



## RESEARCH ARTICLE

# Development of the Empathy in Romantic Relationships Scale: Validity and Reliability Study

Şeyma BİLGİZ ÖZTÜRK<sup>a</sup>  Sümeyye BİLGİZ AKBAYIR<sup>a</sup>  Pınar ÖZDEMİR<sup>b</sup> 

<sup>a</sup> Atatürk University, Erzurum, Türkiye

<sup>b</sup> Düzce University, Düzce, Türkiye

## ARTICLE HISTORY

**Received:** 26/09/2024

**Accepted:** 01/07/2025

## KEYWORDS

Empathy

Romantic relationship

Emotional empathy

Cognitive empathy

Scale development

## ABSTRACT

The present study aimed to develop the Empathy in Romantic Relationships Scale and to examine its psychometric properties to assess empathy skills within romantic relationships. To develop the scale, an extensive literature review was first conducted, resulting in a preliminary pool. Expert opinions were then obtained, and the items were revised accordingly. Data were collected from 504 individuals (293 females, 58.1%; 211 males, 41.9%) who were married (60.1%), engaged (10.1%), or in a dating relationship (29.8%) to conduct an exploratory factor analysis. The results revealed a two-dimensional structure consisting of nine items. These dimensions were identified as Emotional Empathy and Cognitive Empathy. In the second phase, data were gathered from 222 individuals (158 females, 71.2%; 64 males, 28.8%) who were married (34.7%), engaged (18%), or in a dating relationship (47.3%) to perform a confirmatory factor analysis based on the previously obtained structure. Reliability was examined through Cronbach's alpha internal consistency coefficients and test-retest analyses. In the item analyses, correlations among the items were assessed, and the mean scores of the lower 27% and upper 27% groups were compared using independent samples *t*-tests. Criterion-related validity was evaluated by calculating Pearson's product-moment correlation coefficients between the new scale and the Toronto Empathy Scale as well as the Tolerance Tendency Scale. The findings indicated that the Empathy in Romantic Relationships Scale is a valid and reliable instrument for measuring empathy in romantic relationships.

## Introduction

As people are bio-psycho-social beings, they have to interact at every stage of their lives. In order for these interactions to be healthy, people are expected to understand and accept themselves and the people around them (Yüksel, 2004). Understanding another person requires looking at and perceiving events from their perspective. To achieve this, it is important to be able to empathize by looking at what is happening through the other person's perspective (Dökmén, 1995). Developing empathy involves perceiving and responding to verbal and non-verbal emotional cues, as well as distinguishing between the self and the other (Abramson et al., 2020; Riess et al., 2012).

There have been disagreements about the components of empathy in past studies (Cuff et al., 2016). Some of these studies examined empathy in terms of a single dimension (Gökalp & İnel, 2021; Totan et al., 2012). However, the majority of studies argued that cognitive and emotional dimensions are effective in empathy

**CORRESPONDING AUTHOR** Pınar ÖZDEMİR, [haticepinarozdemir@gmail.com](mailto:haticepinarozdemir@gmail.com), ORCID: [0009-0002-6771-2478](https://orcid.org/0009-0002-6771-2478), Düzce University, Düzce, Türkiye.

This is an article under the terms of the Creative Commons Attribution License. As the original work is properly cited, reproduction in any medium is permitted.

© 2025 The Authors. Turkish Journal of Counseling Psychology and Guidance is published by Turkish Psychological Counselling and Guidance Association

(Davis, 2018; Jolliffe & Farrington, 2006; Neumann & Westbury, 2011; Singer, 2009). For the emotional dimension of empathy, emphasis is placed on the person feeling the same emotions as the individual in front of him/her, while for the cognitive dimension, being aware of other people's feelings and thoughts and interpreting their behavior are emphasized (Bierhoff, 2002; Chang et al., 2021). In studies on the components of empathy, it is often emphasized that cognitive and emotional components are in continuous interaction. It is explained that considering both cognitive and emotional aspects of this process plays a more predictive role in understanding empathy (Martingano & Konrath, 2022; Yu & Chou, 2018). Similarly, Baron-Cohen (2003, 2004) emphasized the cognitive dimension of empathy, which explains the identification of other people's thoughts and feelings, and the emotional dimension, which helps respond to these mental states with appropriate emotions. Individuals who empathize have the chance to get to know the other person by touching their inner world (Boostani Kashani et al., 2020). Therefore, empathy can be considered a fundamental feature that enables successful interaction in the social world (Paulus & Klopp, 2023).

Empathy plays an important role in building stronger and longer relationships by enabling people to understand other people's wants and needs as well as their own. Romantic relationships, one of these relationships, include interactions in which human relations are experienced very intensely. Thus, empathy skills displayed in romantic relationships form the basis for a stable relationship. Empathy, which is frequently used in the literature, is examined in terms of general social relationships (Brett et al., 2023; Gıca et al., 2021; Kaya, 2018). However, this empathy may be insufficient for deeper and closer relationships such as romantic relationships. Empathy in such relationships is explained by the concept of dyadic empathy (Long, 1990). Therefore, a different empathy scale is needed to analyze empathy in romantic relationships (Péloquin & Lafontaine, 2010). Empathy in romantic relationships clarifies the individual's feelings of being understood and approved by his/her partner and facilitates the individual to shape his/her behavior accordingly (Rosen et al., 2017). Displaying empathy skills can facilitate the solution of many problems that may arise before and during marriage (Bilen, 2009; Long et al., 1999; Taşdemir & Karaaslan, 1999; Zhan et al., 2022). Several couple therapy approaches are available for solving such problems in relationships. One of them, Imago Therapy, states that empathy has a very important role in solving the problems experienced by couples (Muro et al., 2016). As a matter of fact, in the study conducted by Schmidt and Gelhert (2017) within the context of the Imago Therapy approach, it was observed that the empathy skills of couples increased.

Helping individuals understand each other better in mutual relationships, empathy skills have two important functions in premarital education programs. First, they create a safe and accepting environment for couples while solving their problems by reducing unwanted emotional reactions in the relationship. Second, they allow couples to develop a deeper emotional bond and mutual understanding in romantic relationships (Yakın, 2015). They also prevent violent actions and motivate sacrifice in these relationships (Loinaz et al., 2021). Empathy skills have a very important place in relieving the negative emotions that occur in relational hurt. These skills are associated with couples' feelings of forgiveness towards each other and are effective in unwanted situations that occur during arguments (Hill, 2010). Furthermore, higher empathic communication skills improve the common bond between couples and positively affect the continuity of healthy interactions (Dijkstra et al., 2014).

