the subscales: high scores from the Social Structure subscale indicate negative social judgements regarding early marriage; high scores from the Subjective Judgements subscale represent negative subjective judgements towards early marriage; high scores from the General Judgements subscale point to negative general judgements regarding early marriage; and high scores from the Effects on the Person subscale show negative personal attitudes towards early marriage. It is believed that the instrument developed in this study will contribute greatly to the literature as there is no other instrument developed for this purpose in our country.

Keywords: Public Health, Adolescent, Early Marriage, Validity, Reliability, Scale

z: Erken evlilik veya ocuk yaŐta evlilik genellikle 18 yaŐından nce yapılan evlilik durumunu ifade etmektedir. Erken evlilikler, kadın ya da erkeđin 18 yaŐından nce, kendisini fizyolojik ve psikolojik aıdan evlilik ve ocuk sahibi olma sorumluluklarını yklenmeye hazır hissetmeden evlendirilmesi olarak tanımlanır. AraŐtırmanın amacı niversite đrencilerinin erken yaŐta evliliklere ynelik tutumlarını belirlemeye ynelik gvenilir ve geerli bir lme aracı geliŐtirmek, leđin geerlik ve gvenirliđini incelemektir. AraŐtırma 2019-2020 akademik yılında Kırıkkale niversitesi Sađlık Bilimleri Fakltesinde đrenim grmekte olan 883 đrenciden elde edilen veriler zerinden yrtlmŐtr. Toplanan veriler SPSS ve AMOS programları ile analiz edilmiŐtir. leđin geerliđini araŐtırmak iin KMO ve Bartlett testi, aımlayıcı ve dođrulamalı faktr

analizi yapılmış, yapı geçerliği için kullanılan açımlayıcı faktör analizi çalışmasında faktör yük değerlerinin .356 ile .633 arasında değişen toplam varyansın %55.599'unu açıklayan bir yapı elde edilmiştir. Doğrulayıcı faktör analizinde hesaplanan uyum indeksleri ise; RMSEA= 0,069; GFI= 0.889; AGFI= 0.869 şeklinde elde edilmiştir. Ölçek toplam 23 madde ve 4 faktörde toplanmaktadır. Bulunan faktörler, Toplumsal Yapı, Öznel Yargılar, Genel Yargılar ve Kişiy Etkileri olarak belirtilmiştir. Dört faktör altında yer alan 23 maddelik ölçeğin tümü için Cronbach $\alpha = 0.871$ olarak hesaplanmıştır. Elde edilen bu bulgular doğrultusunda, Erken Yaşta Evliliklere Yönelik Tutum Ölçeği'nin (EYEYTÖ) geçerliği ve güvenilirliği yüksek, madde ölçme gücü yeterince güçlü ve ölçeğin ölçülmesi beklenen yapıya ait düzeyi saptamada yeterli bir ölçek olduğu söylenebilir.

Anahtar Kelimeler: Halk Sağlığı, Adölesan, Erken Evlilik, Geçerlik, Güvenirlik, Ölçek

Introduction

Early marriage or child marriage generally refers to the case of being married before the age of 18. Early marriages are described as a woman or man being forced to marry before the age of 18 when they do not feel physiologically or psychologically ready to take on marital or parental responsibilities (Kavlak et al., 2018:37). Early marriages are especially to the disadvantage of female children, violate their educational rights and increase their risk of being exposed to domestic violence. Death due to adolescent pregnancy of girls between the ages of 15-19 is an important reason for death in this age group around the world (Jisun, 2016:51). World Health Organization (2018) reports that 21 million women between the ages of 15-18 experience pregnancy in the developing countries and 99% of these pregnancies result in the death of the mother or the baby (WHO, 2018). Singh and Samara (1996) state that the timing of the first marriage is an important factor affecting women's reproductive health (Singh & Samara, 1996:148). Long-established cultural practices, low socio-economic level, low literacy rate and lack of awareness of family planning methods increase early marriages and adolescent pregnancies (Udgiri, 2017:59). Similar characteristics are also observed in our country and the literature states that adults are still the decision-makers regarding marriage as a cultural factor, one of every 5 marriage is a kin marriage and education level is a significant predictor of marriage (Yüksel-Kaptanoğlu & Ergöçmen, 2008:1707; Sözer, 2020:157).

