



Turkish Psychological Counseling and Guidance Association
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**TURKISH PSYCHOLOGICAL COUNSELING AND
GUIDANCE JOURNAL**
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Turkish Psychological Counseling and Guidance Journal



Turkish Psychological Counseling and Guidance Association
Central Office

ISSN: 1302-1370

TURKISH PSYCHOLOGICAL COUNSELING AND GUIDANCE JOURNAL

September - Vol: 13 / Issue: 70

TURKISH PSYCHOLOGICAL COUNSELING AND GUIDANCE JOURNAL
Official journal of Turkish Psychological Counseling and Guidance Association

ISSN: 1302-1370

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Publication Date : September 2023
Volume (Issue) : 13(70)

TURKISH PSYCHOLOGICAL COUNSELING AND GUIDANCE JOURNAL
Official journal of Turkish Psychological Counseling and Guidance Association

Indexes

Turkish Psychological Counseling and Guidance Journal is indexed by ULAKBIM, SCOPUS,
Turkish Psychiatry Index

Publication Type

Quarterly Published Academic Journal

Adressess

Saęlık Mah. Sleyman Sırrı Cad. Saęlık İř Hanı No: 21/18, ankaya/Ankara

Phone-Fax

+90 (312) 430 36 74

Print

Reprotek Dijital Baskı Merkezi ve Matbaacılık. Ziya Gkalp Caddesi No: 41 Kolej-ankaya,
Ankara/Trkiye

Phone

+90 (312) 309 08 20

Publication Date : September 2023

Volume (Issue) : 13(70)

TABLE OF CONTENT

Dyadic Assessment of Perceived Partner Forgiveness and Relationship Investment Model in Turkish Romantic Couples

Esra EKER DURMUŞ & Yaşar ÖZBAY

Page: 273-286

Turkish Validity and Reliability Study of Social Emotional Assets and Resilience Scale-Teacher Form (SEARS-T)

Senim ÇENBERCİ & Enver TUFAN

Page: 287-300

Development and Effectiveness of Psycho-Education Program Prevention of Sexual Abuse for Primary School Grade 3. And 4

Sedef ÜNSAL SEYDOOĞULLARI & Emine Gül KAPÇI

Page: 301-314

The mediating role of difficulties in emotion regulation in the relationship between childhood trauma and resilience among university students

Betül TANACIOĞLU AYDIN & Demet PEKŞEN SÜSLÜ

Page: 315-329

Post-Divorce Adjustment of Women: Effectiveness of A Psycho-Education Program Based on Cognitive Behavioral Theory

Nilüfer UYAR & İbrahim YILDIRIM

Page: 330-344

Turkish Adaptation of the Relationship Sabotage Scale: A Validity and Reliability Study

Rana TURAN & İbrahim YILDIRIM

Page: 345-359

Difficulties in Emotion Regulation and Communication Skills: The Mediating Role of Co-Rumination

Ashı BUGAY SÖKMEZ, Muhammet COŞKUN, Ayşe IRKÖRÜCÜ KÜÇÜK, & Raket DELEVİ

Page: 360-371

The Adaptation of the Regret Elements Scale to Turkish Culture

Yahya AKTU

Page: 372-388

Adaptation Problems at Regional Boarding Schools from the Perspective of the School Counselors

Canan ÇİTİL AKYOL & Mustafa KUTLU

Page: 389-407

The Psychometric Properties of the Adlerian Courage Scale in a Sample of Turkish Adolescents

Öykü ALTINTAŞ ATAY, Nazife ÜZBE ATALAY, & Figen ÇOK

Page: 408-418



Dyadic Assessment of Perceived Partner Forgiveness and Relationship Investment Model in Turkish Romantic Couples

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ARTICLE HISTORY

Received: 02.12.22

Accepted: 03.09.23

KEYWORDS

Forgiveness; Perceived
Forgiveness; Relationship
Investment; Relationship
Satisfaction; APIM.

ABSTRACT

The aim of this study is to investigate the relationship between perceived partner forgiveness and relationship investment variables [relationship satisfaction, quality of alternatives, investment size,] in dyadic context. The data were collected from 116 heterosexual romantic couples ($n = 232$) in the 18-30 age group having at least six months of romantic relationship. This study employed cross-sectional correlational study design. Actor-Partner Interdependence Model (APIM) was used to examine the predictive effect of independent variables of the couples on their dependent variables (actor) and their partners' dependent variables (partner). In this study, dependent variables are relationship satisfaction, quality of alternatives and investment size, independent variable is subjective partner forgiveness. Subjective Partner Forgiveness Scale, The Investment Model Scale were used for data collection. The results suggest that as the level of forgiveness experienced by men and women increase relationship satisfaction increases in the relations between relationship satisfaction and perceived partner forgiveness. Results of the quality of the options and perceived partner forgiveness indicate that the partners' assessment of the quality of alternative decrease as the perceived forgiveness level of both men and women increase. Results of relationship investment and perceived partner forgiveness indicate that the partners' assessment of relationship investment increases as perceived forgiveness in women and men increase. The results were discussed in the context of relevant literature.

Scientific interest in forgiveness studies is generally focused on the positive aspects of forgiveness that can be defined as an important virtue (Bono & McCullough, 2004; Seligman, 2002). In recent years, forgiveness studies have received attention and meta-analysis (Fehr et al., 2010; Riek & Mania, 2012) have been published on the topic of forgiveness and its positive effects. For example, empirical evidence suggests that people who can easily forgive have low hematocrit and white blood cells, one of the variables considered as a criterion of health (Seybold, et al., 2001), a lower tendency to anxiety and depression (Sheffield, 2003) and high levels of individual development, self-acceptance, positive relationships with others, and total psychological well-being (Şahin, 2013) and are highly aggregable and less neurotic than those who do not forgive (Ashton, et al., 1998).

Enright (1996) formulated forgiveness in three different dimensions: interpersonal forgiveness, perceived (subjective, feeling of being forgiven; these will be used interchangeably throughout the text) forgiveness, and self-forgiveness. We only studied the perceived forgiveness dimension in the context of this study because it can be considered that feeling forgiven by one's partner is an important issue that operates mutual processes to maintain romantic relationships.

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Self-forgiveness and interpersonal forgiveness were both extensively studied in the context of direct forgiveness (Enright, 1996). Forgiveness studies also have focused on two specific sub-dimensions: granting forgiveness and seeking forgiveness; While the perspective and feelings of transgressors have been given less attention in forgiveness studies (Asbhy, 2003; Aydın, 2017; Riek, 2010; Riek et al., 2014; Sandage et al., 2000;).

The understanding of transgressors' perspective in forgiveness process, primary activity should be seeking forgiveness (Ashby, 2003). Perceived forgiveness is regarded as the concept of subjective partner forgiveness. The conceptualization of this part of forgiveness is not sufficient to explain it. This concept is expressed in the literature with the terms "perceived partner forgiveness" and "subjective experience of forgiveness" (Friesen, et al., 2005; Pansera & La-Guardia, 2012). In general, different phases of seeking forgiveness are described in the literature as; "seeking forgiveness", "receiving forgiveness," "feeling forgiven" (Enright & Coyle, 1998; Exline & Baumeister, 2000;). All these dimensions are different in terms of assessing forgiveness from the perspective of transgressors. Seeking forgiveness is related to owning up to one's mistakes and wanting to fix the broken heart of the partner (Sandage et al., 2000). There are some variables found to be related to seeking forgiveness. For example, narcissism is negatively related to seeking forgiveness, on the other hand, feeling guilty is a facilitator to apologizing and seeking forgiveness (Sandage et al., 2000; McCullough & Oyen-Witvliet, 2002). After seeking forgiveness, transgressors take place in a passive role, receiving forgiveness. In this phase, people who got hurt can forgive or decide not to (Asbhy, 2003), so transgressors have to wait to be forgiven.

In the field of couple research, several studies report the positive effect of forgiveness in the quality of romantic adult relationships (Fenell, 1993; Haselton & Buss, 2000; Kachadourian et al., 2004; Karremans & Van Lange, 2004; McCullough, et al., 1998; McCullough, et al., 1998). Maintaining a relationship is particularly difficult after being hurt in close relationships such as romantic ones. Many previous studies investigate factors that affect relationship stability, such as social interest, relational self-esteem, and spirituality (Akarsu-Uslu, 2018), childhood traumas (Mamati, 2018), attachment styles (Büyüksahin & Hovardaoğlu, 2007; Uzun, 2017), early maladaptive schemas (Şahin, 2015), forgiveness (Tangney, et al., 2015), and empathy (Cramer, 2003). In these studies, factors affecting the relationship stability are also affected by the personal and positive characteristics that both partners share in the relationship.

Forgiveness is seen as an important means of self-protection that helps to eliminate the hurt caused by the other person, to get rid of the damaging situations that occur and to maintain the relationship (Fincham, 2000). Also, after hurtful events, forgiveness is task for partners in all long-term romantic partnerships (Waldron & Kelly, 2005)

Many factors affect the behaviors of individuals in maintaining romantic relationships. The investment model is one of the most important models explaining the relationship maintenance and termination of relations in a healthy way (Rusbult, 1980, 1983). This model examines relationship stability over three basic dimensions related to the continuation processes of relationships. First one these variables is relationship satisfaction which expresses an individual's overall satisfaction with his or her partner, is an important variable for relationship continuity. Relationship satisfaction can be defined as a concept that allows individuals to define their relationships as near ideal and to express their satisfaction with their relationships (Le & Agnew, 2003). Second variable is quality of alternatives. When people do not find sufficient satisfaction in their relationships and their relationship commitment wanes, they tend to turn to alternative relationship options. The quality of the most attractive relationship compared to the existing relationship can, on average, be accepted as a criterion for determining the quality of individuals' options (Rusbult, 1983). Third variable is investment size which are divided into two as internal and external resources, are considered as powerful motivational tools for maintaining the relationship (Rusbult et al., 1998).

Sub-dimensions of this model are closely related to forgiveness. For example, the studies investigating the relationship between relationship satisfaction and forgiveness determined that forgiveness is an indicator of relationship satisfaction (McCullough et al., 1998; Rusbult et al., 2011) and tendency to forgive a partner is a factor that increases relationship satisfaction (Kachadourian et al., 2004).

Another factor related to forgiveness in the investment model is investment size. The size of the investment can be explained as the amount of resources that an individual will lose if he / she terminates the relationship (Rusbult, 1980). Partners invest in each other in the hope of a lasting future by spending time and effort in the relationship and sharing (Rusbult et al., 1998). It is revealed that romantic relationships are thought to be important emotional source, so individuals are more willing to forgive their partners by thinking about their relationship investments (McCullough et al., 1998), and want to protect the relationship especially if it is high quality relationship, and therefore they have a high tendency to ignore the mistakes of their partners (Rusbult et al., 1991; McCullough et al., 1998).

The last factor relating to forgiveness is the quality of alternatives. The quality of alternatives also considered as the earning value that individuals receive from their partners in their current relationships, is an important variable that affects the motivation of individuals to continue their current relationships and refuse the other options (Le & Agnew, 2003). People who see their partner as more favorable than others, show more positive attitudes towards them, and regard the other options as less valuable (Rusbult, 1980). Partner cognitions are also important for maintaining a relationship (Davis & Gold, 2011). People with high level of commitment to their dating partners do not have the tendency of being with someone else. Additionally, individuals who are satisfied with their current romantic relationship do not need other relationships, and their tendency to choose other options is low (Johnson & Rusbult, 1989). These partners also idealize each other or derogate other possible alternatives to avoid the fear of abandonment (Ogolsky et al., 2017).

Studies show that forgiveness promotes closeness (Bono, et al., 2008) and effective communication (Fincham & Beach, 2002) in romantic relationships. Also, forgiveness facilitates reconciliation between partners (McCullough et al., 1997). While there are initial findings investigating the relationship between forgiveness and investment model (Tsang et al., 2006; Wieselquist, 2009) however, forgiveness studies that using dyadic data are quite few (e.g., Chung, et al., 2009; Knobloch & Theisis, 2010; Stoeber, 2012). In intimate relationships, it is important to examine how change in one partner depends on the characteristics of the other partner. These changes can be related to cultural differences (Kadiangandu et al., 2007). It has been noted that there are cultural differences in forgiveness. Bonding to partners in romantic relationships and underlying mechanisms in forgiveness are affected by some variables that are related to cultural outcomes. Findings about cross-cultural forgiveness studies in romantic relationships indicated that individuals who have high level of positive romantic relationship factors (closeness, satisfaction etc.) have high tendency to forgive their partners (Karremans et al, 2011) regardless of cultural context. However, some of study conducted in different cultural contexts concluded that participants in individualistic cultures (e.g., in USA) focused on more personal reasons to forgive others, participants in collectivistic cultures (e.g., in Japan) focused on more social norms than personal reasons (Terzino et al., 2010). Turkish culture has both individualistic and collectivistic elements and studies show that Turkey cannot be placed on one side of these dimensions. (e.g., Uleman et al., 2000; Uskul, et al., 2004). So, forgiveness in romantic relationships in Turkish young adults cannot be studied under one side of individualistic-collectivistic context because of ambiguous cultural status of Turkey.

In the context of relationship maintenance and relationship satisfaction, some studies investigated the actor-partner effects (Stoeber, 2012; Papp, et al., 2012) For example, the results of a study investigating relationship satisfaction and long-term commitment showed that dyadic perfectionism in romantic relationships cause pressure on partners and affects the perception of the quality of the relationship (Stoeber, 2012). Another study investigating the usage of Facebook and relationship satisfaction in dyadic contexts showed that disagreements about the relationship status on Facebook was associated with lower level of relationship satisfaction on females, rather than males (Papp et al., 2012).

The investigation of romantic relationships in dyadic context is very crucial to understand mutual effects on relationships. Relational factors are generally investigated on personal or individual bases, and this creates a weakness to fully understand relationship dynamics from dyadic or couple perspective. This study goes beyond the previous research about seeking forgiveness in romantic relationships and plans to investigate the relationship between relational investment and perceived partner forgiveness in dyadic context, aiming to elicit actor and partner effects in the romantic relationship. Promoting positive behaviors such as being forgiven by

the partner is critical to the stability of the relationship. At this point, it is thought that investigating perceived forgiveness will help the problems of couples who have difficulty in forgiving their partner and reflecting that in the relationship.

In this study, a dyadic approach was adopted and the Actor-Partner Interdependence Model (APIM, Kenny, et al., 2006) was used. This model makes it possible to examine the effect of the independent variables of couples on their dependent variables (actor effect) and the effect of the dependent variable of partners (partner effect) as well (Aydoğan & Özbay, 2018; Karaköse et al., 2023). Generally, partner effects are typically smaller than actor effects (Karaköse, et al., 2023) In our study, we expect for the actor effects, previous studies (Guerrero & Bachman, 2010; Kachadourian et al., 2004) results on a positive relationship between relationship investment model and interpersonal forgiveness show similar results. Particularly, we expect that relationship satisfaction and forgiveness both women and men are significantly related. We do not expect any gender differences in satisfaction and forgiveness relations. However, previous studies suggests that in heterosexual romantic relationships, investment size of women is higher than their partners generally. So, we expect that in investment size and forgiveness relationship, there has a significant positive relation only for women on both actor and partner effects. We also expect that perceived forgiveness and quality of alternatives are negatively associated with for both men and women based on previously mixed findings (Guerrero & Bachman, 2010; Rusbult, 1983; Rusbult et al., 1994). Based on discussions above, general hypotheses of this study were that;

H1: subjective partner forgiveness of men and women is positively significantly related to relationship satisfaction of both men and women.

H2: subjective partner forgiveness is negatively significantly related both men and women's assessments of the quality of alternatives.

H3: subjective partner forgiveness of men and women is positively significantly related to investment size of both men and women.

Method

Participants

In this study, a purposeful sampling method was used. Inclusion criteria for the study were both partners being in the 18-30 age range, unmarried couples, both partners being willing to participate, being in a committed heterosexual relationship, and having a relationship for at least six months (Table 1). The sample of this study consists of 116 heterosexual romantic couples (116 women, 116 men, $N = 232$ participants) from Turkey who provided complete data. It was constituted criterion sampling method and reached 436 Turkish young people (266 females, 170 males) however, 178 of them did not meet the dyad criteria because their partners did not complete the study, 26 of them were outliers and they were excluded from the data set. Finally, 116 dyads (116 females, $M_{age} = 22.67$, $SD = 2.58$; 116 males, $M_{age} = 23.63$, $SD = 2.77$) constituted data set and all studying at different universities in Turkey. No payment was made to the participants. Kenny and Ledermann (2010) recommended at least between 80 and 100 couples to estimate APIM we followed this sample size recommendation. We also set a limit for sample age because having a romantic relationship is an important place for emerging adulthood (18-29 age) (Arnett, 2000).

The ages of the participants ranged between 18-30 ($M = 23.15$, $SD = 2.90$). Educational level of the participants was 1 with primary (0.4%), 1 with secondary (0.4%), 10 with high school (4.3%), 186 with undergraduate (80.1%), and 34 with graduate degree (14.1%). The mean duration of the romantic relationship of the participants was 34.30 ($SD = 2.38$) months and the duration of the romantic relationship varied between 6 and 122 months.

In terms of past relationships, 38 (32.8%) of the female participants stated that they had a single romantic relationship and 78 (67.2%) had more than one romantic relationship while 28 of the male participants (24.1%) had a single romantic relationship and 88 (75.9%) had more than one romantic relationship. According to the participants' living together with their partners, 10 romantic couples (8.6%) live in the same house, 65 couples (56%) live in the same city but in different houses, 40 couples (34.5%) live in different cities.

Three instruments, one of them being personal information form created by the researcher, the other two instruments are The Investment Model Scale (Turkish version) and Subjective Partner Forgiveness Scale.

Data Collection Tool

Demographic Form. The personal information form includes demographic variables such as age, sex, educational attainment, socioeconomic level, relationship duration.

The Investment Model Scale. This scale was initially developed by Rusbult, Martz and Agnew (1998), and adapted to Turkish form (Büyükşahin et al., 2005). It has been used to measure the commitment level (e.g., *I want our relationship to last a very long time.*), satisfaction level (e.g., *(Our relationship is satisfying to me)*), quality of alternatives, (e.g., *Other than the person I'm with, there are very attractive to me*) and investment size (e.g., *I have invested so much in our relationship that I would have lost a lot if it ended*) in dating and married couples. The scale consists of 37 items and four subscales, namely, relationship satisfaction (10 items), quality of alternatives (10 items), investment size (10 items) and commitment level (7 items). The first five items of the relationship satisfaction, quality of alternatives, investment size subscales were of the four-point likert type (1 = *completely false*, 4 = *fully correct*), the rest were of the nine-point likert type (1 = *completely false*, 9 = *fully correct*). Commitment subscale were of the nine-point Likert type (1 = *completely false*, 9 = *fully correct*). Cronbach's alpha coefficient in this study was .87, .87, .86 and .82 respectively, relationship satisfaction, quality of alternatives, investment size and commitment level.

The Subjective Partner Forgiveness Scale. The scale was developed by Gülgün and Özbay (2019) and aims to measure the feeling of being forgiven or perceived forgiveness by partner. The scale was developed to determine the status of feeling forgiven by of dating, engaged and married couples, aged 18 and over. The scale is a single factor consisting of 28 items. Each item (e.g., *"My partner treats me more understanding over time in the face of negative situations we experience"*) is rated on a 5-point scale (1=*strongly disagree* to 5=*strongly agree*). Higher scores on this scale represent that they are forgiven by their partner. The Cronbach's alpha coefficient calculated for is .94 in this study. In the analysis for the criterion validity of the scale, the correlation with the relationship satisfaction sub-dimension of relationship investment model scale was found to be $r = .68$ ($p < .001$).

Procedure

Firstly, ethical permission was obtained (2018/50). Participants were recruited through various ways, such as social media posts, university e-mails, personal and professional contacts. The couples were asked to use the same nicknames with their partners.

Actor-Partner Independence Model (APIM). One method frequently used in studies in recent years to explain the dynamics of family and couple relationships is the actor-partner interdependence model. In this study, the Actor-Partner Interdependence Model (APIM, Kenny, et al., 2006) was used to examine the relationships between dependent and independent variables.

Looking at studies in the field of close relationships in general, we find that processes involving interpersonal relationships, such as commitment and conflict, are traditionally assessed independently of their partners. However, according to the nature of these relationships, individuals should be treated jointly with their partners (Kenny, et al., 2006). The use of the APIM model in research on close relationships contributes to the explanation of the personal characteristics of the partners and the effects of the relationship-related characteristics on them, as well as the effects of the partners on each other.

Data Analysis

For the data screening purposes, single and multidimensional extreme values were examined, standard z-scores were calculated, and it was found that 13 dyads were outside the range of -3, +3, these couples were excluded from the data set. No data was extracted from the data set since no participant produced a value less than .001, according to the Mahalabonis distance (Penny, 1996). Analyzes were performed on the remaining 116 ($n = 232$) couple dyads. Then, missing value analysis was performed, and no missing value was found in the data set.

In the normal distribution analysis, it was observed that the commitment subscale was not normally distributed for both male and female participants, they are positively skewed and aren't appropriate for APIM. Logarithmic transformation, square root transformation and inverse transformation (Büyüköztürk, 2010) were

performed to ensure the normal distribution of the data, but it was observed that the data related to the sub-dimension of the commitment did not show a normal distribution. Therefore, the analyzes of the sub-dimension of the commitment were excluded from the subsequent analyzes since the normal distribution could not be achieved. Data were analyzed with the Statistical Package for Social Science for Windows, version 21. Firstly, descriptive statistics were performed and then, Spearman’s correlation analysis (Spearman’s rho) was used to present variables.

Findings and Interpretation

Preliminary Analyses

Descriptive statistics and intercorrelations between the study variables are shown in Table 1. Also, measurement invariance was determined in this study. Subjective partner forgiveness scores of men and women are relatively high (Table 1). Average of the quality of alternatives subscale points scored below the scale’s mid-point. They get high scores in terms of investment size. Also, unpaired t-tests showed that satisfaction level [(t (684) = 2.04, $p < .01$)] and investment size scores [(t (428) = -3.16, $p < .01$)] of males were significantly higher than females. There was no significant gender difference in subjective partner forgiveness and the quality of alternatives. When the correlations between the variables were analyzed, satisfaction level of each partner had a significant positive correlation with other variables in the study. On the other hand, the quality of alternatives of each partner had a significant negative correlation with their own subjective partner forgiveness as well as the partner’s subjective partner forgiveness. Additionally, significant positive correlations were found between man's and woman’s subjective partner forgiveness and ($r = .40, p < .01$), woman’s investment and woman’s relationship satisfaction ($r = .19, p < .05$) and man’s relationship satisfaction and woman’s subjective partner forgiveness ($r = .26, p < .01$) man’s quality of alternatives and man’s relationship satisfaction ($r = .29, p < .01$) woman’s relationship satisfaction and woman’s subjective partner forgiveness ($r = .32, p < .01$) (Table 1).

Table 1. Correlations Between Relationship Satisfaction, Relationship Investment, Quality of Alternatives and Subjective Partner Forgiveness and Mean and Standard Deviations

	1	2	3	4	5	6	7	8	Mean	Sd
1. W_SPF	1.00								86.26	7.92
2. W_RS	.32**	1.00							59.04	5.89
3. W_QA	-.21**	-.27**	1.00						25.31	9.57
4. W_RI	.12	.19*	-.29**	1.00					45.68	11.39
5. M_SPF	.40**	.30**	-.08	.11	1.00				84.13	10.25
6. M_RS	.26**	.50**	-.07	.25**	-.42**	1.00			60.43	4.42
7. M_QA	-.30**	.30**	.41**	-.19*	.29**	-.07	1.00		23.58	10.43
8. M_RI	.19*	-.21*	-.20*	.35**	.30**	.06	.45**	1.00	50.20	10.13

Since the analysis was conducted primarily on gender; the sub-dimensions of the relationship stability (satisfaction level, quality of alternatives, investment size) and subjective partner forgiveness were tested using Confirmatory Factor Analysis (CFA) to determine whether the same structure was maintained for men and women. Then, the measurement invariance was tested for male and female participants on all variables.

Table 2. Measurement Invariance for The Investment Model Scale and Subjective Forgiveness Scale

Steps	Investment Model Scale			Subjective Forgiveness Scale		
	χ^2 / df	RMSEA	CFI	χ^2 / df	RMSEA	CFI
Formal invariance	1.79	.08	.90	2.12	.09	.92
Metric invariance	1.82	.08	.89	2.07	.09	.92
Measurement inv.	1.84	.08	.89	2.07	.09	.92
Strict invariance	1.87	.08	.88	2.09	.09	.91

Note: Measurement inv.: Measurement invariance

It was tested whether the fit indices of the investment model and subjective partner forgiveness given above are invariant for male and female participants. Since actor-partner model was tested in this study, only the formal invariance has been examined in terms of measurement invariance. In other words, examining whether

the items of the scale were collected under the same factor was thought to be sufficient. Also, metric and scalar invariance were examined, and they are ensured in these two scales according to the CFI values changes (seen that less than .001). Multi-group CFA was performed to test the formal invariance. Providing formal invariance indicates that the male and female participants use the same conceptual points of view to respond to the scale items. According to confirmatory factor analysis results, for the subscales of satisfaction level, investment size and the quality of alternatives included in the analysis for the male and female participants, the structure maintained in the adaptation study. Also, one-dimensional factor structure obtained during the developmental stage of subjective partner forgiveness preserved as a result of exploratory factor analysis.

APIM Results

The fit indices obtained for the models in the hypotheses were examined. Fit indices (RMSEA = .06, NFI = .96, AGFI = .94) obtained in the model for the relationship between the first model of satisfaction level and subjective partner forgiveness show that the model is quite good (Baumgartner & Homburg, 1996; Çokluk, et. al., 2012; Schermelleh-Engel & Moosbrugger, 2003). All fit indices were found to be significant (RMSEA=.06; NFI=.96; AGFI= .94).

The first hypothesis of the study to explain the relationship between subjective partner forgiveness and satisfaction level indicates that both the actor and partner effects are significant. Women's subjective partner forgiveness positively predicts their own relationship satisfaction ($\beta = .14, p < .05$) and likewise, men's subjective partner forgiveness positively predicts their own relationship satisfaction ($\beta = .23, p < .05$). In other words, both the male and female subjective partner forgiveness has actor effect on their own relationship satisfaction.

The partner effects show that the subjective partner forgiveness of both women ($\beta = .19, p < .05$) and men ($\beta = .20, p < .05$) predict the satisfaction of their partners. In other words, feeling forgiven by a partner increases their relationship satisfaction. When the effect size values of the model were examined, the effect size of the female relationship satisfaction was found to be .08 and the male relationship satisfaction was .13. These values indicate small and medium effect sizes (Cohen, 1988).

When the fit indices (GFI = .97, AGFI = .86, CFI = .90) obtained in the second model for the relationship between the quality of alternatives and subjective partner forgiveness are examined, correlation indices show that the model is quite good (Baumgartner & Homburg, 1996, Schermelleh-Engel & Moosbrugger, 2003).

The second hypothesis of the study to explain subjective partner forgiveness is negatively significantly related both men and women's assessments of the quality of alternatives.

The relationship between subjective partner forgiveness and quality of alternatives indicates that only partner effects are significant. The subjective partner forgiveness of women ($\beta = -.12, p < .05$) and men subjective partner forgiveness ($\beta = -.16, p < .05$) have a negative impact on the quality of alternatives of their partners. In other words, both the male and female subjective partner forgiveness has partner effect on evaluation of alternatives. However, no significant actor effect was found. There was not a significant relationship between the feeling of forgiveness of women and men and their own evaluation of alternatives. When the effect size values of the model were examined, the effect size of the female quality of alternatives was found to be .03 and the male quality of alternatives was .04. These values suggest small effect size (Cohen, 1988).

In the last model, the fit indices for the relationship between subjective partner forgiveness and investment size (RMSEA = .00, GFI = .99, AGFI = .98) show that the model is quite good (Baumgartner & Homburg, 1996, Schermelleh-Engel & Moosbrugger, 2003). The third hypothesis of the study to explain subjective partner forgiveness of women has a positive relation to their own relationship investment but not related to partner's investment size. The relationship between subjective partner forgiveness and investment size indicates that only partner effects are significant. The subjective partner forgiveness of both women ($\beta = .13, p < .05$) and men ($\beta = .15, p < .05$) subjective partner forgiveness has an effect on their partner's investment size. However, no significant actor effect was found. There was no relationship between the feeling of forgiveness of women and men and their investment size. When the effect size values of the model were examined, the

effect size of the female investment size variable was found to be .03 and the effect size of the male investment size variable was found to be .02. These values show small effect sizes (Cohen, 1988).

Discussion

The aim of this study is to examine the relationship between perceived partner forgiveness, relationship satisfaction, quality of alternatives, and relationship investment variables in a dyadic context. The results supported first hypothesis that one's own subjective partner forgiveness associated with their own relationship satisfaction and also partner's relationship satisfaction. This finding is consistent with reports from other studies examining the tendency of forgiveness and the satisfaction received from relationships (Friesen, et al., 2004; Reis, et al., 2004).

Braithwaite et al., (2011) concluded that the tendency to forgive partner is related to relationship satisfaction because forgiveness is related not only lower-level negative responses but also increased motivation to relationship. Relationship satisfaction is also related to replacing negative emotions with the positive one. High relationship satisfaction is found to be related to feeling guilty after harmful behavior (Riek, 2010). In a study examining the relationship between accusatory behavior and forgiveness towards the partner, when both partners were asked about their citations about the same negative situation, couples who had high satisfaction with their relationship stated that their negative attributions were low towards their partners (Friesen, et al., 2005). In other words, partner's relational factors such as relationship satisfaction, investment size or quality of alternatives rather than their own relational factors exerted more influence on their perception of forgiveness.

The results also partially supported second hypothesis that one's own subjective partner forgiveness negatively associated with their own assessments of the quality of alternatives and also partner's assessments of the quality of alternatives. In this model, only partner effects are significant. When the individual evaluates his/her current relationship as more attractive and have more relational gain than the alternative relationship options, the tendency towards relational options decreases (Rusbult, 1980). The average relationship satisfaction and relationship investment scores of women and men in this study can be considered as two other important variables that explain individuals not seeking a relationship and wanting to maintain their relationships. The research indicated that relationship satisfaction is an indicator of evaluation about quality of alternatives. When couples are satisfied with their relationships, they negatively consider alternative relationships (Johnson & Rusbult, 1989), and if they are not satisfied with their relationships, the existence of deception increases (Treas & Giesen, 2000).

The results partially supported of third hypothesis that subjective partner forgiveness of men and women is positively significantly related to investment size of both men and women. The other "partner effect" contributing the subjective experience of forgiveness is investment size. When people invest in their romantic relationships, it affects their partner's subjective experience of forgiveness. A number of studies have also found a connection between investments and forgiveness in romantic couples (McCullough, et al., 1998...). It is stated that investments in romantic relationships are perceived as a psychological power and increase the tendency to continue the relationship. Individuals can also develop a defense mechanism for the mistakes of their partners mistakes to protect their satisfaction. Also, individuals tend to forgive more in their relationships that they perceive as high quality and satisfaction (Rusbult et al., 1991).

In accordance with the nature of the relational investment, especially in the relationships with a high relationship quality, the investment made by both parties show that the partners get mutual satisfaction. Individuals tend to behave in favor of their partners in a relationship they want to maintain (McCullough et al., 1998). In the current study, the increase in relationship investment towards their partners are highly related to the positive attitudes of partners, such as the feeling of forgiveness.

The existence of trust as a relational power is another concept that can explain the relationship between investment and feeling forgiven. There are studies explaining that the feeling of trust mediates between the investment and seeking forgiveness (Gordon et al., 2009; Wieselquist, 2009) In current study, there was a significant effect between the feeling forgiven and the relationship investment. In other words, the increase of confidence in the partners who feel that they are forgiven will be positively reflected in their relationship. As long as they trust their partners, people continue to invest in their relationships.

Looking at the reasons of individuals who turn to alternative relationships, it is seen that men and women offer different reasons. In the current study, the fact that the average point of satisfaction was high and individuals who had a romantic relationship unlike the marriage relationship can be considered as factors explaining the decrease in the orientation towards the options. In particular, it is stated that an individual who is satisfied with the relationship uses different cognitive manipulation methods such as underestimating the features of alternative relationship options. Individuals who are satisfied with their relationships use these cognitive mechanisms to avoid anxiety that may arise from questioning their relationships and turning to alternatives in order to preserve their existing relationships (Rusbult et al., 2001).

There was only one 'actor' effect in our study that affects subjective partner forgiveness. In the model, when partners' own relationship satisfaction increases, their subjective experience of forgiveness also increases. The relationship satisfaction model is the only model that have both significant actor and partner effects. In romantic couples, it is important to feel that it is understood by the partner in having high satisfaction relationships and their expectations are also high (Pansela & La Guardia, 2012). In this study, relationship satisfaction scores were above average for both women and men. It is possible that the couples participating in the study have high expectations for understanding and forgiveness by their partners, depending on their high satisfaction with the relationship. This situation can be interpreted as a situation explaining that the actor and partner effects are meaningful in the relationship between the feeling of being forgiven and relationship satisfaction.

Limitations and Future Suggestions

The present study has several strengths, including the collection dyadic data from heterosexual romantic couples, the testing of actor and partner effects, studying the concept of feeling of being forgiven that studied little in forgiveness literature. There are also some limitations. One is the focus on heterosexual romantic couples which may limit the generalizability of the findings to married couples. Therefore, future research may focus on married couples' relationship stability and feeling of forgiven. Also, few of sample is consisted of cohabitated people and this creates some marital outcomes, and it can cause some limitations about romantic relationship qualities and its generalizability.

In current study, correlations are generally weak. This can be caused by the characteristics of the sample such as duration of relationship, cohabitation etc. Mean length of relationship of sample was almost three years (34 months), but nearly half of couples (44.82%) has a relationship period less than two years. Previous studies suggest that relationship length is important for romantic couples in terms of some relational factors affects relationship satisfaction, investments. In long term relationships, individuals invest more their relationships than short ones (Stoeber, 2012). In future studies, it may be useful to work with a study group that has a longer relationship period so that the results of the investment model can be more apparent. This study does not generate a causation as the research design and the data collected in this research are cross-sectional and non-experimental. For instance, that high level relationship satisfaction precedes or even results in subjective partner forgiveness or not that subjective partner forgiveness is the reason of relationship satisfaction. To identify the reasons of forgiveness, at least quasi-experimental design and longitudinal design can use to determine patterns in intimate relationship.

Also, this study group consisted of romantic couples from Turkey, which is a collectivistic society. Although the current findings can be generalized to other cultures like Turkish culture in relational context, still more studies outside of western countries are needed to generalizability of research findings. The current study used data of 116 couples (or 232 individuals), for dyadic data analysis. Although the number of dyads is found to be decent for dyadic data analysis (Kenny & Ledermann, 2010), it is seen that it may be beneficial to work with a larger sample when effect sizes are examined.

It is important to consider these relational systems together with the concept of forgiveness. From the perspective of forgiveness from a broader perspective, the fact that individuals experience events that require forgiveness is a factor that can improve their relational resilience in the relational process. The phenomenon of forgiveness, which can be interpreted as the positive support of the partner, can be addressed with different

variables in the context of relational resilience. In this study, we can find evidence that feeling of forgiveness is associated with the relationship investment model variables. In future research, forgiveness related issues can be extended. In dyadic studies, some important relationships such as parent-child, sibling relationships, friendship, and friendship relations can be studied under the forgiveness studies.

Subjective partner forgiveness is not a commonly studied concept in the context of studies related to forgiveness in Turkey. In this regard, it would be useful for family and couple counselors and researchers to examine different variables related to the concept of subjective partner forgiveness apart from the general concept of forgiveness.

It is important to study dyadic relationships between forgiveness and feeling forgiven so that these research results can be better tested and forgiving cycle based on forgiveness can be explained under a conceptual framework. Additionally, studies can be conducted in this field by looking into the effect of forgiveness-oriented psycho-education activities on forgiveness and the relationship satisfaction of individuals.

The sample consisted of romantic couples, considering the importance of pre-marital counseling in terms of establishing a healthy family, it is important to increase the number of pre-marital psycho-education studies. Psycho-education programs can be organized to increase forgiveness and focus on relationship maintenance skills. These programs can be applied in the pre-marriage period.

Conclusion

Overall, the results of this study indicate that subjective experience of forgiveness is related to the relationship maintenance factors (relationship satisfaction, relationship investment and quality of alternatives). The hypotheses within this study were confirmed especially in the context of partner effects. Both actor and partner effects were found to be significant only in the relationship satisfaction variable. Subjective partner forgiveness had a predictive effect on the satisfaction of both men and women in terms of actor effect. Among partner effects, in the dimension of evaluating the quality of options, the feeling of being forgiven was found to be related to the negative view of the relationship options. In other words, women feeling forgiven by their partners was found to be related to men not turning to alternative relationship options and vice versa.

Finally, when looking at the relationship between investment size and subjective partner forgiveness, a significant relationship was found between the feeling of being forgiven and the relationship investments partners. In other words, the feeling of forgiveness is highly related to their partners' investments in the relationship.

Author Contributions: This study was produced from the dissertation prepared by first author under the supervision of second author. All authors contributed to the conception and design of the study. All authors read and approved the final manuscript.

Funding Disclosure: No funding was provided for this study.

Conflicts of Interest: The authors declare that they have no conflict of interest.

Data Availability: Data is available upon request from the corresponding author.

Ethics Approval and Consent to Participate: Authors declared that study carried out within ethical scope. Participants were given informed consent form and were volunteer to participate to study. Ethic committee approval was obtained from Hasan Kalyoncu University Social and Human Sciences Ethics Committee (2018/50).

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Turkish Validity and Reliability Study of Social Emotional Assets and Resilience Scale-Teacher Form (SEARS-T)

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ARTICLE HISTORY

Received: 28.02.23

Accepted: 11.06.23

KEYWORDS

Social and Emotional Learning; SEARS; Validity; Reliability.

ABSTRACT

This paper aims to adapt the Social Emotional Assets and Resilience Scale-Teacher Form (SEARS-T) into Turkish and to determine its validity and reliability. The sample of the study consisted of 430 students attending kindergarten and primary school grades 1-4. The standardized values, obtained as a result of the first-order confirmatory factor analysis ($X^2= 3.860.88$ $sd=773$; $RMSEA=.10$; $SRMR=.063$; $CFI=.98$; $NNFI=.97$) and obtained as a result of the second-order confirmatory factor analysis ($X^2=3.895.94$ $sd=775$; $RMSEA=.10$; $SRMR=.063$; $CFI=.98$; $NNFI=.97$), confirmed that the scale showed a four-factor structure in Turkish culture similar to its original structure. In order to provide evidence for the reliability of the scale, both Cronbach alpha values and item-test correlations were examined for the sub-dimensions and the total of the scale. According to the item test correlation, it was determined that the scale items served the purpose of measuring the feature to be measured. While Cronbach's alpha value was obtained as .982 for the whole scale, it was obtained as .950 for the responsibility sub-dimension, .953 for the social competence sub-dimension, .957 for the self-regulation sub-dimension, and .921 for the empathy sub-dimension. According to the Pearson Product Moments Correlation coefficient, the correlation coefficients between the sub-dimensions of the scale ranged from .70 to .85, and the sub-dimensions of the scale were found to have high and significant relationships with each other. In light of these findings, it has been revealed that SEARS-T-Turkish is a valid and reliable measurement tool for measuring the social and emotional skills of kindergarten and primary school children.

The concept of social and emotional learning, which is an integral part of education and human development, with its current and broad definition, is the process of acquiring the knowledge, skills, and behaviours necessary for all individuals to develop healthy identities, manage their emotions, achieve personal and collective goals, empathize, establish and maintain supportive relationships, and make responsible and caring decisions (Casel, 2020). The foundation of social and emotional learning is based on the concept of "emotional intelligence", which was first proposed in an article published by psychologists John Mayer and Peter Salovey in 1990. This concept was reformulated by Daniel Goleman in 1995 and published in the book titled "Emotional Intelligence". With this study, Goleman put forward the first evidence of social and emotional learning, which is a very important component of education. The concept of emotional intelligence was adopted by educators in a short time and started to be reflected in educational practices under the name of "social and emotional learning" (Goleman, 2005, p. 6-8).