Previous studies revealed that empathy deficiencies are associated with increased tensions and conflicts in relationships (Carre`re et al., 2000; Kaya, 2018). As a matter of fact, recent studies conducted in Turkey show that 33.4% of couples in the first five years of marriage are divorced (TUIK, 2023). This situation points to the increasing divorce rates in recent years. In order to prevent or reduce the occurrence of this problem, basic issues that will increase or affect the relationship quality of couples who are still in a romantic relationship process gain importance. Studies have indicated that empathy, as one of the key factors affecting relationships, helps in maintaining romantic relationships in the long term. On the other hand, a lack of empathy has been found to create feelings of misunderstanding and neglect, which negatively impact relationship satisfaction (Dijkstra et al., 2014; Kimmes et al., 2014; Ulloa et al., 2017). In addition, Yıldırım's (2005) study explained that the empathy skill scores of individuals who remain married are higher than those who are divorced. Therefore, most approaches related to couples therapy identify empathy as a means to create positive relational change (Schmidt & Gelhert, 2017). With the help of these features, empathy predicts marital compatibility and helps individuals look at events from their spouse's perspective in order to reduce tensions that may occur in

marriage (Kışlak & Çabukça, 2002). Many studies have shown that empathy skills can be improved through education. Thus, empathy and its impact on social life can be improved (Riess, 2022; Yılmaz-Bingöl & Uysal, 2015). The study by Long et al. (1999) explained the effect of these educational practices on empathy. In their study, the changes in the empathy skills of couples in romantic relationships were assessed with feedback received from the couples in the six months following the training. Couples stated that the increase in their empathy skills after the training positively affected their relationship satisfaction levels.

The above-mentioned studies put forth that empathy and romantic relationships are significantly interrelated and can be improved. Romantic relationships manifest themselves intensely during the high school and university years. These relationships often result in a more serious decision and end in marriage after individuals complete the tasks related to their developmental periods. It is very important to use empathy skills effectively in order to maintain these processes healthily. The examination of studies conducted in Turkey identified many empathy scales developed for children and adolescents (Dinç Altun et al., 2018; Gürtunca, 2013; Güzel et al., 2019; Zengin et al., 2018) and for young people and adults (Bora & Baysan-Arabacı, 2009; Kaya & Çolakoğlu, 2015; Yukay-Yüksel et al., 2020). Many of the empathy studies conducted with couples in Turkey showed that empathy scales used in daily social relations are also applied to partners (Kaya, 2018; Tutarel-Kışlak & Göztepe, 2012; Yılmaz, 2021). However, romantic relationships require closer interaction than relationships with any other person. One of the basic conditions for this interaction to be strong is having empathy skills.

For these reasons, the empathy expected in romantic relationships, which involve a different and closer connection than other social relationships, should be examined from a different and deeper perspective. Therefore, it is important to use measurement tools that assess “empathy skills in romantic relationships” in order to obtain more accurate data. Nevertheless, measurement tools for assessing couples’ empathy skills are insufficient in number. As a matter of fact, in a recent study conducted in this context (Şahin & Şirin, 2021), a measurement tool was developed to measure the empathy skills of married individuals. However, in the said measurement tool, it is seen that the sample group consists only of married couples, and the empathy status of other individuals who are engaged or in a dating relationship is not examined. In addition, empathy is not examined in terms of emotional and cognitive dimensions in the scale. All of these have created a rationale for the development of a new measurement tool. Furthermore, the idea that scales developed outside Turkey (Péloquin & Lafontaine, 2010) may not be appropriate for Turkish family culture and relationship processes may constitute a limitation in terms of the adaptation and use of these measurement tools. Hence, taking into account the processes regarding the Turkish marital structure and the grounds for such a scale, the present study aimed to develop an empathy scale that measures cognitive and emotional dimensions for individuals who are married, engaged, or dating, and to contribute to the literature.

## Method

### Study Group

The questions developed by the researcher were converted into an online form and administered to participants who were married, engaged, or dating, using the a convenience sampling method. Different individuals were reached at each stage of the scale application. For the pre-application, data were collected from 85 participants [45 females (52.9%), 40 males (47.1%)]. For the exploratory factor analysis, data were collected from 504 participants [293 females (58.1%), 211 males (41.9%)], whereas for the confirmatory factor analysis, data were collected from 222 participants [158 females (71.2%), 64 males (28.8%)]. Finally, 23 males (41.8%) and 32 females (58.2%) in romantic relationships participated in the test-retest reliability phase. Table 1 presents the data on the marital status of the participants in the pre-application, EFA, and CFA stages.

**Table 1.** Marital status of the participants of the pre-application, EFA and CFA.

	Pre-Application	EFA	CFA
Married	34 (40 %)	303 (60.1 %)	77 (34.7 %)
Engaged	22 (25.9 %)	51 (10.1 %)	40 (18 %)
Dating	29 (34.1 %)	150 (29.8 %)	105 (47.3 %)
Total	85	504	222

## **Data Collection Tools**

### ***Demographic Information Form***

This form developed by the researchers, contained various questions designed to examine the participants' demographic characteristics, such as their sex and romantic relationship status.

### ***Tolerance Tendency Scale Form for Adults***

This scale developed by Çalışkan and Çavuş (2020), measures individuals' respect for and acceptance of differences. The scale consists of 10 items and 2 sub-dimensions. The test-retest reliability coefficients of the measurement tool were .78 for the Respect for Differences dimension, .77 for the Acceptance dimension, and .84 for the total scale. In the present study, after obtaining the necessary permissions from the developers of the Tolerance Tendency Scale, confirmatory factor analysis was performed to determine the tolerance tendency of individuals in romantic relationships. The confirmatory factor analysis showed that the tolerance tendency goodness-of-fit values of individuals in romantic relationships were as follows:  $\chi^2/df = 2.28$ , CFI = .94, AGFI = .89, GFI = .94, SRMR = .05, RMSEA = .076. Thus, the analysis results regarding the use of the tolerance tendency scale in romantic relationships indicated acceptable to excellent goodness-of-fit values (Kline, 2015).

### ***Toronto Empathy Questionnaire***

This scale developed by Spreng et al. (2009) and adapted into Turkish by Totan et al. (2012), aims to measure individuals' empathy levels. The reliability coefficient of the measurement tool, which consists of 13 items and a single dimension, was .79. In the current study, permission was obtained from the developers of the questionnaire, and confirmatory factor analysis was conducted to examine the empathy levels of individuals in romantic relationships. The confirmatory factor analysis revealed that the goodness-of-fit values regarding the empathy levels of individuals in romantic relationships were as follows:  $\chi^2/df = 2.17$ , CFI = .86, AGFI = .87, GFI = .91, SRMR = .08, RMSEA = .073. Hence, the analysis results regarding empathy in romantic relationships indicated acceptable to excellent goodness-of-fit values (Kline, 2015).

### ***Empathy in Romantic Relationships Scale***

This scale was developed by the researchers within the scope of the present study to determine the empathy levels of individuals in romantic relationships. The scale consists of nine items and two sub-dimensions, named Emotional Empathy and Cognitive Empathy. There are no reverse-scored items on the 5-point Likert-type scale (ranging from strongly disagree to strongly agree). Higher scores on the Empathy in Romantic Relationships Scale indicate that individuals in romantic relationships have higher empathy skills. The Cronbach's alpha coefficient calculated for the reliability of the scale was .83. Exploratory factor analysis, confirmatory factor analysis, and reliability analyses were conducted for the scale, and the results are presented in the Findings section.

