The Ideal Grandparent Scale: Validation in a Turkish Young Adults Population

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Abstract

Aim The aim of this study is to examine the psychometric properties of the Turkish version of The Ideal Grandparent Scale(IGS).

Method Content and construct validity were evaluated for the psychometric measurements of the scale. In addition, language validity and reliability analyzes were performed.

Results The language and content validity of the scale was evaluated as appropriate. In the analyzes made for construct validity, item loads, variance and fit values of the scale were found to be appropriate. In addition, in the analyzes for reliability, it was determined that the cronbach alpha value and the test-retest correlation were appropriate. The mean total score taken from the scale is 68.65 ± 20.32. It was determined that the average score given to the scale items by the experts was between 3.71 ± 0.52 and 4.00 ± 0.00.

Conclussion It was determined that the psychometric measurements of The Ideal Grandparent Scale were appropriate and could be adapted to Turkish culture.

Keywords Grandparents · Grandchildren · Psychometric measurement

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Introduction

The relationship between grandparents and grandchildren is very important and should be satisfactory for both parties (Sciplino C, & Kinshott, 2019). In modern societies, it is observed that young people move away from their grandparents and the necessary bond between these two is not established (Crowley et al., 2023). However, there was evidence that emotionally close intergenerational relationships benefit both grandparents and grandchildren (Duflos et al., 2020). According to a study conducted in our country, "living with the family" has been shown to be one of the most important factors affecting subjective well-being in the older persons (Özlem, 2022). In addition, a studie have shown that living with a spouse or children, which reveals the effect of family and cultural ties in older persons individuals, increases subjective well-being (Hassan vd., 2018). In the research conducted by the Turkish Statistical Institute (TUIK), it was observed that mothers undertake the day care of children aged 0–5 (86% of the children). After the mother, grandmother or grandmother are the most responsible for day care with 7.4% (TUIK, 2016). Also, Grandparents often support grandchildren, including making grandchildren feel better emotionally, bolstering grandchildren's self-esteem, giving grandchildren advice, and giving grandchildren Money (Fowler, 2015). Grandparents spoiling grandchildren may be socially acceptable, and grandparents have described giving their grandchildren treats such as food as a pleasurable activity that helps their grandchildren remember them as special grandparents (Pankhurst et al., 2019). Perhaps when grandchildren experience a deficit in tangible support from a grandparent, grandchildren feel that a grandparent is not fully enacting their role as grandparent, which contributes to feelings of loneliness. Alternatively, a deficit in tangible support from a grandparent could represent a lack of family connection or a weaker family system, which could also increase loneliness. Overall, the findings related to the negative correlates of deficits in support are consistent with propositions of an emerging theory of support gaps (Crowley & High, 2020).In addition to this information, it has been reported that grandchildren are also positively affected by the healthy relationship they have with their grandparents.Grandchildren also help their grandparents with tasks that they cannot do, such as housework and grocery shopping (Crowley et al., 2023; Crowley & High, 2020). In this study, it was aimed to verify the psychometric properties of the Turkish version of the Ideal grandparent scale developed by Mansson (2015) to measure young adults' ideal grandparents concepts.

Research Question

1. Can the ideal grandparent scale be adapted to Turkish culture?

Method

Type of Research

It is a psychometric study to adapt the Ideal Grandparent Scale to Turkish culture.

Research Population and Sample

While all students in a university constitute the universe of the research, one of the departments in the university was selected by using the stratified random sampling method. In the selection process, first of all, the names of all departments in the university were written on a piece of paper and thrown into a bag, and it was planned to conduct a research on the selected department. There are approximately 400 students in this department. Among these students, 158 people between the ages of 19–35 who volunteered to participate in the research constituted the sample. The number of samples was calculated by considering the number of items (14 items) of the scale used. In addition, it was determined that our sample was quite sufficient according to the Kaiser-Meyer-Olkin and Barlett's tests. (KMO $= 0.96$, $p < 0.01$).

Data Collection and Data Collection Tools

The data were collected with The Ideal Grand Parent Scale and 3 questions containing demographic data. The forms prepared in the Google Doc form were delivered to the participants in the virtual environment and the participants who volunteered to participate in the research filled the research form.