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In 1994, the concept of social and emotional learning entered the literature with the establishment of Collaborative for Academic, Social, and Emotional Learning (CASEL), in which 16 academicians, including Goleman, combined their work. With CASEL, this concept has started to become widespread and academic studies have gained momentum (Göl- Güven, 2021, p. 30). CASEL has included the word “learning” in this term to reflect the learning process of social and emotional skills and to emphasize that schools are the primary place where this learning takes place. The institution has divided this concept into five basic skills based on personal, interpersonal, and cognitive skills. These are self-awareness, social-awareness, self-management, responsible decision-making, and relationship skills (Weissberg et al., 2015, p. 6-7). The skills can be briefly defined as follows:

- Self-awareness: An individual's ability to identify his own feelings and thoughts and their effects on their behaviours.
- Self-management: An individual's ability to effectively regulate their emotions, thoughts and behaviours in different situations.
- Social-awareness: Being able to understand and empathize with the perspectives of people from different cultures and values; the ability to behave in accordance with social and ethical norms.
- Relationship skills: The ability to establish and maintain healthy relationships with different people or groups.
- Responsible decision-making skills: The ability to make constructive and respectful choices on individual behaviours and social interactions (Casel, 2013).

The concept of social and emotional learning, which was born in America, was adopted in schools in various parts of the world such as the Far East, Europe, Australia, Latin America, and Africa. In 2002, UNESCO made an initiative to promote social and emotional learning and sent a report to the education ministries of 140 countries containing 10 basic principles for the inclusion of social emotional learning in education programs (Goleman, 2005, p. 7-8). Thus, the concept has begun gain an important place in educational practices around the world.

Among the general objectives of Turkish National Education included in the Basic Law of National Education is the article "Raising constructive, creative and productive people who have a well-developed personality and character in a balanced and healthy way in terms of body, mind, morality, spirit and emotion, have an independent and scientific thinking ability, have a wide world view, who are respected to human rights, value personality and enterprise, feel responsibility towards society (Milli Eğitim Temel Kanunu, 1973)". Accordingly, it can be said that the Turkish National Education system embraces as a principle not only the academic development of the individual but also the development of the individual as a whole with its social, emotional and physical aspects; however, it is seen that social and emotional learning skills are not yet directly included in education programs (Göl- Güven, 2021, p. 35). It is thought that the direct as well as implicit inclusion of these skills in the curriculum will serve the general purposes of National Education.

Although social and emotional learning is not yet directly included in education programs in Turkey, the projects initiated by the Ministry of National Education show that this concept increases its importance in the Turkish education system. In 2022, the Social Emotional Skills Project (SODBEP) was started (MEB, 2022b). This project aims to prepare social-emotional skills programs. Again, with the "Development of Social Emotional Skills Project" carried out in cooperation with UNICEF in 2022, it was aimed to prepare a social emotional skills family training program for families and "Social Emotional Skills Family Program In-Service Training Course" was initiated for trainers in the same year. With the prepared family education programs, it is aimed to reach the families of the students at all age group through psychological counselors/guidance teachers (MEB, 2022a). In the light of these studies, it will be important to monitor social and emotional learning skills in the school environment and to measure them at regular intervals. It is thought that SEARS-T, which is based on teacher evaluation rather than self-evaluation, will contribute to educational practices in our country with its usability in the school environment.

The main reason for the need for this adaptation is the fact that a valid and reliable measurement tool suitable for the primary school 1st-grade level, cannot be found in Turkey. As a result of the literature review, various measurement tools developed or adapted for the measurement of social emotional learning skills in the primary school period in Turkey have been reached. Aygün and Taşkın (2017) developed a self-assessment scale to measure the social emotional learning skills of third and fourth-grade students. Totan (2011) made the Turkish adaptation of the Social Emotional Learning Scale based on self-evaluation for the primary school level developed by Coryn (2009). Arslan and Akın (2013), on the other hand, reconsidered the validity and reliability of the Turkish version of the same scale. However, it was thought that the use of these self-evaluation-based scales at the primary school 1st-grade level would not provide a valid and reliable measurement. For this reason, there was a need to adapt the SEARS-T scale into Turkish, which has proven validity and reliability in the original language, where the assessment is made by the classroom teacher, counsellor, or other teachers who know the student closely.

Method

Research Group

Convenience sampling approach, one of the non-probabilistic sampling types, was used in the study. In this type of sampling, the suitability and volunteering of the participants for the study are taken into account (Creswell, 2020, p. 193). The schools where the research will be conducted were chosen by the researcher as the representative of the universe, and the research group was determined in line with the volunteering.

The research group consists of 430 students attending the kindergarten and primary school grades 1-4 in Çankaya, Yenimahalle, and Keçiören districts of Ankara. The validity and reliability study of the scale was conducted on a voluntary basis with the classroom and guidance teachers of the research group. After being informed about the purpose of the research, teachers were asked to fill out the form on behalf of each student in their class based on their observations over the last 3 to 6 months. Distribution of participants by grade level have presented at Table 1.

Table 1. Distribution of Participants by Grade Level, Age and Gender.

Grade	The Number of Participants	Age	Female	Male
Kindergarten	60	5-6	36	24
Grade 1	99	6-7	53	46
Grade 2	98	7-8	52	46
Grade 3	86	8-9	45	41
Grade 4	87	9-10	51	36

Data Collection Tool

The Social Emotional Assets and Resilience Scale (SEARS) is a comprehensive measurement tool developed to assess the social emotional skills of children and young adults. It is divided into three as self-assessment form, teacher evaluation form, and parent evaluation form, which allow social and emotional skills to be evaluated from different perspectives. The self-evaluation form is divided into two as SEARS-C (for 8-12 age group) and SEARS-A (for 13-18 age group). Teacher evaluation form SEARS-T and parent evaluation form SEARS-P are used as measurement tools with high validity and reliability in the age range of 5-18 years. All of these measurement tools measure common constructs such as self-regulation skills, responsibility skills, empathy skills, and social competence. Evaluation forms consist of 35-41 items; there is also a short version of each form consisting of 12 items (Merrell, 2011, p. 1). In this study, adaptation and validity-reliability of SEARS-T were made.

SEARS-T is a teacher evaluation form consisting of four sub-dimensions and a total of 41 items, which can be used in a wide age range from kindergarten through 12th grade. The distribution of these 41 items to the four sub-dimensions of the scale is as follows: self-regulation skills 13 items, social competence 12 items, empathy skills 6 items, and responsibility skills 10 items. If we give an example of each sub-dimension, the item “Is good at understanding the point of view of other people.” is the empathy sub-dimension, the item “Works

independently on assignments, without help.” the responsibility skills sub-dimension, the item “Makes friends easily” the social competence sub-dimension, the item “Is good at solving problems” item represents the sub-dimension of self-regulation skills. Answer options are a 4-point Likert type: 0=never, 1 = sometimes, 2 = often and 3=always (Merrell, 2011, p. 5-15).

Within the scope of the validity study of SEARS-T in its original language, exploratory factor analysis (EFA) was performed on a large sample (n=1.673). As a result, the four-factor structure of the scale was revealed. The first factor, called “responsibility”, explains 49.88% of the variance. The second factor, called "Social Competence", explains 6.91% of the variance. The third factor, called "Self-Regulation", explains 3.8% of the variance and the fourth factor, called "empathy", explains 2.6% of the variance. In order to verify the factor structure revealed, confirmatory factor analysis (CFA) was applied on the data of 836 randomly selected people from a sample of 1.673 people used in the exploratory factor analysis. As a result of the confirmatory factor analysis of the 4-factor structure of the scale, it was seen that the fit was very good ($X^2= 7.765$; $p=.021$; RMSEA=.059; SRMR=.009; CFI=.997). The results obtained from the exploratory and confirmatory factor analyses demonstrated the validity of the internal structure of SEARS-T (Merrell, 2011, p. 60-62). Within the scope of the reliability study of SEARS-T, Cronbach’s alpha values were .95 for the self-regulation factor; .94 for the social competence factor; .91 for the empathy factor; .95 for the responsibility factor and for the total scale was determined as .98. The test-retest application was carried out with the teachers of 118 primary school students. The scale was applied on the same sample with an interval of two weeks. Accordingly, the test-retest coefficients were .90 for the self-regulation factor; .92 for social competence factor; .84 for empathy factor; .92 for the responsibility factor and .94. for the total scale. In light of these results, it has been revealed that the SEARS-T form in its original language is a valid and reliable measurement tool (Merrell, 2011, p. 53-62).

Adaptation Process

Obtaining Permissions. The permission for SEARS-T to be adapted into Turkish was obtained on January 22, 2020 from PAR (Psychological Assessment Resources) Inc., which has all the rights of the scale. In line with this permission, 570 copies of the scale were allowed to be used for scientific purposes within the scope of validity and reliability studies, by waiving the fee. According to the permission received:

- The use of the scale other than the limited 570 copies for this study is subject to permission.
- All rights of the Turkish version of the scale, which will be obtained as a result of the adaptation work, are reserved by PAR and its use is subject to permission. The Turkish version of the scale must be obtained from PAR for any use.
- The validity and reliability study could not be started before the Turkish translation of the scale was approved by the PAR.
- All data from the study were reported to the PAR after reporting.

Translation of Scale Items into Turkish. After the adaptation permission was obtained, the English to Turkish translation process of the scale started. The original form was translated into Turkish by two independent sworn translators and researcher who are fluent in both languages. The expressions obtained from the first translation were compared with each other and common expressions were determined. The expert opinion form, which includes the items in the original language and the common expressions obtained as a result of three different translations, was submitted to the opinions of 8 faculty members working in Gazi University, Gazi Education Faculty, Psychological Counselling and Guidance Department and English Education Department within the scope of linguistic equivalence study.

In line with the suggestions obtained from the expert opinions, necessary arrangements were made on the Turkish items and English to Turkish translation took its first form. The form was back-translated from Turkish to English by a sworn translator who had never seen the original form. Final translation and back translation was sent to PAR. The translation, evaluated by the PAR, had gone through three more revision processes. At the end of the third revision, the Turkish form was approved and finalized by the PAR. After all these stages, the validity and reliability study of the form was started.

Analysis of Data

While examining the structure of the scale in Turkish culture, firstly, descriptive statistics related to the items were calculated to provide information about the general distribution, confirmatory factor analysis was

performed to test its validity, and Cronbach alpha value was calculated for the evidence related to reliability. The findings are presented in tables and graphs. SPSS 25.0 and Lisrell 8.7 package programs were used in the analysis of the data.

Findings and Interpretation

Descriptive statistics on scale items are given in Table 2. When Table 1 is examined, it is seen that the mean scores obtained by the participants from the items in the scale vary between 1.65 ($ss = .94$) and 2.44 ($ss = .68$). When the skewness and kurtosis coefficients are examined, it is seen that the skewness values vary between -932 and $+152$; and the kurtosis values vary between -978 and $+068$. Since these values are in the range of ± 1.5 (Tabachnick et al., 2015), it can be said that the responses of the participants to the items show a normal distribution.

Table 2. Descriptive Statistics on Scale Items

Item	N	Mean	Sd	Skewness	Kurtosis
M1	389	2.35	.83	-.884	-.523
M2	389	2.37	.68	-.624	-.725
M3	389	2.24	.72	-.449	-.849
M4	389	2.05	.85	-.431	-.752
M5	389	2.08	.96	-.623	-.788
M6	389	2.16	.85	-.575	-.732
M7	389	2.14	.87	-.593	-.682
M8	389	2.15	.81	-.572	-.515
M9	389	2.08	.78	-.437	-.453
M10	389	2.19	.88	-.713	-.564
M11	389	2.09	.84	-.388	-.953
M12	389	1.93	.86	-.207	-.978
M13	389	2.44	.68	-.932	.068
M14	389	2.06	.92	-.560	-.731
M15	389	2.03	.90	-.449	-.850
M16	389	2.06	.76	-.383	-.441
M17	389	2.01	.84	-.295	-.916
M18	389	1.86	.84	-.242	-.666
M19	389	2.10	.86	-.606	-.478
M20	389	2.12	.81	-.413	-.891
M21	389	1.97	.79	-.297	-.560
M22	389	2.06	.86	-.655	-.249
M23	389	2.23	.74	-.546	-.463
M24	389	2.03	.82	-.430	-.565
M25	389	2.03	.87	-.455	-.719
M26	389	1.65	.94	-.106	-.914
M27	389	1.87	.90	-.274	-.844
M28	389	2.34	.73	-.828	-.010
M29	389	2.00	.83	-.348	-.721
M30	389	2.24	.83	-.673	-.678
M31	389	1.95	.92	-.310	-.911
M32	389	2.26	.75	-.565	-.771
M33	389	1.85	.79	-.154	-.589
M34	389	1.83	.83	-.055	-.857
M35	389	2.43	.70	-.875	-.346
M36	389	2.28	.82	-.810	-.358
M37	389	2.03	.84	-.323	-.927
M38	389	1.95	.87	-.329	-.786
M39	389	1.93	.84	-.292	-.726
M40	389	1.89	.81	-.250	-.599
M41	389	1.76	.80	.152	-.887

Validity: Confirmatory Factor Analysis

Confirmatory factor analysis was performed to provide evidence of the validity of the scale. As a result of the first-order factor analysis conducted with 4 factors, as in the original structure of the scale, it was seen that the scale was compatible at an acceptable level ($X^2= 3.860,88$ $sd=773$; $RMSEA= .10$; $SRMR = .063$; $CFI = .98$; $NNFI = .97$). Similarly, in the second-order confirmatory factor analysis, acceptable goodness of fit values was obtained ($X^2= 3.895.94$ $sd = 775$; $RMSEA = .10$; $SRMR = .063$; $CFI = .98$; $NNFI= .97$).

Table 3. Obtained Goodness of Fit Values

<i>First Order</i>						
X^2	sd	X^2/sd	RMSEA [90 %]	SRMR	CFI	NNFI
3.860.88	773	4.99	.098-.10	.063	.98	.97
<i>Second Order</i>						
X^2	sd	X^2/sd	RMSEA [90%]	SRMR	CFI	NNFI
3.895.94	775	5.02	.099-.11	.063	.98	.97

While Byrne (2013) stated that the X^2/sd value is higher than 5, the RMSEA value is higher than 08, and the NNFI and CFI values are higher than 90 indicates good compliance, Kline (2015) stated that the CFI and NNFI values over .95 are an indicator of a perfect fit. With this, since the RMSEA value is affected by the sample size (Hu and Bentler, 1999), MacCallum et al. (1996) stated that RMSEA values up to .10 are also acceptable. According to Hu and Bentler (1996), SRMR values of .080 and below indicates a good level of model-data fit. When the findings of the scale are evaluated in light of these criteria, it can be said that the scale has a structure similar to its original structure in Turkish culture. Path diagrams for standardized values obtained as a result of first-order and second-order confirmatory factor analysis are presented in Figure 1 and Figure 2.

When Figure 1 is examined, it is seen that the standardized β values of the items vary between .86 and .75 in the responsibility(F1) dimension; between .71 and .85 in the social competence (F2) dimension; between .65 and .88 in the self-regulation (F3) dimension; between .88 and .75 in the empathy (F4) dimension. When the t values of the items were examined, it was found that each item was a significant predictor of the latent variable it represented ($p<.01$). In addition, it was determined that latent variables (dimensions) showed high and significant relationships with each other.

Similarly, when Figure 2 is examined, it is seen that the standardized β values of the items vary between .75 and .86 in the responsibility (F1) dimension; between .71 and .85 in the social competence (F2) dimension; between .66 and .88 in the self-regulation (F3) dimension; between .74 and .88 in the empathy (F4) dimension. When the t values of the items were examined, it was found that each item was a significant predictor of the latent variable it represented ($p<.01$). In addition, it was observed that the standardized β values of the paths drawn from the sub-dimensions to the common latent variable ranged between .82 and .96, and all sub-dimensions were significant predictors of a common general factor.

Kline (2015) stated that in confirmatory factor analysis, items with a standardized β value of 40 and above should remain on the scale, while items above 1 and negative values should be removed from the scale. When the scale was evaluated according to this criterion, it was decided that all items had sufficient evidence of validity, in other words, they should remain on the scale.

Figure 1. Path diagram of SEARS-T (first order).

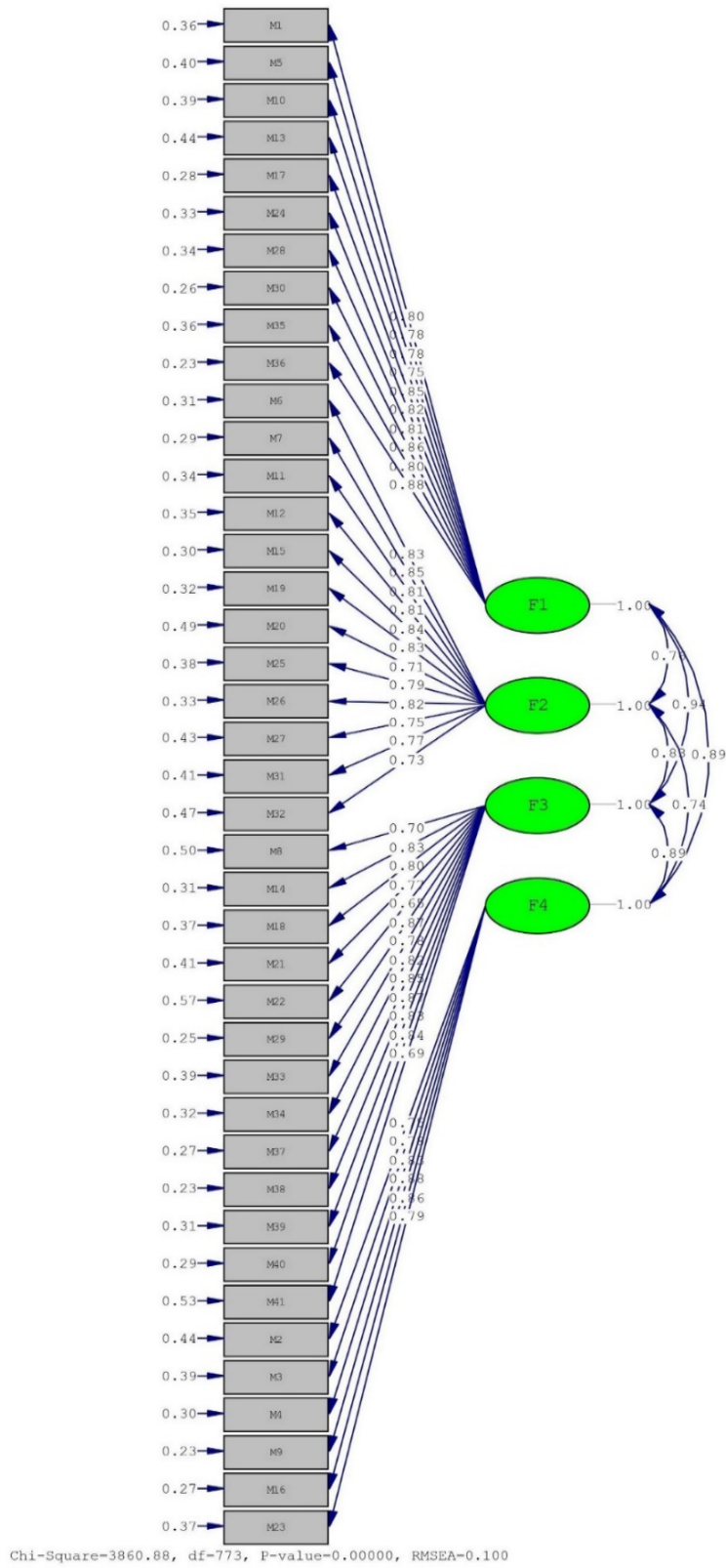
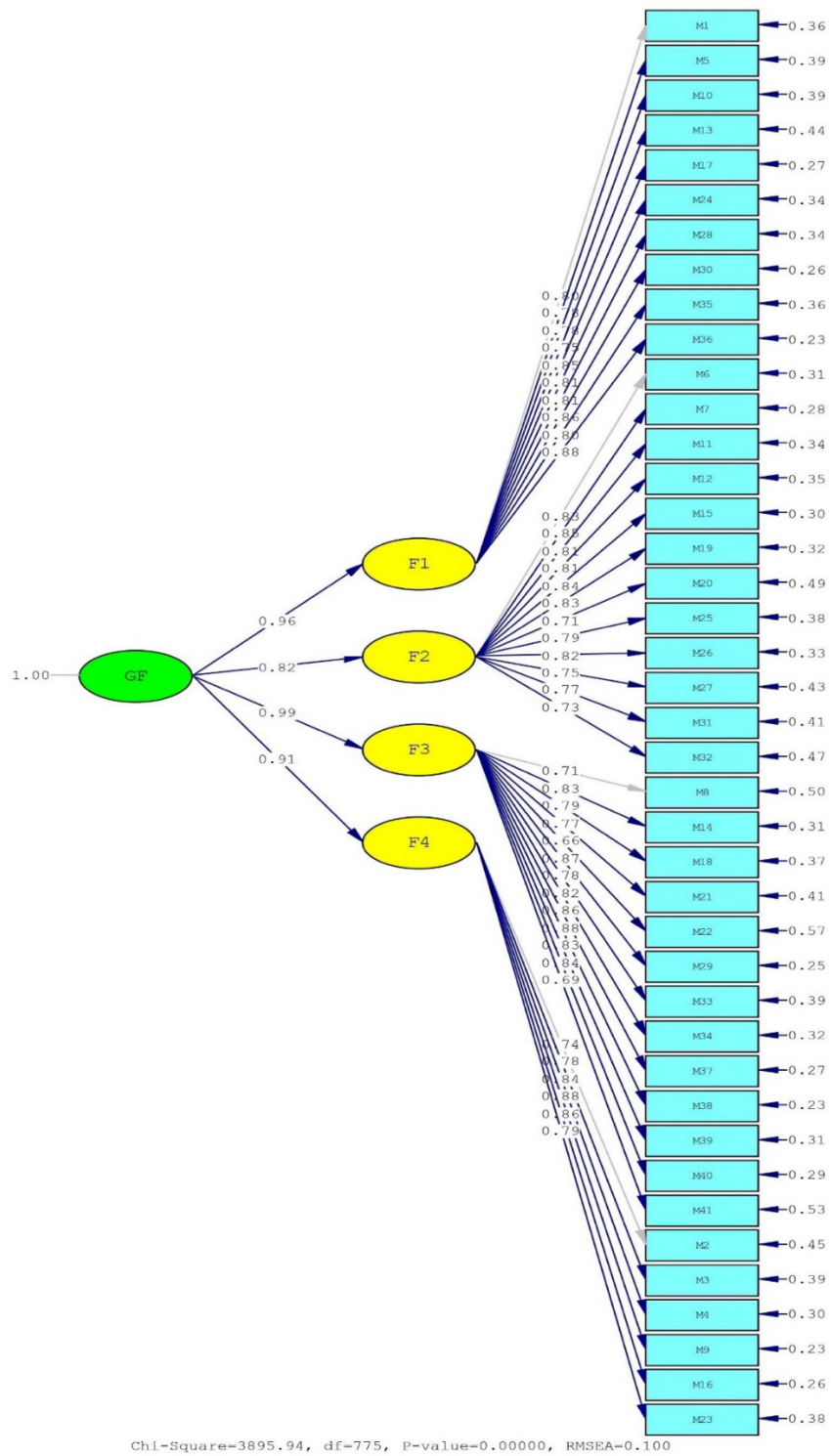


Figure 2. Path diagram of SEARS-T (second order).



Reliability

In order to provide evidence for the reliability of the scale, both Cronbach's alpha values and item-test correlations were calculated for the sub-dimensions and the total of the scale. The obtained results are presented in Table 4.

Table 4. Reliability Values

Dimension	Item	ITC	α	ITC	α	ITC	α	ITC	α	Total ITC	α
Responsibility	M1	.793	.950							.747	
	M5	.755								.746	
	M10	.766								.707	
	M.13	.727								.727	
	M17	.805								.847	
	M24	.783								.764	
	M28	.792								.760	
	M30	.837								.824	
	M35	.786								.727	
	M36	.859								.814	
Social Competence	M6			.813						.668	
	M7			.822						.721	
	M11			.780						.793	
	M12			.790						.740	
	M15			.822						.693	
	M19			.803						.744	
	M20			.694	.953					.652	
	M25			.775						.656	
	M26			.794						.769	
	M27			.720						.795	
	M31			.751						.699	
	M32			.721						.606	
Self-Regulation	M8					.678				.697	
	M14					.791				.830	
	M18					.764				.804	
	M21					.751				.755	.982
	M22					.652				.618	
	M29					.840				.839	
	M33					.776	.957			.746	
	M34					.817				.787	
	M37					.839				.801	
	M38					.857				.822	
	M39					.796				.821	
	M40					.826				.818	
	M41					.684				.664	
Empathy	M2							.727		.656	
	M3							.765		.691	
	M4							.779		.782	
	M9							.840	.921	.773	
	M16							.802		.786	
	M23							.746		.733	

Note: N=398; M=Item; ITC= Item test correlation

When Table 4 is examined, it is seen that the item total test correlations in the responsibility dimension vary between ($r = .72$) and ($r = .86$), in the social competence dimension vary between ($r = .72$) and ($r = .82$), in the self-regulation dimension vary between ($r = .65$) and ($r = .86$), and in the empathy dimension vary between ($r = .72$) and ($r = .84$). Field (2005) states that item-total test correlations should be 30 and higher. In this direction, it can be said that the scale items serve the purpose of measuring the feature to be measured.

Cronbach's alpha values were obtained as .950 for the responsibility dimension, .953 for the social competence dimension, .957 for the self-regulation dimension, .921 for the empathy dimension, and for the whole scale .982. Since Cronbach's alpha value above 70 indicates reliability (Nunnally, 1994), it can be said that the scale produces reliable results in Turkish culture.

Interdimensional Relations

Pearson Product-Moment Correlation coefficient was calculated in order to reveal the relationships of the sub-dimensions of the scale with each other and their relationship with the total scale. The obtained results are presented in Table 5.

Table 5. Relationships Between the Sub-Dimensions of the Scale and the Total of the Scale

Dimensions	(R)	(SC)	(SR)	(E)	Total
Responsibility (R)	1	.735**	.903**	.836**	.935**
Social Competence (SC)		1	.797**	.699**	.896**
Self-Regulation (SR)			1	.847**	.965**
Empathy (E)				1	.886**
Total					1

When Table 5 is examined, it has been determined that the correlation coefficients between the sub-dimensions of the scale vary between .70 and .85, and there are positive significant relationships between the dimensions. It is seen that the sub-dimensions of the scale are in high level and significant relations with each other.

Conclusion, Discussion and Recommendations

The findings obtained as a result of the Turkish adaptation, validity and reliability study of SEARS-T, developed by Merrell (2011) to determine the social-emotional learning skills and psychological resilience of children and young adults, revealed that the scale is a valid and reliable measurement tool at the kindergarten and primary school level with 41 items and four sub-dimensions. First of all, descriptive statistics about the items were obtained to provide information about the general distribution, and it was determined that the responses of the participants to the items showed a normal distribution.

As a result of the first-order factor analysis applied to test the validity of the scale, goodness of fit values were obtained as $X^2= 3.860.88$ $sd=773$; $RMSEA=.10$; $SRMR=.063$; $CFI=.98$; $NNFI=.97$. In the second-order confirmatory factor analysis, the goodness of fit values were obtained as $X^2=3.895.94$ $sd=775$; $RMSEA=.10$; $SRMR=.063$; $CFI=.98$; $NNFI=.97$. These findings confirm that the scale has acceptable goodness-of-fit values and shows a similar structure to its original structure in Turkish culture.

In order to provide evidence for the reliability of the scale, both item-test correlations and Cronbach's alpha values for the sub-dimensions and the total of the scale were calculated. Item test correlations varied between $r=.72$ to $r=.86$ in the dimension of responsibility, between $r=.72$ and $r=.82$ in the dimension of social competence, between $r=.65$ and $r=.86$ in the dimension of self-regulation, and between $r=.72$ to $r=.84$ in the dimension of empathy. These findings show that the scale items serve the purpose of measuring the feature to be measured. When the Cronbach alpha values on the basis of sub-dimensions and in the whole scale were examined (responsibility .950; social competence .953; self-regulation .957; empathy .921 and total .982), it was determined that the scale produced reliable results in Turkish culture. Pearson Product Moments Correlation coefficient, which varies between .70 and .85, shows that the sub-dimensions of the scale are in high and significant relationships with each other and with the sum of the scale.

As a result of the literature review, it was determined that this scale, which was originally in English, was adapted to different cultures. Figueiredo et al. (2020) conducted an adaptation, validity and reliability study of SEARS-T to Portuguese on a sample of 235 children aged 5 to 10 years. As a result of the applied descriptive statistics on the distribution of the scale items before the confirmatory factor analysis, they found that the 20th item of the scale did not show a normal distribution and eliminated this item. For this reason, confirmatory factor analysis was performed on the remaining 40 items of the scale. According to CFA, the 4-factor structure of the scale was confirmed ($X^2= 2.86$, $p = .00$; $CFI = .84$; $TLI = .82$; $RMSEA = .08$). The internal consistency coefficient of the Portuguese SEARS-T was .94 in the responsibility dimension of the scale; .92 in the social competence dimension; .95 in the self-regulation dimension; .92 in the empathy dimension and .98 in the total scale. These findings showed that the scale produced reliable results in Portuguese culture.

On the other hand, Yue (2019), conducted the Chinese adaptation, validity and reliability study of SEARS-T through the kindergarten sample. The internal consistency coefficients of the Chinese SEARS-T were determined as .90 in the responsibility dimension; .93 in the social competence dimension; .93 in the self-

regulation dimension and .89 in the empathy dimension. These findings show that the scale also produces reliable results in Chinese culture. It is seen that the internal consistency coefficients obtained from the Turkish adaptation of SEARS-T and the internal consistency coefficients obtained from the Portuguese and Chinese adaptation are close to each other. This suggests that the internal consistency of the scale does not vary greatly between different cultures.

The validity and reliability study of the original form of the SEARS-T scale was composed of a large sample aged between 5 to 18 years. In this study, in which the Turkish validity and reliability of the scale were discussed, the age range was kept more limited as kindergarten and primary school children. In subsequent studies, it is recommended to expand the sample to include secondary and high school levels.

When the national literature is reviewed, it is seen that the Turkish adaptation studies of SEARS-Pre, which was developed by Ravitch (2013) and used to measure social and emotional skills in the preschool period, were conducted on children aged 3-6 (Yıldız and Akman, 2021) and children aged 5 (Ogelman et al., 2021). When the international literature is reviewed, it is seen that SEARS is adapted to different cultures (Stromgren and Couto, 2022; Figueiredo et al., 2020; Ashori and Yazdanipour, 2019; Yue, 2019) and has a wide use as a measurement tool in scientific research (Cheng and Ray, 2016; Yue, 2018; Dracinski, 2012; Campbell et al., 2022; Wilson and Ray, 2018; Ray et al., 2020; Wang et al., 2015; Bander, 2014; Cuskley, 2014). In this context, it is thought that the SEARS-C (for the 8-12 age group) and SEARS-A (for the 13-18 age group) forms based on self-evaluation, as well as the SEARS-P (for the 5-18 age group) form based on parental evaluation and the short forms that provide a quick evaluation, will contribute to the literature by conducting Turkish adaptation, validity and reliability studies.

The results of this study reveal that the SEARS-T-Turkish form is a valid and reliable measurement tool at the kindergarten and primary school levels. The SEARS-T Turkish form can be obtained from Par Inc and can be used by classroom teachers and school psychological counsellors to determine the social-emotional skills of kindergarten and primary school students, monitor their development, and test the effectiveness of curricula containing social-emotional learning goals.

Author Contributions: This study was produced from the Doctoral dissertation titled “The Effect of Edwin E. Gordon's Music Learning Theory on Children's Developmental Music Aptitude and Social Emotional Learning Skills” prepared by the first author under the supervision of the second author. All authors contributed to the conception and design of the study. All authors read and approved the final manuscript.

Funding Disclosure: This research was financed by Gazi University as a Scientific Research Project (BAP) (Project No: 04/2020-01).

Conflicts of Interest: The authors declare that they have no conflict of interest.

Data Availability: The data sets generated and analysed during the current study are available from the corresponding author on request.

Ethics Approval and Consent to Participate: This study was carried out within the scope of the decision of the Gazi University Ethics Commission dated 06.04.2021 (Research code: 2021-447) and the research permit of the Ministry of National Education numbered E-14588481-605.99-25910430. Participation in the research was based on volunteerism, and a volunteer consent form was collected from all participants before the application.

Author note: I would like to thank Psychological Assessment Resources (PAR) Inc. for permission of adaptation, Gazi University Scientific Research Projects Coordination Unit for project support, and Gazi University Academic Writing Application and Research Center for proofreading.

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Development and Effectiveness of Psycho-Education Program Prevention of Sexual Abuse for Primary School Grade 3. And 4

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ARTICLE HISTORY

Received: 08.03.23

Accepted: 16.05.23

KEYWORDS

Primary School; Child
Sexual Abuse; Personel
Safety Awareness Psycho-
Education Program; Self-
Esteem

ABSTRACT

The aim of this study is to develop a psycho-education program called Personal Safety Awareness (PSA) psycho-education program to protect 3rd and 4th grade students from sexual abuse and to test the effectiveness of this program consisting of six sessions. The participants are 3rd and 4th grade students in a primary school in Izmit in Kocaeli province. 41 of the participants were assigned to the experimental group and 39 to the control group. Before and after the implementation of the training program pre-tests and post-tests related to the dependent variables, six months and a year after the implementation only the experimental group was given follow-up tests. The data related to dependent variables were obtained through the Personal Safety Awareness Scale (PSAS) and Piers Harris' Self Concept of Children Scale (PHSCCS). In the analysis of parametric and nonparametric data, statistics were used to compare the groups. There was a significant increase in the PSAS scores of the students and no significant increase was found in the PHSCCS who participated in the PSA program compared to the pre-practice measurements. PSA psycho-education program had an effective on increasing children's personal safety awareness scores and did not have an effect on the self-esteem scores. These results indicate that the program can be used in educational environments in order to increase students' awareness and knowledge about abuse.

Claimed to be comprehensive and complex public health problem sexual abuse is an important problem with the dimensions of physical, emotional, social, moral, cultural and legal affecting all children of the world. Sexual abuse is defined as the use of a child or adolescent who has not yet completed his development by using force or with threat and luring to confront his sexual desire and needs by an adult (Işeri, 2008). In more general terms, sexual abuse is the use of a child by an adult for sexual pleasure (Crosson-Tower, 2008). Sexual abuse in the form of sexual intercourse non-contact caress, adult exposure of genitals, etc. includes behaviors (Berliner & Elliot, 2002).

According to research conducted in recent years, the rate of sexual abuse of 17 years old girls in the United States is 26.6% and male is 5.1% (Finkelhor, 2014). In America, 13% of males and 30-40% of females reported to be exposed to sexual abuse in their childhood (Finkelhor, 2009). According to the Council of Europe Convention on the Protection of Children from Sexual Abuse (2007) in European countries, one of every five child is reported to have been sexually abused. In recent years, meta-analysis research results showed that the prevalence of child and adolescent sexual abuse in the world scale was 11.8% (Stoltenborgh et al., 2011). In Turkey, the prevalence studies on this subject are quite limited. The results of a study examining the applications made to hospitals between 1990 and 1996 indicate that 26% of 50 cases were identified as sexual

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abuse (Oral et al., 2001). In a similar study by Agirtan et al. (2009), it is stated that 51% of 593 applications to the hospital between 2000 and 2006 were identified as sexual abuse. According to the results of the research conducted on university students, 12% of the participants reported that they were sexually abused during their childhood (Irmak, Aksel, & Thompson, 2016).

Children who have been exposed to sexual abuse experience many psychosocial problems. In addition to the negative impact on the ability to maintain social relationships (Mullen, Martin, Anderson, Romans & Herbison, 1996), self-esteem of these children has also decreased significantly (Beitchman et al., 1992). Sexually abused children also experience post-traumatic stress disorder (Kendall-Tackett, Williams & Finkelhor, 1993; Putnam, 2003), mental disorders such as anxiety and depression (Nickel et al., 2004; Usta, Akbaş & Aydın, 2018) and low life satisfaction (Nickel et al., 2004; Fergusson, Geraldine, McLeod & Horwood, 2013), their academic achievement decreases (Boden, Horwood & Fergusson, 2007; Currie & Spatz Widom, 2010; Koçtürk, Ulaş & Bilginer, 2019), they have exhibited important psychosocial problems such as evasion and adolescent pregnancy (Roberts, O'Connor, Dunn, Golding and ALSPAC, 2004), reported to they experience various problems interpersonal relationships (Csorba, Tsikouras, Lampe & Poka, 2012; Taylor, Piotrowski, Woodgate & Letourneau, 2014).

Governments, many non-governmental organizations, associations established on the issue, local governments, international organizations and policy-makers take various measures to prevent sexual abuse which not only have a negative impact on the lives of children in their childhood, but also have a traumatic experience that can be reflected in adulthood and may continue to last a lifetime. Some of these measures are to deter potential abusers by giving the a heavy prison sentence, to raise public awareness, to invite the public to sensitivity through media campaigns (Mendelson & Letourneau, 2015). In addition to social and legal measures and sanctions for offenders, awareness-raising activities for families are another dimension of prevention efforts.

In addition to these efforts to raise awareness of families and to raise awareness of children in this way, psycho-education programs have been developed to ensure that children have the necessary knowledge and skills to face the possibility of encountering risky situations and thus strengthen children (Wurtele, 2009). The number of school-based personal safety programs has increased rapidly, especially in the United States. Studies on the effectiveness of sexual abuse programs have revealed that children's knowledge of abuse situations has increased and their ability to protect themselves and refuse abuse has improved (Brassard & Fiorvanti, 2015; Finkelhor, 2009; Kenny, 2009; Wurtele, 1990). It is predicted that children who develop their rejection skills through education programs, who can recognize risky and dangerous situations, and who can display the necessary safe behavior in these situations, will be able to protect themselves from sexual abuse. The evaluation and effectiveness results of the training programs developed to increase skills by using methods such as asking children what to do by watching an abuse scenario, revealed that children's sexual abuse prevention skills increased after the implementation of the programs (Hebert et al., 2001; Wurtele & Owens, 1997).

Self-esteem, which is a dimension of the self-concept that develops as a product of the individual's interaction with his/her social and physical environment and expresses the level of satisfaction with one's self-concept, is one of the important research topics in the field of psychology and was defined by Rosenberg (1965) as the evaluations made and adopted by the individual about himself. Fryer, Kraizer and Myoshi (1987), who suggested that one of the main goals of sexual abuse prevention psychoeducational programs should be to increase children's self-esteem, found that there were strong relationships between children's self-esteem and safe behavior habits. This result suggests that children with high self-esteem have a higher tendency to display safe behaviors when necessary by protecting themselves from abuse. An important data obtained from the effectiveness research of the personal safety education program called *Stay Safe*, developed by MacIntyre and Carr (1999), is that a significant improvement was observed in the self-esteem of the children who participated in the education. Similarly, the result of *Safe Child*, another effective abuse prevention program, is that there is a significant increase in the self-esteem of the children participating in the program (Kraizer, Witte, & Fryer, 1989). Acquisitions such as knowing that he/ she has basic rights as a child, being able to protect his/ her rights

when necessary, and being able to say no with confidence, which are targeted by personal safety training programs, also increase self-esteem. It can be concluded that children with high self-esteem have a higher tendency to display safe behaviors when necessary by protecting themselves from abuse.

In the related literature, there are allegations that education programs for children aiming to prevent sexual abuse increase children's anxiety (Finkelhor & Dziuba-Leatherman, 1995) and aggression levels (Hebert et al., 2001) or that parents are concerned that they may have negative effects on children's sexual development (Tutty, 1997). However, there is no evidence for these claims (Kenny et al., 2008). As a matter of fact, Tutty's (1997) research results are in a different direction. Tutty (1997) learned that only four parents' children showed anxiety reactions in his practice with more than 200 children. The fact that no increase was observed in the pretest-posttest anxiety measurement at the end of the application also reveals the positive effects of the training programs in question.