## **Scale Development Process**

In the validity studies conducted to develop the Empathy in Romantic Relationships Scale, a literature review was first carried out to ensure content validity. The literature review of studies conducted in Turkey revealed that there are not many studies measuring empathy skills in romantic relationships. On the other hand, it was considered that adapting studies conducted outside Turkey might pose problems in terms of cultural appropriateness. For these reasons, a comprehensive literature review was conducted to determine the level of empathy in romantic relationships. During this review, measurement tools developed or adapted by Dökmen (1988), Engeler (2005), Topçu et al. (2010), and Totan et al. (2012), which aim to measure empathy skills, were identified. Additionally, studies adapted for couples were examined by Péloquin and Lafontaine (2010). Situations involving dilemmas were discussed with field experts.

While creating the item pool, a comprehensive literature review was first conducted. Care was taken to ensure that the items were neither irrelevant nor misleading. In addition, while developing the measurement tool, attention was paid to ensure that the scale was suitable for its intended purpose and consisted of a limited number of items to maintain participants' interest. After all these steps, a pool of 14 items was created. The developed items were sent to experts along with a three-point rating scale ("appropriate," "not appropriate,"

and “partially appropriate”) and an explanation section for item improvement. Furthermore, the items were revised in terms of language and punctuation based on the recommendations of two linguistics experts to ensure suitability for the target audience. Following this process, the items were re-examined by six field experts and one scale development expert. The experts recommended revising five items and removing five others. After these revisions, the scale was finalized as a nine-item, five-point Likert-type scale: Strongly Disagree (1), Disagree (2), Partly Agree (3), Agree (4), and Strongly Agree (5).

### Data Collection Process

After obtaining permission to use the measurement tools employed in the study from the respective scale developers, ethical approval was granted by the Düzce University Scientific Research and Publication Ethics Committee (Date: 31.08.2023, Reference Number: E-78187535-640-335417). The scale items were prepared using Google Forms after ethical approval was obtained. Before data collection, participants were informed about the content and purpose of the study. They were asked whether they were currently in a romantic relationship, and the scales prepared on the online platform were sent to married, engaged, and dating individuals via e-mail and online messaging. Participants were informed in writing that their responses would remain confidential. Subsequently, informed consent was obtained, confirming that their participation was voluntary, and the data collection process began.

### Data Analysis

The developed nine-item scale was administered to a preliminary sample group of 85 participants. As a result of the pre-application, the Cronbach’s alpha reliability coefficient was found to be .85. Then, data were collected from 504 students to perform exploratory factor analysis. The collected data were entered into the SPSS 25 statistical package program, and the normal distribution of the items was examined. For the normality assumptions, skewness and kurtosis values were found to range between  $-.60$  and  $.27$ . These values meet the criteria for normal distribution (Tabachnick & Fidell, 2019). To determine whether the factors obtained through exploratory factor analysis were consistent with the theoretical structure (Çapık, 2014), confirmatory factor analysis was conducted using data from 222 participants. Correlation analysis was performed with similar scales to determine the criterion validity of the Empathy in Romantic Relationships Scale. The skewness and kurtosis values for this analysis, regarding the normality assumption, were found to range between  $-.03$  and  $-.31$ . These values also meet the criteria for normal distribution (Tabachnick & Fidell, 2019). The data obtained were analyzed using the SPSS 25.0 and AMOS 24 programs.

## Results

### Findings Regarding the Exploratory Factor Analysis

Exploratory factor analysis was performed to reveal the structure of the Empathy in Romantic Relationships Scale. To conduct exploratory factor analysis, the Kaiser–Meyer–Olkin (KMO) and Bartlett’s Test of Sphericity values of the data were first examined. To determine whether the sample was sufficient, the KMO value is expected to be close to 1, and the Bartlett’s Test of Sphericity value is expected to be significant (Büyüköztürk, 2002). In the present study, the KMO value was .84, which indicates sufficient sample adequacy. Additionally, the Bartlett’s Test of Sphericity value ( $p < .001$ ) was found to be significant. The KMO and Bartlett’s Test of Sphericity values for the Empathy in Romantic Relationships Scale are presented in Table 2.

**Table 2.** KMO and Bartlett’s Test of sphericity results of the Empathy in Romantic Relationships Scale

<b>Kaiser-Meyer-Olkin Sample Adequacy</b>		.84
<b>Bartlett’s Test of Sphericity</b>	Chi-square value	1433.003
	df	.36
	p	.000*

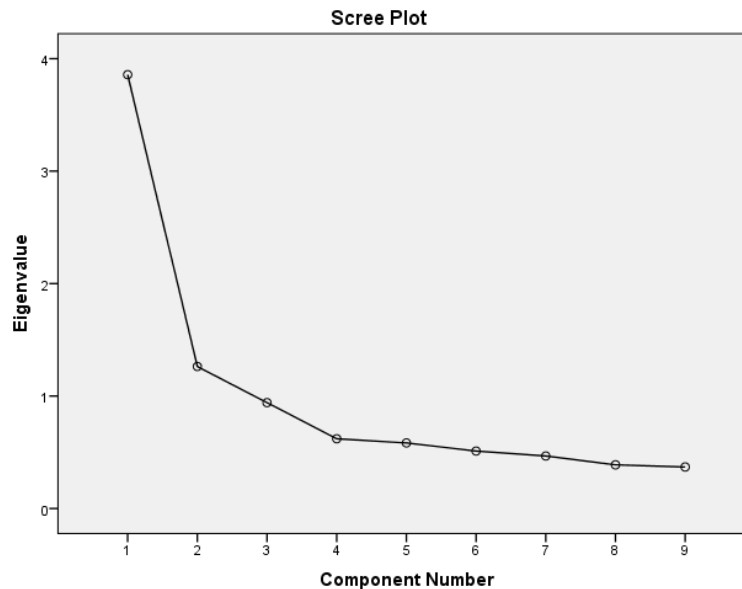
Then, factor analysis using principal components analysis was performed. In the principal components analysis, the direct oblimin technique—one of the oblique rotation methods—was used to determine the factor structure of the scale. The direct oblimin method is applied when it is assumed that there is a relationship between the factors (Yurdabakan & Çüm, 2017). As a result of the principal components analysis, the factor

loadings of the scale were examined. Factor loadings greater than .32 indicate that the item can be included in the scale (Tabachnick & Fidell, 2019). Accordingly, the factor loadings of the items in the Empathy in Romantic Relationships Scale ranged between .60 and .80, and there were no overlapping items. The results regarding the factor loadings of the scale are presented in Table 3.