The Ideal Grandparent Scale (IGS) The scale was developed by Mansson (2015). The scale consists of 14 items and one dimension. The scale can be applied to young and adult people. The answers in the scale are scored in a 7-point Likert type, ranging from 1 (strongly disagree) to 7 (strongly agree). There is no reverse coded item in the scale. Scoring of the scale is obtained by taking the total average as in classical scales. The scale has no cutoff score. As the scores obtained from the scale increase, it indicates that the grandchildren approach the ideal grandparent figure. Cronbach's alpha value was found to be 0.94 in Mansson's (2015) study (Mansson, 2015). For this study, Cronbach's alpha value was determined as 0.97.

Analysis Strategies

Data were analyzed in SPSS and LISREL program. The translation back translation method was used for language validity. Translations were carried out by five experts who are fluent in the English Turkish language. Pre-evaluation of the scale was made with the Expert Opinion. Cronbach alpha's, test-retest application (Simple Correlation Analysis) was used to test the reliability of the scale in SPSS, and construct validity (correlation between items, loads of items, Scree Plot) was used to test the validity of the scale. The fit values of the scale were reviewed in confirmatory factor

analysis. RMSEA, NFI, NNFI, IFI, RFI, CFI, GFI, AGFI, RMR, χ2/df fit values were evaluated to determine the degree of model fit.

Language Adaptation

After obtaining permission for the Turkish validity and reliability study, The Ideal Grandparent Scale was translated into Turkish by five independent linguists. A common translation version was created by reviewing five different translations by the researchers. The joint translation version was translated back into English by a linguist who knows the English language very well (Seçer, 2015).

Ethics of Research

Ethics committee approval was obtained from the non-interventional clinical research ethics committee of a university in order to conduct the study. The purpose of the research was written on the digitally prepared form and volunteerism was taken as basis. This study was conducted in accordance with the Principles of the Declaration of Helsinki.

Results

Content Validity

In this study, expert opinion was sought for content validity. The opinions of the experts were evaluated using the Kendall's W test. As a result of this test, it was determined that the opinions of the experts did not change from each other, they agreed and there was no statistically significant relationship between the opinions ($p > 0.05$). Experts evaluated the scale items (1 point) as very necessary and (4 points) as very appropriate. It was determined that the average score given to the scale items by the experts was between 3.71 ± 0.52 and 4.00 ± 0.00.
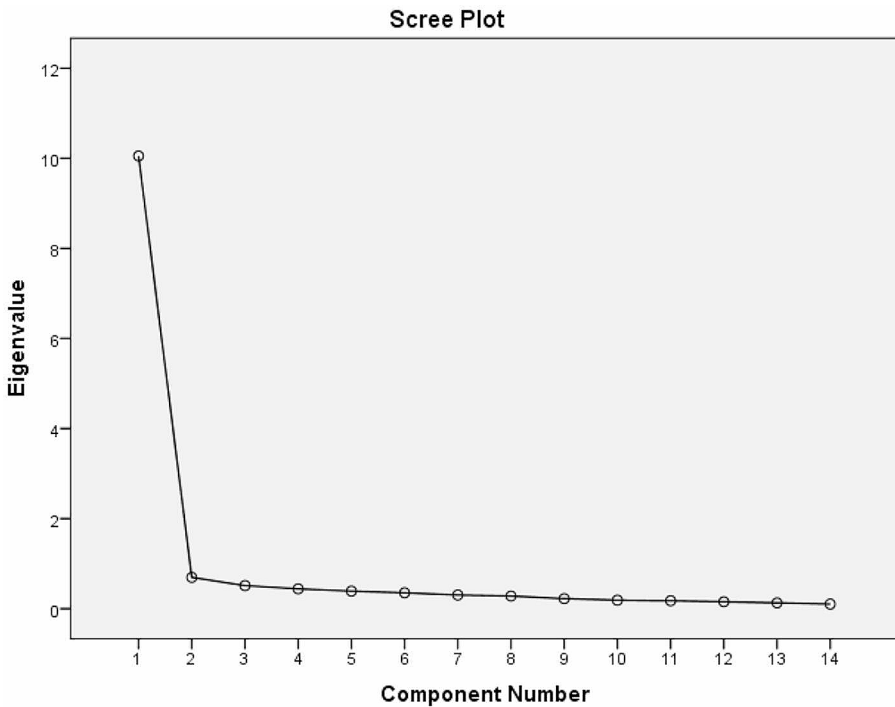
Construct Validity