In Turkey, researches aimed at preventing child sexual abuse and training programs aimed at empowering children are very limited. When we look at the attempts to develop programs to prevent sexual abuse in Turkey, Ziyalar's (1998) work stands out first. The researcher investigated the applicability of the training program called *Feeling Yes, Feeling No* applied abroad in Turkey. Ziyalar demonstrated the applicability of the program to Turkish children based on the views of parents and teachers. Afterwards, a sexual abuse prevention program was developed by Çeçen-Eroğul and Kaf-Hasırcı (2013) for 4th grade students and by Uçar (2014) for mentally retarded children. Çıtak Tunç et al. (2018) The training program named *Body Safety Training Program* developed by Wurtele (2007) was adapted to Turkish culture and it was seen that the training program was effective in increasing the self-protection skills of pre-school children. Irmak et al. (2018) reported that as a result of the effectiveness study of the training program, in which they aimed to increase the self-protection skills of pre-school children and worked with 200 5-year-old children, the knowledge and skills of children on protection from abuse increased. Although limited in number, it is seen that the developed education programs are mainly aimed at pre-school children. Although it is especially emphasized in the relevant literature that children should be taught the knowledge and skills related to their personal safety from the pre-school period (Deblinger, Stauffer & Steer, 2001; Kenny et al., 2008; Pitts, 2015; Wurtele, Kvaternick & Franklin, 1992), the emphasis made by Tutty (2000) as a result of his research should also be taken into consideration. Tutty (2000) found in his study that the rate of benefiting from the program applied by children between the ages of 5 and 7 is not as much as the children between the ages of 8 and 12. When this result is evaluated, it can be seen as an important need to work on people older than pre-school. In addition, it is thought that this education should be given gradually at the next grade levels and programs developed for other grade levels of primary school are needed in order to consolidate the knowledge and acquisitions gained and transform them into skills.

Present Study

The development of school-based psycho-educational programs aimed at preventing child sexual abuse, which aims to empower children due to their effectiveness in preventing child sexual abuse, is a long overdue area to work on in Turkey. When the limited number of educational programs reached are examined, the measurement tools used have limitations in terms of being developed for children in need of special education (Uçar, 2014), based on short-term monitoring (Çeçen-Eroğul & Kaf-Hasırcı, 2013) or targeting a different age group than the study here. (Irmak et al., 2018; Çıtak Tunç et al., 2018). In addition, in parallel with the increase in the tendency to use social networks out of purpose, the need to emphasize protection from abuse situations experienced in the virtual environment, as in the content of the training program here, stands out as an important requirement in terms of sexual abuse prevention training programs. The main problem of this research is the limited number of child abuse prevention programs for primary school students, including abuse that can be encountered on the internet, which can be easily implemented, accessible and effective by experts.

The aim of this research is to develop and test the effectiveness of a psycho-educational program called the *Personal Safety Awareness (PSA)* program, which was developed to help primary school 3rd and 4th grade students protect themselves from sexual abuse. Within the framework of this general purpose, the following hypotheses were tested.

Hypothesis 1: The PSA psycho-education program significantly increases children's awareness of personal safety, which is assessed by the Personal Safety Awareness Scale (PSAS).

1.1. Experimental group PSAS posttest scores were significantly higher than pretest scores. On the other hand, there is no significant difference between the PSAS pretest and posttest scores of the control group.

1.2. Considering the difference between the PSAS pretest scores of the experimental and control groups, the posttest scores of the experimental group are significantly higher than the posttest scores of the control group.

1.3. There is no significant difference between the PSAS posttest scores of the experimental group and the follow-up test scores after six months and one year.

Hypothesis 2: The PSA psycho-education program significantly increases children's self-esteem as assessed by the Piers Harris Children's Self-Concept Scale (PHSCCS).

2.1. The PHSCCS posttest scores of the experimental group were significantly higher than the pretest scores. On the other hand, there is no significant difference between the pretest and posttest scores of the control group.

2.2. Considering the difference between the PHSCCS pretest scores of the experimental and control groups, the posttest scores of the experimental group are significantly higher than the posttest scores of the control group.

2.3. There was no significant difference between the PHSCCS posttest scores of the experimental group and the follow-up test scores after six months and one year.

Method

Research Design

In this study, pre-test, post-test and quasi- experimental model (Büyüköztürk, 2007) with control group were used in order to determine the effect of PSA psycho-education program which prepared by the researchers on 3rd and 4th grade students' on personal safety awareness and self-esteem. 2x3 mixed pattern (split-plot factorial pattern) was used in the study. In the split-plot pattern, the first factor shows experimental treatment groups (experimental and control groups), while the second factor shows repeated measures of the dependent variable (pretest, posttest and follow-up test measurements). The independent variable of the study is the *PSA Psycho-Education Program*, while the dependent variables are *personal safety awareness levels* and *self-esteem levels*.

Study Group

All 80 students studying in the 3rd and 4th grades of a primary school in Kocaeli province Izmit district participated in the research. The distribution of the students participating in the research by grade level and gender is shown in Table 1.

Table 1. Distribution of Experimental and Control Group Students by Grade Level and Gender

Group	3rd Grade			4th Grade			General Total
	Female	Male	Total	Gender Female	Male	Total	
<i>Experimental</i>	10	10	20	10	11	21	41
<i>Control</i>	8	11	19	11	9	20	39
Total	18	21	39	21	20	41	80

Measures

Personal Safety Awareness Scale (PSAS). The scale was developed by the researcher within the scope of this research. The scale measures the level of knowledge of students related to personal safety, including the risk of sexual abuse. There are 20 items in PSAS. Each correct answer "1", each wrong or "do not know" answer is evaluated as "0" points. The increase in the total score indicates that the student has more information about personal safety and protection from abuse. In this case, the highest score from the scale is "20" and the lowest score is "0".

In the scope of the construct validity studies of PSAS, firstly exploratory factor analyses based on tetrachoric correlation matrix was made to datas which obtained from 234 (52.5%) girls, 212 boys (47.5%), 188 (%42.2) 3rd grade, 258 (%57.8) 4th grade, total 446 students. According to factor analysis, factor loadings of 20 items of PSAS ranged from .38 to .79. The total variance explained with one dimension is 41%.

Fit statistics related to the single factor structure of PSAS were obtained according to the results of the tetrachoric factor analysis. Considering the criteria of goodness of fit, chi-square / degree of freedom (2.14), NNFI (.98) and CFI (.98) and GFI (.96) values of the model were excellent, AGFI (.94) and RMSEA (.05) values shows that the model has a good fit. Confirmatory factor analysis was also performed to see if the obtained structure was verified.

The discriminative values of the items of the scale ranged from .37 to .71 and the item difficulty values were between .59 and .85. The results of t-test for the comparison of the upper and lower 27% groups according to the total scores obtained from the PSAS indicate that the difference between the two groups was significant ($t_{(118)} = -34.07, p < .001$).

The criterion validity of the PSAS was tested with the *Good Touch Bad Touch Scale* which was developed by Church et al.(1988) and was adapted to Turkish children by Ceçen-Erogul and Kaf-Hasirci (2013). The scale was practised to 272 students concurrently with PSAS and the correlation coefficient between the total scores was calculated as .66 ($p < .05$). The internal consistency coefficient of the scale, calculated by the KR-20 formula was .85 ($n = 80$). The test-retest correlation coefficient which calculated via practised with 4 weeks break to 79 participants was .79 ($p < .01$). The findings obtained from the validity and reliability analyzes indicate the conformity of the psychometric values of the PSAS.

Piers Harris Self Concept of Children Scale (PHSCCS). The scale was developed by Piers and Harris (1964) for students aged 9 to 16 years. In the scale which aiming to measure students' feelings, thoughts and attitudes towards themselves is answered as "Yes" or "No" to descriptive expressions. The scores obtained range from 0 to 80. High score indicates the existence of a positive self-concept. Piers and Harris (1964) at the results of the factor analysis showed that the scale had six factors as *Behaviors, Intelligence and School Status, Physical Appearance, Anxiety, Popularity and Happiness and Satisfaction*. The adaptation study of the PHSCCS to Turkish children was conducted by Oner (1994). The reliability of the scale was tested with internal consistency and test-retest analysis. The reliability coefficients obtained with Spearman Brown and Kuder Richardson 21 formulas were between .78 and .93, the correlation coefficients obtained with Pearson Product-Moment were found to be between .71 and .77.

"The Student Problem Marking" lists have been formed while testing the criterion-dependent validity of the scale. Correlations were obtain on the level .68 and .64 were obtained between scale and criterias. Multiple factor analysis was applied to the students' score for construct validity. It was observed that the factors explained 42% of the total variance (Oner, 1994).

In the scope of this study, confirmatory factor analysis was applied for the validity of the six-factor structure of the PHSCCS. As a result of analysis of the data obtained from 130 (52%) girls, 119 (48%) men, 107 (43%) 3rd class, 4th class 142 (57%) who attended, total of the 249 students; chi-square/ degree of freedom (2713.97 / 1807) 1.50 and the fit indices obtained RMSEA .04, NNFI .88, CFI .89, IFI .89, GFI .74 and AGFI .72. Considering the criteria for fit indices, it can be said that the values are not sufficient for a perfect and good fit

but acceptable. The low level of GFI and AGFI, which is an important determinant, can be explained by the very different number of items in the factors (Devellis, 2017). For example, there are sixteen items in the "Behavior" subscale on the scale, while six items are included in the "Intelligence and School Status" subscale.

The internal consistency coefficient of the scale, which was calculated with the KR-21 formula was .89, and the test-retest correlation coefficient calculated by applying it to 42 participants at four weeks intervals was .79 ($p < .01$).

Process

At the beginning of the research, necessary permission was obtained from the Ethics Committee for data collection for scale development studies and for the implementation of the training program. After the ethics committee approval, Kocaeli Provincial Directorate of National Education was applied to and permission was obtained for research and implementation studies. In the selection of the school where the application will be made, the supportive administrator approaches that accept the practice in the school have been decisive. Before the implementation of the PSA psycho-education program, a seminar on *Duties of the Family on Child Abuse and Child Personal Safety Awareness* was held with the families of the 3rd and 4th grade students who formed the experimental and control groups. In this seminar, the researcher introduced himself and the training program and explained the application conditions. After the questions from the families were answered, family consent forms were obtained. Experimental and control group students were also informed about the purpose and content of the training program and informed consent forms were obtained. Before the implementation of the curriculum, measurement tools were given to the students as a pre-test. Data collection and training program implementation was carried out by a psychological counselor and a researcher who is also a doctoral student. After the pretest data were collected, the implementation of the training program started in the first week of May. The applications were made between May 2 and June 7 in the second academic year of 2017. The training program was applied to two experimental groups with different grade levels at different times. At the end of the training, measurement tools were reapplied to the experimental and control groups as a posttest. Six months and one year after the implementation of the training program, the experimental group was reached and the measurement tools were given again as a follow-up test. Since the students attending the 4th grade graduated from their schools and continued their education in different schools during the application, the training program could only be applied to the control group students attending the 3rd grade.

Contents of PSA Psycho-Education Program

When the preparation of the content of PSA, firstly, the education programs which are widely used in the world and whose effectiveness are determined by scientific research have been reached, these programs were examined in terms of the subjects discussed and the methods and techniques used. Some of the programs reached are *Second Step*, *Safe Child*, *Teatreetells*, *Stay Safe*, *Lauren's Kids*. In these programs, it was seen that focus on issues safe/ dangerous concepts, good/bad touch, safe behavior, asking for help from the adult when required and it was seen that using case study, role play, puzzle, play game, dicussion, and question- answer methods. Also examined a limited number of research for the prevention of sexual exploitation in Turkey, the general framework of education programs are determined in terms of content and methods used.

PSA psycho-education program consist of six sessions. In each session, a different subject was taken and applied in 80 minute sessions one day a week. In the content of training program which continued six-weeks; it was used case study, question-answer, role play, video monitoring, game, puzzle solution and discussion methods. The relevant literature was used in the selection of the methods and techniques used to gain knowledge and awareness about the mentioned subjects.

The first session of the training program deals with children's rights, neglect and abuse. The aim of this session is to make students aware of their rights as children and to recognize situations that threaten their rights and neglect and abuse. The second session focused on the basic safety rules. The aim is to enable students to be aware of safe and unsafe situations and behaviors to gain personal safety and to know what they can do in these situations. In the third session, personal boundaries, good/bad touches and special areas were discussed.

It is aimed that students will be able to distinguish between the situations that violate their personal limits and the disturbing touches. In the fourth session, shyness, aggression, assertiveness activities and practices of "saying no" in undesirable cases were made. In this session, it was aimed that students will develop social skills related to saying no. In the fifth session, special safety rules, threat, bribery, safe / unsafe secrecy issues are emphasized and the students were aimed to learn security rules related to special body regions, to distinguish between threat, bribery and safe and secure / unsafe secrets. Finally, in the sixth session the risks in the virtual environment and topics of the measures to be taken against the risks were focused. In this session, it is aimed that students know the risks in virtual environments and understand the importance of staying safe.

Data Analysis

In this study with a pretest-posttest control group, the differences between the pretest and posttest of the experimental and control groups were analyzed by Wilcoxon signed-rank test and t-test, the differences in pretest-posttest difference scores were analyzed by difference analysis and Mann Whitney U test. Wilcoxon Signed Rank Test and t-test were used to analyze the differences between the posttest and follow-up tests of the experimental group. In deciding on these methods, examination and analysis of the basic assumptions formed the basis. SPSS.22, LISREL 8.8 and Factor 10.4 package programs were used in the analysis of all data related to the scale development, validity and reliability analyses, and the results of the experimental and control groups pretest, posttest and follow-up tests.

Findings

Hypothesis 1. In order to test the hypothesis of the research, which is expressed that the PSA psycho-education program significantly increases the personal security awareness of children as assessed by the Personal Security Awareness Scale (PSAS), it was analyzed that whether there is a significant difference between the PSAS pretest and posttest scores of the experimental and control groups, whether there is a significant difference between the posttest scores of the experimental group and the control group, considering the difference between the PSAS pretest scores of the experimental group, and whether there is a significant difference between the PSAS posttest scores of the experimental group and the follow-up six months and one year later.

1.1. The fact that the skewness (-1.35) and kurtosis (1.15) values of the experimental group's posttest scores for PSAS were not in the range of $-1+1$, and the z-value of the skewness (-3,66) coefficient was higher than 2.58 for $\alpha=.05$, this indicates that the distribution is not normal. The Wilcoxon signed-rank test, which is the non-parametric equivalent of the t-test for related samples, was used to analyze whether there was a significant difference between the PSAS pretest-posttest scores due to the non-normal distribution of the experimental group's PSAS posttest scores. PSAS pretest score of the experimental group mean = 16.24 (S = 2.51) posttest score was found to be mean= 18.95 (S = 1.35). According to the results of the analysis on whether the difference between the scores is significant, the students' PSAS posttest mean rank (20.28) differs significantly from pretest rank difference mean (12.88), posttest rank difference total (689.50) pretest rank difference total (51.50). was found to be high ($z = -4.645, p < .05$). According to results the comparison of the pretest and posttest mean scores of the control group with the t-test, it was observed that there was no significant difference ($t_{38} = 1.84, p > .05$) between the mean PSAS pretest score of the control group (M= 15.17, S = 3.07) and the mean of the posttest score (M= 15.87, S = 2.39).

1.2. Considering the difference between the PSAS pretest scores of the experimental and control groups, ANCOVA was used to examine the difference between their posttests, but since the data on the pretest and posttest of the groups were not normally distributed, difference analysis was used instead of ANCOVA for this analysis. In this direction, it was examined whether there was a significant difference between the PSAS pretest-posttest difference scores of the experimental and control groups. According to the results, the pretest-posttest difference mean score of the experimental group belonging to PSAS was M = 2.70 (S = 2.72); pretest-posttest difference mean score of the control group M = .69 (S = 2.34). In order to test the significance of the difference between the pretest-posttest difference scores of the experimental and control groups, the Mann Whitney U test was applied to the data that did not meet the normal distribution assumption. According to the

results, the rank means (49.22) and rank totals (2018.0) of the experimental group's PSAS pretest-posttest difference scores were found to be significantly higher than the rank means (31.33) and rank totals (1222.00) of the control group's pretest-posttest difference scores ($U = 442.0, p < .05$). This result means that the PSAS scores of the experimental group increased significantly more than the control group after the training.

1.3. Wilcoxon signed-rank test was used to evaluate whether there was a significant difference between the PSAS posttest scores of the experimental group and the follow-up test scores at six months and one year, since PSAS posttest data were not normally distributed. According to the values obtained, the mean PSAS posttest score was $M = 18.95$ ($S = 1.35$), the six-month follow-up test mean score was $M = 18.53$ ($S = 1.46$) and the one-year follow-up test mean score was $M = 18.46$ ($S = 1.72$). When the rank mean and rank totals of the experimental group's PSAS posttest and six-month follow-up test difference scores are taken into account, the difference is not significant ($z = -1.79, p > .05$). Similarly, there is no significant difference between students' PSAS posttest and one-year follow-up test difference scores mean rank and total rank ($z = -1.83, p > .05$). These results show that the effect of the PSA psycho-education program on students' awareness of their personal safety continued for six months and one year.

Hypothesis 2. In order to test the hypothesis of the research, which is expressed that the PSA psycho-education program significantly increases the self-esteem of children as assessed by the Piers-Harris Self-Concept of Children Scale (PHSCCS), it was analyzed that whether there is a significant difference between the PHSCCS pretest and posttest scores of the experimental and control groups, whether there is a significant difference between the posttest scores of the experimental group and the control group, considering the difference between the PHSCCS pretest scores of the experimental group and whether there is a significant difference between the PHSCCS posttest scores of the experimental group and the follow-up six months and one year later.

2.1. In order to see the difference between the PHSCCS pretest and posttests of the experimental and control groups, the t-test was applied for the related samples. The results of the analysis show that there is no significant difference between the posttest mean score ($M = 63.63, S = 11.20$) of the experimental group and the pretest mean score ($M = 62.14, S = 9.94$) of PHSCCS ($t_{40} = 1.58, p > .05$). The results of the control group were that the pretest scores were significantly lower than the posttest scores ($t_{38} = 3.14, p < .05$). In other words, a significant decrease was observed in the self-esteem of the control group students who did not receive the application.

2.2. ANCOVA was used to compare the posttests by checking the difference between the experimental and control group PHSCCS pretest scores, but since the data of the PHSCCS pretest and posttest scores did not meet the assumption of equality of variances, it was decided to perform a difference analysis. Pretest-posttest difference mean score of PHSCCS of the experimental group was $M = 1.48$ ($S = 6.00$); the mean pretest-posttest difference scores of the control group were found to be $M = -4.76$ ($S = 9.48$). Since the distribution of the difference scores between the pretest and posttest of the groups was not normal, the significance of the difference scores was checked with the Mann-Whitney U test. The rank means (51.62) and rank totals (2116.50) of the experimental group's PSAS pretest-posttest difference scores were found to be significantly higher than the rank means (28.81) and rank totals (1123.50) of the control group's pretest-posttest difference scores ($U = 343.50, p < .05$).

2.3. The t-test was used to analyze whether there was a significant difference between experimental and control groups' PHSCCS six-months and one-year follow-up test scores and the posttest scores. According to the results of the analysis, no significant difference was found between PHSCCS posttest mean scores ($M = 63.60, S = 11.33$) and the six-month follow-up test mean scores ($M = 61.87, S = 12.42$) of the experimental group ($t_{39} = 1.13, p > .05$). There was no significant difference between the PHSCCS posttest mean scores and the one-year follow-up test mean scores ($M = 61.89, S = 12.03$) of the experimental group ($t_{38} = 1.29, p > .05$).

Discussion

As a result of analyzing the first hypothesis of the research, it was observed that the PSA psycho-education program was effective in increasing the knowledge and awareness levels of students about their personal safety and this effect continued for a year.

When the related literature is examined; it is seen that many training programs have been developed to prevent child sexual abuse and the results are consistent with the research conducted here (Çeçen-Eroğul & Kaf-Hasırcı, 2013; Kraizer, 1994; Hebert et al., 2001; Irmak et al., 2018; Lanning & Maasey-Stokes, 2006; Tutty, 2000; Wurtele & Owens, 1997). For example, Hebert et al. (2001) applied the personal safety training program called *ESCAPE*, which they adapted from the American Program for the Prevention of Attacks Against Children, to 133 students, 64 of which were first grade and 69 third grade. In the study, the effect of the education program on the change in children's knowledge and skills was evaluated with a scale (CKAQ) consisting of 11 questions, which measures children's personal safety knowledge and is similar to the measurement tool used in this study. Children were asked to show scenarios involving various abuse situations via video and to express their views on what to do. In addition, the families of the students participating in the training program were asked to evaluate the behavioral change in their children through the "Family Perception Scale". The results show that there is a great improvement in the personal safety knowledge and ability of displaying safe behavior of the children included in the education program. Tutty (2000) aimed to inform children about touching styles and to say no in the program she developed for 231 primary school students. In the effectiveness study of the program called *Who Tells*, she found that children developed skills to protect themselves and the level of knowledge on this subject increased significantly.

One of the limited number of studies on the prevention of child sexual abuse in Turkey was conducted by Çeçen-Eroğul and Kaf-Hasırcı (2013). In this study, a sexual abuse prevention program for 4th grade students was developed and its effectiveness was examined. It was found that the knowledge of good touch/bad touch of the students who participated in the training increased significantly compared to those who did not. The first study conducted with preschool children in Turkey belongs to Irmak et al. (2018). As a result of the research conducted by the researchers who developed the *I'm Learning to Protect Myself with Mica* training program with 200, 5-year-old children and their parents, the self-protection knowledge and skill scores of the children who participated in the training were found to be significantly higher than the scores of the children who did not. The results of the education program that Çıtak Tunç et al. (2018) applied to 83 pre-school children by adapting the education program developed by Wurthele (2007) to Turkish children also indicate that children's knowledge of protection from abuse has increased. The results of the education programs in the Turkish and foreign literature are in line with the results of the study here. In summary; The effectiveness studies of programs aiming to inform and empower children about abuse in order to prevent sexual abuse show that providing information to children about sexual abuse and ways of protection is effective in increasing children's knowledge and awareness on this issue.

The subjects focused on in the personal safety trainings developed for the protection of children from sexual abuse are mainly; safe/dangerous concepts, general safety rules to be followed at home and outside, protecting personal boundaries, distinguishing between good touch/bad touch and good secret/bad secret, safety rules about private parts of the body, recognizing risky situations, being able to say no in unsafe situations, It is the ability to ask for help from an adult that they trust in a disturbing situation (Rispen, Alema & Goudena, 1997). Within the scope of this research, similar topics are included in parallel with the literature.

It is thought that the methods and techniques used in addition to the themes covered in sexual abuse prevention programs have an important role in the effectiveness of the programs. Similar to the education programs reached, the methods mainly used in the education program developed in this research; case studies, question-answer, discussion, role playing, game and material development. According to the Kolb's model (1985), individuals learn by feeling with concrete experience, by monitoring with reflective observation, by thinking with concrete conceptualization and by making with through active experience and the learning styles of individuals consist of the components of these four areas. Similarly, Felder and Silverman (1988) have identified three styles of visual, auditory and kinesthetic in learning. These methods used in the training program allow students to learn, feel, think and do. The effectiveness of the program can be attributed to the variety of methods used.

As a result of the analysis of the second hypothesis of the research, which is stated that the “PSA psycho-education program significantly increases the self-esteem of children as assessed by PHSCCS”, it was observed that the PSA psycho-education program was not effective in increasing the self-esteem scores. In the literature, it was came across that education programs aimed at teaching children to protect themselves from abuse also developed students' self-esteem (MacIntyre & Carr, 1999; Kraizer, 1994; Kraizer, Witte & Fryer, 1989). When an evaluation is made on the reason for the difference between the research here and some of the research results in the literature, it can be argued that the development of the education program with a content that gives more practice and aiming to develop skills may affect the self-esteem more positively. It may be possible with more comprehensive and long-term training program. Because self-esteem development is included a long-term process that starts from infancy (Kohut, 1971). In the development of self-esteem, esteem of others, competence and self-factors are effective (Kohut, 1971). When considering these factors, respect others', positive emotional interaction of the person with others (Yörükoğlu, 2007), the ideas of others, related parent support, competence to cope with the problems that arise as they grow, self-control ability (Özkan, 1994), school success (Demo & Savin-Williams, 1983) are influential in the development of self-esteem. It is an understandable result that the six-session training program, which aims to raise awareness of personal safety in students, didn't increased the self-esteem of children, as the development of self-esteem depends on many factors.

Considering the discussions about the programs aimed at preventing sexual abuse in the literature, it was seen that the programs increased the fear and anxiety of children (Finkelhor & Dziuba-Leatherman, 1995). As a precaution in the education program here, activities aimed at empowering children were included in the content of the education program. For example, in one session, children's rights were studied and it was aimed to realize their rights as a child. The emphasis throughout the training is to emphasize the importance of asking a safe adult for help when faced with a situation that threatens their safety. During the sessions, each child was asked to identify the safe adult, and it was ensured that they were not alone. After the implementation of the training program, feedback was received from the interviews with the students at different times that the students felt good and safe. There was no observation shared by the classroom teacher that there was any negative effect. Therefore, it is thought that the education program does not cause a negative effect on children.

As a result, the PSA psycho-education program, which has been found to be effective in increasing students' awareness of personal security, is a psycho-education program that can be applied by psychological counselors in schools in order to increase the knowledge and awareness of primary school 3rd and 4th grade students about their personal safety.

Limitations

It is a limitation of the research that it was developed for the said grade levels, taking into account the developmental characteristics of only 3rd and 4th grade students. When it is desired to develop a program that covers all grade levels, two different types of curriculum content and measurement tools are needed because the cognitive characteristics and literacy skills of preschool and 1st and 2nd grade students are different from those of 3rd and 4th grade students. For this reason, it was preferred to work with the youngest age group who knew how to read and write. Half of the students in the experimental and control groups were fourth-year students and graduated from their schools shortly after the implementation of the curriculum. It was not easy to reach each student, as some students moved to a different city, as were many students attending different secondary schools. The fact that the follow-up tests were not applied to the students in the control group can be considered as a limitation due to the time limitations of the study.

Suggestions

The KGF psycho-education program developed in this study was found to be effective in raising the awareness of primary school 3rd and 4th grade students about their personal safety. In this context, it can be suggested that the KGF psycho-education program be implemented in schools by school counselors as a program to prevent sexual abuse by empowering children. KGFS developed within the scope of this research can be used as a measurement tool with proven validity and reliability to determine the level of awareness of 3rd and 4th

grade students about their personal safety. Education programs aimed at empowering children can be expanded by developing programs at different grade levels.

Author Contributions: This research is produced from the doctoral thesis of the first author under the supervision of the second author. In this context, the study was conducted together and the second author is the thesis advisor of this study.

Author Note: This research was produced from the doctoral thesis conducted by the first author under the supervision of the second author.

Funding Disclosure: The authors received no financial support for this paper's research, authorship, and/or publication.

Conflicts of Interest: The authors declare that they have no conflict of interest.

Data Availability: The dataset generated and analyzed during the current study are available from the corresponding author on request.

Ethical Approval: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and its later amendments or comparable ethical standards. This study was approved by the University of Ankara Ethics Committee on 1.05.2016

Informed Consent: Informed consent was obtained from all individual participants included in the study.

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The mediating role of difficulties in emotion regulation in the relationship between childhood trauma and resilience among university students

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ARTICLE HISTORY

Received: 15.03.23

Accepted: 14.08.23

KEYWORDS

Childhood trauma;
Difficulties in emotion
regulation; Resilience;
University students;
Mediation analysis.

ABSTRACT

Contrary to the common belief that traumatic experiences always lead to psychopathology, most individuals with such experiences can actually recover from their traumas. Factors leading to a person's resilience are countless, but one of the important factors explaining why some individuals do not develop any kind of pathology in the face of trauma is emotion regulation. The degree that a person experiences difficulty in emotion regulation is a predictive factor for his/her resilience in the face of adverse childhood events, such as abuse and neglect. The purpose of this study was to examine the relationships among childhood traumas, difficulties in emotion regulation, and resilience among university students. The analysis was conducted with 404 participants. The demographic form, Childhood Trauma Questionnaire, Difficulties in Emotion Regulation Questionnaire Brief Form, and Connor-Davidson Resilience Scale were used for data collection. The results confirmed that difficulties in emotion regulation mediated the relationship between childhood traumas and resilience. Childhood trauma affected the resilience of participants depending on the level of the difficulties they experienced in emotion regulation.

“Adverse childhood experiences (ACEs)” is an umbrella term referring to different types of negative life events experienced during childhood (Pearce et al., 2019). Those negative life experiences may include but are not restricted to physical, sexual, or emotional abuse, bullying, parental death or loss, neglect, and poverty (Felitti et al., 1998; cited in Pearce et al., 2019). Exposure to trauma, especially in early periods of life, has been considered as a risk factor for emotional well-being. Despite the increasing number of studies documenting the importance of those negative life experiences, the definition of childhood trauma in the literature has not been clearly defined. Such terms as neglect, abuse, and maltreatment have been used to identify childhood trauma, and sometimes those terms have been used interchangeably (Giardino et al., 2010). According to Terr (1995), childhood trauma is “the mental result of one sudden, external blow or a series of blows that render the young person temporarily helpless and break past ordinary coping and defensive operations” (p. 303). Within the scope of the definition of childhood trauma, maltreatment, other interpersonal violence (e.g., a friend or a family member being murdered or attacked), and non-interpersonal traumas (e.g., natural disasters, serious accidents, or injuries) have been investigated in different studies (e.g., Dunn et al., 2018). According to the World Health Organization (2020):

[childhood maltreatment] includes all types of physical and/or emotional ill-treatment, sexual abuse, neglect, negligence, and commercial or other exploitation, which results in actual or potential harm to the child's health, survival, development, or dignity in the context of a relationship of responsibility, trust, or power.

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Abuse and neglect, on the other hand, have been used to define either the commission or omission of certain acts toward the child. Specifically, “*abuse manifests when the child or adolescent’s caregiver fails to provide for the youth’s health and well-being either by causing an injury or, as in neglect, by not meeting a basic need.*” (Giardino et al., 2010, p. 3). While childhood trauma in nature can be a sudden, one-time event (such as the loss of a beloved one), it can also be a repeatedly occurring event (e.g., maltreatment) (Terr, 1995). According to Gilbert et al. (2009), childhood trauma can also be examined under two different types: intended and unintended. Therefore, the nature and the definition of childhood trauma, as it seems in the literature, reflects the complexity of this issue. In this study, childhood trauma has been conceptualized based on the study by Bernstein et al. (1994), which associated childhood trauma with experiences of abuse and neglect that occurred during childhood. Abuse or neglect has been experienced rarely in isolation, which means that individuals exposed to those negative life experiences generally experience more than one type of childhood trauma (Burns et al., 2012).

Childhood traumas occur in a period within which children do not have the necessary coping skills. Also, early negative life experiences might impact the brain development of a child, which may eventually impact the child’s cognitive, emotional, and behavioral development (DeBellis et al., 2005) because the child’s brain is still developing (Perry & Pollard, 1998). That is why traumas experienced during the early phases of life have more negative effects compared to traumas experienced later in life, and those traumas might have long-term effects on the lives of individuals (Şar et al., 2012). Experiencing different types of traumas repeatedly is associated with higher levels of risk for psychological problems (Gilbert et al., 2009). Children respond to and are affected by those negative life experiences in different ways (Perry & Pollard, 1998). In a study conducted by Bertele et al. (2022), a high correlation between childhood maltreatment and borderline personality disorder was reported. In a study conducted with a Turkish sample (N=485), it was found that university students with the experience of childhood traumas had significantly higher scores in all Symptom Check List- 90 (SCL-90) subtests, and they had increased levels of dissociation (Aydin et al., 2009). The relationships between childhood traumas and post-traumatic stress disorder (Patock-Peckham et al., 2020), sexual problems (e.g., intimacy problem or pain during sex) (Talmon et al., 2022), depression (Chang et al., 2021), suicide attempt, self-mutilative behavior (Zoroğlu et al., 2001), internet gaming (Shi et al., 2020), somatization problems (Güleç et al., 2013), obesity (Hemmingsson et al., 2014), conduct problems, and substance abuse (Grella et al., 2005) were mentioned.

Even if childhood traumas have been a significant risk factor for those problems, it is important to understand the mechanisms that lead to a person’s developing psychological problems in the first place (Bertele et al., 2022) as well as the protective factors helping individuals bounce back from those negative life experiences to identify the preventive-based interventions (McLaughlin & Lambert, 2017). In fact, the ability to cope with difficulties in life exists in varying degrees among different individuals. As the research studies mentioned above show some individuals might experience more serious problems than some others. The current knowledge demonstrates that some individuals are better at handling the difficulties in life and adapting themselves to those life challenges. In the current literature, “resilience” has been a significant term to understand those individuals. Masten (2001) stated that resilience is the term used to understand the positive results for a person who has experienced a trauma even though s/he experiences a serious threat to his/her development and adaptation. In a different definition of resilience, it is a dynamic process including the positive adaptation of a traumatized person who has had severe life experiences (Luthar et al., 2000). Stewart et al. (1997) defined resilience “*as the capability of individuals to cope successfully in the face of significant change, adversity, or risk. This capability changes over time and is enhanced by protective factors in the individual and the environment*” (p. 22).

In the review study conducted by Herrman et al. (2011), it was emphasized that the definition of resilience has changed over time. However, resilience has been associated basically with flexibility, positive adaptation, or the protection of the psychological well-being despite all difficulties, or the reacquisition of psychological health (Herrman et al., 2011). Kararmak (2010) expressed that even though at the beginning of resilience studies, children and adolescents were the subjects of those studies, recently it has been admitted that not only children and adolescents, but every individual in different life stages experiencing various kinds of problems could become resilient.

In the face of childhood adversity, whether resilience could develop or not depends on the protective and risk factors surrounding the individual (McLaughlin & Lambert, 2017). According to McLaughlin and Lambert (2017), trauma-exposed children experience social information processing biases, altered emotional learning, elevated emotional reactivity, and difficulties in emotion regulation. A person's capacity for emotion regulation was found to be a protective factor for different psychological problems (Kim & Cichetti, 2010). Emotion regulation is defined by Thompson (1994) as a set of processes that help an individual reach his/her goals that are either extrinsic or intrinsic and are used to monitor, evaluate, and modify emotional reactions of individuals. Similarly, Gross (1998) states that emotion regulation is a process that influences what emotions people have, when and how they experience them, and how they express them. In this research, Gratz and Roemer's (2004) conceptualization of emotion regulation has been preferred, and as reported by them, it involves *"awareness and understanding of emotions, acceptance of emotions, ability to control impulsive behaviors and behave in accordance with desired goals when experiencing negative emotions, and ability to use situationally appropriate emotion regulation strategies flexibly to modulate emotional responses as desired in order to meet individual goals and situational demands"* (p. 42-43).

Because any difficulty or problem in emotion regulation may make it difficult to disengage from the emotional content of trauma-specific experiences (McLaughlin & Lambert, 2017), it is expected that trauma-exposed children would have further social, psychological, or physical problems in the future. For example, difficulty in emotion regulation might predict depressive symptoms (Aldao et al., 2010), contributes to the continuation of anxiety disorders (Berking & Wupperman, 2012), is related to Internet addiction problems (Tsai et al., 2020), is higher among individuals with eating disorders (binge eating, anorexia, etc.) (Brockmeyer et al., 2014), and is associated with dating violence perpetration (Shorey et al., 2011). In a study conducted by Subic-Wrana et al. (2010), it was found that the patients with somatoform disorders had significantly higher emotional awareness deficits than the healthy control group.

The prevalence of childhood traumas has been documented in different studies. In a study conducted in Turkey (Dereboy et al., 2018), it was found that in a sample of 635 university students, 31.3% of them had experienced childhood trauma. In a different study with university students, the rate of childhood trauma experiences was found to be 87.9% (N=536) (Güloğlu et al., 2016). Similarly, the current literature in different contexts has reported the high prevalence of childhood traumas worldwide (e.g., Pan et al., 2021). Therefore, while childhood traumas are significant life events impacting a great number of individuals negatively, as it is understood by different studies, not every individual who has experienced a trauma during childhood develops pathology in their future lives. One of the protective factors for individuals faced with trauma is emotion regulation. Individuals who can regulate their emotions are more likely to experience resilience, which was conceptualized as bouncing back from adverse life events. Despite the significance of understanding of childhood trauma experiences in Turkey, the studies conducted so far have just examined the relationships between childhood traumas and resilience (i.e., Doğruer et al., 2022), or childhood traumas and difficulties in emotion regulation (Akpınar & Gümüş-Demir, 2022; Tüccaroğlu, 2021). However, the relationships among three variables (childhood trauma, difficulties in emotion regulation, and resilience) have not been studied. This study hereby provides the literature with insight into the mediating role of difficulties in emotion regulation in the relationship between childhood trauma and resilience.

Current Study

As expressed above, the relationships between childhood trauma and resilience (e.g., Flores et al., 2005), childhood trauma and difficulties in emotion regulation (e.g., Huh et al., 2017), and emotion regulation and resilience (e.g., Mestre et al., 2017) have been examined in various studies. The purpose of this study was to understand the mediating role of difficulties in emotion regulation in the relationship between childhood trauma and resilience. The hypotheses of the study were as follows:

1. Childhood trauma questionnaire total score differs based on the participants' gender, mother's and father's educational level, socioeconomic status (SES) level of the participants' families, and psychiatric diagnosis of the participants.
2. Childhood traumas are related to resilience through difficulties of emotion regulation.

Methods

Participants of the Study

The ethical permission was taken from Maltepe University Ethics Committee (acceptance number: 2022/01-03). For this research, a convenience sampling strategy was preferred. Being at an age between 18 and 25 and being a university student were admission/recruitment criteria. The data collection period was between January and March 2022. Both online data collection forms through Google Forms and paper forms were used. When the data with missing values ($n=42$) and with outliers ($n=10$) were removed, the remaining 404 data were used for analysis. Of the participants, 259 were female, and 145 were male. When the psychiatric diagnosis of the participants was screened, it was found that 46 of them (%11.4) had had a psychiatric diagnosis (e.g., attention deficit hyperactivity disorder, anxiety disorder, depression, or personality disorder) in their life at least once. The data were collected in a private university in Istanbul. For further information regarding the demographic characteristics of the participants, please see Table 1.

Table 1. Demographic characteristics of the participants

<i>Variable</i>	<i>Group</i>	<i>f</i>	<i>%</i>
Gender	Female	259	64.1
	Male	145	35.9
Mother's Education Level	Illiterate-Primary School	120	29.7
	Secondary School	76	18.8
	High School	119	29.5
	Graduate Level and Higher	89	22.0
Father's Education Level	Illiterate-Primary School	82	20.3
	Secondary School	76	18.8
	High School	127	31.4
	Graduate Level and Higher	119	29.5
SES	Low	19	4.7
	Middle	345	85.4
	High	40	9.9
Psychiatric Diagnosis	Yes	46	11.4
	No	358	88.6

Data Collection Instruments

Demographic form. This form included questions about the participant's age, education level, mother's and father's education level, the socioeconomic status of his/her family based on his/her perception, and whether the participant had been diagnosed with a disorder or illness by a psychiatrist, and if yes, the label of the diagnosis.

The Turkish childhood trauma questionnaire (CTQ-33). This questionnaire gathers data about childhood traumas retrospectively. The original form was developed by Bernstein et al. (1994), and it included four sub-tests measuring different childhood traumas: physical and emotional abuse, emotional neglect, sexual abuse, and physical neglect. The Cronbach Alpha levels of the original questionnaire's subtests changed between 0.79 and 0.94. The Cronbach Alpha level of CTQ total was 0.95. Test-retest reliability was also high: the interest interval was found to be as 0.88 (Bernstein et al., 1994). The original form was translated by Şar et al. in 2012. Şar et al. (2021) revised this inventory regarding the sentence structures of the items to make it more culture sensitive. They also added over-protection and over-control sub-tests to this test and named this new version as CTQ-33 (Şar et al., 2021). The original CTQ did not include an over-protection or an over-control sub-test. CTQ-33 is a self-report instrument with a 5-Likert structure evaluating abuse and neglect experiences of childhood and adolescence (experiences before the age of 20) under the sub-tests of sexual abuse, emotional abuse, physical abuse, emotional neglect, physical neglect, overprotection and overcontrol, and minimization. The Cronbach alpha score of CTQ-33 was 0.87 (Şar et al., 2021). The Cronbach alpha score for this research was found to be 0.80.