**Tablo 3.** Empathy in Romantic Relationships Scale items and factor loadings

Item Number	Scale Items Factor Load Values	
	Emotional Empathy	Cognitive Empathy
Item 1	.79	
Item 2	.71	
Item 4	.62	
Item 6	.77	
Item 9	.74	
Item 3		.80
Item 5		.76
Item 7		.83
Item 8		.61
Explained Variance	% 43	% 14

Additionally, the examination of the variance values related to the factors showed that the variance value for the first dimension explained 43%, and the variance value for the second dimension explained 14%. In scales with more than one dimension, the total explained variance is expected to range between 40% and 60% (Tavşancıl, 2014). Thus, the developed scale explained 57% of the total variance, indicating that it measures the intended construct effectively. After determining the appropriateness of the data for exploratory factor analysis, eigenvalues, scree plot, and variance percentages were examined to determine the number of factors in the scale (Çokluk et al., 2016). In the scree plot graph, the point at which the eigenvalues show a sharp decline indicates the number of factors (Yaşlıoğlu, 2017). Accordingly, the number of factors of the developed scale shown in the scree plot was two. The scree plot graph of the Empathy in Romantic Relationships Scale is presented in Figure 1.



**Figure 1.** Scree plot graph of the Empathy in Romantic Relationships Scale



The eigenvalues of the factors were also examined to determine the number of factors related to the scale. Dimensions with eigenvalues greater than 1 were considered significant (Yaşlıoğlu, 2017). Regarding the factor eigenvalues of the developed measurement tool, the eigenvalue for the first dimension was 3.83, and that for the second dimension was 1.26. Accordingly, there were two dimensions with eigenvalues greater than one. The exploratory factor analysis revealed that the Empathy in Romantic Relationships Scale consists of nine items and two dimensions. To name the dimensions, the items under each dimension were first examined. As a result, the first dimension of the measurement tool was named Cognitive Empathy (four items), while the second dimension was named Emotional Empathy (five items). The Cognitive Empathy dimension includes items that reflect an individual's understanding of their partner's experiences in romantic relationships (e.g., "Before criticizing my partner, I first think by putting myself in my partner's shoes"). The Emotional Empathy dimension includes items that reflect the individual's ability to feel the emotions experienced by their partner in romantic relationships (e.g., "If my partner has difficulty in any issue, I feel their concerns").

### Correlation Analyses for the Empathy in Romantic Relationships Scale

The significance of the scale items and the relationships among the items were examined using correlation analysis. At this stage, a heatmap was first utilized. The heatmap is presented in Figure 2.



Figure 2. Heatmap analysis

The heatmap illustrating the relationships among the items displays green when there is a positive relationship between the variables and red when there is a negative relationship. Accordingly, the heatmap of the Empathy in Romantic Relationships Scale appears predominantly green, indicating that the scale items are positively correlated with each other.

Pearson's correlation analysis was conducted to examine the relationships between the dimensions of the scale and the overall scale. The results of the correlation analysis are presented in Table 4.

Table 4. Findings regarding the relationships between the scale and its factors

	1	2	3
1. Total Empathy	1	.86*	.88*
2. Cognitive Empathy		1	.51*
3. Emotional empathy			1

\* $p < .05$

As shown in Table 4, there were highly significant positive relationships between the total empathy score of the scale and the cognitive empathy ( $r = .86$ ) and emotional empathy ( $r = .88$ ) sub-dimensions. In addition,

there was a moderately significant positive relationship between the cognitive empathy dimension and the emotional empathy dimension ( $r = .51$ ).

### Findings Regarding Confirmatory Factor Analysis

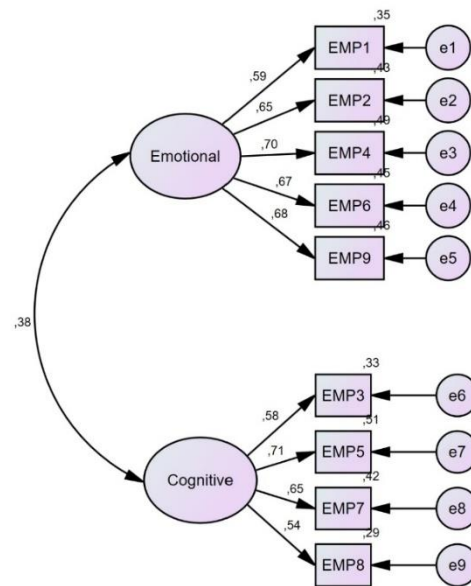
Confirmatory factor analysis was conducted to determine whether the two-dimensional structure obtained from the exploratory factor analysis was confirmed. Before performing confirmatory factor analysis, the assumptions of normal distribution and multicollinearity were tested. To assess normality, skewness and kurtosis values were examined. The skewness and kurtosis values of the scale's sub-dimensions ranged between -2 and +2, indicating that the data were normally distributed (George & Mallery, 2010). Tolerance and VIF values were also examined to assess multicollinearity. The tolerance value was .91 and the VIF value was 1.0, indicating no multicollinearity problem (Hair et al., 2010). After meeting the necessary assumptions for confirmatory factor analysis, the analysis was conducted using nine items and two sub-dimensions with a different sample group ( $N = 222$ ). To evaluate the model's validity in confirmatory factor analysis, the model's goodness-of-fit indices must meet the criteria for excellent or acceptable fit (Çokluk et al., 2016). The results regarding the goodness-of-fit values of the confirmatory factor analysis model for the Empathy in Romantic Relationships Scale are presented in Table 5.

**Table 5.** Goodness of fit values of the Empathy in Romantic Relationships Scale CFA model

	Acceptable Fit Values	Good Fit Values	Fit values of the Current Model	Result
Chi-Square/df	$3 < \chi^2/df \leq 5$	$0 < \chi^2/df \leq 3$	1.8	Good Fit
TLI	$0.90 < NFI \leq 0.95$	$0.95 < NFI \leq 1.0$	.94	Acceptable Fit
CFI	$0.90 < CFI < 0.95$	$0.95 \leq CFI < 1.00$	.95	Good Fit
AGFI	$0.90 \leq AGFI < 0.95$	$0.95 \leq AGFI \leq 1$	.91	Acceptable Fit
GFI	$0.90 \leq AGFI < 0.95$	$0.95 \leq GFI \leq 1$	.95	Good Fit
RMSEA	$0.05 \leq RMSEA \leq 0.08$	$0 \leq RMSEA \leq 0.05$	.06	Acceptable Fit

The examination of the goodness of fit values of the model showed that the Chi-square/degree of freedom ratio, CFI, and GFI indicated good fit values, while the TLI, AGFI, and RMSEA values indicated acceptable fit (Kline, 2015). Based on these findings, the construct validity of the scale was considered high according to the confirmatory factor analysis. The results of the confirmatory factor analysis for the Empathy in Romantic Relationships Scale are illustrated in Figure 3.





CMIN/df:1,833; AGFI:,.918; GFI:,.953; CFI:,.954; TLI:,.936; RMSEA:,.061

**Figure 3.** Confirmatory factor analysis results for the scale

As shown in Figure 3, the factor loadings of the items in the Cognitive Empathy dimension ranged from .59 to .70, and the factor loadings of the items in the Emotional Empathy dimension ranged from .54 to .71.

### Findings Regarding Criterion Validity

To test the criterion validity of the Empathy in Romantic Relationships Scale, the Tolerance Tendency Scale Form for Adults and the Toronto Empathy Questionnaire were administered. Correlation analysis was conducted to examine the relationships between the scales. The data used for criterion validity were collected during the confirmatory factor analysis. The results of the correlation analysis are presented in Table 6.