Early marriages sometimes take place when teenage girls do not wish to continue their education or poor families cannot afford educational expenses (Jisun, 2016:52). No matter whatever reason they are made for, early marriages negatively affect children's health and welfare as well as increasing the risk of sexually-transmitted diseases and various infections, and cause reproductive complications, social isolation, low education level, and different social, psychological and physical problems (Erulkar, 2013:6). In addition to poverty, cultural traditions and gender violence, early marriage incident is an important reason for disadvantaged people (Delpratoa at al., 2017:173).

Early marriages continue their prevalence in many parts of the world despite governmental efforts to discourage and end the practice. Around the world, 1 in every 6 women in the 15-19 age group is married (UNICEF, 2018-a). According to the 2005 Global Population Report, from the women in the 15-24 age group, 48% in South Asia and 42% in Africa got marriage before reaching the age of 18. In all developing regions, one third of women between the ages of 20-24 got married before the age of 18 in the period between 2000-2011 (UNFPA, 2011; Wahhaj, 2018:147). It was found that more than 40% of women aged between 20-24 got married before 18 years of age in Ethiopia (Gage, 2013:124). Although the density of these numbers vary between countries, child marriage rates in undeveloped countries are more striking; in recent years, it is seen that almost 1 in every 3 child bride is from South-Saharan Africa (UNICEF, 2018-b). Among the official marriages that took place in our country in the year 2014, the rate of female children marrying at the ages of 16-17 is 5,8% and their number is 34.629 (TÜİK, 2015). This rate dropped to 3,1% and the number decreased to 17.047 in the year 2019 (TÜİK, 2019).

Early and Forced Marriage Reduction Strategy Paper and Action Plan was prepared by UNICEF in order to prevent and remove child marriages in our country and strengthen national capacity on this matter. Adapted guidelines were distributed to 1.900 service providers within the scope of the project. A total of 1.000 service providers including Ministry of Family, Work and Social Services staff, field workers of NGOs and teachers were trained within the scope of UN's common program (UNICEF, 2018-a). The review of relevant literature revealed limited scale measuring the attitudes towards early marriage in our country (Akn and Peker, 2019; Kaynak at all., 2016). Conducted studies generally concentrated on the comparison of early marriages and certain demographic features as well as collecting perspectives on the issue (Kavlak et al., 2018; Acemođlu et al., 2005; Aydın & Akay, 2017; Evgin at al., 2018; Gler & Kker, 2010; Oran & Kar, 2008; Saday-Duman at al., 2017; Soylu & Ayaz, 2013).

University students as the education population of the society have a major role in shaping future societies. Hence, their attitudes are of great importance in terms of the society they live in. In this regard, university students' perspective on early marriage as a social problem is quite significant. Students who will take part in the health team have important responsibilities in this regard. Accurate, reliable and authentic evaluations should be made in order for the conducted studies to be effective. In this regard, raising awareness of early marriages among university students before graduation important for them to take responsibility in this regard in their professional life. Thus, the present study aims to develop an instrument measuring attitudes towards early marriage.

Materials and Methods

As this study aimed to develop a valid and reliable instrument in order to determine university students' attitudes towards early marriage, general survey model from descriptive survey models was used. General survey models are research models that aim to describe a situation that existed in the past or present. The most striking feature of this model is to be able to observe the existing as it is without changing it (Karasar, 2005). According to the researcher, the survey model is considered as studies conducted on large groups in order to determine certain characteristics of a group, to determine the opinions and attitudes of individuals in the group in relation to the phenomenon or events, and to explain the facts or events.

Study Group

The study group consists of students studying at different departments of the Faculty of Health Sciences of Kırkkale University during 2019-2020 academic year. Students were informed about the aim of the study and their voluntary participation was taken into consideration. The data for the study was collected from 883 students studying at the Faculty of Health Sciences of Kırkkale University. The average age of the study group is 20.99 ± 2.59 , 81.9% of them are female students. 51.9% of them continue their first year while 48.1% of them continue their fourth year. 85.6% of the students stated that they have a nuclear family, 76.7% of them stated that their income level is equal to their income and expense. 13.9% of the participants in the study Nutrition and Dietetics, 12.5% Child Development, 16.3% Physical Therapy and Rehabilitation, 35.2% Nursing, 5.0% Health Management, 17.0% Social Work students.