Difficulties in emotion regulation scale-brief form (DERS-16). Gratz and Roemer (2004) developed DERS to assess the different dimensions of emotion regulation difficulties that affect the psychological functioning of an individual in a comprehensive way. The 16-item self-report DERS-16 was developed by Bjureberg et al. (2016) by decreasing the number of items in DERS, which had 36 items rated on a 5-Likert scale. DERS-16 has five subtests measuring the different emotion regulation difficulties. The sub-tests were namely clarity (lack of emotional clarity), goals (difficulties in goal-directed behaviors), impulse (difficulties in impulse control), strategies (limited access to different emotion regulation strategies), and non-acceptance (non-accepting emotional responses). The higher score in the form means higher levels of difficulties in emotion regulation. Cronbach alpha level of the original study was 0.92, and test-retest reliability was found to be as $r=0.85$ (Bjureberg et al., 2016). Yiğit and Guzey-Yiğit (2019) adapted the scale into Turkish and reported high Cronbach alpha levels as the original study: for total scale, it was 0.92, and for sub-tests, it ranged from 0.78 to 0.84 (Yiğit & Guzey-Yiğit, 2019). In this study, Cronbach alpha level was found to be 0.93.

Connor–Davidson resilience scale (CD-RISC). Developed by Connor and Davidson (2003) as an attempt to measure resilience in individuals coming from different populations, the original scale had a 5-factor structure: personal competence, high standards, and tenacity; trust in one's instincts, tolerance of negative affect, and strengthening effects of stress; positive acceptance of change and secure relationships with others; control; and spiritual influences. However, the Turkish adaptation of the study, conducted by Karairmak (2010), confirmed a 3-factor structure: tenacity and personal competence, tolerance of negative affect, and tendency toward spirituality. There are 25 items rated on a 5-Likert scale. The higher scores indicated higher resilience. The Turkish adaptation of the scale gave a good reliability with a Cronbach Alpha of 0.92 (Karairmak, 2010). The current study evaluated the Cronbach Alpha level 0.89.

Data Analysis

Before beginning the data analysis process, the normality of the data was checked for childhood trauma questionnaire, difficulties in emotion regulation scale, and Connor-Davidson Resilience Scale. Leech et al. (2015) asserted that if a variable's skewness scores were between -1 and +1, the data was normally distributed. When 414 participants' data were examined, it was observed that some extreme outliers were affecting the childhood trauma questionnaire's skewness. The scale scores of the students were first converted into standardized Z scores, and then the scores of individuals with a value of 3.29 and above were deleted. According to Gürbüz (2019), it is a reasonable approach to exclude those with standardized Z values ± 2.5 if the number of participants is lower than 200, and ± 3.29 if the number of participants is higher than 200 from the data set (Gürbüz, 2019). A total of 10 data were deleted from the data set, and the number of samples was accepted as 404 instead of 414. Descriptive statistics and skewness coefficients of participants' childhood trauma, resilience, and emotion regulation difficulty scores are presented in Table 2.

Table 2. Descriptive statistics and skewness coefficients of the participants' childhood trauma, resilience, and emotion regulation difficulty scores (N=404).

Score	Minimum	Maximum	Mean	SD	Skewness	
					Value	Std. Error
Resilience	17	99	69,32	13,99	-0,41	0,12
Difficulties in Emotion Regulation	16	80	39,75	13,43	0,66	0,12
Childhood Trauma	30	88	44,77	11,81	1,00	0,12

For demographic analysis, t-test and ANOVA statistics SPSS 26.0 were used. Post-hoc analysis was conducted by using Scheffe statistics. For mediation analysis, PROCESS Makro v. 4.1 (Hayes, 2022) was added to SPSS 26.0.

Results

Preliminary analysis

The first research question was related to childhood trauma total score statistics regarding the demographic variables of gender, age, mother's and father's educational level, SES level, and psychiatric diagnosis. For this

research question, t-test and ANOVA analysis were conducted. As Table 3 shows, there was no significant difference between female ($M=44.74$, $SD=11.99$) and male ($M=45.24$, $SD=12.73$) participants regarding CCTQ-33 total score ($p=0.70$). Similarly, there were no significant differences among the participants' childhood trauma total scores in terms of their mother's and father's education level (for the mother's education level $p=0.677$ and the father's education level $p=0.181$). Another important finding was the significant difference between participants who had a psychiatric diagnosis ($M=51.76$, $SD=14.45$) and those who did not have one ($M=44.04$, $SD=11.43$) ($t(401)=-4.299$, $p<0.05$). Because the low SES group had only 19 participants, a non-parametric test was conducted for the SES variable regarding CTQ-33 total scores. The Kruskal-Wallis test result showed that there were no significant differences among low ($M=46.89$), middle ($M=45.01$), and high ($M=43.23$) SES groups regarding their CTQ-33 scores, $H(2)=3.30$, $p=.19$.

Table 3. Demographic characteristics of the participants and t-test, ANOVA, and Kruskal-Wallis results based on CTQ-33 Total score.

Variable	Groups	N	%	M	SD	Test Result
Gender	Female	259	64.1	44.74	11.99	$t(402)=.400$, $p=0.70$
	Male	145	35.9	45.24	12.73	
Mother's Education Level	Illiterate-Primary School	120	29.7	44.72	10.00	$F(3,400)=0.507$, $p=0.677$
	Secondary School	76	18.8	45.89	11.85	
	High School	119	29.5	43.99	13.18	
	Graduate level and higher	89	22.0	45.61	13.20	
Father's Education Level	Illiterate-Primary School	82	20.3	46.95	10.99	$F(3,400)=1.635$, $p=0.181$
	Secondary School	76	18.8	44.64	10.98	
	High School	127	31.4	43.30	11.28	
	Graduate level and higher	119	29.5	45.43	13.93	
SES Level	Low	19	4.7	46.89	11.09	$H(2)=3.30$, $p=.19$.
	Middle	345	85.4	45.01	11.91	
	High	40	9.9	43.23	13.69	
Psychiatric Diagnosis	Yes	46	11.4	51.76	14.45	$t(401)=-4.299$, $p<0.05^*$
	No	358	88.6	44.04	11.43	

* $p<0.05$

To determine the relationships between the variables of the study, Pearson correlation analysis was conducted.

Table 4. Pearson correlation coefficients of scales.

	CTQ-33	DERS-16	CD-RISC
CTQ-33	1.00		
DERS-16	,425**	1.00	
CD-RISC	-,285**	-,389**	1.00

** $p<.01$

As Table 4 above demonstrates, childhood trauma scale (CTQ-33) scores were correlated significantly with Difficulties in Emotion Regulation Total Score (DERS-16) ($r=,425$, $p<0.05$), and Connor-Davidson Resilience Scale Total Score (CD-RISC) ($r=-,285$, $p<0.05$). Accordingly, when childhood trauma scores increase, difficulties in emotion regulation increase and resilience scores decrease. In addition, there was a significant negative correlation between difficulties in emotion regulation and resilience scores ($r=-,389$, $p<0.05$). Therefore, when the participants' difficulties in emotion regulation increase, their resilience scores decrease.

The mediating role of difficulties in emotion regulation in the relationship between childhood trauma and resilience

In order to test the mediation role of difficulties in emotion regulation in the relationship between childhood traumas and resilience, the regression analysis was conducted. In the regression analysis conducted with the PROCESS Macro v.4.1. (Hayes, 2022) that was embedded into SPSS 26.0. 5.000, resampling options were selected with the bootstrap technique at the 95% confidence interval, and the results were summarized in Table 5 and Figure 1 presented below.

Table 5. The mediating role of difficulties in emotion regulation in the relationship between childhood trauma and resilience.

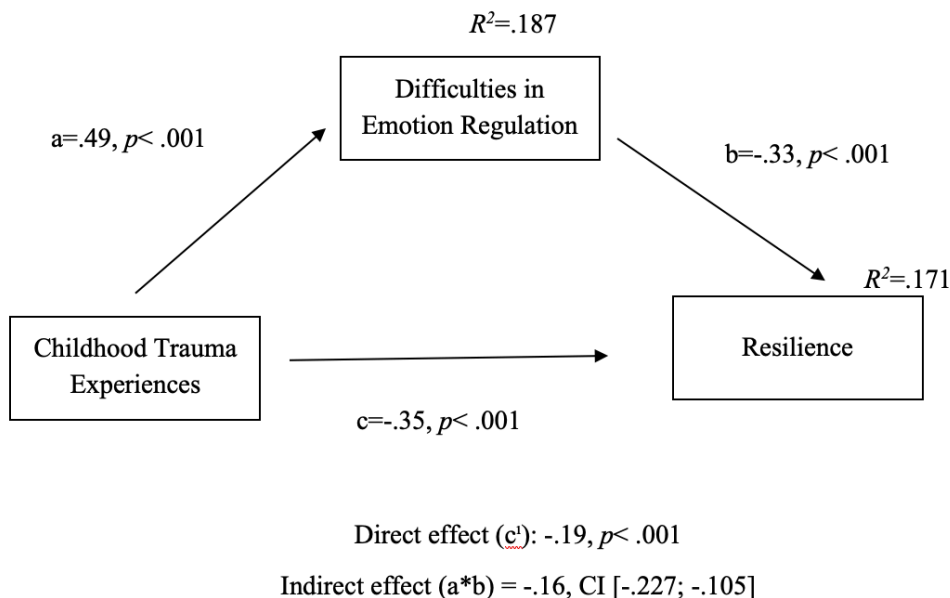
Predictor Variables	Dependent Variables			
	Difficulties in Emotion Regulation (M)		Resilience (Y)	
	<i>b</i>	<i>Standard Error</i>	<i>b</i>	<i>Standard Error</i>
Childhood Trauma (X)	.49***	.05	-.19**	.06
Difficulties in Emotion Regulation (M)	-	-	-.33***	.05
Constant	17.75***	2.37	90.92	2.66

$R^2=.187$ $R^2=.171$
 $F(1, 402)=92.24; p<.001$ $F(2, 401)=41.39; p<.001$

Indirect effect (K^2)=.139

** $p<.01$, *** $p<.001$, Unstandardized beta (*b*) coefficients have been reported. The R^2 value represents the variance explained.

Figure 1. Difficulties in emotion regulation mediates the relationship between childhood trauma experiences and resilience.



Note. a = Independent variable (IV) to Mediator (M), b = direct effect of M on Dependent variable (DV) while controlling for X, c = total effect of IV on DV, c' = direct effect of IV on DV while controlling for M. In the figure, unstandardized beta (*b*) coefficients were reported. R2 demonstrates the explained variance. p is significant at 0.001 level.

In order to confirm the hypothesis of the study in mediation analysis using the bootstrapping technique, the 95% confidence interval (CI) values obtained as a result of the analysis should not include the zero (0) value in order to support the research hypothesis. (Gürbüz, 2019). We found that childhood trauma experiences had a significant impact on resilience ($B=-.35, p<.001$) (path c, Figure 1). Also, childhood trauma experiences were significantly associated with difficulties in emotion regulation ($B=.49, p<.001$) (path a, Figure 1). Lastly, having difficulties in emotion regulation was found to be a significant predictor of resilience ($B=-.33, p<.001$) The mediation analysis results showed that difficulties in emotion regulation had a significant and negative impact on resilience ($B=-.16, \%95 CI [-.227; -.105]$) in that CI did not include any zero (0) point. The mediating role of difficulties in emotion regulation on the relationship between childhood traumas and resilience was

found to be as moderate ($K^2=.139$). According to Preacher and Kelly (2011), if K^2 is zero, then there is no mediation; if K^2 is 1, it means the highest mediation level. A K^2 value close to .01 indicates a small effect, a K^2 value close to .09 indicates a medium one, and a K^2 value of .25 and above indicates a large one for mediation analysis (Preacher & Kelley, 2011). Consequently, it was confirmed that the difficulties in emotion regulation had mediated the relationship between childhood trauma experiences and resilience in a sample of university students.

Discussion

Childhood traumas do not only affect the period of time they are experienced in. Because of the long-term effects of abuse and neglect experiences, the effects of those negative life events could be traced in adolescence, during university period, or even adulthood. In this study, because of the importance of the period, university students were chosen as the target population. This study showed that there were significant differences found between university students who had a psychiatric diagnosis and those who did not have such a diagnosis regarding the childhood trauma total score. This finding is important in that it shows childhood trauma experiences are a risk factor for psychiatric problems in the future. Similar to the findings of this research, Collishaw et al. (2007) showed that compared to individuals without any abuse experience, individuals with childhood abuse experience had higher levels of adult psychopathology. Similarly, in different studies, childhood trauma's being a risk factor for different psychological problems has been emphasized (i.e., Kaya, 2020). Therefore, childhood traumas are risk factors not only during childhood but also for emerging adulthood as they increase the vulnerability for psychopathology.

The examination of childhood traumas based on demographic variables provides valuable information regarding finding the target group for preventive interventions. In this study, there was no significant difference detected between male and female participants' childhood trauma scores. Some other studies in the literature confirmed that childhood trauma experiences were not different between males and females (e.g., Bostancı et., 2006, Çavuşoğlu, 2020). The US Department of Health & Human Services Children's Bureau (2022) has been collecting data every year about childhood trauma incidences, and their report also stated that the male and female percentages of childhood trauma were very close to each other (48.1 and 51.6% respectively). In order to understand childhood traumas in a specific culture, it is important to examine the parenting practices and expectations from children as well as the value of children within a given culture. According to Kağıtçıbaşı and Ataca (2005), the value of a child is described as "the sum total of psychological, social, and economic costs and benefits that parents derive from having children" (p.318). Because parents reflect the culture in which they live, examination of their expectations would give clues about the value that a culture gives for children. In the study about the value of children, it was found that parents had more psychological expectations from their children in the 2000s compared to the 1970s. Despite the increase in the psychological value of children, for children the most desired quality was still "being a good person," while "being an independent person" was the least desired quality (Kağıtçıbaşı & Ataca, 2005). Therefore, by the current research authors, it was commented that regardless of the gender of the child, the parents might have been using the same parenting practices because they want their children to be obedient to their rules and they want them to fulfill their wishes and expectations. Also, what kind of values are attributed to children has probably affected the parenting practices, and parents may have the similar parenting attitudes (i.e., same rules, boundary setting) affecting the occurrence of childhood traumas experienced by the male and female participants.

In this study, the childhood trauma scores of the participants did not differ based on their mother's and father's education level, either. Similar findings have been found in different research findings (e.g., Zeren et., 2012). However, low education level of parents has been found to be a risk factor for childhood trauma incidence in different studies (Derakhshanpour et al., 2017; Örsel et., 2010; Thornberry et al., 2014). In this study, childhood trauma was evaluated with a total score. On the other hand, when childhood traumas are examined as physical, emotional, sexual abuse, and neglect subdimensions, the education level of parents may be a significant factor in increasing or decreasing some specific types of abuse or neglect experiences of children. In a study conducted in Iran (Derakhshanpour et al., 2017), it was emphasized that among educated parents physical abuse toward their children was more common than neglect. On the other hand, neglect experiences among children who had parents with a low level of education was more common (Derakhshanpour et al., 2017).

Similarly, participants' childhood neglect and abuse experiences did not differ based on their SES levels. A similar finding was expressed in a different study (Bostancı et al., 2016). As Oakes and Andrade (2017) suggested, SES is about the individual's access to resources such as material resources (e.g., goods or money), power, friendship networks, educational opportunities, and even leisure time. Therefore, asking about the mother's and father's education level and income level of the participants may not have given the whole status of the participants' SES. Indeed, assessing the SES level of participants is not an easy target for researchers. Even though in this research, the mother's and father's education level was taken into consideration, the SES means more than that (Jeynes, 2002). Asking the participants' perceptions regarding their families' income level may not give the real SES level of their families.

The present study aimed to build upon prior work on childhood trauma by examining the mediating role of difficulties in emotion regulation between the relationship of childhood traumas and resilience among a sample of university students. This mediation analysis provided evidence that difficulties in emotion regulation had mediated the relationship between childhood traumas and resilience. One of the results that emerged from the resilience studies is that negative life experiences do not always have to affect individuals adversely (Howell & Miller-Graff, 2014). Identifying risk and protective factors explaining childhood trauma is important for preventive interventions (McLaughlin & Lambert, 2017). Protective factors leading to an individual's resilience in the face of a negative life event are generally examined as individual factors (e.g., personality, coping, or self-efficacy), family-level factors (e.g., supportive relationships or stable caregiving) as well as community level factors (e.g., peer relationships, non-family member social support, or religion) (Afifi & MacMillan, 2011). Specifically in this study, difficulty in emotion regulation was identified as a risk factor for resilience among university students who had childhood trauma.

Similar to our finding, a considerable amount of research on childhood trauma has shown a positive relationship between childhood traumas and deficits in emotion regulation (i.e., Michopoulos et al., 2015). Among a group of participants diagnosed with major depressive disorder, the relationship between deficits in emotion regulation strategies and depression was documented. Both depression severity and depression lifetime persistence were associated with deficits in emotion regulation (Hopfinger et al., 2016). In a different study comparing 141 maltreated and 87 non-maltreated children, it was found that maltreated children who had less adaptive emotion regulation were more prone to having emotional negativity as well as more contextually unrelated emotions (Shields & Cicchetti, 1998).

As understood, individuals with childhood traumas have more problems in emotion regulation. When interventions that aim to improve emotion regulation strategies were targeted, it was documented that it would be possible to lessen the negative effects of childhood traumas. For instance, Cameron et al. (2018) proved that a 12-week intervention program with a pre-test and post-test design focusing on emotion regulation, resilience, self-awareness, and social functioning could be effective for individuals with adverse childhood experiences regarding improvements in reappraisal and could lead to a decrease in suppression and emotional symptoms, such as depressive symptoms or stress (Cameron et al., 2018). Therefore, childhood traumas' negative consequences on the survivors may be lessened by using emotion regulation interventions.

Childhood trauma experiences are prevalent all over the world. Understanding protective factors affecting those survivors could provide insight into intervention strategies while working with childhood trauma survivors. That is why, in this study, the relationships between childhood trauma, difficulties in emotion regulation, and resilience were studied. One of the most important findings was that difficulties in emotion regulation mediated the relationship between childhood traumas and resilience. Childhood traumas affected the resilience of participants depending on the level of the difficulties they experienced in emotion regulation. Therefore, emotion regulation intervention strategies could be used to help childhood trauma survivors to increase their resilience.

Limitations of the Study

The mediation model included only one mediator variable (difficulties in emotion regulation) so only partial mediation was detected. The model in this study should be improved in further studies to understand the resilience mechanism after childhood traumas.

The age at which the participants experienced trauma was not asked. In fact, in different studies, the importance of age was expressed: the younger ages were significantly at higher risk of developing a disorder after experiencing trauma (e.g., McDermott et al., 2005).

SES levels of participants' families were identified based on the perceptions of the participants. Rather than asking the perceptions of the participants, the actual income level of the families could have given more detailed information. Also, to understand the SES level of the families, questions related to family-related factors should have been directed to the participants.

Suggestions

The mediation model should be tested with different participants with larger samples. In addition, the severity of childhood trauma and the duration or chronicity of trauma should be investigated regarding the effect of complex traumas on children (Thompson et al., 2014). As stated above, in this study, the mother's and father's education level and SES of the family of the participants were asked, and the group analysis showed that there were no significant differences in childhood trauma questionnaires based on these three variables. However, in some studies, it was explained that mother-father relationship status as well as family relationship could be an important factor in understanding childhood trauma. What kind of support the child received from his/her mother and father after the childhood abuse and neglect experience could be a critical factor to consider. Also, relationships with the mother and the father are significant for emotion regulation skills. Furthermore, important family dynamics (e.g., communication styles or relationship quality) apart from the mother's and the father's education level and SES of the family could be a risk or protective factor for the resilience of the child. Therefore, more family-related factors should be examined in further studies.

Given the critical role of the difficulties in emotion regulation in the relationship between childhood traumas and resilience, practitioners working with clients with childhood trauma should focus on the emotion regulation strategies of their clients so that they would have a chance to improve their resilience levels.

In this research, childhood trauma scores were used as a total score for the analysis. However, in the literature, there were some studies examining the effect of different childhood traumas on different psychological problems. For instance, Kuo et al. (2015) have examined the effect of emotional abuse on borderline personality disorder symptoms, and they found that although different forms of childhood abuse were related to borderline symptoms, especially emotional abuse had the biggest impact (Kuo et al., 2015). That is why examining different childhood traumas and their specific impacts on different populations might be critical in understanding the nature and consequences of childhood trauma.

Author Contributions:

Funding Disclosure: No funding was provided for this study.

Conflicts 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 data that support the findings of this study are available on request from the corresponding author.

Ethics Approval and Consent to Participate: The ethical permission was taken from Maltepe University Ethics Committee (acceptance number: 2022/01-03). All participants signed an informed consent form and were volunteer to participate in the research.

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Post-Divorce Emotion/Social Adjustment of Women: Effectiveness of a Psycho-Education Program Based on Cognitive Behavioral Theory

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ARTICLE HISTORY

Received: 15.03.23

Accepted: 01.08.23

KEYWORDS

Divorced Women; Post-Divorce Adjustment; Cognitive Behavioral Theory.

ABSTRACT

The study aimed to investigate the effectiveness of the psycho-education program based on the Cognitive Behavioral Theory (CBT) on the emotional/social adjustment levels of newly divorced women. The research was carried out with a true experimental design with a control group in which pre-test-post-test and follow-up measurements were made. The research started with 15 newly divorced women in both groups. However, after the group was completed, 12 women remained in the experimental group and 11 women in the control group. Data collection tools are Fisher Divorce/Separation Adjustment Scale-Short Form and Personal Information Questionnaire. The results of the study reveal that the psychoeducation program based on CBT is effective in increasing the post-divorce adjustment of women. In addition, the psycho-education program was found to be effective in increasing women's self-worth and reducing grief reactions, disentanglement from relationship, and anger levels. Such a difference was not observed in the control group. At the same time, the effectiveness of the psycho-educational program continued in the follow-up measurements five weeks later.

It can be stated that the number of divorced couples has increased after the middle of the 20th century, especially with important divorce law reforms. In this context, it can be stated that divorce rates are lower in Turkey compared to some European countries where divorce rates are high (Eurostat,2023). However, it is noteworthy that the number of divorced couples in Turkey has increased, especially in recent years. Although the lockdown measures implemented in Turkey in the second quarter of 2020 due to the COVID-19 pandemic caused a periodic decrease in divorce rates, the number of divorces increased above the previous year's data with the abolition of the restrictions (TUİK, 2020). On the other hand, the increase in domestic violence incidents and thus, the rise in the desire to end marriage during the pandemic period have drawn attention (Şahin et al., 2021; Vora et al., 2020). The 2021 data from the Turkish Statistical Institute (TUİK) show that the increase in divorce rates continues and that 54.5% of divorces occur within the first 10 years of marriage (TUİK, 2021). In light of this information, it can be predicted that the recent increase in divorce rates will continue over the years.

Divorce can be defined as the legal ending of a marriage. It is claimed that divorce is not an instantaneous, situation, but rather a complex transition process that includes at least one of the parties considering the end of the marriage as an option, making an official divorce decision, and adapting to the new life (Amato, 2010; Asanjarani et al., 2018; Bohannan, 1970; Dahl et al., 2015; Erdim & Ergün, 2016). In this regard, one of the

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life tasks of the individual after divorce, which can cause radical changes in the individual's life, can be the reconstruction of this disrupted balance. Besides, many studies show that divorce generally has negative effects. (Amato, 2010; Cohen & Weitzman, 2016; Hughes & Waite, 2009; Krumrei et al., 2007). In this context, it has been stated that there is an increase in alcohol abuse, perceived stress levels, and some psychological problems including depression and anxiety, and a decrease in perceived life purposes of divorced individuals compared to married individuals (Amato, 2010; Bierman et al., 2006; Williams & Dunne-Bryant, 2006). It can be said that field experts draw attention to these possible negative effects of divorce and the concept of adjustment after divorce.

Despite the definitions of adjustment after divorce differ, it is seen that some points are especially emphasized in the process of building a new life. Based on the definitions made in the relevant literature, post-divorce adjustment has a multidimensional nature, including factors such as completing the grieving process, recovering from emotional burdens, individualization, creating a new social environment, and an increase in psychological well-being with the reconstruction of the disturbed balance, and occurs over time (Asanjarani et al., 2018; Chan Lai Cheng & Preifer, 2015; Diedric, 1991; Fisher, 1976; Kitson & Morgan, 1990; Krumrei et al., 2007; Madden-Derdich & Arditto, 1999; Robinson, 2005; Wang & Amato, 2000; Weiss, 1975). Demographic, relational, and legal variables can be effective in this adjustment process. Moreover, some individuals are exposed to more intense and many secondary stresses after divorce due to demographic and structural features, and therefore, adjustment processes can be more difficult (Amato, 2010; Diedrick, 1991; Williams & Dunne-Bryant, 2006). Relevant studies have revealed that single mothers are more exposed to secondary stress factors associated with the termination of marriage, such as relationships with ex-spouses, relationships with children, financial issues, change in work and living spaces, and social pressure or stigma, and eventually, adjustment may be more difficult (Dahl et al., 2015; Duffy et al., 2002; Hardesty et al., 2019; Holden & Smock, 1991; İlhan, 2020; Konstam et al., 2016; Uyar & Yıldırım, 2022; Williams & Dunne-Bryant, 2006). Having a child is a secondary stress agent in the post-divorce adjustment process whereas having custody of a younger child, who needs more parental care, is considered a situation that makes adjustment more difficult (Williams & Dunne-Bryant, 2006). In light of all this information, it can be stated that divorced women who have taken custody of an early-age child are in the risky group in the process of building their new life and need intense psychological support.

Although the evaluations about the phenomenon of divorce have differed during the historical process, today divorce is not considered the end of the family, on the contrary, it is thought that the family enters a new reconstruction process, since the parenting relationships are permanent and continuous, even if the marriage ends. In this context, various mental health services are provided in order to ensure the mental balance that is disturbed by the divorce, facilitate the adjustment of the divorced individual, and ensure positive development. In international applications, there are compulsory parenting education programs, especially for divorced individuals with early-age children (Amato, 2010; Ferraro et al., 2016; Jewell et al., 2017). Similarly, with the increase in divorce rates, protective, preventive, or intervention group studies are widely carried out with divorced individuals (Asadpour & Hosseini, 2018; Asanjarani et al., 2018; Canbulat ve Aladağ, 2023; Hasanvandi et al., 2013; Mohamadi & Khanjani Veshki, 2020; Shooshtari et al., 2016; Vukalovich & Caltabiano, 2008; Quinney & Fouts, 2003; Zohrabniya et al, 2022). In Turkey, especially in recent years, group practices are increasingly carried out with divorced individuals (Bulut Ateş, 2015; Canbulat ve Aladağ, 2023; Güzel, 2020; Halisdemir, 2020; Karadeniz Özbek, 2019; Öngider, 2013).

It is remarkable that different therapy approaches are used in group studies conducted with divorced individuals (Alimoradi et al., 2016; Ghorbani-Amir et al., 2019; Bulut Ateş, 2015; Canbulat ve Aladağ, 2023; Güzel, 2020; Öngider, 2013; Saadati & Lashani, 2013; Saadati et al., 2017; Zohrabniya et al, 2022). Also, cognitive behavioral therapy is widely used by researchers.

According to the CBT, the aim of the therapy process is basically to study the meaning that the individual attributes to events and circumstances that have the probable to influence one's emotional along with behavioral reactions (cognitive evaluation). According to Beck developed the theory, the emotional and behavioral problems experienced by the individual arise from a realistic, appropriate, and unconstructive

mindset. As a matter of fact, the emotional and behavioral problems of the individual are eliminated as this problematic mindset of the individual is changed (Beck, 2014). Furthermore, the mutual relationship between dysfunctional thoughts and behavioral outcomes in CBT is emphasized and it has been claimed that the current cognitive structure is preserved with behaviors (Özdel, 2015). Therefore, the intervention areas of the psychological help process include cognitions and behaviors. In the literature of adjustment after divorce, there are studies examining the relationship of this phenomenon with cognitive and behavioral elements. As a matter of fact, some studies examine the relationship between adjustment and subjective perceptions (Chan Lai Cheng & Pfeifer, 2015; Gaffal, 2010; Yılmaz & Fişiloğlu, 2005; Sayan Karahan & Yıldırım, 2021; Shapiro, 1996), while some studies examine the relationship between behavioral elements such as coping with stress, communication skills, social functionality or setting new life goals (Bevino & Sharkin, 2003; Thomas & Ryan, 2008; Wang & Amato, 2000). Moreover, there are studies examining the effectiveness of CBT on adjustment levels, hopeless and loneliness, resilience and self-controlling strategies, self-esteem, self-efficacy, emotion regulation skills, metacognitive beliefs and rumination levels, and mental health of divorced women, especially in recent years (Alimoradi et al., 2016; Asadpour & Hosseini, 2018; Ghezelsefloo et al., 2019; Ghorbani-Amir et al., 2019; Shooshtari et al., 2016; Pyrsrayy et al., 2017; Zohrabniya et al., 2022). In conclusion, it can be suggested that the CBT, which prioritizes cognitive and behavioral interventions in the psychological help process, is an effective therapeutic approach to studying the phenomenon of post-divorce adjustment.

Divorce is a stressful life event that brings along radical changes in the dynamics of life and almost every individual will have difficulty adapting to the new life. However, due to some demographic and structural features, some individuals are more exposed to secondary stress factors, and their adjustment may be more difficult and get longer. Therefore, this study aimed to investigate the effectiveness of the CBT-based program, which was improve to increase the adjustment of divorced women, who have taken custody of their early-age children, to life after divorce. Toward this purpose, a response was sought to the question “Is the CBT-based psycho-education program significantly effective in increasing post-divorce adjustment of divorced women (total score and scores on each of the subdimensions of grief, disentanglement from relationship, anger, trust-intimacy, self-worth)?”

- 1.The post-test post-divorced adjustment level of the participants in the experimental group are significantly higher than their pre-test scores.
- 2.There is no significant difference between the pre-test, post-test, and follow-up post-divorced adjustment level of the participants in the control group.
- 3.The post-test post-divorced adjustment level of the participants in the experimental group are significantly higher than the post-test scores of the participants in the control group.
- 4.There is no significant difference between the mean post-test and follow-up scores of the participants in the experimental group regarding the post-divorced adjustment level.

Method

The research had a true experimental design. In true experimental designs, members are randomly assigned to groups (Fraenkel, Wallen & Hyun, 2012, p.270). Also, in this study, a participant pool was created from divorced women who met the application criteria for the group. Members were randomly assigned to groups. Follow-up measurements were performed to test the timewise effectiveness of the expected difference within and between the groups. In this context, pre-test, post-test and follow-up measurements were made in this research. There is a randomized control group. Consequently, the research was designed as an experimental study.

Participants

In this study, the inclusion criteria of the research were determined, based on the knowledge that adjustment to divorce takes approximately two years (Clarke-Stewart & Brentano, 2006; Lorenz et al., 1997) and that having a young child is a secondary stress factor that makes adjustment difficult (Williams & Dunne-Bryant, 2006). The inclusion criteria of the study (a) volunteering to participate in the research, (b) having completed

the official divorce case a maximum of two years ago, (c) having taken custody of child/children aged 0-10, and (d) having no clinical illness. The study started with 15 members in each group. After member losses, post-intervention measurements were made on 12 participants in the experimental group and 11 participants in the control group.

The age range of women in the experimental group was 27-35. In the control group it was 32-49. The average age was 31 in the experimental group. In the control group it was 37. The majority of the participants had an income-generating job. All of the participants in both groups had a high school degree or higher education level. In terms of marriage duration, women in the experimental group were divorced within the first 10 years of marriage. Those in the control group, except for 4 members, divorced within the first 10 years of marriage. Finally, in general, the participants in both groups were the party initiating the divorce. Some descriptive characteristics of the participants are presented below.

Table 1. Descriptive Characteristics of the Participants in the Experimental and Control Groups

Variables	Groups	Experimental Group	Control Group
Age	Mean	31.16	37.36
	SD	2.44	4.92
Employment in an income-generating job	Employed	10	8
	Unemployed	2	3
Education level	High school	1	1
	Undergraduate	11	10
Duration of marriage	Less than 5 years	5	2
	6-10 years	7	5
	11-15 years	0	3
	16-20 years	0	1
Party initiating the divorce	I did	8	7
	My ex-spouse did	1	1
	We decided together	3	3

Data Collection Tool

In this study, the Fisher Divorce/Separation Adjustment Scale-Short Form (FDAS-SF) was used testing the effectiveness of the experimental procedure. A Personal Information Questionnaire was used to obtain information about the participants’ demographic characteristics.

Fisher Divorce/Separation Adjustment Scale-Short Form (FDAS-SF). The FDAS was developed by Fisher (1976) to determine the level of emotional/social post-divorce adjustment. It consists of 100 items ranked on a Likert-type range. The Turkish version was modified into a 25-item short form. Scale items are scored between “1-Always” and “5-Never. The score range of the scale is 25 to 125. An increase in the score on FDAS-SF indicates an increase in divorce/separation adjustment. FDAS-SF has five sub-dimensions: grief, disentanglement from relationship, anger, trust-intimacy, and self-worth (Yılmaz et al., 2021). Exploratory factor analysis of the FDAS-SF revealed that the five-factor structure explained 44.78% of the total variance. Confirmatory factor analysis showed that the five-factor structure of the FDAS-SF fit the data well and that the items had strong factor loads under relevant dimensions (Yılmaz et al., 2021). The Cronbach alpha coefficient was determined as .91 for overall FDAS-SF, .84 for the grief sub-dimension, .90 for disentanglement from relationship, .81 for, .88 for trust-intimacy, and .80 for self-worth. Test-retest measurements of FDAS-SF were performed only for the total score and the reliability coefficient was found to be .81. Finally, in the convergent validity analysis performed using the Life Satisfaction Scale, the Psychological Well-Being Scale, and the Depression-Anxiety-Stress Scale, significant positive correlations were revealed between the total adjustment and sub-dimension adjustment levels (only disentanglement from relationship did not have significance) and life satisfaction and psychological well-being levels and significant negative correlations were determined with depression-anxiety-stress levels (Yılmaz et al., 2021). Cronbach

alpha internal consistency was found to be .89 for the pre-test measure in the current study.

Personal Information Questionnaire. The form was created to determine some demographic characteristics such as age, education level, employment status, age of marriage, duration of marriage, age of the child, time passed since the divorce, and the party initiating the divorce.

Group Process

Necessary research permission was obtained from the Ethics Committee of the Hacettepe University Senate. In the first stage of the doctoral thesis, the author conducted face-to-face interviews with 15 newly divorced women and determined the opinions and needs of women regarding post-divorce adjustment. Then, the "Psycho-educational program on post-divorce adjustment based on the CBT" was developed using the literature on post-divorce adjustment, the acceptance of CBT regarding the psychological help process, and the qualitative data collected in the first stage of the doctoral thesis. The pilot application was carried out with 5 newly divorced women and the opinions of 3 field experts about the program were received. After the psycho-education program was finalized, the group was announced and applications were received. For this purpose, a poster promoting the group was designed and the group was announced on social media accounts of the researcher. Applications to the group were accepted online and the application process continued for five weeks between July and August 2021. A survey, including a "voluntary participation form" to obtain the consent of the applicant, a "Personal information questionnaire" to determine demographic characteristics, the "Fisher Divorce Adjustment Scale-Short Form" to measure the pretest of the research, and the "Brief symptom inventory" to determine psychological symptoms, was prepared on Google Forms. Forty-one people filled out the survey online. The applications of four participants were rejected since they did not meet the application criteria. The researcher conducted pre-20-minute interviews with 37 people online. A standard "pre-interview form" was used in these interviews. During the interview, the applicant was given detailed information about the purpose, characteristics, and process of the group, as well as information regarding the expectations of the applicant from the group was received. After the pre-interviews, 7 applicants' applications were rejected due to a clinical diagnosis, severe psychological symptoms, and not meeting the inclusion criteria. As a result, after the pre-interviews, applications of 30 divorced women to the group were accepted. Then, the scores obtained from FDAS-SF were ranked from the lowest to the highest, and the participants were assigned to the groups, respectively. After the groups were created, the members were interviewed and informed about which group they were assigned to. At this stage, five members of the experimental group stated that they wanted to be on the waiting list due to personal reasons. Therefore, five members of the control group were transferred to the experimental group, considering the score ranking. An "Informed consent form for post-divorce adjustment psycho-education group" was sent to the members of both groups online and their consent was taken. The post-test measurements were made after the group application was completed, the follow-up test measurements were made 5 weeks later, and the data collection process was completed. Finally, as an ethical requirement, the members of the waiting list (control group) were contacted and given the psycho-education group application in the online environment after the follow-up measurements were completed.

The experimental intervention in the study was carried out under the group leadership of the first author. The first author has been working as a psychological counselor in a psychological counseling and guidance center of a state university for about ten years and provides individual and group counseling to young adults and adults. The author conducts face-to-face or online counseling. In addition, the author has completed the "CBT theory and 100 hours of supervision training" organized by the Cognitive Behavioral Therapies Association. In the light of this information, it can be stated that the author has knowledge and experience in CBT, group counseling and online psychological counseling.

Group Intervention. Post-divorce adjustment psycho-education was held online through the author's own zoom account. In order to ensure easy access for the participants, the group day and time were determined as 21.00 on Saturday evening. Each session included a warm-up game, group activities, and theme-related information presentations and lasted approximately two hours. The group process and sessions were planned considering the psychological help process of the Cognitive Behavioral Theory. The psychological help process was structured based on the presentation of the A-B-C help model related to the post-divorce adjustment theme, cognitive interventions, and then behavioral interventions needed by divorced women.

Information about the content of group sessions is given below.

Table 2. The Content of Cognitive Behavioral Theory-Based Psycho-Education Program Content

Sessions	Aim of session	Session content
Session 1	Introduction, group rules, general and specific purposes,	Warm-up games, Information presentation: “group rules, Group activity: “my individual purpose” form, Exercise: event emotion recording
Session 2	Problem areas related to post-divorce adjustment / A-B-C model presentation	Revision of exercises, Information presentation: “post-divorce adjustment and problem areas”, Warm-up game: “differentiation of emotions”, Information presentation: “A-B-C help model”, Exercise: “thought recording”
Session 3	Emotions and bodily responses, recognition and interpretation	Revision of exercises, <u>Warm-up game</u> : “emotion detective”, Group activity: “emotions and my body”, Group activity: “What my emotions say”, <u>Exercise</u> : Distribution of the emotion recording form
Session 4	Cognitive dysfunction and its types	Revision of exercises, <u>Warm-up game</u> : “Eye to eye”, Group activity: “Guess what”, <u>Exercise</u> : “Cognitive Dysfunction types examination form”
Session 5	Examination of automatic thoughts, practices for generating alternative thoughts	Revision of exercises, <u>Group interaction + information presentation</u> : “Thought analysis techniques, practices for generating alternative thoughts”, <u>Group activity</u> : “My way of coping with stress”, <u>Exercise</u> : “automatic thoughts analysis form”
Session 6	Stress and coping with stress	Revision of exercises, <u>Information presentation</u> : stress and methods used to reduce the negative effects of stress, <u>Group activity</u> : “How I deal with my sources of stress, <u>Exercise</u> : “practicing methods that reduce the negative effects of stress”
Session 7	Communication: barriers and facilitating elements	Revision of exercises, <u>Warm-up game</u> : my partner and I, <u>Information presentation</u> : communication, I language-you language, <u>Group activity</u> : “what is my communication language”, <u>Group interaction + information presentation</u> : “communication barriers”, <u>Exercise</u> : “I language-active listening practices”
Session 8	Boundaries in relationships-boundary problems	Revision of exercises, <u>Warm-up game</u> : “chat rooms”, <u>Information presentation</u> : “boundaries and boundary problems in relationships”, Group activity: “how are my boundaries in my relationships”, <u>Exercise</u> : “practices for building healthy boundaries”
Session 9	Partner relationships-future plans	Revision of exercises, <u>Warm-up game</u> : “my positive trait”, <u>Group activity</u> : “me in partner relationships”, <u>Warm-up game</u> : “I have the right”, <u>Group activity</u> : “my future”
Session 10	Evaluation-Termination	<u>Group activity</u> : “Evaluation of the group process, what was my individual purpose, how is my awareness”, <u>Closing game</u> : love overload

Data Analysis

The data were analyzed in the SPSS 24 package program. The Mann-Whitney U test was used to compare the mean scale scores of the groups. The Wilcoxon Signed Rank test was used for intra-group comparisons of mean pre-test-post-test and post-test-follow-up scores ($p < 0.05$). Assumption for the homogeneity of variance was checked using Levene’s test, and results showed that all sub scores and total scores in pre-test were met homogeneity assumption; Grief [$F = 1.58, p = .223$], Disentanglement from relationship [$F = 1.58, p = .223$], Anger [$F = .63, p = .437$], Trust-Intimacy [$F = .58, p = .455$], Self-Worth [$F = 1.87, p = .186$] and total score of the scale [$F = 1.30, p = .268$]. Additionally, Skewness values were between $-.050$ and $-.609$, while Kurtosis scores ranged from $-.183$ to -1.18 .