**Table 6.** Findings regarding the relationships between the Empathy in Romantic Relationships Scale, Tolerance Tendency Scale Form for Adults and Toronto Empathy Questionnaire

	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Cognitive Empathy	15.2	2.72	1				
2. Emotional Empathy	21.4	2.88	.29*	1			
3. Empathy in Romantic R. (Total)	36.6	4.51	.79*	.82*	1		
4. Toronto Empathy Questionnaire	58.6	6.21	.23*	.49*	.45*	1	
5. Tolerance Tendency	36.4	6.91	.45*	.33*	.48*	.37*	1

\*\*  $p < .05$ ; *M*: Mean; *SD*: Standard deviation

As can be seen from Table 6, there were significant positive relationships between the Empathy in Romantic Relationships Scale and the Toronto Empathy Questionnaire ( $r = .45$ ,  $p < .05$ ), and between the Empathy in Romantic Relationships Scale and the Tolerance Tendency Scale Form for Adults ( $r = .48$ ,  $p < .05$ ). There was a moderately significant positive relationship between Emotional Empathy and the Tolerance Tendency Scale ( $r = .33$ ,  $p < .05$ ) and the Toronto Empathy Questionnaire ( $r = .49$ ,  $p < .05$ ). In addition, there was a moderately significant positive relationship between Cognitive Empathy and the Tolerance Tendency Scale ( $r = .45$ ,  $p < .05$ ), and a low but significant positive relationship between Cognitive Empathy and the Toronto Empathy

Questionnaire ( $r = .23$ ,  $p < .05$ ).

### **Findings Regarding the Reliability of the Empathy in Romantic Relationships Scale**

To calculate the reliability of the scale, Cronbach's alpha values, which indicate the internal consistency of the items, were computed using the data collected in the second stage (confirmatory factor analysis). Cronbach's alpha is defined as the coefficient that shows the degree to which a scale measures the construct it is intended to measure. A Cronbach's alpha value of .70 or above is considered acceptable (Büyüköztürk, 2016). The Cronbach's alpha values for the developed Empathy in Romantic Relationships Scale were .77 for the entire scale, .79 for the Cognitive Empathy sub-dimension, and .71 for the Emotional Empathy sub-dimension. In addition, the test-retest reliability coefficient, obtained by administering the scale to the same participants twice at a four-week interval, was found to be .78. Therefore, the analyses regarding the reliability of the scale were considered sufficient, and the scale was determined to meet the reliability criteria. In this respect, it can be concluded that the scale is reliable.

### **Findings Regarding Lower-Upper Group Reliability**

Lower-upper group reliability, another method used to test the reliability of the scale, was examined. According to Büyüköztürk (2002), a significant difference between the lower 27% group and the upper 27% group, calculated based on the total score of the scale, is an important indicator of the scale's reliability. In the present study, an independent samples t-test was conducted to determine the difference between the mean scores of the lower 27% group ( $N = 60$ ) and the upper 27% group ( $N = 60$ ) taken from the study sample. The t-test results indicated a significant difference ( $t = 28.4$ ,  $p < .05$ ) between the lower and upper groups. Accordingly, the items of the Empathy in Romantic Relationships Scale demonstrated high distinctiveness.

## **Discussion**

It is important for individuals who are expected to constantly interact within social life to establish healthy communication with their partners, with whom they share a close and deep relationship. The impact of this issue on the family and on the relationships that form the foundation of society, as well as the fact that it can be enhanced through educational or developmental programs, underscores the necessity of conducting this study. A review of the literature revealed that studies aiming to measure empathy in romantic relationships are limited in several respects.

Empathy is a fundamental psychological process that enables individuals to build healthier and more meaningful bonds in their relationships. Numerous studies have demonstrated that empathic abilities enhance relationship quality and are closely associated with attachment styles (Davis, 2018; Decety & Jackson, 2006; Smith, 2006). The coexistence of cognitive and emotional components in empathy aligns with Hoffman's (2000) empathy theory and Davis's (1983) multidimensional model of empathy. According to Hoffman, empathy emerges through the integration of cognitive and emotional processes, playing a crucial role in social development. Similarly, Davis conceptualizes empathy as comprising two primary dimensions: cognitive empathy (the ability to take another's perspective) and emotional empathy (emotional responsiveness). These theoretical foundations support the two-factor structure of the developed scale. For instance, Péloquin and Lafontaine (2010) developed a measurement tool designed to assess empathy in romantic relationships, incorporating both cognitive and emotional dimensions. These dimensions represent two complementary aspects of empathy (Davis, 2018; Eklund & Meranius, 2021; Dziobek et al., 2008). The presence of these dimensions is crucial for ensuring empathy's core function—the ability to understand and share another person's feelings (Zurek et al., 2017). Empathy involves not only perceiving the emotions of others but also being emotionally responsive and sensitive to those emotions (Zhou, 2023).

As a matter of fact, although the study by Péloquin and Lafontaine (2010) is consistent with the present study in several respects, the couples they examined were analyzed in terms of heterosexual, homosexual, and bisexual relationships. In their measurement tool, heterosexual relationships were analyzed from two perspectives: in the first sample group, there was no cohabitation criterion, whereas in the second group, this criterion was applied. This multidimensional perspective provided a comprehensive tool for measuring empathy. However, when considered within the context of Turkish culture, it is thought that individuals may

be reluctant to disclose personal expressions related to their sexual preferences and experiences. Furthermore, it was deemed more culturally appropriate to examine separately the dating stage, during which individuals establish closer relationships; the engagement period, during which meetings begin with the knowledge of families; and the marriage process.

This cultural aspect underscores the necessity of developing an empathy scale specifically adapted to Turkish society. Furthermore, previous measurement tools have primarily focused on a specific stage of relationships, such as marriage, without encompassing the full spectrum of romantic relationships. For example, Şahin and Şirin (2021) developed a scale that is more culturally appropriate for Turkish society. However, this scale assesses only the empathic skills of married individuals, excluding couples in the dating or engagement stages, which represents a limitation. In addition, the scale conceptualizes empathy as a single-dimensional construct, whereas various studies emphasize that examining empathy across both cognitive and emotional dimensions offers a more comprehensive understanding of the construct (Decety & Jackson, 2006; Martingano & Konrath, 2022; Smith, 2006). Considering all these points, the developed measurement tool aims to assess empathy skills in romantic relationships in a comprehensive, reliable, and culturally appropriate manner. Thus, it serves as a functional resource for future research on this topic. As a result of the relevant literature review, expert evaluations, preliminary application, and exploratory factor analysis, a two-dimensional, nine-item scale was developed. This version of the scale explains 57% of the total variance (43% for Cognitive Empathy, the first factor, and 14% for Emotional Empathy, the second factor). These values are considered acceptable.