Data Collection Instrument

The "Attitude towards Early Marriage Scale" items were developed through an item pool of 32 items which was formed on the basis of the review of relevant literature (Kavlak et al., 2018; Acemođlu et al., 2005; Aydın & Akay, 2017; Evgin at al., 2018; Gler & Kker, 2010; Oran & Kar, 2008; Saday-Duman at al., 2017; Soylu & Ayaz, 2013). In addition, before the scale was developed, interviews were held with the students about early marriage in the domestic violence course.

Expert Opinion (Content Validity)

The pilot scale consisting of 32 items was reviewed by 2 experts from the field of social services and 2 experts from the field of sociology. Revisions were made based on the expert feedback and the pilot scale was reduced from 32 to 30 items it meant similar meanings. Each item included in the pilot form was rated as 5-point Likert-type with the options of “Strongly Disagree”, “Disagree”, “Undecided”, “Agree” and “Strongly Agree”. The positive items were scored from 1 to 5 starting with “Strongly Disagree”; and the negative items were scored from 5 to 1 starting with “Strongly Disagree”. The lowest score one can get is 23 and the highest score to be received is 115. The increase in scores indicate individual’s negative attitudes towards early marriage.

Data Collection

The questionnaires were distributed to the students in the classroom and collected in the envelopes. The students have completed theirs under the supervision of the authors. Students were informed about the purpose of the research. It was explained that participation in the study is optional and there is no obligation. Stating that the research was conducted for scientific purposes only and that no identity information was required. It took an average of 15 minutes to distribute and collect the surveys.

Data Analysis

Firstly, the data were transferred to SPSS software in order to test construct validity through factor analysis. To this aim, the suitability of the data to factor analysis was measured through Kaiser-Mayer-Olkin (KMO) and Bartlett’s Test (Çokluk et al., 2014). Upon determining that the dataset is suitable for factor analysis, factor eigenvalues and explanation variances, factor construct and factor loads of the “Attitudes towards Early Marriage Scale”, item total correlation values and Cronbach Alpha internal consistency coefficients were calculated. For the confirmation of the dimensions gathered from exploratory factor analysis, confirmatory factor analysis (CFA) was implemented through maximum likelihood method in the AMOS software (Meydan & Şeşen, 2011). The findings are presented in the results section.

KMO coefficient and Bartlett’s Test results were examined to see whether the data from the 30 items are suitable for factor analysis. KMO coefficient was calculated as .805 and Bartlett’s Test result was found significant ($p < .000$). Later on, upon determining that the data from the 30 items are suitable for factor analysis, Exploratory Factor Analysis and Principal Components Analysis were implemented in order to investigate the construct validity and factor construct of the Attitudes towards Early Marriage Scale. The “Pilot Form” consisting of 30 item was implemented to 209 university students. Certain items were made more open and clear upon pilot implementation. Unsuitable items (Item 1, Item 2, Item 6, Item 12, Item 13, Item 23 and Item 30) have been omitted as a result of the Direct Oblimin Rotation Methods and other analyses; thus, a scale of 4 factors and 23 items was obtained. The validity of the Attitudes towards Early Marriage Scale was also tested through confirmatory factor analysis method on the research data. The Cronbach Alpha coefficient of the Attitude towards Early Marriage Scale was calculated as .97 on the basis of the dataset gathered from 883 students. The evidence regarding the validity and reliability of the Attitude towards Early Marriage Scale indicate that ATEMS can be safely used for the purposes of measuring views on marriage at early ages.

Ethical Considerations

After receiving institutional permission, the study was approved by the Ethics Committee of Kırıkkale University (Ref. no. 01, date 14/01/2019). All students were informed, and written consents were obtained before data collection.

Results

Findings Regarding the Validity of the Scale

Exploratory Factor Analysis

Firstly, factor analysis was implemented for the construct validity of the scale. To this aim, obtained data was tested to see whether it is suitable for factor analysis. Kaiser-Mayer-Olkin (KMO) fit value, showing whether data is suitable for factor analysis is .873. This value indicates that the dataset has perfect goodness of fit. The result of the Bartlett's Test of Sphericity calculated for the same dataset is $\chi^2 = 9406,336$, $sd = 276$, $p = .000$ and it is meaningful at 0.001 value. These values show that the data obtained from the pilot implementation are suitable for factor analysis. The factor analysis results from the principal components analysis and varimax rotation are presented in Table 1.