According to the results of the factor analysis we conducted, it was determined that all of the items were in appropriate values (0.75–0.92) and the single-factor structure of the scale was preserved. The variance rate of the single factor structure of the scale was determined to be 72% (Table 1). In addition, the factor structure of the scale was confirmed in the Scree Plot graph (Graph 1). The fit values we obtained from the confirmatory factor analysis were found to be within the desired values(RMSEA: 0.04, NFI: 0.97, NNFI: 0.97, IFI: 0.98, RFI: 0.96, CFI:0.98, GFI:0.85, AGFI:0.87, RMR:0.06 and X^2/df:2.17) (Hu and Bentler, 1998; Schermelleh-Engel et al. 2003).

Table 1 KMO value of the scale, item loads, averages, cronbach's alpha after item subtraction, test-retest, variance values	KMO=0.97 $p<0.01$	Mean±S.D.	Item loads	Cronbach's Alpha if Item Deleted
	Item1	4.75±1.71	0.83	0.69
	Item2	5.13±1.69	0.88	0.78
	Item3	5.18±1.73	0.83	0.70
	Item4	4.61±1.96	0.75	0.56
	Item5	4.80±1.81	0.86	0.73
	Item6	4.86±1.80	0.92	0.85
	Item7	4.65±1.72	0.90	0.80
	Item8	5.28±1.70	0.85	0.72
	Item9	5.19±1.57	0.85	0.73
	Item10	5.38±1.54	0.80	0.64
	Item11	4.87±1.59	0.87	0.75
	Item12	4.35±1.77	0.88	0.77
	Item13	4.62±1.66	0.83	0.70
	Item14	4.97±1.75	0.80	0.64
The scale we examined; It is a one-dimensional scale with 1% eigenvalue and 10% variance, which explains 72% of the total variance.	Total points mean(min-max)		68,65±20.32	min:65.46,max:71.86
	Cronbach's alpha		0.97	
	Test-retest		$r=0.90\ p<0.01$	

Graph 1 Scree Plot

Reliability of Analysis

The mean total score taken from the scale is 68.65 ± 20.32 (min: 65.46, max: 71.86). Since the scale has only one factor, correlation between factors could not be evaluated. However, by examining the correlation between the scale items, it was found that the relationship between the items was positive and strong. The Cronbach alpha's value of the scale was determined to be 0.97 (Table 2).

Test Re-test Analysis

In the test-retest analysis we conducted on 158 individuals independent of our sample, it was found that the scale averages of the individuals were close to each other and the correlation coefficient was 0.90. For this analysis, the same scale questions were asked to the same participants 15 days after the pre-test. The first mean was 66.68 ± 23.18 and the second mean was 67.82 ± 24.12 (Table 1).

Discussions

In this study, it is aimed to adapt The Ideal Grandparent Scale, which was developed for young adults who share the same family identity with their grandparents, to describe their relationships with their grandparents to Turkish culture. According to the analyzes made, it was seen that this adaptation was successful. The translation-back translation method was used in the language validity of the Ideal Grandparent Scale. Language validity is the most used method for the validity of measurement tools. (Seçer, 2015; Bayık & Gürbüz, 2016). Another method used in the validity of measurement tools is content validity (Crestani et al., 2017). Content validity is used to determine how much the scale as a whole and each item in the scale explains the subject to be evaluated (Vehid & Eral, 2014). In this study, expert opinion was sought for content validity. The opinions of the experts were evaluated using the Kendall's W test. As a result of this test, it was concluded that the opinions of the experts were similar and the scope of the scale was appropriate. As a result, it has been concluded that the scope of the scale is appropriate and sufficient for the criteria to be measured. According to the results of the factor analysis we conducted, it was determined that all of the items were in appropriate values (0.75–0.92) and the single-factor structure of the scale was preserved. In addition, it was found that the variance rate of the single factor structure of the scale was 72% and the factor structure of the scale was preserved in the Scree Plot plot. It was determined that the fit values obtained from the confirmatory factor analysis were within the desired values, providing the construct validity of the measurement. It was determined that The ideal Grandparent Scale which we adapted was adapted to a different culture and appropriate results were achieved within this culture. It was determined that the item loads of the scale, which was adapted to the French culture, were similar to ours and the single-factor structure of the scale was preserved. In addition, it was observed that the fit values in the factor analysis results of the same study were similar to our study (Duflos et al., 2021). It was determined that the results of the research in which The İdeal Grand-