Following the exploratory factor analysis, confirmatory factor analysis was conducted with the second data group and the functioning of the scale on another group was also evaluated. The fit indices of the model obtained as a result of this analysis were found as  $\chi^2/df= 1.83$ , RMSEA=.06, CFI=.95, AGFI=.91, GFI=.95, SRMR=.05. The fit indices of the resulting scale were between good fit and acceptable fit index values (Hooper et al., 2008). The confirmatory factor analysis results revealed that the model of the Empathy in Romantic Relationships Scale shows good fit and its construct validity is met. According to these findings, it can be said that the 9-item structure found in the exploratory factor analysis was confirmed.

The Cronbach's alpha value obtained from the reliability analysis was .77, indicating that the scale is reliable (Tavşancıl, 2014). According to the results of the correlation analysis conducted to determine the relationships between the factors, there were significant positive correlations among all factors, demonstrating that they are interrelated. The nine-item scale consists of two factors: five items in the Emotional Empathy dimension and four items in the Cognitive Empathy dimension. The maximum possible score on the scale is 45, and the minimum score is 9. Higher scores indicate greater empathy skills in romantic relationships. Based on all analyses, the Empathy in Romantic Relationships Scale can be considered a valid and reliable measurement tool for assessing empathy between partners. The findings further suggest that the scale's theoretical foundation, factor structure, and psychometric properties provide a strong basis for future research in the field of romantic relationship studies.

### Limitations and Recommendations

Using the convenience sampling method to obtain the study data can be considered a limitation. In addition, the fact that this measurement tool was developed specifically for Turkish adults in romantic relationships, and the lack of information regarding the age distribution of the study group, are also limitations. It is recommended that future studies conduct adaptation studies with individuals from different cultural contexts. This study focuses solely on the scale development process. Future research could include descriptive and regression-based analyses to examine factors that may influence empathy in romantic relationships, such as relationship duration, quality, and satisfaction. Studies proposing more comprehensive models could also be conducted to explore variables such as partners' psychological resilience, attachment styles, and personality traits, concepts that may be associated with empathy skills, and to reveal the multidimensional effects of empathy in romantic relationships. In longitudinal studies, this measurement tool can be used to track changes in couples' empathy levels over time. Furthermore, the developed scale may be beneficial for use in intervention studies aimed at reducing negative experiences that individuals may encounter in romantic relationships. In this context, the scale can also be used to emphasize the importance of empathic skills in romantic relationships within psychological and family counseling processes, thereby helping clients to better recognize the need for empathy in their relationships.

**Funding:** The authors received no financial support for the research, authorship, and/or publication of this article.

**Conflict of Interest:** The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

**Data Availability:** The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

**Ethical Approval:** In this article, journal writing rules, publication principles, research and publication ethics rules, journal ethics rules were followed. The author is responsible for any violations that may arise in relation to the article. Ethical approval was obtained from the Düzce University Scientific Research and Publication Ethics Committee with the decision number 2023/296, dated 31.08.2023.

**Consent to Participate:** All individual participants included in the study provided informed consent.

**Acknowledgments:** This research was not pre-registered. The data used in the research are available. The data can be obtained by emailing: [haticepinarozdemir@gmail.com](mailto:haticepinarozdemir@gmail.com). The materials used in the research are available. The materials can be obtained by emailing: [haticepinarozdemir@gmail.com](mailto:haticepinarozdemir@gmail.com).

**Author Contributions:** The authors contributed to this article as follows: 35%, 35%, and 30%.

## References

- Abramson, L., Uzefovsky, F., Toccaceli, V., & Knafo-Noam, A. (2020). The genetic and environmental origins of emotional and cognitive empathy: Review and meta-analyses of twin studies. *Neuroscience & Biobehavioral Reviews*, 114, 113-133. <https://doi.org/10.1016/j.neubiorev.2020.03.023>.
- Baron-Cohen, S., & Wheelwright, S. (2004). The empathy quotient: an investigation of adults with Asperger syndrome or high functioning autism, and normal sex differences. *Journal of Autism and Developmental Disorders*, 34, 163-175. <https://doi.org/10.1023/B:JADD.0000022607.19833.00>
- Bierhoff, H. W. (2002). *Prosocial behavior*. Psychology Press.
- Bilen, M. (2009). *Sağlıklı insan ilişkileri [Healthy human relationships]*. Anı.
- Bora, E. & Baysan-Arabacı, L. (2009). Psychometric features of turkish version of empathy quotient in university students. *Bulletin of Clinical Psychopharmacology*, 19(1), 39-47.
- Boostani Kashani, A. A., Khodabakhshi-Koolaei, A., Davoodi, H., & Heidari, H. (2020). Effects of marriage preparation per Satir's communication model and narrative therapy on empathy and emotional expression in single young adults. *Journal of Client-Centered Nursing Care*, 6(3), 145-156. <https://doi.org/10.32598/JCCNC.6.3.33.10>
- Brett, J. D., Becerra, R., Mayberry, M. T., & Preece, D. A. (2023). The psychometric assessment of empathy: Development and validation of the Perth Empathy Scale. *Assessment*, 30(4), 1140-1156. <https://doi.org/10.1177/10731911221086987>
- Büyüköztürk, Ş. (2002). Factor analysis: Basic concepts and using to development scale. *Educational Management*, 8(4), 470-483.
- Büyüköztürk, Ş. (2016). Sosyal bilimler için veri analizi [*The handbook of data analysis for social sciences*]. Pegem.
- Carre`re, S., Buehlman, K. T., Gottman, J. M., Coan, J. A., & Ruckstuhl, L. (2000). Predicting marital stability and divorce in newlywed couples. *Journal of Family Psychology*, 14, 42-58. <https://doi.org/10.1037/0893-3200.14.1.42>.
- Chang, S. A. A., Tillem, S., Benson-Williams, C., & Baskin-Sommers, A. (2021). Cognitive empathy in subtypes of antisocial individuals. *Frontiers in Psychiatry*, 12, 1070. <https://doi.org/10.3389/fpsy.2021.677975>
- Cuff, B. M. P., Brown, S. J., Taylor, L., & Howat, D. J. (2016). Empathy: A Review of the concept. *Emotion Review*, 8(2), 144-153. <https://doi.org/10.1177/1754073914558466>