Results

In the study, the aim was to examine the significance of the difference between the experimental and control group participants’ mean total FDAS-SF score and sub-dimension scores in pre-test, post-test, and follow-up

measurements. Table 3 shows the mean total FDAS-SF scores, the mean pre-test, post-test, and follow-up test scores on the sub-dimensions, standard deviations, and the results of the Mann Whitney U test, which statistically tests the significance of the inter-group differences.

Table 3. Mean Total and Sub-Dimension Scores of Groups on FDAS-SF, Standard Deviations, and Mann Whitney U Test Results

Measuring tools		Experimental group (n:12)	Control Group (n:11)	Mann Whitney U Test value	p
		□+SD	□+SD		
Total FDAS-SF	Pre-test	86.08±11.39	87.36±15.74	-.062	.951
	Post-test	101.50±9.68	88.45±15.46	-2.002	.045*
	Follow-up test	100.00±9.09	87.27±17.08	-1.878	.060
Grief	Pre-test	17.25±3.51	16.91±4.22	-.155	.877
	Post-test	20.25±2.70	17.18±3.42	-2.050	.040*
	Follow-up test	20.25±2.01	16.63±5.70	-1.364	.172
Disentanglement from relationship	Pre-test	21.83±3.01	19.55±4.03	-1.370	.171
	Post-test	23.75±1.76	19.91±3.98	-2.430	.015*
	Follow-up test	23.83±2.12	19.54±4.76	-2.572	.010*
Anger	Pre-test	14.83±3.92	14.91±4.52	-.031	.975
	Post-test	19.67±3.55	15.72±5.21	-1.946	.052
	Follow-up test	19.50±3.58	15.91±4.55	-1.824	.068
Trust-Intimacy	Pre-test	16.08±5.33	16.73±4.58	-.278	.781
	Post-test	18.17±4.95	16.45±6.60	-.463	.643
	Follow-up test	16.91±5.31	16.18±5.11	-.402	.688
Self-Worth	Pre-test	16.33±3.98	19.27±2.79	-1.913	.056
	Post-test	19.67±1.77	19.18±3.34	-.156	.876
	Follow-up test	19.50±2.02	19.00±3.46	-.220	.826

According to Table 3, there was an increase in the mean total FDAS-SF and sub-dimension scores of the participants in the post-test compared to the mean scores of the experimental group in the pre-test, and this increase was preserved in the mean scores on other sub-dimensions, except for the trust-intimacy sub-dimension. In the control group, the mean scores of the FDAS-SF total and subscale measurements were close to each other. In the Mann-Whitney U test, the groups were at the same level with regards to the mean total FDAS-SF and sub-dimension scores before the experiment. After the experimental procedure, the difference between the groups with regards to FDAS-SF score [$Z = -2.002, p < .05$] and the mean scores on the sub-dimensions of grief [$Z = -2.050, p < .05$] and disentanglement from relationship [$Z = -2.430, p < .05$] was statistically significant. Finally, there was no statistically significant difference between the groups with regards to the mean scores in other follow-up tests, except for the sub-dimension of disentanglement from relationship [$Z = -2.572, p < .05$].

In the study, the significance of the intra-group differences between the pre-test-post-test measurements and post-test-follow-up measurements was also examined. Wilcoxon Signed Rank Test results are presented below.

Table 4. Results of The Wilcoxon Signed Rank Test Related to Mean Total FDAS-SF And Sub-Dimension Scores of Groups

Measuring tools		Experimental group		Control Group	
		Test value	p	Test value	p
Total FDAS-SF	Pre-test-post-test	-3.061	.002*	-.313	.754
	Post-test-Follow-up	-.802	.423	-.712	.476
Grief	Pre-test-post-test	-2.363	.018*	-.171	.864
	Post-test-Follow-up	-.137	.891	-.119	.905
Disentanglement from relationship	Pre-test-post-test	-2.056	.040*	-.516	.606
	Post-test-Follow-up	-.368	.713	-.425	.671
Anger	Pre-test-post-test	-2.992	.003*	-1.184	.237
	Post-test-Follow-up	-.154	.877	-.287	.774
Trust-Intimacy	Pre-test-post-test	-1.742	.081	-.223	.824
	Post-test-Follow-up	-1.695	.090	-.352	.725
Self-Worth	Pre-test-post-test	-2.810	.005*	-.071	.943
	Post-test-Follow-up	-.491	.623	-.516	.606

According to Table 4, there were statistically significant differences between the mean pre-test-post-test ranks of the experimental group on total FDAS-SF [$Z = -3.061, p < 0.05$] and the sub-dimensions of grief [$Z = -2.363, p < 0.05$], disentanglement from relationship [$Z = -2.056, p < 0.05$], anger [$Z = -2.992, p < 0.05$], and self-worth [$Z = -2.810, p < 0.05$] whereas the difference between the mean post-test-follow-up test ranks on total FDAS-SF and all its sub-dimensions were insignificant. Otherwise, intra-group difference measurements of the control group were statistically insignificant.

Discussion, Conclusion and Recommendations

Considering the results of the research, it can be stated that the CBT -based psycho-education program was effective in increasing the level of post-divorce adjustment of women who had taken custody of their early-age children. As a matter of fact, after the experimental intervention, a statistically significant increase was observed in the total score of the participants in the experimental group regarding post-divorce adjustment and their scores on other sub-dimensions, except for the trust intimacy sub-dimension, and this increase remained after 5 weeks. There was no significant difference in the measurements of the control group. When the differences in the post-test scores between the groups were examined, it was observed that the experimental group participants had a higher mean score on total FDAS-SF and its sub-dimensions as per the control group. When the statistical significance of the inter-group differences was tested, the differences in the total post-divorce adjustment score and scores on its sub-dimension of disentanglement from relationship were found to be significant. In light of all this information, it can be suggested that the CBT-based psycho-education program is effective in increasing women’s post-divorce adjustment and that this effect continues for a certain period of time.

In the literature, CBT techniques have been used in group studies in which post-divorce adjustment or different variables related to adjustment have been examined (Alimoradi et al., 2016; Asadpour & Hosseini, 2018; Ghezelseflo et al., 2019; Ghorbani-Amir et al., 2020; Hasanvandi et al., 2013; Öngider, 2013; Shooshtari et al., 2016; Pyrsrayy et al., 2017; Zohrabniya et al., 2022). It has been stated that post-divorce adjustment is positively associated with the subjective perceptions and attitudes of the individual (Chan Lai Cheng & Pfeifer, 2015; Gaffal, 2010; Shapiro, 1996; Wang & Amato, 2000). In this context, the effectiveness of the program developed within the scope of the research regarding women’s post-divorce adjustment can be clarified by the suitability of the CBT, which the program was based on, to address this phenomenon. As a matter of fact, with this program developed based on the CBT, women who have taken custody of their early-age children had the opportunity to work and change their dysfunctional subjective perceptions that they attributed to the divorce-

related challenging life events with cognitive interventions and also to acquire some behavioral skills that support their adjustment.

In the study, unlike the control group, there was a decrease in the experimental group's grief and anger reactions, which were positively related to post-divorce adjustment, after the experimental intervention and a significant increase in disentanglement from relationship and self-worth. The research finding is consistent with the findings of previous experimental research in which similar measurement tools have been used (Asanjarani et al., 2018; Ghezelseflo et al., 2019; Karadeniz Özbek, 2019; Vukalovich & Caltabiano, 2008; Zohrabniya et al., 2022) and findings of experimental research conducted on post-divorce adjustment using different therapy approaches (Güzel 2020; Halisedemir, 2020; Saadati et al, 2017). The consistency between the results of these studies in which different approaches have been used in experimental interventions and the current research findings can be explained by the healing power of the group process. As a matter of fact, group experience is a process in which members learn to receive and give help and realize that they are not alone, and it is easier for them to use what they have learned through group experiences in social life (Voltan Acar, 2001). In this context, in the present study, the participants had the opportunity to provide psychological support to each other by self-revealing and listening to each other through the group, while gaining professional knowledge and skills about the process of adaptation divorce. In addition, the study group consisted of newly divorced women who had taken custody of their early-age children. In group interventions, members are more likely to realize that they are not alone in the face of similar problems and receive support from each other, and this may increase the effectiveness of the group intervention (Voltan Acar, 2001). In the light of this information, realizing that they are not alone and receiving emotional and intellectual support from people with similar characteristics may have positively affected their level of post-divorce adjustment.

Considering the importance of the difference between groups in the study, it was determined that the increase in the total post-divorce adjustment score and grief and disentanglement from relationship scores of the experimental group participants was significantly higher than the control group. This finding is consistent with the research finding that the post-divorce psychological support program had a significant effect on women's levels of post-divorce adjustment, grief, and disentanglement from the relationship (Karadeniz Özbek, 2019). Similarly, the research finding is supported by research findings revealing that CBT is effective in increasing the adjustment levels of divorced women (Ghezelseflo et al., 2019; Zohrabniya et al., 2022). The effectiveness of this program on the levels of post-divorce adjustment can also be explained by the development process and content of the program. During the preparation of the psycho-education program, the qualitative data about the opinions and needs of newly divorced women which were collected in the first stage of the research were utilized. As a matter of fact, in the explanation of the ACB model in the CBT or during cognitive interventions, group activity and warm-up games were prepared by benefitting from the opinions and life experiences of divorced women collected with qualitative data. Similarly, while addressing the function of emotions in the help model, correspondence was drawn with the sub-dimensions of grief, disentanglement from relationship, and anger, and divorced women's need to recognize and interpret their feelings was largely met. Behavioral skills to be acquired through the program were also determined based on the qualitative data collected. Finally, an emoji (Miss Güneş), which is similar to the characteristics of the group members, was used in the information presentations and examples of experiences, emotions, thoughts, and behaviors related to post-divorce adjustment were conveyed through this emoji. In this context, a point was made to prepare the psycho-educational program of the research in a way to include cultural elements with qualitative data in light of theoretical explanations and relevant literature. In summary, there is a need to research the phenomenon of post-divorce adjustment by including cultural elements (Chan Lai Cheng & Preifer, 2015). In this regard, the preparation of the psycho-education program considering qualitative data may be one of the factors affecting the significant increase in women's post-divorce adjustment.

Another finding obtained in the inter-group comparison of post-test scores was that the increase in trust-intimacy levels of the experimental group as per the control group was found to be as insignificant as the intra-group differences. The research finding is consistent with the finding of the research conducted by Karadeniz Özbek (2019) in which no significant difference between groups was found in the trust intimacy sub-dimension after the post-divorce psychological support program. However, the research finding is not similar to the research findings revealing that the CBT intervention is effective in reducing the loneliness levels of divorced

women (Alimoradi et al., 2016; Öngider, 2013). This finding of the study can be interpreted with the items in this sub-dimension and the content of the psycho-education program. The trust intimacy sub-dimension consists of 5 items related to new emotional relationships and sexual experiences. Three of the 5 items in this sub-dimension aim to measure the feelings, thoughts, or behaviors of the person related to sexual experiences. However, the theme of sexuality was not included in the psycho-education program of the research. As in the relevant literature, the need for new emotional relationships was frequently mentioned in the qualitative interviews conducted with divorced women in the first stage of the study. Based on this information, group activity and information presentation were added to the 9th session of the psycho-education program in order to address emotions, thoughts, and behaviors in new partner relationships. However, in the qualitative interviews, except for one woman, the participants did not express their opinions and needs about sexuality. This can be interpreted with cultural elements and gender roles. As a matter of fact, sexuality is a phenomenon that is considered private and suppressed due to the influence of social, cultural, religious, and social factors (Bilgin & Kömürcü, 2016). In summary, the ineffectiveness of the developed program in the trust intimacy sub-dimension can be explained by the structure of the scale items and the fact that the theme of sexuality, one of the components of this sub-dimension, was not covered in the psycho-education program.

Another finding related to the inter-group differences was the increase in the anger scores of the experimental group after the experimental intervention; however, this increase was not statistically significant compared to the control group ($U=34.500$; $p=.052$). This finding is not consistent with research findings that reveal a significant difference in the anger level of the experimental group after group intervention. (Asanjarani vd., 2018; Karadeniz Özbek, 2019; Vukalovich ve Caltabiano, 2008). In the interpretation of this research finding, theoretical explanations and demographic characteristics of the participants can be used. The items in the anger sub-dimension are associated with the intensity of anger towards the ex-spouse. When the demographic characteristics of the women were examined, almost all of them stated in the group application form that they were the party initiating the divorce or that they decided to divorce together and that they were satisfied with the decision to divorce. In addition, the majority of the participants expressed challenging life events related to the feeling of anger towards the ex-spouse, such as being cheated on, psychological and physical violence, and severe conflict as the reason for divorce. In this context, the intensity of anger felt towards the ex-spouse can complicate the adaptation to new life for the divorced individual (Chan Lai Cheng & Pfeifer, 2015; Guzmán-González et al., 2019; Kitson & Holmes, 1992). In light of all these theoretical explanations and information about the demographic characteristics of the participants, although there was a positive development after the experimental intervention regarding anger towards the ex-spouse, it can be suggested that the support needs of the participants in this area continue in parallel with the intensity of anger.

The last finding regarding the inter-group differences was that the increase in the self-worth level of the experimental group was insignificant compared to the control group. This finding is consistent with the findings of some research (Karadeniz Özbek, 2019) and is inconsistent with the results of other research (Asanjarani vd., 2018; Fisher, 1976; Vukalovich & Caltabiano, 2008) investigating the effectiveness of the experimental intervention on the self-worth levels of the participants. Considering the mean self-worth scores of the groups, there was a significant increase in the mean scores of the participants in the experimental group whereas there was no significant change in the mean score of the control group. In this context, this finding of the research can be explained by the loss of sample, which is one of the situations that cannot be controlled in the experimental process but has the potential to influence research results. In the experimental intervention, 3 members of the experimental group and 4 members of the control group withdrew from the research. After the experiment, the missing subjects were eliminated from the data set and the analysis of the difference between the pre-test groups was repeated. As a result, the difference between groups was not found to be statistically significant [$U =35.500$; $p=.059$]. However, when the mean pre-test scores of the groups in Table 3 were examined, it is noteworthy that there was a 3-point change in favor of the control group after the experimental losses. In this context, the 3-point increase observed in the mean self-worth scores of the experimental group after the intervention only seems to have helped to close the pre-experimental inter-group difference, which was caused by experimental losses. In summary, the fact that the psycho-education program did not give a significant result in favor of the experimental group in the self-worth sub-dimension in the inter-group

comparison can be associated with uncontrollable experimental losses during the experimental process and may have possibly affected the results.

This study has some limitations. The research was conducted with women who were newly divorced and had taken custody of their early-age children. In future studies, it may be recommended similar studies be conducted with divorced individuals without children, divorced individuals who do not have custody, or divorced men, and the effectiveness of the experimental intervention be tested by working with heterogeneous groups. Based on the knowledge that adjustment to divorce takes about two years (Clarke-Stewart & Brentano, 2006; Lorenz et al., 1997), the criterion in the current study is that at most two years has passed since the official divorce. However, there is a possibility that adjustment to divorce, which is related to secondary stress factors, may become chronic from time to time (Wang & Amato, 2000). In the light of this information, it may be recommended to determine a longer period passed after the official divorce in future studies and to test the effectiveness of the study. Due to the COVID-19 pandemic, the group intervention was carried out online and the effectiveness of the program can be tested by providing the current education program in face-to-face environments in future research. Finally, follow-up measurements in the study were performed after 5 weeks and it was determined that the program was highly effective. In this regard, it may be recommended to test the continuity of this effect over a longer period in future studies.

Author Contributions: This study was produced from the doctoral thesis prepared by first author under the supervision of second author. All authors contributed to the conception and design of the study. First author performed the experimental applications and data collection and wrote the paper. Second author supervised all the research process and provided feedback and reviewed the paper. All authors read and approved the final manuscript.

Funding disclosure: No funding was provided for this study

Conflicts of Interest: The authors declare that they have no conflict of interest.

Data Availability: Data is available upon request from the corresponding author.

Ethics Approval and Consent to Participate: Authors declared that study carried out within ethical scope. Participants were given informed consent form and were volunteer to participate to study. This study was approved by Ethics Committee of the Hacettepe University on 07 Ocak 2020 (ReferenceNo: 35853172-300).

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Turkish Adaptation of the Relationship Sabotage Scale: A Validity and Reliability Study

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ARTICLE HISTORY

Received: 17.03.23

Accepted: 08.06.23

KEYWORDS

Romantic relationships;
Self-sabotage in
relationships; Scale
adaptation; Validity;
Reliability; Relationship
sabotage scale

ABSTRACT

In this study, it is aimed to adapt the 'Relationship Sabotage Scale' (RSS), whose validity and reliability studies were conducted by Peel and Caltabiano (2021), adapting it to Turkish. The adaptation process of the scale was carried out by going through various stages in which the participants were university students. In the first stage of the research, 32 university students were reached for language equivalence study. At the next stage, the study group for the validity and reliability study of the research consists of a total of 266 university students, 150 (56%) female and 116 (44%) male, studying at various faculties in the fall semester of the 2022-2023 academic year. The construct validity of the RSS was tested with Confirmatory Factor Analysis (CFA). Confirmatory factor analysis results show that the 12-item and three-factor structure of the original scale was confirmed. It was observed that the item factor loads of the scale ranged from .56 to .95. According to the findings, it is seen that the scale tested with CFA has sufficient goodness-of-fit indices. For the reliability of the scale, the Cronbach alpha reliability coefficient was calculated; At the end of the analyzes, the total Cronbach alpha reliability coefficient of the scale was found .81, while the Cronbach alpha (α) internal consistency coefficients for the sub-dimensions ranged from .81 to .85. The findings obtained as a result of the study show that RSS is a valid and reliable measurement tool that can be used in evaluating the self-sabotage of individuals in their romantic relationships.

When individuals are seen and noticed by the other, their existence becomes even more meaningful. This process, which begins with the caregiver, manifests itself in various forms of relationship throughout life. When people feel seen and noticed, their belief that their existence is meaningful is supported. A person who has the feeling that the caregiver is the most valuable asset in his eyes, seeks a similar feeling in the other throughout his life. Romantic relationships involve a process in which the person has the opportunity to recreate, understand, and feel understood in the other. For this reason, the size and scope of the meaning of love in human life always maintains its importance. Love recognizes an area where the person is perhaps the closest to herself/himself. Also, in a romantic relationship, people encounter aspects that they did not know or were not aware of before. Romantic relationships, which also have biological and physiological foundations, constitute a complex and comprehensive structure in the human world of meaning (Burunat, 2019; Esch & Stefano, 2005; Resnick, 2018).

In the adulthood romantic relationships are among the most effective forms of social interaction (Lavner & Bradbury, 2010; Whisman et al., 2000). The positive and negative features of these relationships can affect the happiness of the individual and the partner (Antonucci et al., 2001; Fincham & Linfield, 1997). Specifically,

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unhealthy relationship qualities (for example, ineffective conflict skills) appear to negatively affect people's well-being, such as increased depressive symptoms and poor physical health outcomes (Dush & Taylor, 2012; Waite & Gallagher, 2000; Wickrama et al., 1997). In addition, positive romantic relationship qualities (for example, effective communication, spousal support, positive attributions) are associated with increased self-esteem (Voss et al., 1999) and life satisfaction (Pateraki & Roussi 2013; Shek, 1995). Fromm (1995) states that love is the only positive answer that can be given to the problem of human existence. Many aspects of love are revealed by neuroscientific studies, and the curiosity about the unexplained parts continues (Marazziti & Baroni, 2012). Along with neuroscientific studies, studies are also carried out in many psychological, cultural and social sciences related to love in a multidisciplinary manner in order to understand love and present different perspectives. Many aspects of love, individual and social, personal and universal, understandable and inexplicable, physiological and spiritual, determine its complexity and importance (Murotmusaev, Dzhelyalov, & Boltaeva, 2021).

Individuals meet their need for belonging in life through deep and close relationships with other people (Myers, 2003). When the studies are reviewed, it is seen that young people want to be in a long-term romantic relationship (Haskan- Avcı, 2014). Skills such as being able to initiate a relationship, being aware of one's feelings while maintaining it, and expressing it to the other party within healthy limits are very important for the individual in a romantic relationship. Being able to establish healthy romantic relationships during the university period is seen as an emotional need. It is also important for a healthy transition to the next life stage. The ability to initiate and maintain romantic relationships can be related to many different dynamics in romantic partners and the relationship between them. In addition, being able to take a step for a relationship and stay in a relationship can be achieved individually by the interaction of many factors (past relationship experience, attachment style, self-perception, etc.). As in all other interpersonal relationships, sometimes difficult situations can be experienced in a romantic relationship for many different reasons. How people develop behaviors and attitudes in the face of difficult situations in their romantic relationships can determine the course of the relationship. In general, love can be expressed as an art that requires experience and the ability to concentrate, intuition and understanding (Murotmusaev, Dzhelyalov, & Boltaeva, 2021). According to Fromm (2020), there are some reasons why many people do not realize this necessity. First of all, most people look at love from the "how to love themselves" position, but not from the "how to love someone else" position. Also, people have the idea that the problem is not in the ability to love, but in the love itself. As a result, the idea that nothing is easy to love is quite different in practice (Murotmusaev, Dzhelyalovi, & Boltaeva, 2021). The fact that romantic relationships have many dynamics related to being very comprehensive and to be understood brings with it to look from new perspectives. The concept of self-sabotage in the romantic relationship, which is the subject of the research, explains the behaviors and attitudes that cause the loss of the relationship by 'undermining' themselves as a result of complex experiences in the inner world, although it seems that individuals do their best to initiate and maintain the relationship (Peel & Caltabiano, 2021).

It is seen that individuals who sabotage themselves try to cope with the situation that threaten their selves or create uncertainty by creating the negative conditions that will hinder their performance (Akin, Abacı, & Akin, 2011). It is thought that self-sabotage develops as a result of negative cognitive structures and evaluations that individuals develop since childhood regarding self and success (Arazzini Stewart & De Leorge Walker, 2014; Kearns et al., 2008; Warner & Moore, 2004). These assessments are thought to emerge as a result of life experiences such as negative interactions with early parents. Negative parent-child relationships can create various effects on self-development, revealing failure mechanisms and fear of making mistakes. Self-sabotage behavior, which is one of the coping mechanisms that is effective on the behavior of the individual; after a while, it can become a pattern of behavior of an individual (Martin et al., 2015).

The concept of 'self-handicapping' was first used by Berglas and Jones (1978) to describe an individual's feeling of uncertainty about whether he or she can perform a job or task despite having the potential to do it. It is defined as an effort to justify oneself that one is not in sufficient capacity. When the literature is examined, it is seen that there are two different strategies of self-handicapping in the form of behavioral self-handicapping (behavioral self-handicapping) and verbal/self-reported self-handicapping. While verbal self-handicapping involves verbally stating psychological symptoms such as anxiety, exhaustion, and stress before the action to be performed, behavioral sabotage does not work at the required level to be successful before the action, deal

with different agendas, tie the result to fate, show physical symptoms, try to carry out more work than one can do. It includes behaviors such as alcohol-substance use (Hendrix and Hirt 2009). In addition, in behavioral strategies, individuals take actions that may affect their performance, such as procrastinating, not taking advantage of opportunities, and not making enough effort for their task (Kearns et al., 2008; Leary and Shepperd 1986; Tucker et al., 1981). Therefore, while behavioral sabotage includes more explicit actions, verbal sabotage includes passive actions (Hendrix & Hirt, 2009). However, the concept of 'self-handicapping', which is included and expressed in this definition, is used for academic and professional studies, unlike the concept of 'self-sabotage' in relationships.

It is seen that there is a study in the Turkish literature on the fact that some individuals are stuck in a self-sabotaging cycle in romantic relationships (Karahana-Sayan, 2021). Although the dynamics of self-sabotage in the relationship has been investigated, it is seen that there are links to the importance of the first relationships established with the caregiver (Peel & Caltabiano, 2021). It is seen that attachment styles determine the way people live their romantic relationships, their approach to problems in romantic relationships and their relationship with personal problem solving tools. In people with an anxious attachment style; There is a high effort to see value. However, they believe that people do not value them too much, and their partners' interest and respect for them is not enough for them (Lemay & Spongberg, 2015). This combination can create anxiety and fear of rejection and abandonment (Lemay & Spongberg, 2015; Mattingly & Clark, 2012). This fear and anxiety arising from inadequate reactions of caregivers in childhood can lead to intense emotional distress in various relational situations, including conflict, violated trust and other threatening stimuli (Jiang & Tiliopoulos, 2014; Mattingly & Clark, 2012; Meyer et al., 2015; Reiner & Spangler, 2013). Individuals with an anxious attachment style may react to this emotional distress in various unhealthy ways by sabotaging relationships that can provide the love and attention they seek (Slade, 2020). They tend to react intensely and impulsively to situations that arise in a relationship (Mattingly & Clark, 2012; Meyer et al., 2015). They often use ineffective conflict resolution styles, such as inducing guilt, controlling, and expressing or implying their distrust of their partner, to indirectly express their hurt (Feeney & Fitzgerald, 2019). Individuals with an anxious attachment style may try to minimize physical and emotional distance by clinging to their partners at the same time, while expressing their feelings in ways that are not good for the partners and the relationship (Feeney & Fitzgerald, 2019; Meyer et al., 2015). While engaging in these behaviors, they may send a continuous message to their partner or demand that they be more involved in the conflict so that they do not leave their partner. This creates a confusing combination for partners of anxiously attached individuals. Individuals with an anxious attachment style may also have a tendency to experience distress associated with intense negative emotions, to remember negative experiences, and to think deeply about them (Lemay & Spongberg, 2015; Meyer et al., 2015; Reiner & Spangler, 2013). They appear to attribute less respect and attention to their partners than they actually do. As a result of the fear of being abandoned by their partner, they face the situation that other areas of their lives are affected (Lemay & Spongberg, 2015; Meyer et al., 2015; Reiner & Spangler, 2013).

Because individuals with an anxious attachment style may have low self-esteem, this cycle reinforces the belief that they are not worthy of love and attention from others - because 'no matter how hard they try'; their relationships come to the breaking point, which further weakens their self-esteem (Lemay & Spongberg, 2015; Lockhart et al., 2017; Mattingly & Clark, 2012). This cycle reveals the necessity of examining 'sensitivity to rejection' as a new concept in the cycle of self-sabotage in romantic relationships. Rejection-sensitive individuals may act hostile in situations that create anxiety or expectation of rejection (Ayduk et al., 1999). The concept of rejection sensitivity, based on attachment theory, suggests that interactions of early rejection by caregivers, such as parental neglect and exposure to domestic violence (Downey et al., 1997; Feldman & Downey, 1994), result in a high expectancy anxiety. In the context of a romantic relationship, people who are sensitive to possible rejection by their partner may make certain strategic responses to maintain a relationship they perceive as fragile. Individuals who are sensitive to rejection may display adaptive behaviors such as tolerating violence or suppressing a different opinion in order to prevent perceived rejection (Downey et al.,

1998, 1999; Purdie & Downey, 2000). Unfortunately, these relationship maintenance behaviors are ineffective and are thought to sabotage an unstable relationship as a result (Downey et al., 1998).

Looking at the concept of defensiveness, one of the sub-factors of self-sabotage in the relationship; It is defined as defensive strategies that lead to self-sabotaging behaviors such as showing oneself perfectly and not showing fault in the relationship (Hewitt et al., 2003). It is also stated as a self-protection mechanism used as a counter-attack when the victim is felt against a perceived attack (Peel & Caltabiano, 2021). Theoretically, it is thought that self-sabotage in romantic relationships is activated through goal-directed defense strategies in relation to attachment styles to protect self-worth. Basically, it is seen that people use methods such as defensiveness in their romantic relationships in order to protect their self. The work of Gottman and colleagues (Christensen & Heavey, 1990; Gottman, 1993; Heavey et al., 1993) has detailed maladaptive behaviors and relationship dynamics that can predict relationship ending. It has been stated that the behaviors defined as the 'four horsemen' of the apocalypse (criticism, humiliation, advocacy and wall building) lead to divorce six years after marriage on average (Gottman, 1993). In addition, the research obtained from the observations of couples during the counseling process, descriptively describes the three communication styles or couple dynamics that contribute to the end of romantic relationships; attack-attack, attack-withdrawal and retreat-withdrawal (Greenberg & Johnson, 1998). It will be seen that a person who frequently uses defensiveness will generally prefer a relationship style of 'attacking' to his partner. Rusk and Rothbaum (2010) state how patterns of insecure attachment and insecure patterns can trigger the defense function in individuals. Rusk and Rothbaum (2010) explained that stressful moments in the relationship will activate the individual's attachment system, which in turn will determine how the person will react to situations and set goals for their relationships. In other words, defensive strategies can become self-defeating and, as a result, hinder the individual's chances of a successful relationship. In relation to the other factor, trust difficulty, choosing not to trust or not being able to trust in a romantic relationship has also been defined as hurt avoidance methods (Peel, 2020). Difficulty in trusting the partner can often occur as a result of past experiences of betrayal. This theme manifests itself as feeling extremely jealous (Peel & Caltabiano, 2021). It has been found that there is a strong correlation between insecurity and insecure attachment (especially anxious attachment) (Harper, Dickson, & Welsh, 2006; Hazan & Shaver, 1987).

Lack of relationship skills, which is another sub-factor; It can be expressed as the inability to share communication and duties in a romantic relationship (Peel, 2020). In addition, it refers to the fact that partners have difficulty in understanding the dynamics in a relationship or that they do not have insight (Peel and Caltabiano, 2021). The study by Peel, Caltabiano, Beryl Buckby, and Kerry McBain (2019) found that a lack of relationship skills is one of the main reasons why people maintain a cycle of relationship sabotage in their close relationships. It has been found that partners know little about how relationships work (what to expect and how to maintain them). In a romantic relationship, the partner's perception of being accessible, reliable, and willing to provide support when needed (as opposed to self-sabotage) increases the likelihood of feeling closeness, support, and care (Cassidy, 2000; Hazan & Shaver, 1994).

It is stated that people who use self-sabotage strategies have very low life satisfaction and generally higher negative mood levels (Zuckerman & Tsai, 2005). Recently, it is seen that people have started to become consumers in their attitudes towards each other in their romantic relationships. However, as a result, people are faced with self-consumption, which generally causes them to be dissatisfied both physically and spiritually (Murotmusaev, Dzhelyalov, & Boltaeva, 2021). In relation to this situation, it can be stated that self-sabotage behaviors are associated with low levels of health and well-being. Although self-sabotage behavior seems to support one's self-worth for a short time by finding excuses for failures (Covington, 2000), it loses its effect when used for a long time and causes negative effects on the individual's health and self (Maata, Stattin, & Nurmi, 2002). Despite the importance of self-sabotage in relationships and its effects on individuals' relationship life, the limited number of studies on self-sabotage in romantic relationships shows that there is a gap in this area. Self-sabotage seems to be an important concept that can be addressed in understanding close interpersonal relationships and helping to establish healthy relationships, and that will contribute to the literature in counseling with couples and individuals. It is expected that this study will fill a very important gap in the field for individuals who have difficulties in starting relationships and maintaining a healthy

romantic relationship. Presently, there is no instrument to conceptualise and empirically measure how people continue to self-sabotage attitudes and behaviors in relationships.

Although there are no scales that directly measure the similar structure in the literature on self-sabotage in romantic relationships; in connection with the scope of the subject and the factors that may be parallel to the self-sabotage; Experiences in Close Relationships-Revised-Short Form (Selçuk, Günaydın, Sümer & Uysal, 2005), Conflict Resolution Styles Scale in Romantic Relationship (Özen, Engin & Uğurlu, 2016), Self-Sabotage Scale (Akin, 2012). While the Experiences in Close Relationships-Revised-Short Form is about attachment styles, the Conflict Resolution Styles in Romantic Relationships Scale consists of subordination, withdrawal, positive and negative conflict resolution factors, while the Self-Sabotage scale is related to academic subjects, such as performance avoidance, approach, learning consists of dimensions such as avoidance and approach. RSS is a short scale that provides precise information about individual patterns in relationships. Findings using this scale can provide explanations for the reasons why individuals engage in destructive behaviors from one relationship to another. Furthermore, the current work provides open avenues for future research to develop models to explain relationship dissolution and work towards relationship maintenance. Overall, this series of studies is considered to complement the literature on conceptualizing relationship sabotage and, more broadly, self-defeating attitudes and behaviors in relationships (Peel & Caltabiano, 2021).

When it comes to romantic relationships, there is a marked lack of information to explain why some people who have successfully started a relationship embark on a path that seems to end the relationship once and for all. It seems important to carry out studies to provide evidence for this point of view and to guide practical approaches in relationship counseling (Peel et al., 2017). The study will contribute to individuals to look at themselves and their relationships from a different point of view regarding healthy romantic relationships, which is one of the most basic agendas in counseling with individuals and couples, especially in young adulthood, and will also be a powerful resource for counselors. It is seen that the adaptation of this scale is an important scale for practitioners and researchers to understand romantic relationships and help establish healthy relationships, and to contribute to the literature in counseling with couples and individuals. It will contribute to the psychological counselors in the field to see the dynamics and structures that prevent individuals from maintaining their romantic relationships. The aim of this study is to adapt the Relationship Sabotage Scale, which was developed to have information about the self-sabotage attitudes of individuals in their romantic relationships, into Turkish, and to conduct validity and reliability studies.

Method

In this section; study group, data collection tools, data collection and data analysis.

Participants

The study group of the research consisted of two different groups. The first study group for language equivalence consisted of 32 university students studying at the Department of English Language Teaching. The second study group consists of 266 university students, 150 (56%) female and 116 (44%) male, aged between 18 and 36 ($\bar{X}=21.49$), studying at various faculties of the relevant university. Table 1 includes the characteristics of the participants.

Table 1. Characteristics of the Participants

		N	%
Gender	Women	150	56,4
	Men	116	43,6
	Total	266	100,0
Grade	1	4	1,5
	2	46	17,3
	3	110	41,4
	4	106	39,8
	Total	266	100,0
Faculty	Education	154	57,9
	Economics and Administrative Sciences	38	14,3
	Conservatory	33	12,4
	Law	41	15,4
	Total	266	100,0

Measures

Relationship sabotage scale. The Relationship Self-Sabotage Scale (Peel et al., 2020), which aims to measure the person's self-sabotage in their romantic relationship, is a 7-point Likert-type rating scale consisting of 12 items (1 = Strongly disagree, 7 = Strongly agree). There are four reverse scored items in the scale. The scale consists of three factors: defensiveness, trust difficulty, and lack of relationship skills. The cronbach alpha reliability coefficient for the total of the scale is .77. The scores that can be obtained from the scale range from 12 to 84, and a high score indicates that individuals have a high level of self-sabotage in their relationships. It was concluded that the three-factor structure of the scale explained 60.3% of the total variance. Considering the distribution of variance according to the factors; Defensiveness factor (33.3%), Confidence Difficulty factor (14.3%) and Lack of Relationship Skills factor (12.7%) were explained as (Peel & Caltabiano, 2021).

Personal information form. The personal information form includes the personal information of the participants such as age, gender, grade level, faculty information. In addition, in order to obtain relational information, questions containing relational information such as duration of the relationship and perspective on the relationship were also included.

Adaptation of the Relationship Sabotage Scale to Turkish

In the process of adapting the Relationship Sabotage Scale into Turkish, a gradual and systematic way was followed. First of all, the responsible author was contacted via e-mail in order to obtain the necessary permissions for the adaptation of the scale. Then, the original scale was sent to 4 experts working in the field of guidance and psychological counseling for the Turkish translation of the scale. Then, the translations of each item made by the experts were examined and the expressions that were thought to explain the items in the most appropriate way were selected. At this stage, the language consistency assessment form developed by Şeker and Gençdoğan (2014) was used. In the use of this form, significantly different translated items are noted and reviewed. If the translations of the experts are similar to the original version of the article, a plus (+) sign is placed in the translators section, if there is a difference, a minus (-) sign is placed. Then, these numbers (+ and -) were compared and whether the translations were appropriate or not was added to the conclusion section. Afterwards, the Turkish version of the scale was agreed upon by the researcher and the consultant, and its final form was given for the back translation study. At the next stage, the Turkish form created for the back translation process was sent to 3 experts in the field of PCR and English grammar. After back translation, it was seen that the expressions were semantically compatible with the expressions in the original form. It was sent to an expert in the field of Turkish grammar in order to examine the scale in terms of meaning and grammar. Then, within the scope of the application, 48 students from the 4th grade students in the field of psychological counseling and guidance were studied on the intelligibility of the scale items. Group interviews were conducted regarding the items that were difficult to understand from the scale items. Since there was a problem in the intelligibility of an item in the scale, its meaning was clarified by reaching the owner of the

scale. In the last stage, for language equivalence, the Turkish and English forms of the scale were administered to 32 3rd grade students from the English Language Teaching Department, with an interval of two weeks.

Data Collection Process

The data of this study were collected face to face in the 2022-2023 academic year. The data were collected face-to-face at an appropriate time after obtaining the necessary permissions from the Ethics Committee of the relevant university. Before starting the validity and reliability studies of the scale, the sample size for the research was tried to be determined. There are various opinions (Kline, 2004; Bryman & Cramer, 2001) regarding the determination of the sample size related to the study so that factor analysis can be carried out. As a reference in this study; The view that each item in the measurement tool should be answered by at least ten participants was considered (Pett, Lackey, & Sullivan, 2003). As a result of this criterion (1/10) in the literature, it is considered sufficient to reach 120 participants as 10 times the 12-item RSS. However, the sample size was tried to be kept high in order to reduce the sampling error in the research and to reveal a healthier analysis result due to the increase in the number of samples (MacCallum et al., 1996).

In this process, first of all, the participants were informed about the purpose of the study, voluntary participation and the duration of the study. Then, the data collection process was started with the participants who agreed to participate in the study. After obtaining permission from the Ethics Committee of the university where data collection was planned, interviews were conducted with various faculties of the universities using the appropriate sampling method. It can be achieved by using the appropriate sampling method, it is aimed to reach the maximum sample size and to prevent time and labor loss (Büyüköztürk et al., 2017). Appropriate course hours were planned and 266 university students were reached. The scale application was carried out face to face; It took an average of 10 minutes.