Table 1: Factor Analysis Results Before and After Rotation Regarding the Pilot Form of the Attitude towards Early Marriage Scale

Factor	Initial Eigenvalue			Loads after Rotation		
	Total	Explained Variance Percentage	Pooled Variance Percentage	Total	Explained Variance Percentage	Pooled Variance Percentage
1	6,336	26,400	26,400	4,676	19,482	19,482
2	3,669	15,287	41,687	4,316	17,984	37,466
3	1,843	7,677	49,365	2,293	9,552	47,018
4	1,496	6,234	55,599	2,059	8,581	55,599

As can be seen in Table 1, there are 4 factors with eigenvalue of above 1. When the initial eigenvalues of the 55.599% of the total variance explained by these four factors, the variance percentage explained by Factor 1 is 26.400, followed by 15.287 explained by Factor 2, 7.677 explained by Factor 3, and 6.234 explained by Factor 4. Regarding the variance percentage explained by the factors after rotation, it is noted that the variance percentage explained by Factor 1 decreased (19,482), and the variance percentages explained by Factor 2 (17,984), Factor 3 (9,552) and Factor 4 (8,581) increased. On the other hand, the analyses done through varimax rotation indicate that the scale has a construct made up of four factors. No base limit was determined in the varimax rotation process for the factor load values for the items to be received in the relevant factor. Table 2 presents under which factors the items will be gathered and their factor load values.

Table 2: Factor Construct and Factor Loads of the Attitude towards Early Marriage Scale

	Social Structure	Subjective Judgements	General Judgements	Effects on the Person	R ²
Item 11	,356				,699
Item 15	,436				,410
Item 16	,576				,494
Item 17	,578				,673
Item 22	,611				,528
Item 25	,494				,567
Item 3		,435			,709
Item 4		,426			,780
Item 5		,399			,755
Item 9		,614			,607

Item 19	,505		,827
Item 26	,586		,809
Item 27	,533		,762
Item 10		,384	,492
Item 18		,522	,630
Item 20		,564	,632
Item 21		,633	,602
Item 24		,553	,532
Item 7			,659
Item 8			,552
Item 14			,452
Item 28			,396
Item 29			,519

As presented in Table 2, a construct of 23 items and four factors was obtained. The revealed subscales are named as; 6 item Social Structure (SS), 7 item Subjective Judgements (SJ), 5 item General Judgements (GJ) and five item Effects on the Person (EP). The factor loads of the items vary between .356 and .633. According to these load values, the scale is made up of four subscales and all items have load values sufficient to be included in the scale. It was found that, 7 items were omitted from the 30-item scale because their factor load values remained below .35 and were overlapping at .10 level (Tabachnick & Fidell, 2001). The omitted items were not included in Table 2.

Table 3: Item Total Correlation Values

Social Structure (SS)		Subjective Judgements (SJ)		General Judgements (GJ)		Effects on the Person (EP)	
Item	R	Item	r	Item	r	Item	R
Item11	,331	Item 3	,297	Item 10	,465	Item 7	,328
Item 15	,300	Item 4	,528	Item 18	,436	Item 8	,370
Item 16	,476	Item 5	,476	Item 20	,403	Item 14	,462
Item 17	,420	Item 9	,587	Item 21	,578	Item 28	,450
Item 22	,382	Item19	,621	Item 24	,417	Item 29	,407
Item 25	,425	Item26	,527				
		Item27	,604				

The item total correlation coefficients of the items from the scale are given in Table 3. It is observed that item total correlation values range between $r=.297$ (Item 3) and $r=.621$ (Item 19), and are significant at 0.01 level. Based on the correlation values, it can be stated that the characteristic which can be measured by the overall scale is the same as the characteristic which is attempted to be measured by each item. Thus, all items are qualified enough to be included in the scale.

Confirmatory Factor Analysis

Upon determining that the scale is made up of 4 factor as a result of the exploratory factor analysis, confirmatory factor analysis was also conducted to confirm the factor constructs of instrument. The relation structure between the items and matching subscales are presented in Figure 1. Then, from the model fit criteria, χ^2/df , goodness of fit index (GFI), adjusted goodness of fit index (AGFI) and root mean square error of approximation (RMSEA) values were calculated (Di Fabio & Blustein, 2016).