Table 2 Determining the relationship between items

Items	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	-	0.82	0.71	0.58	0.71	0.75	0.71	0.65	0.62	0.58	0.66	0.72	0.66	0.64
2	0.82	-	0.78	0.62	0.77	0.81	0.79	0.70	0.70	0.64	0.72	0.75	0.70	0.66
3	0.71	0.78	-	0.62	0.72	0.78	0.74	0.65	0.67	0.59	0.68	0.70	0.62	0.65
4	0.58	0.62	0.62	-	0.70	0.66	0.65	0.62	0.58	0.54	0.62	0.65	0.56	0.55
5	0.71	0.77	0.72	0.70	-	0.80	0.80	0.71	0.67	0.63	0.69	0.68	0.67	0.65
6	0.75	0.81	0.78	0.66	0.80	-	0.87	0.78	0.74	0.68	0.74	0.80	0.75	0.75
7	0.71	0.79	0.74	0.65	0.80	0.87	-	0.76	0.73	0.63	0.72	0.76	0.78	0.67
8	0.65	0.70	0.65	0.62	0.71	0.78	0.76	-	0.75	0.70	0.70	0.73	0.67	0.65
9	0.62	0.70	0.67	0.58	0.67	0.74	0.73	0.75	-	0.76	0.82	0.71	0.71	0.64
10	0.58	0.64	0.59	0.54	0.63	0.68	0.63	0.70	0.76	-	0.82	0.66	0.63	0.64
11	0.66	0.72	0.68	0.62	0.69	0.74	0.72	0.70	0.82	0.82	-	0.76	0.68	0.66
12	0.72	0.75	0.70	0.65	0.68	0.80	0.76	0.73	0.71	0.66	0.76	-	0.77	0.69
13	0.66	0.70	0.62	0.56	0.67	0.67	0.75	0.78	0.67	0.71	0.68	0.77	-	0.68

parent Scale was developed were similar to our results (Mansson, 2015). Therefore, we can say that the one-dimensional structure of this scale is copied at the cultural level and can be copied between different cultures. When we evaluated the reliability of the scale, it was determined that the Cronbach alpha's value was 0.97. In studies conducted in two different cultures where the ideal grandparent scale was applied, the Cronbach's alpha value was found to be 0.94 (Mansson, 2015; Duflos et al., 2021). These values showed us that our scale is suitable in terms of reliability. A test-retest was conducted to investigate the stability of the ideal grandparent scale over time. Test-retest reliability is also a very important factor in assessing the psychometric properties of a scale (Bayık & Gürbüz, 2016). In the test-retest evaluation we conducted, it was observed that the participants gave the same or similar answers to the scale questions every fifteen days. The results of our other analysis are as follows. The mean total score taken from the scale is 68.65 ± 20.32 (min: 65.46, max: 71.86). Since the scale has only one factor, correlation between factors could not be evaluated. However, by examining the correlation between the scale items, it was found that the relationship between the items was positive and strong. This result showed us that the items of the Ideal grandparent scale were very compatible and were suitable for the single factor structure.

Conclusions

In all analyzes, it was determined that the psychometric measurements of the Ideal Grandparent Scale were appropriate and could be adapted to Turkish culture. In addition to these results, it can be said that the ideal grandparent scale is a scale that can be used for many cultures and intergenerational solidarity is important for individuals. Ideal Grandparent Scale will provide an opportunity to examine and evaluate the grandchild and grandparent relationship in Turkish society. Being able to determine the ideal grandparent concepts of grandchildren thanks to this scale and being able to evaluate the differences between generations with this result will open the door of many researches. In addition, nurses can determine the ideal relationship between their grandchildren and older people and identify new approaches. It is envisaged that this scale can be beneficial in increasing the welfare of the old people.

Data Availability Data available on request from the authors.

Declarations

Conflict of Interest The author has declared no conflict of interest.

Ethics of Research Ethics committee approval was obtained from the non-interventional clinical research ethics committee of Kilis 7 Aralık University in order to conduct the study(date: 05.05.2021/committee number:2021/16).

The Patient Consent Patient consent was obtained from the participants in this study.

Implications for Practice The last section (in the main text) after 'Conclusions' should be 'Implications for Practice'.

Competing Interests The authors declare that they have no competing interests.

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