- Çalışkan, H., & Çavuş, M. (2020). Tolerance tendency scale form for adults: A study of reliability and validity. *Journal of Values Education*, 18(40), 181-205. <https://doi.org/10.34234/ded.731250>
- Çapık, C. (2014). Use of confirmatory factor analysis in validity and reliability studies. *Journal of Anatolia Nursing and Health Sciences*, 17(3), 196-205.
- Çokluk, Ö., Şekercioglu, G., & Büyüköztürk, Ş. (2016). *Sosyal bilimler için çok değişkenli istatistik: SPSS ve Lisrel uygulamaları [Multivariate statistics for social sciences: SPSS and LISREL applications]*. Pegem.
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, 44(1), 113-126. <https://doi.org/10.1037/0022-3514.44.1.113>
- Davis, M. H. (2018). *Empathy: A social psychological approach*. Routledge.
- Decety, J., & Jackson, P. L. (2006). A social-neuroscience perspective on empathy. *Current Directions in Psychological Science*, 15(2), 54-58. <https://doi.org/10.1111/j.0963-7214.2006.00406.x>
- Dijkstra, P., Barelds, D. P., Groothof, H. A., & Van Bruggen, M. (2014). Empathy in intimate relationships: The role of positive illusions. *Scandinavian Journal of Psychology*, 55, 477-482. <https://doi.org/10.1111/sjop.12142>
- Dinç Altun, Z., Değerli, F. İ., Bolat, N., & Kınık, Ö. (2018). Adaptation of the Empathy Section Scale for Children into Turkish. *Mehmet Akif Ersoy University Journal of Education Faculty* (45), 153-168. <https://doi.org/10.21764/maeuefd.309234>
- Dökmen, Ü. (1988). Measurement of empathy based on a new model and its development with psychodrama. *Ankara University Journal of Faculty of Educational Sciences*, 2(1-2); 155-190.
- Dökmen, Ü. (1995). *İletişim çatışmaları ve empati [Communication conflicts and empathy]*. Sistem.
- Dökmen, Ü. (2003). *Günlük yaşamda iletişim çatışmaları ve empati [Communication conflicts and empathy in art and daily life]*. Sistem.
- Dziobek, I., Rogers, K., Fleck, S., Bahnemann, M., Heekeren, H. R., Wolf, O. T., & Convit, A. (2008). Dissociation of cognitive and emotional empathy in adults with Asperger syndrome using the Multifaceted Empathy Test (MET). *Journal of Autism and Developmental Disorders*, 38, 464-473. <https://doi.org/10.1007/s10803-007-0486-x>
- Eklund, J. H., & Meranius, M. S. (2021). Toward a consensus on the nature of empathy: A review of reviews. *Patient Education and Counseling*, 104(2), 300-3007. <https://doi.org/10.1016/j.pec.2020.08.022>
- Engeler, A., & Yargıç, L. İ. (2007). Engeler, A., & Yargıç, L. İ. (2007). Interpersonal reactivity index: Measurement of empathy multidimensionally. *New Symposium Journal*, 45(3), 119-127.
- George, D., & Mallery, M. (2010). *SPSS for Windows step by step: A simple guide and reference* (10th ed.). Pearson.
- Gıca, Ş., Büyükavşar, A., İyisoy, M. S., & Güleç, H. (2020). Psychometric properties of questionnaire of cognitive and affective empathy (QCAE): reliability and factor analysis study in Turkish sample. *Archives of Neuropsychiatry*, 58(3), 228. <https://doi.org/10.29399/npa.27248>
- Gökcalp, A., & İnel, Y., (2021). Empathy scale: Validity and reliability study. *Journal of Anatolian Cultural Research (JANCR)*, 5(1), 32-45. <https://doi.org/10.15659/ankad.v5i1.137>
- Gürtunca, A. (2013). *Empathy scale for children and adolescents: Validity and reliability study in Turkey* (Publication No. 358142) [Master's thesis, Istanbul Arel University]. Council of Higher Education National Thesis Center.
- Güzel, H. Ş., Sevi Tok, E. S., & Güney, E. (2019). Validity and reliability of the Turkish version of the cognitive, affective, and somatic empathy scales for Children. *Anatolian Journal of Psychiatry*, 20(1), 55-64. <https://doi.org/10.5455/apd.22991>
- Hair, J. F., Anderson, R. E., Babin, B. J., & Black, W. C. (2010). *Multivariate data analysis: A global perspective* (Vol. 7). Prentice Hall.
- Hill, E. W. (2010). Discovering forgiveness through empathy: Implications for couple and family therapy. *Journal of Family Therapy*, 32, 169-185. <https://doi.org/10.1111/j.1467-6427.2010.00492.x>



- Hoffman, M. L. (2000). *Empathy and moral development: Implications for caring and justice*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511805851>
- Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Structural equation modelling: guidelines for determining model fit. *Electronic Journal of Business Research Methods*, 6(1), 53-60. <https://doi.org/10.21427/D7CF7R>
- Jolliffe, D., & Farrington, D. P. (2006). Development and validation of the basic empathy scale. *Journal of Adolescence*, 29, 589-611. <https://doi.org/10.1016/j.adolescence.2005.08.010>
- Kaya, A., & Siyez, D. M. (2010). Child and adolescent KA-SI empathic tendency scale: Development, validity and reliability study. *Education and Science*, 35(156), 110.
- Kaya, B. & Çolakoğlu, Ö. M. (2015). Adaptation of Emphaty Quotient (EQ) Scale. *Inonu University Journal of the Faculty of Education*, 16(1), 17-30. <https://doi.org/10.17679/inuefd.16127895>
- Kaya, Ö. S. (2018). An analysis of the problem solving skills in the romantic relations in terms of empathy and mental well being. *Journal of Higher Education and Science*, 8, 62-72. <https://doi.org/10.5961/jhes.2018.248>
- Kışlak, Ş. T., & Çabukça, F. (2002). The relationship among empathy, demographic variables and marital adjustment. *Journal of Social Policy Studies*, 5(5), 1-7.
- Kimmes, J. G., Edwards, A. B., Wetchler, J. L., & Bercik, J. (2014). Self and other ratings of dyadic empathy as predictors of relationship satisfaction. *The American Journal of Family Therapy*, 42(5), 426-437. <https://doi.org/10.1080/01926187.2014.925374>
- Kline, R. B. (2015). *Principles and practice of structural equation modeling*. Guilford publications
- Loinaz, I., Sánchez, L. M., & Vilella, A. (2021). Understanding empathy, self-esteem, and adult attachment in sexual offenders and partner-violent men. *Journal of Interpersonal Violence*, 36(5-6), 2050-2073. <https://doi.org/10.1177/0886260518759977>
- Long, E. C., Angera, J. J., Carter, S. J., Nakamoto, M., & Kalso, M. (1999). Understanding the one you love: A longitudinal assessment of an empathy training program for couples in romantic relationships. *Family Relations*, 48(3), 235-242. <https://doi.org/10.2307/585632>
- Martingano, A. J., & Konrath, S. (2022). How cognitive and emotional empathy relate to rational thinking: Empirical evidence and meta-analysis. *The Journal of Social Psychology*, 162(1), 143-160. <https://doi.org/10.1080/00224545.2021.1985415>
- Muro, L., Holliman, R., & Luquet, W. (2016). Imago relationship therapy and accurate empathy development. *Journal of Couple & Relationship Therapy*, 15(3), 232-246. <https://doi.org/10.1080/15332691.2015.1024373>
- Neumann, D. L., & Westbury, H. R. (2011). The psychophysiological measurement of empathy. In Danielle J. Scapaletti (Eds), *Psychology of Empathy* (pp. 119-142). Nova Publisher.
- Paulus, C. M., & Klopp, E. (2023). Development of the Jefferson scale of empathy for teachers (JSE-T) to measure empathy in educationally relevant situations. *European Journal of Educational Sciences*, (10)2, 169-187. <https://doi.org/10.19044/ejes.v10no2a169>
- Péloquin, K., & Lafontaine, M. F. (2010). Measuring empathy in couples: Validity and reliability of the interpersonal reactivity index for couples. *Journal of Personality Assessment*, 92(2), 146-157.
- Rosen, N. O., Mooney, K., & Muise, A. (2017). Dyadic empathy predicts sexual and relationship well-being in couples transitioning to parenthood. *Journal of Sex & Marital Therapy*, 43(6), 543-559.
- Riess, H., Kelley, J. M., Bailey, R. W., Dunn, E. J., & Phillips, M. (2012). Empathy training for resident physicians: A randomized controlled trial of a neuroscience-informed curriculum. *Journal of General Internal Medicine*, 27(10), 1280-1286. <https://doi.org/10.1007/s11606-012-2063-z>
- Riess, H. (2022). Empathy can be taught and learned with evidence-based education. *Emergency Medicine Journal*, 39(6), 418-419. <https://doi.org/10.1136/emered-2021-212078>