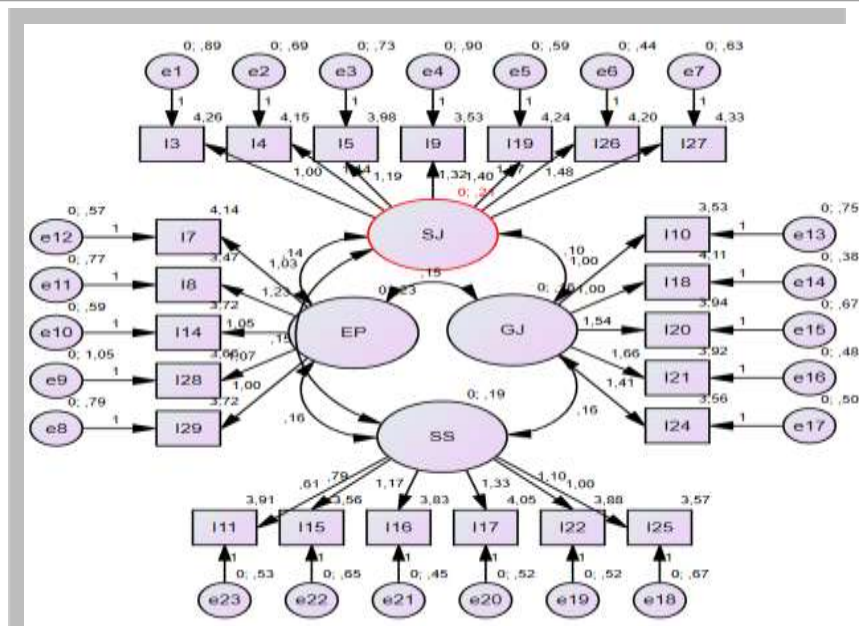


Figure 1: CFA Graphic

SJ: Subjective Judgements EP: Effects of the Person GJ: General Judgements SS: Social Structure

The findings from the Confirmatory Factor Analysis revealed the following values $\chi^2/df = 1,952, p < .001, GFI = .889, AGFI = .869$ and $RMSEA = .069$. Having a χ^2/df value below 2 indicates good fit, being below 5 points out an acceptable (Jabeen & Hamid, 2019; Kline, 2010; Şimşek, 2007); whereas, having RMSEA value at or lower than .05 represents a good fit, having a value between .05 and .08 reflects an adequate fit, and having a value between .08 and .10 indicates a weak fit. AGFI and GFI values over .95 indicate a perfect fit and values of .90 and above reflect a good fit (Hu & Bentler, 1999; Schumacker & Lomax, 1996). The calculated values of this study are $GFI=.889<.90$ and $AGFI=.869<.90$ which is a little lower than the expected values; yet, the scale model is concluded to be adequately fit.

Table 4: Regression Weights for the Factors

	Estimate	S.E.	C.R.	P
S3 <--- SJ	1,000			
S4 <--- SJ	1,145	,237	4,837	***
S5 <--- SJ	1,190	,244	4,870	***
S9 <--- SJ	1,322	,272	4,866	***
S19 <--- SJ	1,404	,266	5,271	***
S26 <--- SJ	1,565	,284	5,521	***
S27 <--- SJ	1,483	,280	5,292	***
S29 <--- EP	1,000			
S28 <--- EP	1,071	,242	4,420	***
S14 <--- EP	1,049	,211	4,982	***
S8 <--- EP	1,234	,246	5,025	***
S7 <--- EP	1,035	,208	4,983	***
S10 <--- GJ	1,000			
S18 <--- GJ	1,001	,210	4,765	***
S20 <--- GJ	1,537	,309	4,969	***
S21 <--- GJ	1,657	,316	5,237	***

			Estimate	S.E.	C.R.	P
S24	<---	GJ	1,408	,279	5,039	***
S25	<---	SS	1,000			
S22	<---	SS	1,105	,210	5,267	***
S17	<---	SS	1,328	,237	5,607	***
S16	<---	SS	1,170	,212	5,511	***
S15	<---	SS	,792	,186	4,260	***
S11	<---	SS	,609	,159	3,828	***

The regression coefficient weights of the items matching the factors are shown in Table 4. The results the most meaningful item for Subjective Judgements is the S26 question and statistical significance was ensured was all items. Similarly, it was noted that the effect of the items in all factors on the factors is statistically significant. While the most significant item in the Effects of the Person factor is S8, it is S21 for General Judgements, and S17 for Social Structure.