Ethical Statement

Ethical approvals and permissions required for this study were obtained from University Research and Publication Ethics Committee

Data Analysis

The analysis of the data obtained from the study was carried out with SPSS 24.0 and AMOS 24 programs. Confirmation of the structure of the Relationship Sabotage Scale for Turkish was carried out using the AMOS 24 program with Confirmatory Factor Analysis. Çokluk, Şekercioğlu and Büyüköztürk (2012) stated that there is no single option for starting factor analysis with EFA or CFA techniques; They stated that the researcher should choose his own method in connection with the knowledge and purpose he wants to obtain. Since the adapted scale has evidence of structure and reliability, the validity of the model was examined by CFA. Confirmatory Factor Analysis is an analysis that tests theory rather than producing theory (Henson & Roberts, 2006). Before the CFA for the scale, factor analysis assumptions (Ullman, 2001) were first reviewed; It was determined that there were no outliers, no multicollinearity and singularity problems. It was observed that there were no extreme values that would adversely affect the analyzes. It was aimed to calculate the Cronbach alpha (α) internal consistency coefficient of the entire scale, which was adapted into Turkish, and for each sub-dimension.

Results

Information on the descriptive statistics of the scale, and findings on its validity and reliability are given under this section.

Language Equivalence Study of the Relationship Sabotage Scale

In the language equivalence stage of the scale, after the necessary translation processes were carried out, the translations of the scale were examined and the Turkish version of the scale was prepared by determining the appropriate items. The prepared Turkish form was translated back by two English teachers and it was tried to determine whether it was consistent with the original scale. It was seen that the Turkish form was consistent with the original form. An application was made to 48 university students in order to receive feedback on the clarity of the items in the scale. After the application, group interviews were made and information was

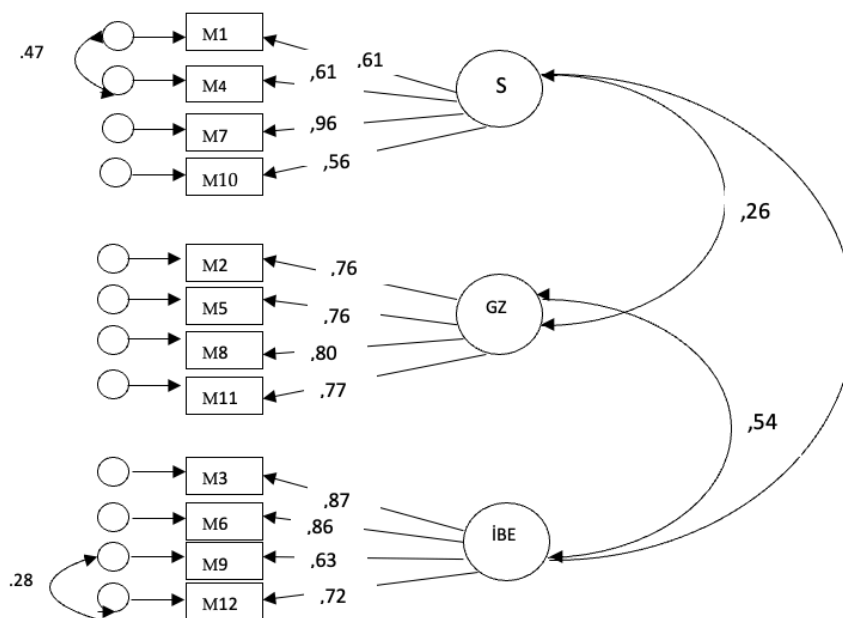
obtained about whether there were items that were difficult to understand. An arrangement has been made based on the feedback received about an item. Then, a Turkish teacher and an expert from the field of psychological counseling re-evaluated the scale in terms of fluency, intelligibility and compatibility with Turkish. Finally, the language equivalence testing phase of the scale was started. 32 students from the English Language Teaching Department, who speak Turkish and English, were first given the original form of the scale, and then the Turkish form created 2 weeks later and asked to fill in the scales. Post-application data were analyzed with dependent groups t-test. According to the results of the related groups t-test analysis regarding the linguistic equivalence of the IKSES, it was found that there was a high ($r = .883$, $p < .001$) positive correlation between the Turkish and English forms of the scale. Findings confirmed that the scale gave similar results in both languages and had linguistic equivalence. After all these steps related to the scale were completed, the ethics committee permission and application permissions were obtained and the data collection stage was started. Then, it was decided to move on to validity and reliability studies within the scope of scale adaptation.

Construct Validity Studies of the Relationship Sabotage Scale

CFA was carried out to examine the validity of the structure of Relation Sabotage Scale in Turkish. Before the confirmatory factor analysis, assumptions such as outliers, multicollinearity and singularity problem were reviewed. Multicollinearity was the case when the test items were highly correlated with each other ($r > 0.80$) in pairs; The fact that $r = 1$ means singularity (Büyüköztürk, 2011). In the study, the highest r value reached among the items in pairs was 0.74. It was observed that there was no problem of multicollinearity among the items. Then DFA was performed.

The three-dimensional factor structure and factor loads of the scale items in the Turkish sample are given in Figure 1. As in the original form, the defensiveness subscale consists of four items (1, 4, 7, 10), the trust difficulty consists of four items (2, 5, 8, 11) and the lack of relationship skills subscale consists of four items (3, 6, 9, 12). It was concluded that the three-factor structure of the scale explained 60.4% of the total variance, similar to the original scale.

Figure 1. Confirmatory Factor Analysis of the Relationship Sabotage Scale Factor Loads



CMIN=108,191; DF=49; $p = .000$; CMIN/DF=2,208, RMSEA=.068; GFI=.936; CFI=.960

As seen in Figure 1, factor loads obtained in the confirmatory factor analysis of the scale were between .56 and .96 for defensiveness, between .76 and .80 for trust difficulty, between .63 and .87 for lack of relationship skills, and between .63 and .87 for the whole scale. It was concluded that it varied between .56 and .96. The fact that all factor loading values for Confirmatory Factor Analysis are $>.50$ indicates that the findings are at a sufficient level (Kline, 2009). Modifications were made between "M1-M4" and "M9-M12" in order to increase the goodness of fit values of the scale. The modifications were arranged as not more than 3 as stated by Kline (2011). The modification indices were examined and two modification suggestions that would provide the highest covariance change; a covariance link between M1-M4 and M9-M12 under the same factors was determined and the proposed post-modification fit criteria were met; goodness of fit indices of the model were found to be good (CFI = .96, AGFI = .89, GFI = .93, RMSEA = .06).

The adequacy of the goodness-of-fit indices of the model is necessary for the Confirmatory Factor Analysis results to be considered valid. In the study; Ratio of chi-square value to degrees of freedom, proportional fit index (CFI), adjusted goodness of fit index (AGFI), goodness of fit index (GFI), and mean square root of approximate errors (root mean square error of approximation, RMSEA) was used to evaluate the results obtained by confirmatory factor analysis. The fit indices of the scale are given in Table 2.

Table 2. Fit Indices and Reference Values

Fit Index	Values of the Study	Good Fit	Excellent Fit
χ^2 / sd	2,208	$2 \leq \chi^2 / sd \leq 3$	$0 \leq \chi^2 / sd \leq 2$
RMSEA	0,068	$.05 \leq RMSEA \leq .08$	$0 \leq RMSEA \leq .05$
NFI	0,930	$.90 \leq NFI \leq .95$	$.95 \leq NFI \leq 1.00$
AGFI	0,899	$.85 \leq AGFI \leq .90$	$.90 \leq AGFI \leq 1.00$
CFI	0,960	$.90 \leq CFI \leq .95$	$.95 \leq CFI \leq 1.00$
GFI	0,936	$.85 \leq GFI \leq .90$	$.90 \leq GFI \leq 1.00$
IFI	0,961	$.90 \leq IFI \leq .95$	$.95 \leq IFI \leq 1.00$

Note: Ki kare (χ^2) = ; sd = ; $p \leq .001$.

Regarding the evaluation of the fit indices resulting from the Confirmatory Factor Analysis; χ^2 / sd for $\chi^2 / sd < \chi^2 / sd < 3 < acceptable fit$ (Kline, 2011), $<.05$ excellent for RMSEA (Browne & Cudeck, 1993), Goodness of Fit Index (GFI), Normed Fit Index (NFI), Comparative Fit Index (CFI) and Incremental Fit Index (IFI) values $>.90$ were used to indicate that there was sufficient fit (Schermelleh-Engel, Moosbrugger and Müller, 2003). When the goodness of fit indices obtained as a result of the Confirmatory Factor Analysis in Table 1 are examined; It is seen that the values of $\chi^2 / sd=2.208$, $p \leq .001$, $RMSEA=0.068$, $NFI=0.930$, $AGFI=0.899$ are in good agreement. $CFI=0.960$, $GFI=0.936$ and $IFI= 0.961$ values show perfect fit and the model is compatible. The results of the original scale's CFA test showed that the three-factor model had an RMSEA of 0.048 ([0.034, 0.062], $p=0.565$), which was considered a perfect fit. The GFI and CFI values were 0.96 and were found to be above the acceptable level. Finally, it was seen that the SRMR value = 0.052 in the original scale again showed an acceptable value.

After this process, the Cronbach's alpha (α) internal consistency coefficient and test-retest were used to test the reliability of the whole and each sub-dimension of the Relationship Sabotage Scale, which was adapted into Turkish.

Findings Related to the Reliability of the Relationship Sabotage Scale

The internal consistency coefficient of the Relationship Sabotage Scale was calculated using Cronbach's alpha. In addition, test-retest was carried out to support the reliability of the scale. The Cronbach alpha internal consistency coefficients of the original scale and each subscale of the adapted scale were also calculated and shown in Table 3.

Table 3. Reliability Coefficients of Relationship Sabotage Scale

Factors	Number of Items	Original Scale	Adaptation Scale
Trust difficulty	4	,61	,86
Defensiveness	4	,85	,81
Lack of relationship skills	4	,75	,85
Total	12	,77	,81

As can be seen in Table 3, the total internal consistency value of the scale was found to be .81. Regarding the subscales; .86 for the trust difficulty subscale, .81 for the defensiveness subscale and .81 for the lack of relationship skills subscale. It appears to be 85. In the original form of the scale, the trust difficulty subscale was .61, the defensiveness subscale was .85, and the lack of relationship skills subscale was .75. The reliability coefficient for internal consistency increases as it approaches 1 and decreases as it approaches 0 (Rubin & Babbie, 2009). These values show that the reliability value of the scale is high. The test-retest was calculated by re-applying the scale to 94 university students with an interval of three weeks. Pearson Moments Correlation Analysis results for test-retest reliability were found to be $r = .88$ for the total score, $r = .79$ for the defensiveness sub-dimension, $r = .88$ for the trust difficulty sub-dimension, and $r = .84$ for the lack of communication skills sub-dimension. According to Hair et al. (2010), coefficients calculated as .70 and above indicate high reliability of the measurement tool.

Discussion Conclusion and Recommendations

In this study, it was aimed to adapt the Relationship Sabotage Scale, which was developed to obtain information about self-sabotage in romantic relationships, into Turkish. Due to the one study in Turkey (Karahan-Sayan, 2021) and limited studies (Peel, 2020; Peel, McBain, Caltabiano, & Buckby, 2017; Peel, McBain, Caltabiano and Buckby, 2018; Peel, Caltabiano, Buckby & McBain, 2019; Peel, McBain, Caltabiano, & Buckby, 2019; Peel & Caltabiano, 2021; Slade, 2020) in the literature about self-sabotage in romantic relationships, it is thought that this adaptation study will make a great contribution to the literature. It is foreseen that it will be a usable scale for the studies to be carried out on the subject of "self-sabotage in the relationship", emerging as a new concept about romantic relationships. It is thought that the scale will create an area for future research on the development of models to explain the dissolution of romantic relationships and to work towards the maintenance of the relationship. Since a similar tendency to self-sabotage is exhibited in different romantic relationships, negative results are encountered repeatedly. As a result, individuals may lose their belief in romantic relationships and may seek psychological counseling regarding this situation (Karahan-Sayan, 2021). It is thought to be a scale that can contribute to the field of psychological counseling and further academic studies.

Within the scope of the study, confirmatory factor analysis (CFA), a three-factor structure was revealed as in the original scale. The fit indices were found to be good; RMSEA = .068, CFI = .96, GFI = .93, AGFI = .89 indices are taken into account. In the original scale, a three-stage study was carried out by Peel and Caltabiano (2021). In the first study, EFA; In the second study, scale and factor structure were developed using two-part EFA and single homogeneous model analysis. Finally, in the third study, the final structure and construct validity of the scale were analyzed by CFA. In the original scale, it was seen that the three-factor model had an RMSEA of 0.048 ([0.034, 0.062], $p = 0.565$), which was accepted as the perfect fit index (Byrne, 2010); GFI and CFI values were found to be 0.96 and above the acceptable level (Peel and Caltabiano, 2021). It was concluded that the three-factor structure of the scale, the validity and reliability of which was studied by Peel and Caltabiano (2021), explained 60.3% of the total variance. Considering the distribution of variance according to the factors; Defensiveness factor (33.3%), Confidence Difficulty factor (14.3%) and Lack of Relationship Skills factor (12.7%) were explained as (Peel & Caltabiano, 2021). It was concluded that the three-factor structure of the scale, which was adapted into Turkish, explained 60.4% of the total variance, similar to the original scale.

In the study, the Cronbach alpha internal consistency coefficient of the Relationship Sabotage Scale was calculated as .81. The Cronbach alpha internal consistency coefficient of the original form of the scale is .77. It was observed that the Turkish form had a higher value than the original scale. Considering the reliability of the sub-dimensions; defensiveness dimension is .81, confidence difficulty is .86, and lack of relationship skills

is .85. In this respect, it is seen that the scale is reliable. In the original scale, these values are respectively; It is seen that it is .85, .61 and .75. The difference in the Cronbach's alpha results of the original scale and the adapted scale; it can be explained in terms of cultural and linguistic differences (Hambleton, 2005). When the results obtained in this study are compared with the results obtained in the original scale study (Peel & Caltabiano, 2021), it is seen that the scale has reliability values in both studies. Parallel to this, it was observed that the item-factor loads were close to each other in both studies.

Peel and Caltabiano (2021), in the convergent and discriminant validity study of the Romantic Sabotage Scale, the Experiences in Close Relationships Scale Short-Form (ECR-SF), Relationship Quality Components Inventory Short-Form (PRQCI-SF), the Self-Handicapping Scale Short Form (SHS-SF) scales were used. Regarding convergent validity, Factor 1 (Defensiveness) showed significant positive correlation ($p < 0.01$) with anxious attachment ($r = 0.348$) and avoidant attachment ($r = 0.435$) and significantly negative correlation with perceived relationship quality ($r = -0.371$). Factor 2 (Trust Difficulty) showed significant positive correlations ($p < 0.01$) with anxious attachment ($r = 0.508$) and avoidant attachment ($r = 0.197$). Factor 3 (Lack of Relation Skills) showed significant positive correlations ($p < 0.01$) with avoidant attachment ($r = 0.473$) and significant negative correlations with perceived relationship quality ($r = -0.406$). Regarding divergent validity, all three factors showed a positive correlation with self-handicapping to near zero (ranging from 0.033 to 0.082). Parallel to this study, in the study (Haydon et al., 2017) which is closely related to the 'romantic sabotage', Recovery Sabotage Scale (negative behavior and perseveration on conflict in the moments following conflict) was associated with high attachment anxiety and low avoidance. Recovery sabotage was associated with higher partner conflict avoidance. Recovery sabotage and conflict resolution also differentially predicted satisfaction and stability one year later. Findings suggest recovery sabotage is a distinct, developmentally organized relationship process tied to attachment history and behavioral, rather than affective, transactions between partners during conflict.

When the validity and reliability evidences of the Relationship Sabotage Scale is evaluated together, it is concluded that it is appropriate to use in Turkish culture. At the same time, the scale; It is seen that it is short, easily applicable, and easily scored. Various suggestions can be made based on the research results. In this study, the participants were reached by convenient sampling method. In future studies, using random sampling method and working with a larger sample may support the generalizability of the results. The use of the scale in different studies and samples may contribute to the understanding of the psychometric properties of the scale. It is thought that future studies may reveal other factors and structures related to the concept of self-sabotage in the relationship. Since validity and reliability studies are carried out on the basis of the measurements, it will be useful to examine the psychometric properties of the RSS with the data to be obtained from larger and different sample groups in the future. Finally, it is anticipated that studies with different variables that are thought to be related to self-sabotage in the relationship will add new evidence to the validity and reliability of the scale and contribute to the development of the literature.

Author Contributions: First author and second author both contributed to the design of study. First author responsible for data collection, data analysis and reporting. Second author provided support for data analysis and reporting.

Funding Disclosure: Rana Turan received the TUBITAK 2211-A National Graduate Scholarship during her doctoral education. Apart from no funding was provided for this study.

Conflicts of Interest: Authors declare no conflict of interest for this study.

Data Availability: The authors can provide the data upon request.

Ethics Approval and Consent to Participate: Authors declared that study carried out within ethical scope. Participants were given informed consent form and were volunteer to participate to study. Ethic committee approval was obtained from Hacettepe University Ethics Commission (16/04/2022- E-35853172-399-00002138889)

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Difficulties in Emotion Regulation and Communication Skills: The Mediating Role of Co-Rumination

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ARTICLE HISTORY

Received: 28.03.23
Accepted: 14.08.23

KEYWORDS

Emotion Regulation; Co-Rumination;
Communication Skills;
Teachers.

ABSTRACT

Teaching highly depends on good communication skills including emotional regulation. This study specifically examines the mediating role of co-rumination between emotional regulation and communication skills in an educational setting. Data was collected from 4128 (1387 females, 2741 males) teachers working in the Turkish Ministry of National Education. Structural equation modeling was used to evaluate the mediator role of co-rumination in the relation between difficulties in emotion regulation and communication skills. Difficulties in emotion regulation predicted lower level of communication skills, which was mediated by co-rumination. Contrary to predictions, co-rumination was found to be positively correlated with communication skills. Thus, difficulties in emotion regulation lead individuals to co-ruminate more, which in return seems to be a positive variable that contributes to overall communication skills. Therefore, it can be inferred that when teachers with higher emotion regulation difficulties start to co-ruminate more, which positively increases their communication skills.

Communication skills are a crucial component of teaching, to thrive in their line of work, teachers must possess strong communication skills. It requires active and empathic listening, conscious interpretation of the message, and understandable expression of response both verbally and non-verbally, which in return motivates students and enables learning in educational settings (Duta, 2015). A teacher needs to be extremely knowledgeable in each of these areas in order to communicate and teach effectively. Proper verbal and nonverbal communication between teachers and students can be crucial in establishing a good relationship, which in turn can help them reach their educational goals (Bambaeroo & Shokrpour, 2017). The communication abilities of teachers have a direct impact on how well they perform in the classroom. If the teacher is competent at communicating, he or she will be able to present the lecture in an understandable way (Maes, Weldy & Icenogle, 1997). Research showed that when students perceive the communication skills of teachers as effective, the quality of education, and student learning and motivation increase (Frymier & Houser, 2000).

A minimum of two persons must share their information, feelings, thoughts, and lifestyles for interpersonal communication to take place. People communicate with others by using both verbal and non-verbal cues to convey a variety of messages. Along with numerous communications, moods and emotions comprising emotions are also expressed during this message exchange (Ozkaral & Ustu, 2019). This shows the important role of emotions in communication. Teachers who use effective communication skills understand their students better, accept them unconditionally and experience more positive emotions toward their students, which positively

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affects student behaviors and attitudes (Kısaç, 2002). It has also been found that healthy communication behaviors of teachers (i.e., eye contact, smiling, touching, etc.) are positively associated with students' interests and learning (Mazer, 2013). In a meta-analytic research based on 81 studies, Witt et al. (2004) concluded that teachers' verbal and nonverbal immediacy (e.g., smiling, moving close to, eye contact, etc.) is significantly related to students' effective learning. In the current study, it was aimed to understand the communication skills of teachers in the light of two emotion-related constructs: emotion regulation and co-rumination. The following sections discuss how these constructs are related and explain the hypothetical mediator model that was tested.

Difficulties in Emotion Regulation and Communication Skills

Emotion regulation refers to “the process by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions” (Gross, 1998, p. 275). It refers to an important set of skills as it is about managing both one's own and others' emotions effectively. Through emotion regulation, individuals can influence both their own and others' mood, and improve their interpersonal relationships (Williams et al., 2018).

Studies demonstrated that emotion regulation deficiencies might contribute to various mental health problems such as depression, anxiety (Berking et al., 2008), stress (Bardeen et al., 2012), eating disorders (Prefit & Szentagotai-Tatar, 2018) and so on. Teachers may be more vulnerable to these problems caused by emotion dysregulation because educational settings and classrooms are emotionally sensitive intense places that require emotional demands from teachers (Yin, 2016). In that sense, practicing emotion regulation is necessary for the well-being and functioning of teachers (Sutton et al., 2009).

Gratz and Roemer (2004), in Difficulties in Emotion Regulation Scale (DERS), defined the elements of emotion dysregulation as (1) non-acceptance of negative emotions, (2) problems engaging in goal-directed behavior, (3) lack of control on impulsive behaviors, (4) lack of emotional awareness, (5) lack of strategy building, and (6) lack of emotional clarity.

Teaching and emotions go hand in hand; and thus, teaching has been described as an emotional endeavor (Schutz & Lanehart, 2002). More specifically, how emotions are displayed and regulated shape teacher behaviors in the classroom, and therefore impacts student learning either positively or negatively (Frenzel, 2014). Effective emotion regulation has a positive relation with positive educational outcomes (Boekerts, 2002). Sutton et al., (2009) showed that teachers' beliefs about how they regulate emotions were related to their job effectiveness. However, research on teachers' emotion regulation and how they might contribute to their communication skills is scarce.

Could emotion regulation difficulties be related to how teachers communicate in the classroom? It is known that employing emotion regulation strategies improve interpersonal functioning (Gross & John, 2003). Pallini et al., (2018) argued that the existence of difficulties in emotion regulation and especially the dysregulation of negative emotions is one of the important factors contributing to unhealthy communication, unfavorable interpersonal relationships, and attention problems. Emotion itself facilitates communicating information to other people, emotion regulation has the potential to improve communication skills (McMain et al., 2001). One study (Berkovich & Eyal, 2018) showed that school principals' emotion recognition ability, which is a prerequisite for emotion regulation (Yoo et al., 2006), was predictive of their positive behaviors toward teachers (e.g., transformational leadership). Moreover, teachers reported that they boost self-confidence when they communicate their positive emotions while managing their negative emotions, but teachers' emotions were not seriously taken into consideration in teaching practice (Sutton et al., 2009).

Co-rumination, Emotion Regulation, and Communication

Rumination is a mental process that involves repetitive, recurrent, and passive thinking about one's problems and their causes and consequences (Watkins, 2016). A rather new construct, co-rumination is a social rumination process that refers to talking to someone about one's negative experiences without focusing on any problem-solving, and it is a common communication and emotion regulation strategy (Rose, 2002). Rumination is likely to lead to co-rumination because ruminators often discuss the causes and meanings of

their difficulties with the people around them (Watkins, 2016). This excessive sharing of problems, i.e., co-rumination, may at times be helpful in gathering support (Boren, 2013). In fact, co-rumination is indicative of closeness and friendship quality among friends. In other words, the closer the friendship, the more likely one is to co-ruminate and find support (Rose et al., 2014). In a sense, co-rumination enhances social connectedness (Weaver & Bosson, 2011). Co-ruminating has also been found to be negatively associated with the frequency of one's negative behaviors. For instance, engaging in self-harming behavior was found to diminish by co-ruminating with friends and parents (Latina et al., 2015).

Furthermore, controlling for depressive symptoms, co-rumination was found to be negatively correlated with social anxiety (Starr & Davila, 2009), and positively with the emotion regulation skills of the ruminator (Stone et al., 2011). Given that the ruminator seeks social support, co-rumination might show similar benefits to having close friendships, which could promote emotional adjustment (Rose, 2002; Rose et al., 2007). For instance, a study carried out in the workplace found that co-rumination was associated with negative feelings about the problem at hand, which harms one's workplace adjustment; however, it was also positively associated with friendship satisfaction (Haggard et al., 2011).

On the other hand, co-rumination can also be problematic for one's emotional adjustment (Bugay-Sökmez et al., 2023) because of its emphasis on excessive problem talk (Rose et al., 2012). It could trigger internalizing symptoms including depressive symptoms and mood (Stone et al., 2011), higher peer stress (Rose et al., 2017), emotional distress (Calmes & Roberts, 2008), and increased stress level and burnout (Boren, 2013). Overall, it can be concluded that the literature provided mixed results as to the adaptive versus maladaptive nature of co-rumination as a communication style. In this study, it was hypothesized that difficulty in emotion regulation would positively affect co-rumination which also would positively contribute to the communication skills of teachers.

Studies on Teacher Communication Skills in the Turkish Context

Considering the studies in terms of emotional intelligence and communication skills conducted in Turkey, some studies have been presented in the following sentences. In one of these studies, the relationship between emotional intelligence and communication skills was investigated, and findings indicated a significant positive relationship between communication skills and emotional intelligence of students, however, this study was conducted with healthcare manager candidates, not with teachers (Erigüç & Köse, 2013). In another study, the influence of communication skills training on emotional intelligence was investigated and researchers reported that the communication skills training program increases the teachers' communication skills and emotional intelligence (Tuluhan & Yalçınkaya, 2018). Similarly, Ozkaral and Ustu (2019) also captured a positive association between communication skills of and emotional intelligence levels of teacher candidates. However, in the aforementioned study, only levels were investigated not the relations. It is suggested that prospective teachers' general communication skills and intellectual, emotional, and behavioral skills are at a moderate level (Tutkun, 2015). As can be seen from the mentioned research above, emotion, emotion regulation, and communication skills are variables are concepts that are not studied before in Turkish literature.

The Current Study

To reiterate, in this study a mediational model was hypothesized to examine the mediating role of co-rumination between emotion regulation and communication skills. Therefore, the research question of the current study was set up as "To what extent are communication skills explained by the proposed difficulties in the emotion regulation model as being mediated by co-rumination?". The hypotheses that are investigated in the present study are a) difficulties in emotion regulation are directly related to co-rumination and communication skills; b) co-rumination will be directly related to communication skills; and c) that co-rumination will have indirect effect on the relationship between difficulties in emotion regulation and communication skills.

Method

In the present study, according to the objectives, several steps were taken to test the structural relationship between emotion regulation difficulties, co-rumination, and communication skills. Structural equation modeling (SEM) was used as the main analysis to test the pro-posed model and explain the relationships

between variables using LISREL 8.8. More specifically, this study investigated the direct paths from emotion regulation difficulties to co-rumination and communication skills as well as indirect paths in the relation between emotion regulation difficulties and communication skills through co-rumination. After that a regression-based bootstrapping approach was used to examine the hypothesized indirect effects. Before the main analysis, missing data were first identified, data screening and cleaning were completed, assumptions required for the main analysis were tested, and descriptive statistics were summarized using SPSS 22.

Participants

The participants of the current study were 4128 teachers composed of 1387 females (%33.60) and 2741 males (%66.40) working for the Turkish Ministry of National Education. Convenient sampling method to collect the data. The data collection was done online by posting an announcement of the present study in teacher forums. Prior to data collection, an informed consent form was shown first, the data collection was carried out on a voluntary base, and also data were collected and held anonymously. Data collection was performed in accordance with the principles stated in the Declaration of Helsinki, and ethical consent was obtained from Human Research Ethics Committee of Middle East Technical University with protocol number of 388-ODTU-2021.

Participants were asked to indicate their income levels as low, medium and high according to their self-evaluations of their monthly income. 11.2% of the participants reported their income as low, 84.7% as medium and 4.1% as high. 75.7% have an undergraduate degree, 23% have a master's degree, and 1.3% hold a PhD. The professional experience of the participants was grouped as 1 to 5 years (10.3%), 6 – 10 years (14.1%), 11-15 years (13.3%), 16-20 years (22.5%) 21-25 years (18.8%) and 25 plus (21.2%) with this regard professional experience of the participants mean was 3.89, standard deviation was 1.63. 8.5% of the participants were from the science field, 2.9% were from social sciences and 68.6 % were from other fields.

Instruments

The Communication Skills Scale (CSS; Korkut-Owen & Bugay, 2014). This scale consists of 25 items and 4 factors including communication principles and basic skills, personal expression, non-verbal expression and willingness to communicate. Sample items are: 'I wait for other person to finish his/her speech before I respond', 'I can express my thoughts clearly whenever I want.', 'I can sense the feeling of other person while listening to him.' Internal consistency (Cronbach's alpha = .88), test-retest reliability (.81), and concurrent validity findings proved that the scale is reliable and valid to use. In the present study, the internal consistency reliability coefficient for the total Communication Skills Scale was found to be 0.95. Cronbach's alphas for the four subscales ranged from .80 to .88. The total score was used for this study.

Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004). This is a 36-item, 5-point Likert type self-report scale ranging from 1 (almost never) to 5 (almost always) that aims to measure difficulties in emotion regulation. It consists of six subscales: clarity, impulse, awareness, non-acceptance, goals, and strategies. A sample item is: 'I feel at ease with my emotions.' The scale was adapted into Turkish by Rugancı and Gençöz (2010) who reported Cronbach's alpha score as 0.94, and the test-retest reliability as .83, which indicates a high-reliability level of this measurement tool. The internal consistency reliability coefficient for the present study data was .94. Cronbach's alphas for the six subscales ranged from .73 to .91.

The six-factor model of difficulties in emotion regulation scale was found to demonstrate poor fit with the data. When the awareness subscale was excluded, the data demonstrated a better fit. Previous studies also supported this five-factor model (e.g., Bardeen et al., 2012; Hallion et al., 2018). Therefore, in the current study, five-factor model was used. Difficulties in emotion regulation was utilized as a latent variable; thus, the total score was used like also it is used in earlier studies on psychometric properties of the DERS (Hallion et al., 2018). For the current study, the internal consistency of the 5-factor scale was .94.

The Co-rumination Questionnaire (CRS; Ross, 2002). This self-report inventory is a 27-item and 5-point Likert scale ranging from 1 (not at all true) to 5 (really true) that measures to which extent individuals tend to co-ruminate with others. A sample item is: 'We spend most of our time together while talking about my or my friend's problems.' Reliability and validity studies of this tool for a Turkish sample were carried out by Bugay and Erdur-Baker (2015), and this scale was found to be highly reliable (Cronbach's alpha = .95, and test-retest

reliability score = .90) and valid. For the present study, Cronbach's alpha was found to be .98. As co-rumination is a latent variable, the total score was used. Although co-rumination questionnaire does not have any subscale and it is a unidimensional questionnaire, prior to SEM, item parceling, a method in which an item is created by summing or calculating averages for multiple items (Bandalos, 2002) was used for the co-rumination variable. Observed variables with item parceling are CRUM1, CRUM2 and CRUM3.

Results

The Structural equation modeling was used to evaluate the mediator role of co-rumination in the relationship between difficulties in emotion regulation and communication skills. Prior to structural equation modeling, descriptive analysis was conducted. The means, standard deviations, and correlations between relevant variables are presented in Table 1.

Table 1. Descriptive Statistics and Correlations of the Current Variables (N=4128)

Variables	\bar{X}	<i>SD</i>	1.	2.	3.
1. Communication Skills	104.56	13.14	-	-.30	.12
2. Difficulties in Emotion Regulation	63.43	21.92		-	.29
3. Co-Rumination	72.90	25.10			-

In the model, communication skills which were represented by communication principles and basic skills, personal expression, non-verbal expression, and willingness to communicate were used as outcome variables. On the other hand, difficulties in emotion regulation with dimensions clarity, awareness, impulse, non-acceptance, goals, and strategies were latent variables, and co-rumination was the mediator.

In advance of SEM, the necessary assumptions were checked. Two different data sets were tested with SEM to find the effect of outliers. One data set includes outliers and in the other data set outliers were excluded. There was no difference between the two data sets, thus we included the outliers in the dataset. Sample size adequacy was also checked. The current sample size (N = 4128) was found to be sufficient according to Klein (2016)'s suggested ratio of 10:1. Multicollinearity assumption was assessed, and no violations were found. In addition to these assumptions, univariate and multivariate normality were also investigated. While the former was found to be adequate, the latter was not as the multivariate normality assumption was not satisfied. Thus, Robust Maximum Likelihood estimation was used to remove the influence of non-normality. We used Satorra-Bentler scaling-corrected test statistic (Satorra & Bentler, 1994). The structure model was tested with LISREL 8.80. RMSEA, GFI, CFI, GFI, and SRMR model fit indexes were used to assess the model.

The results of the structural model indicated fit indices as Satorra-Bentler $\chi^2(51) = 833.87$, $p = .00$; RMSEA = .06; CFI = .98; NNFI = .98; GFI = .96; SRMR = .04. In the light of reference fit indices, it can be concluded that hypothesized model presented a good fit (Hu & Bentler, 1999). In the current model, Chi-Square/df ratio is higher than 5, however, the χ^2 statistic is very sensitive to sample size, and looking at other fit indices is suggested (Byrne, 2010).

The squared multiple correlation coefficients (R²) were examined in order to explain the proportion of variance for each latent variable. The results of R² values demonstrated that difficulties in emotion regulation accounted for 15% of the variance in co-rumination. Moreover, difficulties in emotion regulation and co-rumination together explained 3% of the variance in communication skills.

In the structural model, in addition to model fit indices, the significant direct paths between difficulties in emotion regulation, communication skills and to co-rumination were observed. The direct effects from difficulties in emotion regulation to communication skills ($\beta = -0.13$, $p < .01$) and to co-rumination ($\beta = .39$, $p < .01$) were significant. Moreover, the direct path from co-rumination to communication skills ($\beta = .17$, $p < .01$) was also found to be significant. Klein (2016) suggested that standardized path coefficient (β) which is below .10 indicates small effect size, while around .30 is claimed as medium and higher .50 as large. According to Klein, standardized path coefficient (β) of the current model can be interpreted as low for paths of difficulties in emotion regulation to communication skills and co-rumination to communication skills, and medium for the path of difficulties in emotion regulation to co-rumination. Moreover, there is a negative relation between difficulties in emotion regulation to communication skills can be also highlighted.

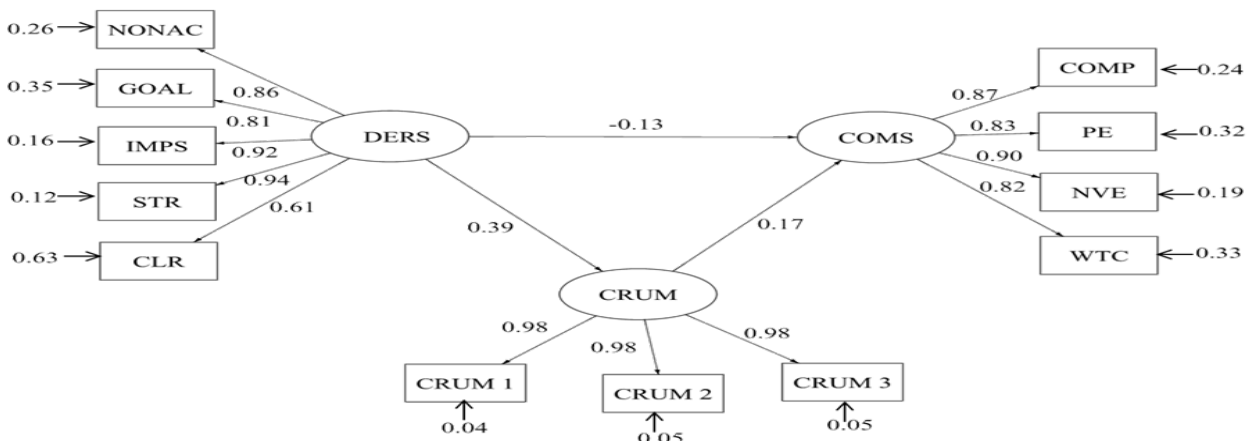
The indirect effect of difficulties in emotion regulation on communication skills through the influence of co-rumination was examined. Findings demonstrated that difficulties in emotion regulation ($\beta = .07$ $p < .01$) have a significant positive indirect effect on communication skills through co-rumination. In the light of these findings, it can be summarized that the direct and indirect paths are statistically significant which indicates that co-rumination plays a mediating role in the current model. The direct effect of emotion regulation difficulties on communication skills was negative and significant however when co-rumination intervenes the association this relationship was turned to significant and positive which means co-rumination changes the way of the relationships between emotion regulation difficulties on communication skills. In brief, when the individual difficulty level in emotion regulation increases, rumination, as a mediator, could mitigate the influence of emotion regulation difficulties on communication skills.

Building from significant direct and indirect paths between difficulties in emotion regulation, communication skills, and co-rumination, it was decided to use bootstrapping method to produce a confidence interval for the mediational effect of co-rumination. To eliminate the limitations of cross-sectional data on mediation analysis coefficient approaches was recommended (Fairchild & McDaniel, 2017). Thus, the mediated association was estimated using the product of coefficients approach.

The hypothesized mediation model was evaluated by using Process Macro v3.2 (Model 4) which is an SPSS procedure (Preacher & Hayes, 2004). Before assessing the mediated effect, a mediation regression was evaluated to understand the relationships between variables. Baron and Kenny's (1986) suggest a four-step procedure in mediation analysis which are; (1) significant effect of independent variable (difficulties in emotion regulation) on mediator (co-rumination), (2) significant effect of independent variable (difficulties in emotion regulation) on dependent variable (communication skills), (3) significant effect of dependent variable (communication skills) on mediator (co-rumination), (4) a weaker or insignificant effect on independent variable (difficulties in emotion regulation) on dependent variable (communication skills) in the presence of mediator (co-rumination).

In the mediation model, Figure 1 provides the estimated standardized regression coefficients of the hypothesized mediation model. In the first path, it can be seen that the direct effect of the difficulties in emotion regulation on the co-rumination was significant ($\beta = .3836$, $t = 22.83$; $p < .05$), which means difficulties in emotion regulation significant predictor of the co-rumination. Another path was from mediator to dependent variable that is from co-rumination to communication skills, which also indicated a significant and positive relationship ($\beta = .1084$, $t = 13.11$; $p < .05$). In consideration of the direct effect of difficulties in emotion regulation on communication skills was also significant, but the relationship was negative ($\beta = -.1718$, $t = -18.14$; $p < .05$). All paths were significant as suggested by Baron and Kenny's (1986).

Figure 1. Figure 1



Note. DERS= difficulties in emotion regulation (NONAC= non-acceptance, GOAL=goals, IMPS=impulse, STR= strategies, CLR=clarity), COMS= communication skills (COMP=communication principles and basic skills, PE=personal expression, NVE =

non-verbal expression, WTC=willingness to communicate), CRUM=co-rumination (CRUM1, 2, 3 are the parcels for co-rumination variable)

A regression-based bootstrapping approach was used to examine the hypothesized indirect effects. The results of the mediation analysis indicated that co-rumination significantly partially mediated the relationship between difficulties in emotion regulation and communication skills. The bootstrap estimates results presented that 95% bias-corrected confidence interval was above zero. The difficulties in emotion regulation had a significant total effect on communication skills was significant (TE=-.1302, SE= .0091, p=. 0000), a significant residual direct effect (DE=-.1718, SE= .0095, p = .0000) and a significant effect (IE=.0416, SE=.0043, LLCI=.0334, ULCI=.0501). According to these results, it can be inferred that difficulties in emotion regulation predict communication skills through the mediation of co-rumination. Results were presented in Table 1.

Discussion

The purpose of the study was to examine the relationship between emotion regulation difficulties, co-rumination, and communication skills in detail with a sample of teachers. Accordingly, the structural relation between emotion regulation difficulties, co-rumination and communication skills were tested. Findings revealed that difficulties in emotion regulation accounted for 15% of the variance in co-rumination. Moreover, difficulties in emotion regulation and co-rumination together explained %3 of the variance in communication skills. Therefore, co-rumination was found to decrease the negative effect of difficulties in emotion regulation on communication skills.