- Schmidt, C. D., & Gelbert N. C. (2017). Couples therapy and empathy: An evaluation of the impact of imago relationship therapy on partner empathy levels. *The Family Journal: Counseling and Therapy for Couples and Families* 25(1), 23-30. <https://doi.org/10.1177/106648071667862>
- Singer, T., 2009. Understanding Others: Brain Mechanisms of Theory of Mind and Empathy, in Paul W. Glimcher, Colin F. Camerer, Ernst Fehr, Russell A. Poldrack (Eds.) *Neuroeconomics: Decision Making and the Brain*. Academic Press, pp. 251-268.
- Smith, A. (2006). Cognitive empathy and emotional empathy in human behavior and evolution. *The Psychological Record*, 56(1), 3-21. <https://doi.org/10.1007/BF03395534>
- Spreng, R. N., McKinnon, M. C., Mar, R. A., & Levine, B. (2009). The Toronto empathy questionnaire: Scale development and initial validation of a factor-analytic solution to multiple empathy measures. *Journal of Personality Assessment*, 91(1), 62-71. <https://doi.org/10.1080/00223890802484381>
- Şahin, Y., & Şirin, A. (2021). Development and validation of the empathy scale in marriage for Turkish cultural context. *Spiritual Psychology and Counseling*, 6(2), 63-72. <https://doi.org/10.37898/spc.2021.6.2.136>
- Tabachnick, B. G., & Fidell, L. S. (2019). *Using Multivariate Statistics* (7th ed.). Pearson.
- Taşdemir, G., & Karaaslan, A. (1999). Assessment of the relationship between the empathic tendency and job satisfaction of nurses. *Journal of Ege University Faculty of Nursing*, 15(1), 1-12.
- Tavşancıl, E. (2014). *Tutumların ölçülmesi ve SPSS ile veri analizi [Measurement of attitudes and data analysis with SPSS]*. Nobel.
- Topçu, Ç., Baker, Ö. E., & Çapa-Aydın, Y. (2010). Turkish adaptation of basic empathy scale: Validity and reliability study. *Turkish Psychological Counseling and Guidance Journal*, 4(34), 174-180.
- Totan, T., Doğan, T. & Sapmaz, F. (2012). The Toronto empathy questionnaire: Evaluation of psychometric properties among Turkish university students. *Eurasian Journal of Educational Research*, 46, 179-198.
- Tutarel-Kışlak, Ş., & Göztepe, I. (2017) Emotion expression, empathy, depression and relationships between marital harmony. *Ankara University Journal of Social Sciences*, 3(2), 27-46. [https://doi.org/10.1501/sbeder\\_0000000044](https://doi.org/10.1501/sbeder_0000000044)
- Ulloa, E. C., Hammett, J. F., Meda, N. A., & Rubalcaba, S. J. (2017). Empathy and romantic relationship quality among cohabitating couples: An actor-partner interdependence model. *The Family Journal*, 25(3), 208-214. <https://doi.org/10.1177/1066480717710644>
- Yakın, İ. (2015). Evlilik öncesi psikolojik danışma[Pre-marital counselling]. In M. Kalkan & Z. Hamamcı (Eds.), *Evlilik öncesi psikolojik danışma [Pre-marital counselling]*. (pp. 385-410). Anı.
- Yaşlıoğlu, M. M. (2017). Factor analysis and validity in social sciences: application of exploratory and confirmatory factor analyses. *Istanbul University Journal of the School of Business*, 46, 74-85.
- Yıldırım, A. (2005). The relationship between people's empathic tendencies and divorce analysing the relationship. *Marmara University Atatürk Faculty of Education*, 22(1), 233- 242.
- Yılmaz, B. (2021). *Childhood invalidating environment, irrational beliefs, and empathy level as predictors of romantic relationship satisfaction* (Publication No. 701180) [Master's thesis, Marmara University]. Higher Education Council National Thesis Center.
- Yılmaz-Bingöl, T., & Uysal, R. (2015). The effect of empathy development program on empathy levels of second grade elementary school students. *Elementary Education Online*, 14(2), 430-437. <https://doi.org/10.17051/ieo.2015.90489>
- Yu, C. L., & Chou, T. L. (2018). A dual route model of empathy: A neurobiological prospective. *Frontiers in Psychology*, 9, 2212. <https://doi.org/10.3389/fpsyg.2018.02212>
- Yukay Yüksel, M., Okur, S., Akbulut, Z. & Kütük, H.(2020). Psychometric parameters of the Turkish version of the affective and cognitive measure of empathy (ACME). *International Journal on New Trends in Education and Their Implications*, 11(3), 1-15.
- Yurdabakan, İ., & Çüm, S. (2017). Scale development in behavioral sciences (based on exploratory factor analysis). *Turkish Journal of Family Medicine and Primary Care*, 11(2), 108-126. <https://doi.org/10.21763/tjfmpe.317880>

- Yüksel, A. (2004). Empathy training program in increasing the emphatic ability levels of primary school students. *Journal of Uludag University Faculty of Education*, XVII (2), 341-354.
- Zengin, H, Yalnızoğlu Çaka, S. & Çınar, N. (2018). Adaptation of the adolescent measure of empathy and sympathy (AMES) to Turkish: A validity and reliability study. *Anatolian Journal of Psychiatry*, 19(2), 184-191.
- Zhan, S., Shrestha, S., & Zhong, N. (2022). Romantic relationship satisfaction and phubbing: The role of loneliness and empathy. *Frontiers in Psychology*, 13, 967339. <https://doi.org/10.3389/fpsyg.2022.967339>
- Zhou, Y. (2023). How empathy influences aggressive behaviors in early childhood. *Journal of Education, Humanities and Social Sciences*, 10, 176-181. <https://doi.org/10.54097/ehss.v10i.6915>
- Zurek, P. P., & Scheithauer, H. (2017). Towards a more precise conceptualization of empathy: An integrative review of literature on definitions, associated functions, and developmental trajectories. *International Journal of Developmental Science*, 11(3-4), 57-68. <https://doi.org/10.3233/DEV-16224>