The relations among the subscales of the instrument were examined and the findings are presented in Table 5.

Table 5: Correlation Coefficients between Factors

Factors	Social Structure	Subjective Judgements	General Judgements	Effects on the Person
Social Structure				
Subjective Judgements	.354***			
General Judgements	.500***	.433***		
Effects on the Person	.529***	.288***	.640***	1.00

*** $p < 0.000$

The relation between the subscales of the instrument were examined and the correlation coefficients between the subscales are presented in Table 5. According to the result of the analysis, it was found that all subscales have a positive and statistically significant relation with each other. While the lowest relation is between effects on the person and subjective judgement with one-way 28,8%; the highest relation is between effects of the person and general judgement subscales with one-way 64,0%.

Findings Regarding the Reliability of the Scale

Cronbach's Alpha reliability coefficients were calculated for each factor and the overall scale to determine its reliability.

Table 6: Internal Consistency Coefficients of ATEMS

	1.Factor	2.Factor	3.Factor	4.Factor	Total
Item Number	6	7	5	5	23
Cronbach's Alpha	,705	,857	,772	,781	,871

The Cronbach alpha internal consistency coefficients were calculated as .705 for the 1st Factor (SS), .857 for the 2nd Factor (SJ), .772 for the 3rd Factor (GJ), .781 for the 4th Factor (EP) and .871 for the overall scale. In relation to the alpha coefficients, it is stated that is the reliability of a scale is $0.60 \leq \alpha < 0.80$ the scale is very reliable, and if reliability is $0.80 \leq \alpha < 1$, the scale is highly reliable (Kayış, 2014); so, it can be concluded that the Social Structure, General Judgements, and Effects on the Person subscales are "very reliable" while Subjective Judgement and the overall scale are "highly reliable".

Conclusion

This study aimed to develop a reliable and valid instrument which can be used to determine university students' attitudes towards early marriage. Firstly, the relevant literature was surveyed while developing the Attitude towards Early Marriage Scale. The 32 items from the item pool were decreased to 30 at the end of the pilot study, then, out of those 30 items, 7 were omitted from the scale as their factor loads remained below .30; resulting in a finalized scale made up of 23 items. ATEMS instrument consists of 23 items, 6 of which are negative and 17 are positive statements. The highest score to be received from this 5-point Likert type scale is 115 while the lowest score is 23. Exploratory and confirmatory factor analyses were implemented to determine the construct validity of the scale. The scale explains 52,971% of the total variance regarding the construct that needs to be explained. The results of the exploratory factor analysis revealed that the scale developed to determine university students' attitudes towards early marriage has a construct where the items are collected under four factors. The results of the Confirmatory Factor Analysis implemented to test the accuracy of this construct are as follows: $\chi^2/df = 1,952$, $p < .001$, GFI = .889, AGFI = .869 and RMSEA = .069. Although the values indicating the goodness of fit for the model are relatively lower than expected, it was still concluded that the scale model is sufficient good for fit. The Cronbach Alpha values calculated for the reliability of the scale were found as .871 for the overall scale and that it ranged between .705 and .857 for the subscales. The high scores received from the scale can be said to reflect an individual's negative attitudes toward early marriage. Social structure subscale covers; family structure, poverty, migration and gender roles, cultural structure, subjective judgments covers; the person's thoughts on early marriages, general judgments covers the general reasons for early marriage and its effects on the person; effects on person covers the effects of early marriages on individuals.

In terms of the subscales: high scores from the Social Structure subscale indicate negative social judgements regarding early marriage; high scores from the Subjective Judgements subscale represent negative subjective judgements towards early marriage; high scores from the General Judgements subscale point to negative general judgements regarding early marriage; and high scores from the Effects on the Person subscale show negative personal attitudes towards early marriage. In conclusion, when all the findings are evaluated together, it can be said that the scale of attitude towards early marriage can be used as a valid and reliable measurement tool. Since this scale can be used in many studies that can contribute to the solution of the problem of early marriage, it is thought to make an important contribution to the literature. Early Marriage Scale can be used by the people who work in the fields of health. In addition, it may be suggested to examine individuals' attitudes towards early marriages according to family structures and gender roles in future studies.

Conflict of Interest

The authors declare that there is no conflict of interest. All listed authors meet the authorship criteria and they are in agreement with the content of the manuscript.

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