Direct and indirect paths were also examined. The first direct path was from difficulties in emotion regulation to communication skills. Difficulties in emotion regulation had a strong negative influence on communication skills. In other words, participants who experience difficulty in emotion regulation also tended to experience difficulty in communication skills. It was an expected outcome that individuals who become good at learning and understanding emotions also become good at communicating with others according to previous research (Eisenberg et al., 2005). For instance, training to improve the communication skills of participants with diabetic neuropathy made these individuals suffer less from difficulties in emotion regulation (Heydarian et al., 2018). In Turkey, Dagal (2017) concluded that there was not a significant overall association between emotion regulation and communication skills of children, but a significant relation was detected among subscales of Emotion Regulation and Communication Skills such as between negativity subscale of Emotion Regulation and 'Reacting Positively toward Others' subscale of Communication Skills. After receiving dialectical behavior therapy program, a client with borderline personality disorder which is associated with serious difficulties in emotion regulation reported to develop better communication skills (McMain et al., 2001). Even difficulties in emotion regulation were found to have a mediator role between a man's restrictive emotionality and how to communicate his psychological distress (Cohn et al., 2010). Thus, the way of regulating emotions can impact the way how it is communicated. As Pallini et al., (2018) argued, emotion dysregulation influences healthy communication and interpersonal relationships negatively, and that is what this present study supported.

Secondly, by augmented difficulty in emotion regulation, participants became more likely to co-ruminate. Interestingly, participants with high level of co-rumination tended to get their communication skills enhanced. While participants have difficulty in regulating emotions, they can start sharing their problems with their friends more, which can improve one's communication skills, and this improvement may affect the direction of the negative relation between emotion regulation difficulties and communication skills. Co-rumination has positive correlation with emotion regulation difficulties and it has positive correlation with communication skills. This shows the two-sided effect of co-rumination; as a negative emotion regulation strategy, co-rumination increases the severity of the person's distress related to emotion regulation increases, which pushes the individuals to share their problems with the others through self-disclosure, which in turn is expected to increase their communication skills. This finding might seem paradoxical because as it is a negative emotion regulation strategy a destructive effect of co-rumination was expected; however, this study demonstrated a constructive influence of co-rumination. However, as Rose (2002) claimed, co-rumination has a paradoxical influence on different concepts. As also discussed in the literature, co-rumination is also a sort of communication (Rose, 2002), and a kind of social support with more negative content (Boren, 2013; Rose,

2002). In other words, co-rumination and communication cannot be separated from each other. Therefore, when the relationships between emotion regulation difficulties, co-rumination and communication skills are considered as a whole, it can be concluded that the relations between emotion regulation difficulties and co-rumination are weaker than the relations between co-rumination and communication skills.

The indirect path presented the association between communication skills and difficulties in emotion regulation through co-rumination. The result showed that difficulties in emotion regulation predict communication skills through the mediation of co-rumination. That is, the model confirmed that difficulties in emotion regulation affected communication skills both directly and through the mediating effect of co-rumination.

To sum up, while emotion regulation difficulties have a negative relationship with communication skills, it has a positive relationship with co-rumination. Literature asserts that co-rumination has both positive and negative sides. It increases anxiety and negative symptoms by making individuals talk repetitively and negatively focusing on the negative sides of the experienced problem (Rose et al., 2007). However, it also increases social functioning as being a specific type of self-disclosure (Rose, 2002). Co-rumination enables social support including emotional support and presenting sympathy (Fenlason & Beehr, 1994). Unlike rumination, co-rumination requires a social process that helps individuals establish emotionally closer and higher quality friendships (Haggard et al., 2011; Rose, 2002; Rose et al., 2007). Thus, individuals who use co-rumination actively need friends which in turn require communication skills to have closer friends (Keshishlan et al., 2016). This close friendship means providing social support that decreases emotional exhaustion through the mediator role of co-rumination (Boren, 2013).

Overall, the current study contributed to the enlightenment of the reasons and consequences of factors influencing the communication skills of teachers, which is crucial to a healthy educational setting. Although their difficulties in emotion regulation negatively affect their communication skills, co-rumination eases this negative impact. In other words, when teachers increase in self-disclosure of their problems with others, side effects of emotion regulation difficulties decrease. This in return leads to improvement in communication skills. However, considering the cruciality of communication skills in educational setting, teachers must know how to regulate and communicate their emotions, which is an essential indicator of their competence (Muehlbacher et al., 2022). Both intrapersonal and interpersonal emotion regulation capacity are key to teachers' well-being, self-efficacy, job satisfaction (Hoffmann et al., 2020), belongingness to school (Arslan & Coşkun, 2023), and satisfying relationships with other stakeholders (Ocak-Karabay, 2019). Hence, the main suggestion of findings of the current study is to develop and apply intervention programs for enhancing emotion regulation skills of teachers. In fact, a teacher must have effective communication skills (Bıçak & Yöndem, 2008), but it does not seem possible with difficulties in emotion regulation because understanding and communicating emotions are prerequisite for building positive communication between teachers and students (Morrish et al., 2018). Even the current study captured the functional role of co-rumination between difficulties in emotion regulation and communication skills of teacher since co-rumination itself is an interpersonal emotion regulation strategy (Tudder et al., 2022). Nevertheless, while some cultures, especially in Western ones, have already been come up with such programs to improve emotion regulation skills of teachers (e.g., Fried, 2011; Wimmer et al., 2019), to the best of our knowledge, no such a program has been examined in Turkey. As a result, effective training programs targeting emotion regulation skills of educators should be developed so that they can communicate in a more functional and flourishing way, which is crucial for a healthy school climate.

The study is not without some limitations. First of all, the teaching profession requires a great amount of communication; thus, communication skills of the current sample might not be representative of those from another profession. Another limitation is about the scales that were used. More specifically, Communications Skills Scale, Emotional Regulation, and Co-Rumination Scales are not specific to communication in the classroom, but rather measure general interpersonal communication skills. Thus, further studies can develop scales that are specific to classroom communication.

Lastly, an online self-report survey was used, which might be impacted by personal biases and social desirability. In addition, due to problems with Internet access, it may not have reached as many people as would be desirable. Overall, it should be noted that the study is a correlational and cross-sectional study that does not allow conclusions to be drawn about causality.

Author Contributions: Aslı Bugay-Sökmez: Contributed to the concept and design of the study, data collection, and writing introduction part. Ayşe İrkörücü Küçük: Contributed to data analysis, methodology, and revisions of the article. Muhammet Coşkun: Contributed to writing introduction and discussion as well as revisions of the article. Raket Delevi: Contributed to data collection and data analysis part of the article.

Funding Disclosure: No funding was provided for this study.

Conflicts of Interest: No potential of interest was reported by author(s).

Data Availability: The dataset generated and analyzed during the current study is available from the corresponding author on reasonable request.

Ethics Approval and Consent to Participate: All actions conducted in research studies involving human participants adhered to the ethical guidelines set forth by the institutional and/or national research committee. Ethic committee approval was obtained from Middle East Technical University Social and Human Sciences Ethic Committee (388-ODTU-2021).

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The Adaptation of the Regret Elements Scale to Turkish Culture

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ARTICLE HISTORY

Received: 26.05.23

Accepted: 10.08.23

KEYWORDS

Regret; Affective Regret;
Cognitive Regret; Scale
Adaptation; Validity and
Reliability.

ABSTRACT

Humans feel the need to reflect on their past decisions throughout their lives. Regret plays a significant role in this evaluation. Acknowledging regret is crucial, as it helps in rectifying undesirable past decisions and making healthier options in the future. Regret has cognitive and affective dimensions. Cognitive regret refers to reviewing past decisions, while affective regret belongs to negative emotions. This study aims to adapt the regret elements scale (RES) in the Turkish adult population. The study involved 48 participants in the pilot application stage, 40 participants in the language validity stage, 599 participants in the confirmatory factor analysis stage, and 52 participants in the test-retest stage. The participants' ages ranged from 18 to 60 years. The study examined the language validity, confirmatory factor analysis, and criterion-related validity of the scale. Additionally, reliability measures such as Cronbach Alpha internal consistency coefficient, Spearman-Brown split-half reliability, test-retest reliability coefficient, and differences between the 27% lower and upper groups were utilized. Mean explained variance (AVE) and combined reliability (CR) values were also calculated. The findings indicate that the language validity of the scale was high (.80). Confirmatory factor analysis revealed that the 2-dimensional and 10-item scale had acceptable fit indices [$\chi^2 / df = 2.09$, RMSEA = .043, SRMR = .07, NNFI / TLI = .91, CFI = .94, GFI = .92]. The scale and its sub-dimensions were negatively correlated with Satisfaction with Life. Reliability analyses found high Cronbach's Alpha reliability (.92), Spearman-Brown split-half reliability (.95), and test-retest reliability (.75) coefficients, as well as significant differences between the regret score averages of the lower and upper groups of 27%. The AVE and CR values of the scale were also high. The findings suggest that the 2-dimensional (affective regret and cognitive regret) and 10-item RES is a valid and reliable measuring tool for assessing regret in the field of mental health for adult individuals in Turkey. Overall, the RES can be considered a useful tool for measuring regret and its various dimensions. It is thought that the adaptation of the regret elements scale (RES), which includes these dimensions, will contribute to the literature.

Throughout human life, there is a need to reflect on the past after making numerous decisions. The need to review decisions is sometimes related to question the past (Buchanan et al., 2016). However, this evaluation is predominantly aimed at shaping the future (Pink, 2022). The belief that outcomes will vary depending on the chosen path can lead individuals to embark on a new course (Sayar, 2022). This process involves not being satisfied with the results of previous decisions. There are emotions accompanying this situation that can alter one's state of mind. Emotions provide clues about whether the preferred methods are healthy or not (Plutchick, 2003; Zeelenberg et al., 2000).

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In daily life routines, emotions are indispensable tools. Emotions help ascribe new meanings to events and facts. When individuals believe they have made a wrong decision, they perceive themselves in negative emotions (Plutchick, 2003; Zeelenberg et al., 2000). When evaluating the past, the most intense emotion experienced is regret (Roose et al., 2005). Regret, as it encompasses guilt, sadness, and various other emotions, appears to present a negative situation. However, regret is a more productive and helpful emotion in making healthier decisions (Buchanan et al., 2016; Plutchick, 2003; Zeelenberg & Pieters, 2007). The complex nature of the emotion of regret can effectively transform human behavior (Oam, 2023).

The emotion of regret is closely related to life experiences. As individuals age and gain more experience, they tend to experience more regret (Wrosch & Heckhausen, 2002). An individual can feel regret for both their actions and inaction. In the first case, the individual regrets a situation they chose and dislike the outcome. In the other case, the individual may regret as not choosing a situation more beneficial for him/herself. In both cases, the individual questions his/her decisions (Pink, 2022). In summary, although individuals perceive regret as an undesirable path, it can enable them to regulate their future (Sayar, 2022).

Regret and Disappointment

Regret can generally be defined as an individual not being satisfied with their decisions or actions (Zeelenberg et al., 2000). Regret can manifest itself in various forms of lamentation. It involves not only negative emotions but also the cognitive process of reconsidering different alternatives. Along with negative emotions, regret can be accompanied by emotions of guilt, remorse, self-reproach, disgust, and sadness. Cognitive processes also accompany regret. For example, expressions such as "I wish I had done it" or "I wish I hadn't done it" involve regret (Güller, 2022; Özdemir & Düzgüner, 2020; Pink, 2022; Zeelenberg & Pieters, 2007).

Regret can be directed toward actions taken and actions not taken. Both cases result in undesired outcomes. Regret felt for inaction is generally seen as more acceptable (Zeelenberg et al., 2002). This is because the responsibility for the behavior is not yet established. On the other hand, regret experienced after taking action encompasses negative emotions and thoughts. In both cases of regret, questioning the behavior or decision made is involved (Pink, 2022).

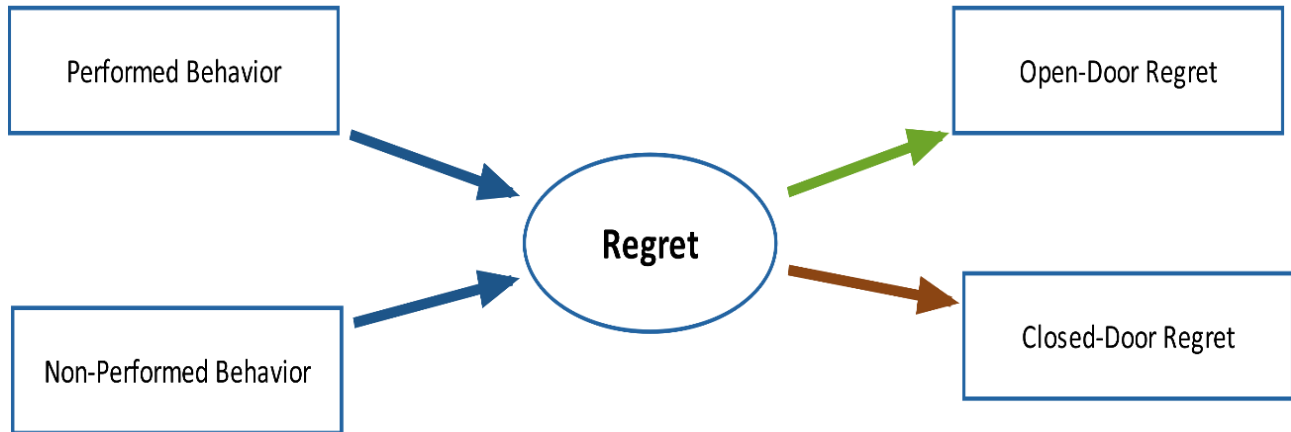
One concept closely related to the emotion of regret is disappointment. Regret and disappointment are terms that are often used together in the literature (Marcatto & Ferrante, 2008). Although used interchangeably in some studies, regret differs from disappointment in terms of the person to whom it is directed. For a better understanding of regret, it is necessary to explain the difference from disappointment. Disappointment can be expressed as a negative emotion that arises when expectations from others or the external world are not met (Zeelenberg et al., 2000). In disappointment, emotions such as guilt, sadness, and anger can also be present. However, while these emotions in disappointment are directed toward the external world, in regret, these emotions are directed toward the internal world. In other words, when experiencing disappointment, individuals tend to blame others, whereas in regret, individuals tend to blame themselves. Cognitively, the two phenomena can also differ. The expression "I wish" can be used for both disappointment and regret. When expressing disappointment, the "I wish" statement is directed toward the behavior of others, whereas in the case of regret, it is directed toward one's own behavior (Özdemir & Düzgüner, 2020; Pink, 2022; Zeelenberg et al., 2000, 2002). In summary, the concepts of disappointment and regret differ based on the direction of expectations.

Theoretical Structure of Regret

The emotion of regret tends to focus on the internal world. By its nature, regret necessitates an examination of life and a review of decisions. It provides individuals with an opportunity for deep introspection both before and after experiencing regret (Pink, 2022; Zeelenberg & Pieters, 2007). In this regard, regret exhibits both cognitive and affective elements. The cognitive element involves questioning thoughts and decisions, while the affective element encompasses self-blame, sadness, and emotions of guilt (Buchanan et al., 2016). For example, when an individual says, "I wish I hadn't done it" they are cognitively questioning their behavior. Additionally, they may experience emotional distress and emotions of sadness or remorse.

From a theoretical perspective, regret emerges in relation to behavioral outcomes (Pink, 2022). Regret can be categorized into actions taken or not taken. Inaction-related regret is generally viewed more positively than action-related regret (Zeelenberg et al., 2002). The process of regret includes both regret for actions taken and regret for actions left untaken. The regret process is presented in Figure 1.

Figure 1. The Process of Regret



Source: Adapted from Pink (2022).

As seen in Figure 1, the emotion of regret arises following actions taken or actions not taken. When regret is experienced, the opportunity to change the outcome is reassessed. In this regard, there are two options (Pink, 2022): Closed-door regret and open-door regret. Closed-door regret involves a situation where there is no possibility of taking action or changing the outcome. Open-door regret, on the other hand, refers to a situation where there is the opportunity to take action and alter the outcome.

Regret can manifest in fundamental, courage-related, moral, and relational forms. Fundamental regrets pertain to personal development. Courage-related regrets involve taking risks. Moral regrets are associated with emotions of guilt and the desire to engage in a morally correct action. Relational regret encompasses efforts to improve interpersonal relationships (Oam, 2023; Pink, 2022). Joseph-Williams et al. (2011) indicated that there are two kinds of regret that emerge during the process: Anticipated regret and experienced regret. Anticipated regret precedes a decision, which can take the form of actions taken or actions not taken. Experienced regret occurs after the decision is made. Experienced regret can be immediate or delayed in its manifestation. It can be stated that experienced regret is closely related to the closed-door regret and anticipated regret to the open-door regret.

As stated above, although regret has different theoretical explanations, it needs concrete explanations to measure regret. Buchanan et al. (2016), revealed that regret has cognitive and affective dimensions. While affective regret covers the emotional experience of an unexpected event, cognitive regret includes negative evaluations of that event. Conceptualizing regret with regard to these two components helps to learn about the underlying conditions of this complex emotion. The experience of regret leads both to the emergence of negative emotions and to think about other options (Buchanan et al., 2016).

Aim of The Study

The current research aims to adapt the regret elements scale (RES), developed by Buchanan et al. (2016), to the Turkish. The original scale consists of two subdimensions: Cognitive regret and affective regret. The affective element encompasses emotions such as sadness, guilt, and anger. The cognitive element involves cognitive questioning and reviewing (Buchanan et al., 2016). The RES was developed due to the lack of a sufficient measurement tool that assesses the positive and negative ways of experienced regret (Buchanan et al., 2016; Joseph-Williams et al., 2011).

The RES differs from other scales such as existential regret (Ermiş & Bayraktar, 2021), decision-related regret (Diotaiuti et al., 2022; Telata et al., 2021), regret related to sports participation (Madrigal & Robbins, 2018),

and regret related to purchases (Kazancıoğlu et al., 2021). The scale measures the overall regret. As the measurement tool focuses on experienced regret (Buchanan et al., 2016), it does not assess anticipated regret (Joseph-Williams et al., 2011). The RES derives from other regret scales in that it can measure general regret, have affective and cognitive components, and measure regret differently from other emotions. The scale's minimal number of items and its inclusion of dimensions that measure different aspects facilitate ease of use. When reviewing the literature on general regret, it can be observed that regret is associated with depression (Kraines et al., 2017), stress (Perdomo, 2021), self-expectations (Roese & Summerville, 2005), decision avoidance (Lauriola et al., 2019), satisfaction with life (Moyano-Diaz et al., 2023), and forced choice (Goldstein-Greenwood et al., 2020; Matarazzo et al., 2021). Stress can be experienced because the experience of regret includes negative affect and confusion in the past. When the individual experiences the emotion of regret deeply, he/she can get more depression and less satisfaction from life (Kraines, et al., 2017; Moyano-Diaz et al., 2023; Perdomo, 2021). It is emphasized that examining these relationships based on cultural characteristics is important for confirmability (Breugelmans et al., 2014).

In conclusion, the RES (Buchanan et al., 2016) is a measurement tool that assesses the general state of regret in adult individuals. The scale is highlighted as a valuable tool for uncovering individuals' self-expectations and evaluations of the past (Buchanan et al., 2016). Given the power of regret to influence future decisions, this scale will aid in recognizing both preferred and unpreferred paths (Pink, 2022). Recognition of regret is important, as it gives the opportunity to notice and correct undesirable decisions in the past. At the same time, the experience of regret allows to make healthier decisions in the future (Roese & Summerville, 2005). The scale adapted into Turkish can be an important assessment tool to determine general, affective and cognitive regret in adults. It is thought that the scale will contribute to the literature based on measuring the cognitive and affective dimensions of regret. The scale can be used in psychological counseling and therapy studies that include the themes of making healthy decisions about life and utilizing opportunities. It can be said that this study is original in terms of bringing the scale to Turkish culture. In this regard, the scale is aimed to be adapted to Turkish culture through validity and reliability studies. Based on this information, this study aimed to test the following hypothesis:

H: The adapted Turkish version of RES is a valid and reliable tool for measuring general regret in the Turkish adult population.

Method

Participants

The adaptation research of the RES was conducted with the participation of adult individuals residing in different regions of Turkey. In the Turkish-English translation phase of the study, 40 participants were involved, while 48 participants took part in the pilot application phase, 52 participants in the test-retest reliability study, and 599 participants in the confirmatory factor analysis (CFA) study. It can be highlighted that the sample size was sufficiently large for validity and reliability analyses (Kline, 2014; Seçer, 2015). The selection of participants for the CFA was conducted using a simple random sampling method, ensuring that every element in the population had an equal and uncorrelated opportunity of being chosen for the sample (Büyüköztürk et al., 2018, p. 88). Among the participants in the CFA study, the age bracket of the participants spanned from 18-60 years, with an average age of 24.44 (SD=7.05). The demographic information of the participants is presented in Table 1.

Table 1. Demographic Information of the Participants

		Translation Study		Pilot Study		Test-Retest Study		CFA Study	
		f	%	f	%	f	%	f	%
Gender	Female	31	77.5	30	62.5	38	73.1	423	70.6
	Male	9	22.5	18	37.5	14	26.9	176	29.4
Age	18-24	29	72.5	32	66.7	25	48.1	342	57.1
	25-32	9	22.5	11	22.9	21	40.4	182	30.4
	33-40	2	5	2	4.2	4	7.7	45	7.5
	41-60			3	6.3	2	3.8	30	5
Education level	Primary education			3	6.3	5	9.6	51	8.5
	High school			15	31.3	15	28.8	153	25.5
	University	40	100	25	52.1	29	55.8	341	56.9
	Postgraduate education			5	10.4	3	5.8	54	9
Marital status	Single	37	92.5	36	75	34	65.4	429	71.6
	Married	2	5	12	25	18	34.6	165	27.5
	Widowed/Divorced	1	2.5					5	0.8
Perceived income level	Low	13	32.5	14	29.2	12	23.1	142	23.7
	Moderate	24	60	20	62.5	35	67.3	382	63.8
	Good	3	7.5	4	8.3	5	9.6	75	12.5
Total		40	100	48	100	52	100	599	100

Measurements

Demographic Information Form. The demographic information form was created to obtain information about variables such as gender, age, perceived income level, and educational background.

The Regret Elements Scale (RES). The scale was developed by Buchanan et al. (2016). It consists of 10 items and has a two-dimensional structure. The affective element of the scale includes five items, while the cognitive element consists of five items. The measurement tool is a 7-point Likert-type self-report scale, ranging from "Strongly Disagree" (1) to "Strongly Agree" (7). The results of the CFA indicate that the fit indices are at an acceptable level ($\chi^2 / df = 2.42$, $p < .05$, $RMSEA = .10$, $SRMR = .03$, $CFI = .96$). In the original study, the internal consistency coefficient (Cronbach's alpha) of the affective and cognitive subscales were determined to be .84, and .94, respectively. Scores obtained from the scale ranged from 10 to 70. As scores on the scale increase, it can be interpreted that individuals experience more regret in life. In this study, the internal consistency coefficient (Cronbach's alpha) of the affective and cognitive subscale, and overall scale were respectively found to be .86, .93, and .92.

Satisfaction with Life Scale (SWLS). The scale was developed by Diener et al. (1985). The original scale reported a Cronbach's alpha coefficient of .82, indicating high internal consistency, and the single-factor scale explained 66% of the variance. The measurement tool is a 7-point Likert-type self-report scale, ranging from "Strongly Disagree" (1) to "Strongly Agree" (7). The adaptation of the scale was conducted by Durak et al.

(2010). The adaptation study found that the scale demonstrated a Cronbach's Alpha coefficient of .81 and item-total scale correlations ranging from .55 to .69 in a sample of Turkish university students (n=547). The results of confirmatory factor analysis (CFA) indicated that the fit indices were at an adequate level ($\chi^2 / df = 2.02$, RMSEA = .043, SRMR = .02, NNFI (TLI) = .98, IFI = .99, CFI = .99). Scores obtained from the scale range from 7 to 35. As scores on the scale increase, it can be interpreted that individuals experience higher satisfaction with life. In this study, the internal consistency coefficient (Cronbach's alpha) was determined to be .75.

Procedure

To adapt the RES into Turkish, permission was obtained from Dr. Summerville, one of the authors who developed the scale in 2022. Subsequently, the Siirt University Ethics Committee granted ethical approval for the study with decision number 4044, dated January 16, 2023. The scale was translated with the assistance of two English linguists. Then, three linguists, who hold a doctoral degree in Turkish Language and Literature, conducted reviews and revisions. Based on the feedback received, the scale was further reviewed by an expert in the field of psychology and an assessment specialist to give its final form. The Turkish version was back-translated by two bilingual academics in a way that preserves idiomatic expressions. Opinion was received from the author about the items containing idiomatic expressions. Afterwards, 40 university students majoring in English Language Teaching were asked to rate the Turkish and English forms separately. In this stage, suggestion boxes were created below each item to obtain possible recommendations. The correlation coefficient between the Turkish and English versions of the scale was 0.80.

The necessary adjustments were made to the scale's instructions, and the final scale form was pilot tested with 48 adult participants. The pilot study revealed a high internal consistency coefficient of .92 and item-total correlations ranging from .41 to .77. After this stage, adult participants were invited to the study through a simple random sampling method via social media. Data from 650 participants who voluntarily filled out the informed consent form were collected through an online data collection method. Due to reasons such as missing data and violations of normality, the data of 51 participants were excluded from the dataset. Finally, a CFA was conducted using data from 599 participants. In the test-retest reliability study, the responses of 52 participants were evaluated with a two-week interval. Finally, the difference between the mean scores of the lower and upper quartiles (27%) was examined.

Data Analysis

The research data analysis was carried out using SPSS 25.0 and AMOS 24.0 software packages. All raw data were examined for normality assumptions, and data that did not adhere to the normal distribution measures were removed from the dataset. In the CFA study, skewness and kurtosis values below -1.96 and above +1.96 were removed from 21 data sets (Kline, 2014; Seçer, 2015). The Pearson's product-moment correlation coefficient was utilized to examine the association between the original and Turkish versions of the scale, the test-retest relationship, and the relationship between the regret elements scale and satisfaction with life scale. Item-total correlations and Cronbach's Alpha coefficients were calculated for both pilot and main applications. The Spearman-Brown reliability coefficient method was employed to examine the scale's split-half reliability. This involved analyzing the odd and even items of the scale separately. Additionally, independent samples t test results were examined to analyze the difference between the lower and upper quartiles (27%) in the reliability study (Çokluk et al., 2018).

A CFA was conducted to test the scale structural validity. It is recommended that the sample size be more than 384 for CFA analyses (Kline, 2014; Seçer, 2015). In this study, data were collected from 599 participants for CFA analyses. Initially, Mahalanobis distance outliers were examined for CFA adequacy. Due to the violation of the assumption of multivariate normality in continuous data, analysis was performed using the distribution-free estimation method instead of maximum likelihood estimation, following the recommendations in the literature (Hair et al., 2017; Schermelleh-Engel et al., 2003). Next, goodness-of-fit indices and modification indices were calculated for the model. Finally, average variance extracted (AVE) and composite reliability (CR) values were examined (Hair et al., 2017) to assess the model's goodness of fit.

Results

Validity Results

Confirmatory Factor Analysis

The CFA study was carried out to assess the construct validity of the RES. In the CFA study, the goodness-of-fit indices of the latent model were analyzed. In this regard, t-values were initially examined for the scale results. The item factor loadings and t-values for the RES regarding the CFA results are presented in Table 2.

Table 2. The CR Results for the Items of the Regret Elements Scale

Item No	Standardized factor loading	SE	CR
Item 1	.834	.049	8.22*
Item 2	.915	.049	4.51*
Item 3	.871	.059	5.19*
Item 4	.672	.062	10.19*
Item 5	.570	.060	12.28*
Item 6	.865	.060	7.33*
Item 7	.932	.049	4.45*
Item 8	.920	.043	5.76*
Item 9	.913	.037	7.11*
Item 10	.855	.060	7.08*

* $p < .01$

The t-values for the items in the latent model being above 1.96 ($p < .05$) at the .05 significance level and above 2.56 ($p < .01$) at the .01 significance level indicate statistical significance (Çokluk et al., 2018; Schumacker & Lomax, 2010). As shown in Table 2, the standardized factor loadings range from .57 to .93. The t-values (CR) for the items range from 4.51 to 12.28. Thus, it can be concluded that the standardized factor loadings ($> .45$) and t-values ($p < .01$) in the model are significant.

For testing the latent model of the scale, CFA results were examined. The CFA results, following the suggested modification changes, are presented in Fig. 2.

Figure 2. The CFA Results

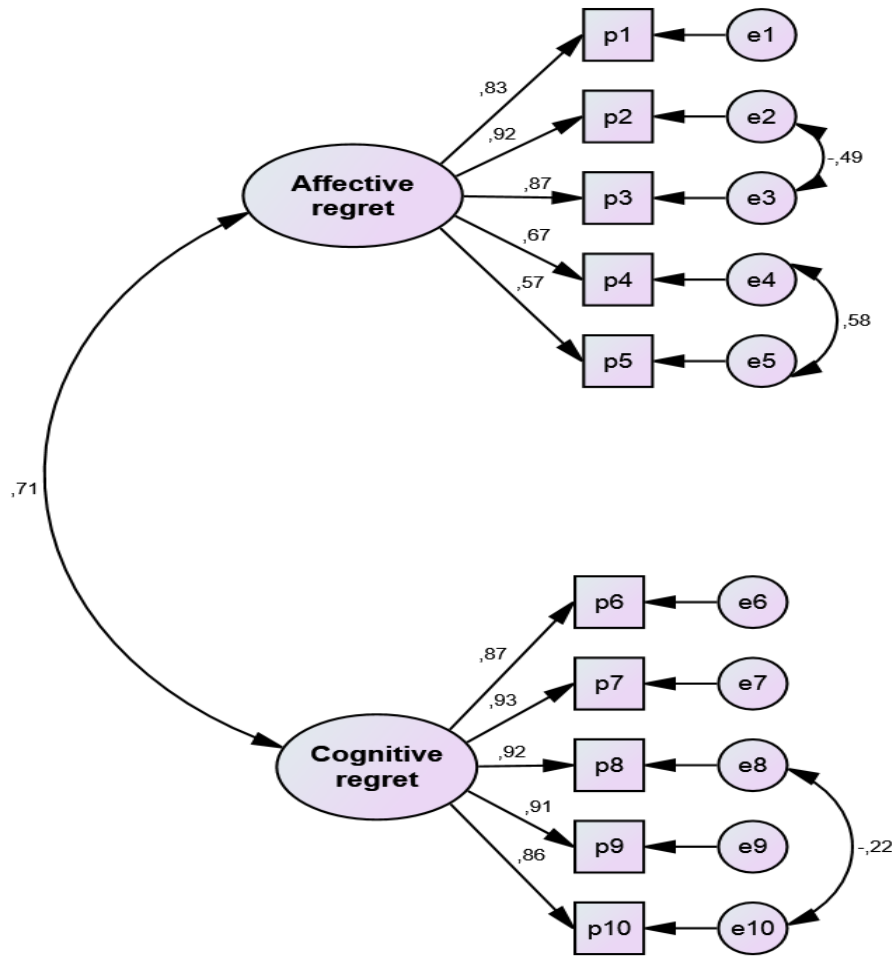


Fig. 2 displays the factor loadings, intercorrelations between the subdimensions, and modification processes of the two-dimensional, 10-item model of the RES. In a CFA study, it is emphasized that second-level CFA and modification processes should be done (Seçer, 2015). In the implicit model, the proposed modification was made between p2-p3 and p4-p5 for the affective regret sub-dimension, and between p8-p10 for the cognitive regret sub-dimension. The item correlation values being equal to or greater than .45, can be interpreted as significant (Çokluk et al., 2018; Seçer, 2015). As observed in Figure 1 and Figure 2, the item correlation values range from .57 to .92. The positive and significant correlation between the subdimensions of affective regret and cognitive regret ($< .85$) is evident. Following this stage, the goodness-of-fit indices for the scale were researched. The results of the goodness-of-fit indices for the scale are presented in Table 3.

Table 3. Goodness-of-Fit Index Results

Goodness-of-Fit Indices	χ^2/sd	RMSEA	SRMR	RMR	NFI	NNFI (TLI)	CFI	GFI	AGFI
Perfect Fit Criteria	≤ 2	$\leq .05$	$\leq .05$	$\leq .05$	$\geq .95$	$\geq .95$	$\geq .95$	$\geq .95$	$\geq .90$
Acceptable Fit Criteria	≤ 5	$\leq .08$	$\leq .10$	$\leq .10$	$\geq .90$	$\geq .90$	$\geq .90$	$\geq .90$	$\geq .85$
Results	2.09	.043	.07	.08	.89	.91	.94	.92	.86

Kaynak: Kline, 2011; Seer, 2015.

As shown in Table 3, the goodness-of-fit indices for the scale [$\chi^2 / df (\leq 5)$, SRMR ($\leq .10$), RMR ($\leq .10$), CFI ($\geq .90$), NNFI /TLI ($\geq .90$), GFI ($\geq .90$), and AGFI ($\geq .85$)] indicate acceptable goodness-of-fit according to the criteria (okluk et al., 2018; Kline, 2014; Seer, 2015). Furthermore, the RMSEA value ($\leq .05$) falls within the boundaries of excellent fit, and the NFI value ($< .90$) is very close to the acceptable goodness-of-fit criterion. It can be concluded that the two-dimensional, 10-item RES demonstrates sufficient model fit. The scale comprises five items for each sub-dimension of affective regret and cognitive regret.

Criterion-Related Validity

In the literature, satisfaction with life has been found to be negatively correlated with regret (Moyano-Diaz et al., 2023). For this reason, satisfaction with life was used as a criterion variable in the study. To test the criterion-related validity of the RES, its relationship the satisfaction with life scale (SWLS) has been examined. The findings regarding criterion-related validity are presented in Table 4.

Table 4. Correlation Results between the Regret Elements Scale, Subdimentions and Satisfaction with Life Scale

Variables	Mean	SS	Skewness	Kurtosis	r [95% CI]			
					1	2	3	4
1. Affective Regret	11.24	4.64	1.072	.996				
2. Cognitive Regret	13.26	5.87	.689	-.566	.59 [.53, .64]*			
3. Regret Elements (RES)	24.49	9.37	.822	.236	.86 [.84, .88]*	.91 [.90, .93]*		
4. Satisfaction with Life	16.97	5.78	.377	.879	-.15 [-.22, -.07]*	-.14 [-.22, -.06]*	-.16 [-.24, -.08]*	

* $p < .01$

As shown in Table 4, the SWLS, affective regret subscale, cognitive regret subscale, and RES exhibit skewness and kurtosis values within the normal range. Negative correlations were found between the SWLS and the RES, affective regret subscale, and cognitive regret subscale. Positive relationships were observed between the RES and the affective regret subscale, as well as between the RES and the cognitive regret subscale.

Convergent Validity

In the context of Structural Equation Modeling (SEM), which was used in the study, validity indices such as AVE and CR were examined to assess the construct validity of the measurement tool. The calculations revealed an AVE of .61 and CR of .88 for the affective regret subscale, an AVE of .80 and CR of .95 for the cognitive regret subscale, and an AVE of .71 and CR of .95 for the entire scale. Based on these structure validity values, the measurement tool can be considered to have sufficient validity (Hair et al., 2017). It can be said that the

RES provides convergent validity.

Reliability Results

Table 5 presents the reliability results of the RES, including Cronbach's Alpha, test-retest reliability, and independent samples t-test analysis based on the lower-upper group variable.

Table 5. Reliability Results for the Regret Elements Scale

Item No	Mean	SS	Item-Total Correlations		All Scale	
			Affective Regret	Cognitive Regret	α	α
Item 1	2.40	1.16	.658			
Item 2	2.42	1.18	.707			
Item 3	2.28	1.16	.653			
Item 4	2.14	1.14	.576		.86	
Item 5	1.98	1.11	.494			.92
Item 6	2.72	1.37		.712		
Item 7	2.64	1.32		.794		
Item 8	2.54	1.29		.786		
Item 9	2.67	1.29		.772	.93	
Item 10	2.66	1.31		.727		

As seen in Table 5, the item-total correlations of the affective regret subscale range from .494 to .707. The item-total correlations of the cognitive regret subscale range from .712 to .794. The internal consistency coefficient (Cronbach's Alpha) is found to be .86 for the affective regret subscale, .93 for the cognitive regret subscale, and .92 for the overall scale. These findings suggest that the scale items have high discriminant power.

To analyze the split-half reliability of the RES, the Spearman-Brown reliability coefficient method was employed. The calculated split-half reliability coefficient for the entire scale is .95, indicating high reliability. The split-half reliability coefficient for the affective regret subscale is .75, and for the cognitive regret subscale, it is .91.

To assess the test-retest reliability of the RES, a test-retest study was conducted with a two-week interval and 52 participants. The reliability coefficients obtained from the test-retest analysis were .70 for the affective regret subscale, .72 for the cognitive regret subscale, and .75 for the entire scale. These results indicate high reliability of the scale when measured using the test-retest method.

As part of the reliability study, a differential item analysis based on the difference in mean scores between upper and lower groups was conducted. Accordingly, the RES total score was ranked, and a lower group comprising 27% (n=162) and an upper group comprising 27% (n=162) were formed. The difference between the means of the two groups was examined using an independent samples t test. The results of the independent samples t test based on the upper and lower group variable are presented in Table 6.

Table 6. Independent Group T Test Results based on the Lower-Upper Group Variable

Item No	Group	N	Mean	SS	sd	t-test
Item 1	The Upper %27 Group	162	3.52	1.23	314.57	9.44**
	The Lower %27 Group	162	2.32	1.05		
Item 2	The Upper %27 Group	162	3.66	1.19	308.10	10.99**
	The Lower %27 Group	162	2.33	.95		
Item 3	The Upper %27 Group	162	3.34	1.35	289.95	8.36**
	The Lower %27 Group	162	2.25	.96		
Item 4	The Upper %27 Group	162	3.06	1.43	280.47	7.50**
	The Lower %27 Group	162	2.04	.95		
Item 5	The Upper %27 Group	162	2.72	1.51	283.24	5.70**
	The Lower %27 Group	162	1.90	1.02		
Item 6	The Upper %27 Group	162	4.27	1.07	322	13.27**
	The Lower %27 Group	162	2.62	1.16		
Item 7	The Upper %27 Group	162	4.27	.99	322	16.28**
	The Lower %27 Group	162	2.50	.96		
Item 8	The Upper %27 Group	162	4.14	1.02	322	15.98**
	The Lower %27 Group	162	2.38	.95		
Item 9	The Upper %27 Group	162	4.16	1.03	322	13.02**
	The Lower %27 Group	162	2.68	.99		
Item 10	The Upper %27 Group	162	4.11	1.08	322	11.84**
	The Lower %27 Group	162	2.69	1.07		

**p<.001

When examining the independent samples t test results based on the upper and lower group variable in Table 6, it can be observed that the t-values range from 5.70 to 16.28. A statistically significant difference has been found between the means of the lower 27% and upper 27% groups ($p < .001$). In this context, it can be stated that the RES has a high level of discriminant validity, as it can effectively differentiate the intended characteristic being measured.

Discussion

In the literature, the themes of life review and regret are frequently addressed in counseling/therapy studies to understand the emotional states of adult individuals. The current study aimed to adapt the RES, developed by Buchanan et al. (2016), to Turkish in order to assess the regret status of adult individuals. The analyses conducted on the Turkish version of the scale yielded supportive evidence for its psychometric properties.

Validity studies, including CFA and criterion-related validity, were conducted in the research. According to the CFA results, the goodness-of-fit indices for the scale were found to be significant, indicating satisfactory model fit ($\chi^2 / df = 64.849/31 = 2.09$, $p = .000$). The goodness-of-fit indices for model fit are as follows: $\chi^2 / df = 2.09$, RMSEA = .043, SRMR = .07, RMR = .08, NFI = .89, NNFI/TLI = .91, CFI = .94, GFI = .92, AGFI = .86. In the literature, the recommended cutoff values for goodness-of-fit indices are reported as follows: $\chi^2 / df (\leq 5)$, RMSEA ($\leq .080$), SRMR or RMR ($\leq .10$), NFI, NNFI, CFI, and GFI ($\geq .90$), AGFI ($\geq .85$) (Çokluk et al., 2018; Kline, 2014; Seğer, 2015). It is emphasized that χ^2 / df , RMSEA, SRMR, CFI, and GFI criteria

should be met to have an acceptable model (Hair et al., 2017; Schermelleh-Engel et al., 2003). In the current study, it can be stated that the majority of these criteria are met. Therefore, the two-factor and 10-item latent structure of the RES has been confirmed. The adequacy of the model fit indices for the scale can be considered sufficient. The first five items of the scale are related to affective regret, while the subsequent five items are related to cognitive regret. It can be interpreted that obtaining higher scores indicates a greater experience of regret.

The calculations for the convergent validity resulted in AVE=.61 and CR=.88 for the affective regret subscale, AVE=.80 and CR=.95 for the cognitive regret subscale, and AVE=.71 and CR=.95 for the overall scale. The relevant literature suggests that AVE should be $\geq .50$ and CR should be $\geq .70$ (Hair et al., 2017). Based on the values of convergent validity, it can be said that the measurement tool has sufficient validity.

In order to establish criterion-related validity of the scale, correlations between the SWLS and the RES, as well as its sub-dimensions (affective regret and cognitive regret), were examined. A negative relationship was found between SWLS and RES. Similarly, negative relationships were observed between SWLS and the subdimensions of the scale (affective regret and cognitive regret). Accordingly, as regret, affective regret, and cognitive regret scores increase, SWLS scores decrease. There is a negative correlation between regret and satisfaction with life. In related studies, a negative correlation was determined between regret and satisfaction with life (Buchanan et al., 2016; Moyano-Diaz et al., 2023; Lee & Jang, 2016). Buchanan et al. (2016) found a moderately positive relationship between regret and distress and self-blame. Bozkurt (2017) reported a weak negative relationship between SWLS and Regret. It is known that life satisfaction is closely related to subjective well-being and happiness (Diener et al., 2002; Moyano-Diaz et al., 2023; Lee, & Jang, 2016). In this context, the results from the literature support the findings of the present study. Based on these results, it can be said that individuals experiencing regret are less satisfied with life and experience lower levels of satisfaction with life.

In terms of reliability analysis, the study employed Cronbach's Alpha coefficient, Spearman-Brown two-half reliability, and test-retest reliability. Additionally, an independent groups t test was conducted to analyze the differences between the lower 27% and upper 27% groups. In the current study, the Cronbach's Alpha coefficient was found to be .92, for the affective regret subscale was .86, and for the cognitive regret subscale, it was .93. The item-total correlations of the scale ranged from .49 to .79. The two-half reliability coefficient for the scale was found to be .95. The two-half reliability coefficients for the affective regret subscale and the cognitive regret subscale were respectively .75 and .91. The test-retest reliability of the entire scale was .75. The reliability coefficient for the affective regret subscale was .70, and for the cognitive regret subscale, it was .72. Lastly, an independent groups t test showed a significant difference between the mean regret scores of the lower 27% and upper 27% groups ($p < .001$). A reliability coefficient of $\geq .70$ indicates high reliability (Büyüköztürk et al., 2018; Çokluk et al., 2018; Fraenkel et al., 2012; Seçer, 2015). In light of these results, it can be stated that the scale has a high degree of reliability and a good discriminant validity.

Limitations

Regarding the limitations of the study, several suggestions can be made. This study was conducted with adult individuals, similar to the original scale (Buchanan et al., 2016). In future studies, in order to obtain generalizable results, research can be conducted with adult individuals of different ages, educational levels, and residing in different geographical regions. Most of participants in this study were women. Researchers can test this scale on adults again by trying to equate the gender variable. A large of participants in this study are individuals in the first adulthood period. More research is needed to say that the scale is suitable for all adults, Depending on the average age of the study. Satisfaction with life was considered in terms of criterion validity in the study. In future research, more comprehensive evidence can be obtained by examining the relationships between self-efficacy, positive-negative experiences, and regret to establish criterion validity. One limitation of the study is related to convergent validity. Although convergent validity was achieved in this study, obtaining more valid results in future studies could be enhanced by using a measurement tool that specifically assesses issue to regret, thereby contributing to further examination of the relationships.

Conclusion

In conclusion, it has been observed that the RES is a valid and reliable scale for assessing general regret. The scale adapted into Turkish, is highlighted as an important assessment tool to determine general, affective and cognitive regret in adults. It is predicted that complex of regret can be better understood by using the scale validated in this study. It is anticipated that mental health professionals will frequently use this scale in psychological counseling/therapy sessions to understand emotions related to regret and regulate the future. Adults could mainly express their regrets in psychological counseling/therapy sessions. Regret, by its nature, is considered an important power as it contributes to both reviewing the past and shaping the future. The adult can prepare for future in a healthier way by reviewing his/her past mistakes. In these cases, it is predictable that this scale will be widely used.

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

Conflicts of Interest: The author declares that there is no conflict of interest.

Data Availability: The data that support the findings of this study are available on request from the author.

Ethical Disclosure: This research was conducted with the approval of Siirt University Ethics Committee numbered 4044, dated 16/01/2023.

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Appendix

Pişmanlık Unsurları Ölçeği

Yönerge: Aşağıda yaşamınızın son zamanlarında verdiğiniz kararlarla ilgili pişmanlık durumunu ne kadar deneyimlediğinizle ilgili ifadeler bulunmaktadır. İlgili ifadeye ne kadar katıldığınızı lütfen işaretleyiniz.

Yaşamımda verdiğim kararlarla ilgili olarak...	Kesinlikle katılmıyorum (1)						Kesinlikle katılıyorum (7)
		2	3	4	5	6	
1. Karar verme tarzımdan dolayı kendime kızıyorum.	1	2	3	4	5	6	7
2. Üzüntü duyuyorum.	1	2	3	4	5	6	7
3. Kendimi suçluyorum.	1	2	3	4	5	6	7
4. Acı çekiyorum.	1	2	3	4	5	6	7
5. Kahroluyorum.	1	2	3	4	5	6	7
6. Başka bir tercihte bulunsaydım işlerim daha iyi yolunda gidebilirdi.	1	2	3	4	5	6	7
7. Keşke farklı bir karar verseydim.	1	2	3	4	5	6	7
8. Farklı karar vermem gerekirdi.	1	2	3	4	5	6	7
9. Farklı bir karar verseydim daha iyi durumda olurum.	1	2	3	4	5	6	7
10. Keşke daha önce farklı bir tercihte bulunsaydım.	1	2	3	4	5	6	7

Değerlendirme: Ölçekten 10-70 arasında puan alınabilmektedir. Puanlar yükseldikçe yaşamdan daha çok pişmanlık duyulduğu şeklinde yorumlanabilir. Ölçeğin ilk beş maddesi duygusal pişmanlığı ve son beş maddesi bilişsel pişmanlığı ölçmektedir.



Adaptation Problems at Regional Boarding Schools from the Perspective of the School Counselors

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ARTICLE HISTORY

Received: 05.07.23

Accepted: 11.09.23

KEYWORDS

Adaptation Problems;
Reginal Boarding Schools;
School Counselor; Focus
Group.

ABSTRACT

The aim of this qualitative study is to explore students' adaptation problems at regional boarding schools from the perspective of the school's psychological counselors. Focus group discussions were carried out with eight psychological counselors working at different regional boarding schools in Türkiye. The results showed that the reasons for adaptation problems of regional boarding school students can be grouped under three main themes. These themes encompass students' separation from their families, the change in living conditions, and the emotions they feel about other students' lives. Furthermore the results showed how these problems can be identified under five main themes; and it was noteworthy that these themes encompass both students' deliberate actions and actions they unconsciously carry out. The study also offers insights into addressing these problems through four main themes. These themes have demonstrated the importance of counseling services, students' sense of belonging and unity, and the significance of having similar experiences. Based on the research findings, recommendations were made to develop school orientation psychoeducation programs, integrate the peer counseling system into school adjustment studies, and design studies that examine the risky behaviors of regional boarding school students in depth.

A family environment is best for children to flourish. Unfortunately, due to increasing rates of divorce, separation, death of one of the parents, neglect and abuse, some family members are deprived of the opportunity to live together as mother, father and child/ren (Gander and Gardiner, 2010). When the burden of being a single parent is combined with various economic difficulties, parents may prefer a public school where their school-age children can stay (Sönmez, 2000). Moreover, a large part of the population in Türkiye live in villages, smaller towns, hamlets, highlands and even nomadic groups, especially in the regions of the Black Sea, Eastern and Southeastern Anatolia (Öztürk, Hilton and Jongerden, 2014). Extreme weather conditions, disease and financial problems in remote school districts in these regions affect school attendance negatively (Ulutaş and Yayan, 2017).

One of the most important reasons why children leave their families behind is to have access to education. In order for children to continue their education, even if they are far from the family environment, Regional Boarding Schools (RBS) which provide boarding or daytime education in settlements such as villages, hamlets, and plateaus far from the city centers are preferred by families. Additional benefits include access to health care and catering services and shelter (Uysal, 2016).

Regional boarding elementary schools are for school aged children in scarcely populated areas where there is not a school so that they have access to a free compulsory education. Children living in the same neighborhoods

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as the school can attend as day students (Official Gazette, 2003, 25212). In 2012, the name of the schools was changed to Regional Boarding Schools (Official Gazette, 2012, 28360). What makes these schools stand out amongst other elementary schools is that they board students. Boarding schools are open 24/7, whereas other schools are only open during specific hours (8 am – 3 pm). Thus, RBSs serve as a second home for children as they have to meet all their needs at school (Eraslan, 2009).

Students, who would otherwise not be able to attend schools due to their family's financial disparities, are welcomed at RBSs. There are studies showing that girls in particular do not attend school in cities in the east of Türkiye and in the villages of these cities (Smits and Gündüz-Hoşgör, 2006). Girls are less likely to be sent to school than boys due to economic difficulties. The fact that the child who is preferred to receive education is a boy is related to the traditional understanding that gives particular importance to men over women in these regions (Cokamay et al., 2014; Yalın et al., 2004). Thanks to RBSs, more girls have access to education and most importantly, RBSs provide children a safe haven away from terrorist acts. On the other hand, students can also experience problems while attending RBSs; for example, bedwetting, depression, aggression, contagious diseases and homesickness are common. Children need to learn how to live with their peers without their kindred, and share sorrows, happiness and excitement. This makes RBSs both a "school" and "home." Schools being homes at the same time bring about several problems (Başarır and Parman, 2009). Amongst the most important problems that occur are the lack of continuance of family support (Şenol and Yıldız, 2009), feelings of inadequacy and concerns for the future (Çetin, 2013), and high rates of diseases (Özcan et al., 2013). Based on this information, it can be said that boarding schools play a significant role in the education of girls, in particular. Taking into consideration that students live apart from their families, it is crucial to address a wide range of student needs, from health issues to concerns about the future.

Students eat breakfast, lunch and dinner at school and can return home on weekends if they wish to do so. However, as RBSs are more prevalent, especially in the east of Türkiye, where the winter conditions are tough and the roads are closed with snow on weekends, students often cannot go home even if they want to (İnal and Sadık, 2014). It is to be expected that students will experience problems when they spend prolonged periods of time at school at RBSs. Foremost amongst these issues is being away from family and adaptation problems, which are important enough to be discussed at Turkish Grand National Assembly (TGNA) (Eraslan, 2006). When examining the international literature, it is observed that boarding schools are mostly for adolescents, and prominent issues include mental health (Aisyaroh and Ediyono, 2023; Hopkins et al., 2023), psychological resilience (Langham et al., 2018; Redman-MacLaren et al., 2017), loneliness (Baru, et al., 2020; Rudrum, 2020), and adaptation (Sri-Wahyuni and Barus, 2020; Su et al., 2019). Hence, there is a need for effective psychological guidance and counseling services to support the psychological and social development of the students at RBSs and help them with their emotional problems (Atli, 2018; Pavletic et al., 2016).

Like every school in Türkiye, RBSs are also affiliated to the Ministry of National Education. The Ministry publishes various regulations in order to facilitate the execution of psychological counseling and guidance services. Clause 8.b and 8.c in the Psychological Guidance and Counseling Services Regulations state that "these services are to be carried out within the context of educational, vocational, personal/social guidance and counseling for students to be able to adapt to school, to develop a positive attitude towards learning and educational settings, and to recognize the characteristics of the developmental period they are in" (Official Gazette, 2017, 30236). This information sheds light on the importance of orientation programs for children who begin their education in boarding schools, especially when starting a new life away from their families.

Adaptation to school refers to conditions such as being aware of emotions, using skills to cope with stress, fulfilling given instructions, performing tasks in and out of the classroom, and collaborating with other students, as well as readiness and academic skills (Commoradi, 2012). The fact that the children might be worried about the family members they left behind, and the expectations of teachers could be above the child's developmental characteristics are among the reasons that make it difficult to adapt to school. However, no special planning was found for RBSs to solve the adaptation problems when the literature was reviewed (Oktay, 2018; Özaslan and Baba-Öztürk, 2022).

There is a large body of quantitative research comparing students from RBSs to others in terms of self-value (Ferrah, 2014; Kahraman, 2009; Köksal-Akyol and Salı, 2013), self-care (Bekar, 2006; Özcan, 2009) and qualitative interviews carried out with teachers, students and administrators at RBSs (Boydak-Özan et al., 2012; Çetinkaya and Gelişli, 2014); however, there are no qualitative or experimental studies on the adaptation problems of RBS students and teachers. Thus, this study is vital as it thoroughly examines adaptation problems of RBS students from the perspective of psychological counselors who work at these schools.

RBS students begin their school life away from their families and in unfamiliar settings. Understandably, they may experience more adaptation issues compared to day students. Kahraman (2009) asserts that RBS students lack the strength to deal with problems and mental health issues when compared to students from normal schools. She concluded that students that interacted less with the school environment were directly affected by this situation. Liu and Villa (2020) focused on the cognitive, physical, and mental health issues experienced by students who continue their education in boarding schools as a result of their parents' migration in China. The research results suggest that boarding school conditions should be improved not only to enhance cognitive skills but also to contribute to the physical and mental health of students. Our study explores a variety of adaptation issues village students face upon enrolling in a RBS from the perspective of psychological counselors. The results of the study will assist in the planning of future orientation programs. It is expected that students who have managed to adapt to the school environment and developed a sense of belonging will have better mental health. Moreover, once they are supported emotionally, cognitively and socially, students with adaptation problems will have higher satisfaction levels in the educational experiences.

RBSs in Türkiye host children who are in the risk group and the students there experience various problems. The fact that students start their education by staying away from their families and that they come from low socioeconomic regions are among the reasons why students are seen as high-risk groups. Although the studies focus on the various problems of the students (Ulutaş and Yayan, 2017; Yıldız and Kula-Şanlı, 2012), the data on the adaptation process are insufficient. In their research comparing the behaviors of adolescents aged 11-19, both those residing in boarding schools and those who do not, Noll et al. (2020) reported that students in boarding schools engaged in more risky behaviors, such as smoking, alcohol consumption, and engaging in risky sexual relationships. In light of all this information, the aim of this research is to analyze the factors that cause adaptation problems and to what extent, if any, their relationship with the adaptation processes. Our intentions are that the findings can be used to better design curriculum which is more suitable to students' needs. In the light of this information, the aim of this study is to reach in-depth data on understanding the adjustment problems experienced by students from the perspective of psychological counselors working in RBSs. Specifically, answers are sought to the following research problems:

- According to the psychological counselors, what are the reasons that students experience adaptation problems?
- How do the psychological counselors identify students that experience adaptation problems?
- What methods do psychological counselors employ to reduce the adaptation problems of students?

Method

Design

The purpose of this research is to explore the experiences of school counselors working in regional boarding schools regarding the adaptation problems experienced by RBS students. Qualitative research provides the opportunity to investigate how individuals perceive and interpret their own or other people's life experiences. In this study, we tried to shed light onto the experiences of RBS students during their adaptation period to the school and how they interpreted these experiences from the school counselors' perspective. Thus, we chose to employ the qualitative research method (Merriam, 2013). In this research, a phenomenological research design has been employed. Creswell (2007) states that the phenomenological research design aims to conduct an assessment based on individuals' life experiences. At this point, not only perceptions and experiences but also how these perceptions and experiences are formed are addressed in this design (Miller & Salkind, 2002). Since this research examines the adaptation problems experienced in boarding schools based on the experiences of school psychological counselors, a phenomenological design has been chosen. Qualitative research focuses on

describing events and phenomena in their natural environments, understanding, and reflecting the perspectives of the participants, with an inductive approach. Unlike quantitative research, which is based on the positivist paradigm, qualitative research is far from making generalizations (Putnam, 1983). In this study, qualitative paradigm was employed since we aimed to investigate the adaptation problems of RBS students with their unique dimensions and to make in-depth discoveries from the perspective of school psychological counselors. In qualitative research, data can be collected through focus group interviews. Focus group interviews, which are frequently used in educational research, are one of the systemic data collection methods (Kitzinger, 1995). The aim of the focus group interviews is to obtain in-depth, detailed, and multidimensional qualitative data about the perspectives, experiences, thoughts, perceptions, and attitudes of the participants about a certain topic (Bowling, 2002). A rich flow of information is provided as a result of in-group interaction. Moreover, the aim of the focus group interviews is to reveal how the participants perceive the subject being studied rather than making explanations about the participants. Despite all its positive aspects, it is often difficult to predict what will come out of the focus group interviews due to its open-ended nature. For this reason, it is recommended to discuss a limited number of concepts or topics (Edmunds, 2000). In this context, eight psychological counselors working in the regional boarding schools were reached by using purposeful sampling in determining the focus group. Purposeful sampling can be used to gather rich data from experiences in qualitative research (Patton, 2014). The inclusion criteria for the study were determined as being employed in boarding schools in rural areas and having a degree in psychological counseling and guidance.

Participants

All participants are psychological counselors working at RBSs located in different regions of Türkiye. There is a total of 8 participants (3 females, 5 males). Three participants from the Mediterranean Region (Kahramanmaraş/n=1 and Adana/n=2), three participants from the Central Anatolia Region (Aksaray/n=1, Eskişehir/n=1, and Sivas/n=1), one participant from the Marmara Region (Istanbul/n=1), and one participant from the Eastern Anatolia Region (Erzurum/n=1) voluntarily decided to participate in the study. Participants are aged between 26-33 and have worked at RBSs between 5-10 years. Participants agreed to take part in the study voluntarily and each participant signed a "participant consent form" beforehand. Each participant was assigned a pseudonym and these pseudonyms were used in the findings section of the research.

Collecting Data

After having obtained the Ethics Committee Approval for the research, a face-to-face meeting was held at the Psychological Counseling Unit in İnönü University with the volunteer participants to collect data through the focus group interview. The opinions of school psychological counselors were asked by employing questions such as "What do you think the source of your students' adaptation problems is?", "How does the process of applying to the guidance service work for students who have adjustment problems?". The discussion, which lasted for 2 hours 46 minutes and 32 seconds, was audio recorded with the consent of the participants. The interview questions for the focus group discussion were prepared in the form of a semi-structured questionnaire. The interview questions were organized and finalized after obtaining input from two experts with doctoral degrees in the field of Guidance and Psychological Counseling. The semi-structured form was used in the study to ensure that the focus group discussion progresses along a specific axis while also allowing the researcher the necessary flexibility.

Analyzing Data

Thematic analysis procedures defined by Braun and Clarke (2006) were employed for data analysis. Accordingly, to become familiar with the data, transcripts were initially read from start to finish without any coding. In the second step, the data set was re-read and coded. This was done to ensure coder reliability. Coder reliability is achieved through the process of reconfiguration at different time intervals (Miles & Huberman, 2016). In the third step, five randomly selected data sets were provided to and analyzed by three faculty members with doctoral degrees in the Department of Counseling and Guidance to ensure a member check procedure (Lincoln & Guba, 1985) in accordance with the different perspectives of various experts. Experts

identified some inconsistencies between codes, subthemes, and main themes. After examining the differences in coding and their rationales, consensus was reached on the final codes, subthemes, and main themes. In the fourth step, coded quotations identified by the authors of the study were rechecked by comparing them with the entire data set. In the fifth step, the contents and boundaries of the themes were clarified, and possible relationships with other themes were reviewed. In the sixth step, the data set and emerging themes underwent a final analysis, and vivid, clear, and persuasive data quotations, representing the voices of the participants, were selected for inclusion in the final report. Finally, the results of the thematic analysis were written in relation to the research questions and relevant literature. For example, homesickness, family elders, attitudes of parents were identified variables labeled with temporary codes; once the relationship amongst the variables was aggregated, a binomial variable was created and coded “With or Without Family.”

Validity of the Study

To ensure the validity of the data, investigator triangulation, member checking, and thick descriptions (Creswell, 2014) were employed in the study. Investigator triangulation is the analysis of the same data by several different investigators and comparing the results (Patton, 2002). Transcriptions were read by three different faculty members from the Psychological Counseling and Guidance Department and the possible themes were agreed upon.

Member checking allows the participants to review the draft so that each can confirm the researcher interprets their ideas correctly. This also helps the researcher by pointing out any problematic parts in case of publication and provides new ideas and solutions (Patton, 2002). Each participant in this study received the findings and results chapters via e-mail and gave feedback on them. Thick descriptions allow the readers to decide on the transmissibility of the study because the writer provided detailed descriptions of the participants and the research environment (Creswell, 2014). Direct quotations were used in this study to reflect the emotions and opinions of the participants.

Findings

Themes identified following the analysis of the focus group discussion with the psychological counselors were grouped under each research question and explained using direct quotations of the participants. Accordingly, the causes for the adaptation problems of RBS students were grouped under 3 main themes; the noticing of the adaptation problems of RBS students was grouped under 5 main themes; and solutions regarding the adaptation problems of RBS students were grouped under 4 main themes. Below the themes are the codes associated with that theme. The frequency of the codes was shown in the tables and these codes were used while explaining the themes.

Findings on the causes for the adaptation problems of RBS students

Differences in family structure due to perceived parental attitudes of students, divorce, loss of a parent, and history of violence are grouped under the main theme of “*With or Without Family.*” Problems that students faced when they first left their villages are grouped under “*Everything Is So Different.*” Students with adaptation problems imitating positive and negative behaviors of their friends are grouped under “*Envyng the Lives of Others.*” The table below shows the frequency of main themes and codes associated with the causes for the adaptation problems of RBS students.

Table 1. Causes for the adaptation problems of RBS Students

Theme	Codes	f	Total
<i>With or Without Family</i>	Homesickness	23	59
	Family Structure (Divorce, Death etc.)	19	
	Attitudes of Parents	17	
<i>Everything Is So Different</i>	First Year at the RBS	28	59
	Hygiene Problems	12	
	Academic Success	11	
	Attitudes of Teachers	8	
<i>Envyng the Lives of Others</i>	“They Go Home Every Week”	13	24
	“Their Families Visit Them”	11	

"With or Without Family". Psychological counselors agreed that students often missed their families during their first year at RBSs. Feelings associated with **homesickness** are one of the most important reasons that hinders the adaptation process to the school environment. Students with good family relations experience more homesickness than their friends. In addition, parents' attitudes are also one of the causes for adaptation problems. According to Counselor Mehmet, *"Being away from parents, siblings and the village wears out children as they try hard to adapt to a new environment. The kids feel "motherlessness" when they go to bed every night."* **Family structure** is also a reason of adaptation problems. Children that miss their families a lot may experience anger or disappointment if they are unable to meet their families. These emotions are considered as part of adaptation problems by the counselors. Counselor Meltem gives the following example, *"I felt insufficient when a student attempted to jump out of the window because he didn't want to stay at the dormitory. I somehow couldn't communicate with the kid at all. His mother is out of the family picture; she'd left the family years ago. His step-mother has children from a previous relationship, all of which are older, and they all live in the same house. He never stopped trying to run away from school. He can get into a fight with strangers and come back with bruises. He hates his father and wants him at his side at the same time. His behavior has never changed."* Counselor Kerem, who thinks family structure and features are the main reason for adaptation problems declares: *"We have kids who we label as maladaptive. However, these kids come from broken families and have serious inner conflicts. They lack all sorts of parental control and structure. There are no rules in the family that they can adopt, they are outside on the streets all day until they are in the 7th or 8th grade and they have acquired bad habits along the way. They grow up in such freedom that they obviously have difficulty following the rules and adapting to the school environment."* All of the psychological counselors agree that **attitudes of the parents** can and do increase the students' adaptation problems. Counselor Ismail, who witnessed both characteristics from parents, that being overly protective and indifferent towards their children, revealed *"Some parents try to visit the kids at school every day. They don't even give the kids enough time to adapt to the school, so kids naturally wait for them every single day. On the other hand, some parents never visit. They behave as if their livestock at home was more valuable than their kids and they think 'Oh, what could ever happen to the kid at school?' We can't expect the kids to grow out of adaptation problems when they have these kinds of parents."*

The research findings indicate that students often miss their families during their initial period at RBSs, and the feelings associated with homesickness, which are linked to the sense of being away from home, are shown to be one of the most significant factors negatively affecting the school adaptation process. Furthermore, it is found that parental attitudes also contribute to students' adaptation problems, with these attitudes, especially when parents are overly protective or indifferent towards their children, being identified as potential factors that can exacerbate adaptation difficulties.

"Everything Is So Different". School psychological counselors highlight that students who start secondary school at RBS tend to have more adaptation problems than students who start primary school. School subjects, teachers and even the physical surroundings of the school feel strange to them and they feel alienated in both the school and dormitory. Counselor Hanife points out that *"Children who have just started school and immediately have to stay in the dormitory have more adaptation problems. We can help first graders overcome adaptation problems easily, but fifth graders have a lot of difficulty."* Furthermore, a drop in a student's academic success who was previously enrolled in multigrade classes and then started to attend a RBS plays a role in creating adaptation problems. Counselor Ismail implies that *"Almost none of the students who have transferred from multigrade classes know how to read and write. They aren't willing to learn and even the ones who know how to read and write a bit don't want to improve. They even graduate just like that. Kids who aren't successful in school start having problems in the dormitory. Academic success directly affects the adaptation process."* Some students, who have come from impoverished settings, don't know how to benefit from the school and dormitory facilities. Many lack basic hygienic awareness, such as bathing and using indoor toilets; this also leads to further adaptation problems students suffer from. The opinions of Counselor Ayşe summarize the opinions of others as well: *"Personal hygiene and cleanliness are among the adaptation problems seen at dormitories. The majority of kids wear shoes without socks, don't clip their fingernails and don't eat anything they haven't eaten in their villages. Hygiene is a big problem because these kids need to*

wash their hands before meals and brush their teeth before bed. They need to take a shower regularly. They don't have to do any of these in the village. They wash up once in fifteen days if there is hot water. They don't know how to use the facilities at school and in the dormitory."

In many of the village schools, the students had only one teacher for all subjects; however, each subject is taught by a different teacher in an RBS. They may have difficulty adapting to the personality of each teacher. Teachers responsible for education in RBSs also work in the hostel of the school. Every day, two male and two female teachers work in shifts, and they are held responsible for both the safety and health problems of the children in the hostel. In addition, they have to control if the students follow the rules such as eating / bathing / obeying the bedtime hours. The relationship that the teachers establish with the students in the school and the relationship they establish in the hostel can be confusing for the children. Furthermore, each teacher may have a different attitude towards a similar situation. Students are taken aback by different reactions of different teachers on the same topic and have problems with adapting to the school and dormitory environment. Counselor Hanife states, "Some teachers wake students up too harshly in the mornings. What child would want to be woken up to a scolding?" Counselor Serdar also thinks many of the teachers have negative attitudes. He adds that "Teachers may treat students badly in the dormitory, they never listen to the ones who cry, for example." Similarly, Counselor Ismail refers to the differences between the attitudes of teachers; "Some teachers tell students that they are garbage in the first lesson and some teachers hold them too dearly. This leaves students in the limbo."

In light of these findings, it can be stated that the physical and hygienic conditions of the school, especially for students coming from villages, are another factor contributing to adaptation problems. Students may encounter issues related to not knowing or following basic hygiene rules. Furthermore, the different behaviors and attitudes of various teachers can complicate students' adaptation to the school and dormitory environment. These variations can lead students to receive different responses from different teachers on the same subject, thus contributing to adaptation problems.

"Envyng the Lives of Others". Jealousy and/or envying the lives of other students are another characteristic associated with adaptation problems. Psychological Counselor Serdar says, "If there's a group of three students and two of them are sick, the last one will fake an illness, ask for his/her mother, and want to return to their village." According to Psychological Counselor Hanife, "I notice the looks of those who are left behind when some families visit their children; they struggle between envying them and wishing they were in their place." Psychological Counselor İsmail also suggests that "some students, when others go home, start questioning why they were not allowed to go, why they have to stay, and eventually express their feelings of jealousy by saying they wish they didn't have to stay." Such actions accurately reflect that many students indeed prefer the lives of their peers.

Findings on noticing the adaptation problems of RBS students

Frequent mood swings and risky behaviors are categorized under **"Kids in Danger."** Applications to the Counseling Services by both students and teachers are grouped under **"A Cry for Help."** Somatic pains are grouped under **"Growing Pains."** Frequent phone calls are grouped under **"Hello, Are You There?"** Lastly, maladaptive behaviors experienced on certain days of the week, are grouped under **"Monday-Friday Syndrome."**

Table 2. Noticing the adaptation problems of RBS students

Themes	Codes	f	Total
Kids in Danger	Mood Swings	19	31
	Risky Behaviors	12	
A Cry for Help	Applying to the Counseling Service	19	27
	Survey-Test Results	8	
Growing Pains	Somatic Pains	17	26
	Desire to Be Hospitalized	9	
Hello, Are You There?	Frequency of Using the Telephone	15	24
	Fighting in the Telephone Line	9	
Monday-Friday Syndrome	Not Attending School on Monday	14	24
	Going Back to Village before Friday	10	

"Kids in Danger". While describing specific mood swings that students display, the psychological counselors emphasized that students were not able to contain their emotions and behaviors. Students who feel as if they do not have any control over their emotions or the risky behaviors they engage in tend to experience more adaptation problems. Counselor İsmail explained, *"I have an 8th grader who always displays depressive behaviors, feels insecure and thinks that nothing holds any meaning and he doesn't belong to the school environment. He thinks he doesn't have any control over anything, and this makes the situation worse."* Similarly, Counselor Ayşe commented that she had students who burst into tears and wanted to leave. *"These children experience emotional outbursts."*

Students experiencing adaptation problems are a bit easier to identify because of their tendency to display risky and depressive behaviors. For example, students who have had suicidal thoughts or have even attempted to commit suicide have family problems and/or adaptation problems that have not been fully addressed. Counselor Hanife admits that she, herself, felt insufficient as a psychological counselor with one of her students. *"A kid who grew up in the welfare service. He had some adaptation problems in the 3rd grade and the adults thought the best way was to sedate him. This neglected kid has been on anti-depressants since then. His social workers neglected him so much even though there is a protection from abuse order for him. They filled him with lies and empty promises. Naturally, he doesn't trust anyone and is prejudiced, especially against his teachers. We tried to keep him at school for two weeks. On his first day, civilian authorities including the mayor and the district attorney gathered at school together with the police officers because he created such a mayhem at the dormitory. I felt we were all insufficient because we couldn't get organized properly and win this kid back."*

Counselor Kerem added, *"I've had students that smoked in the dormitory and even escaped from the dormitory. These students were usually the ones with adaptation problems. I've had kids who tend to be violent and had bursts of rage, kids who were extremely reserved, who cried in a corner and refused to eat. When these kids opened up in time, they expressed that they didn't know why they did what they did. They only knew they couldn't keep these outbursts under control."*

Counselor Mehmet's student, the one who had threatened to jump out of the window if he was not left alone, ended up running away from school several times. In a separate incident, Counselor Meltem revealed a student at her RBS had tried to stab himself with a blunt pair of scissors. Such self-destructive thoughts and behaviors can indeed be considered to be connected to adaptation problems.

"A Cry for Help". Identifying a student that is experiencing adaptation problems is not always an easy task. Sometimes teachers are able to identify the behavior in class and will refer the student to Counseling Services. In other cases, the students themselves will seek out help and apply for services. Counselor Ahmet states, *"I can identify these students through their teachers' feedback on the student's lack of concentration in class, which is usually a symptom of adaptation problems."* Counselor Kerem agrees, *"Classroom teachers and tutors are a great help to notice kids with adaptation problems. They approach us to say that a certain student never speaks up in the class, doesn't attend to the lessons regularly or uses profanity all the time and stops talking to their friends. Then we start the procedure for sessions with the student."*

Counselor Hanife explains, *"Because I am the school counselor and I listen to all the kids, students with adaptation problems feel that they can also talk to me."* Moreover, Counselor İsmail's example echoes Counselor Hanife's. *"When I am on night duty at the dormitory, students who see their friends speaking with me are more apt to freely approach me later at school."* These statements illustrate the importance of the relationship the school counselor builds with the students. Further, surveys and tests aimed at getting to know the students better can help them express themselves. Counselor Serdar expresses that *"Adaptation problems can become quite visible when I ask student to write biographies. Or I can identify children with problems after a sociometry or another test."*

In summary, identifying students experiencing adaptation problems can occur through observations by teachers in the classroom and sometimes through students seeking help themselves. Teachers' feedback plays a crucial role in recognizing these students, especially when symptoms like lack of concentration are indicative of adaptation issues. The relationship established with the school counselor can facilitate students in expressing their problems, and surveys and tests prove to be useful tools for better understanding students.

"Growing Pains". School psychological counselors observe that students with adaptation problems often suffer from physical pains and use this symptom as an excuse to return to their homes. Counselor Ahmet, who thinks these pains are mostly psychologically-rooted, describes: *"Kids start getting sick when the families are not here to pick them up. We had one student whose family couldn't visit her for a month and a half. She kept getting sick and only recovered after we managed to bring her family to school."*

Counselor Meltem highlights that somatic pains are related to adaptation problems. She recalled that *"One student had to be hospitalized by his parents almost every week due to severe stomach pains. His family moved after a while and the kid left the dormitory to stay with his family. He got never sick after that. It was all about adaptation problems."*

Counselors point out the fact that they can identify students with adaptation problems as they often get sick, try to skip classes due to stomach aches, and fake being sick after witnessing other students that get to go back home when they are really sick. Additionally, the frequency of going to the hospital is another sign that a student is suffering from adaptation problems. Counselor Mehmet comments that, *"Some students want to go to the hospital and see a doctor from the first day of school. They know that either their families will take them home or they will not have to attend the classes that day if they go to the hospital. Children start exploiting it. You've got to look into adaptation problems if a kid has developed a habit of going to the hospital."*

The research findings indicate that students experiencing adaptation problems often suffer from physical pains and use them as an excuse to return to their homes. It has been observed that these pains are typically of psychological origin and become more pronounced, especially when families are not able to visit. Additionally, somatic pains have been linked to adaptation problems, leading students to attempt to skip classes and mimic illness when they observe other students being allowed to return home when genuinely ill. The frequency of hospital visits has also been emphasized as a significant indicator for identifying students facing adaptation problems. These findings underscore the importance of observation and communication by teachers and school counselors in recognizing and providing support to students experiencing adaptation issues.

"Hello, Are You There?". Another key to identifying students with adaptation problems is observing their frequency of using the telephone. All of the participating counselors agreed that students who want to call their families more than others are prone to have adaptation problems. Counselor Kerem admits that he cannot resist the students when they say they miss their mother and want to talk to her. Counselor Ayşe's agrees and claims that *"Students will demand to use the phone to find out if their families will visit them in the week; otherwise, they get into fights while waiting for their turn in the telephone line."* These statements show that teachers can use the phone calls as a temporary solution to ease adaptation problems, but it can cause negative relations among friends. Counselor Hanife explains how she identifies students with adaptation problems: *"Phone calls provide important insights when it comes to adaptation. If the students don't have a mobile phone, they can't talk to their families. They can only borrow their friends' phones. If they use the school phone and cannot reach their families, it ruins their day."*

Counselor Mehmet agrees, *"Asking to call the families is an important sign in identifying students with adaptation problems. Knowing which student wants to phone their parents and how often is important."*

Arguments that arise between students while waiting in the telephone line is another symptom. Counselor Hanife states that *"Students without problems don't create any disturbance while waiting in the line. They think to themselves that they will talk to their families tomorrow if not today. However, some children want to use the telephone only for themselves and get into fights in the line. I sometimes observe that these kids have adaptation problems."* In light of these findings, it can be said that observing students' telephone usage habits is an important way to identify adaptation problems. Especially, students who want to call their families more are more likely to experience adaptation problems. These findings indicate the importance of school staff being more sensitive to recognizing and providing support for students with adaptation problems.

"Monday-Friday Syndrome". Another observable symptom that a student is experiencing adaptation problems is his/her sense of uneasiness specifically witnessed on Mondays and Fridays. Counselor Serdar notes that *"Our students have adaptation problems on Mondays and Fridays. They don't want to return to the dormitory from the village on Mondays. They nervously wait to see if their families will turn up to collect them on Fridays."* Counselor Kerem adds, *"The rate of absenteeism is too high on Mondays. Students sometimes*

return to school on Tuesdays or Wednesdays and immediately start to use the phones to learn if they will go back home on Friday.” Counselor Hanife’s experiences support these statements as well: “We have more adaptation problems at school on Mondays and Fridays. Some families forget to pick their kids up on Fridays, so children keep waiting in vain. Then they don’t want to return to the dormitory on Mondays. Getting relocated every week feels difficult.” Counselor Ahmet explains that “Students put up a real fight on Monday mornings; therefore, they can’t adapt to school.” Counselor Ayşe also agrees; “The real problem starts on Fridays when some children go back home, and some have to stay at the dormitory. It is more difficult for the kids who are left here over the weekends.” These findings indicate that students experiencing adjustment issues tend to have more pronounced problems on Mondays and Fridays in particular. Additionally, situations where some parents forget to pick up their children on Fridays can further exacerbate adjustment issues. These findings suggest that students may experience greater adjustment problems on specific days of the week and may require more attention and support during these time periods.

Findings on reducing the number of adaptation problems of RBS students

Individual and group work to reduce the number of adaptation problems, together with sessions in the dormitory, are grouped under “**24/7 Counseling Services.**” Cooperation between the school administration, teachers and the Counseling Services are grouped under “**One for All, All for One.**” Efforts to enhance the students’ sense of belonging to the school are grouped under “**Sense of Belonging**” and sessions carried out together with students with adaptation problems and their peers are grouped under “**Children with Similar Experiences.**”

Table 3. Reducing the number of adaptation problems of RBS students

Theme	Codes	f	Total
24/7 Counseling Services	Individual or Group Psychological Counseling and Guidance	21	44
	Visiting Dormitory in Case of Emergency	17	
	Becoming A Teacher-Counselor	6	
One for All, All for One	Cooperation between Administration-Teachers-Counseling Service	19	33
	Finding Financial Sources	9	
	Unity in Social Activities	5	
Sense of Belonging	Expanding Playgrounds	19	33
	Organizing Dormitory Activities	14	
Children with Similar Experiences	Having A Sibling at School	16	31
	Coming from The Same Village	9	
	Peer Orientation	7	

"24/7 Counseling Services". School psychological counselors attempt to work through adaptation problems via individual sessions and group work. Individual sessions are preferred in emergency cases or family problems; although group work, is more suitable for students who are disobeying school rules or experiencing difficulties maintaining their personal hygiene. Counselor Ayşe’s statement is informative in the context of group work. She states, “One of the main problems is following the school rules. Rules for the times to go to bed and get up, study hours, classroom hours, doing homework should all be provided for students as preventive measures. Then personal hygiene is also a big problem. We have to explain everything from how to use the toilets to brushing teeth and combing hair. I can even collaborate with the Public Health Center.” Counselor Serdar adds, “We showed all parts of the school to the groups of students on the smart board when the school started. We also carry out group work to inform students on how to behave in the library and the dining hall or that they should knock on the door before entering a room etc.” Further, Counselor Hanife emphasizes the importance of group work, “We debrief students on topics such as how and when to clip fingernails, how to use the toilets and showers, how to talk to the seniors, how to make a bed or why we should turn off lights.”

In commenting on the importance of individual sessions, Counselor Meltem explains, *"I carry out individual sessions with children who come from broken families or who were abused in the past and must stay in the dormitory. We are not always qualified to analyze what the children tell us, especially when these disadvantaged groups have adaptation problems. That's why, I think all RBS counselors should hold a master's degree at least."* Counselor İsmail believes that, *"Through individual sessions, I am able to better explain that this is a boarding school and we have rules here, that there are other children in similar situations, and they can support one another. I try to help them explore their own strengths. I try to help them understand that they are not weak, and they can overcome hardships."*

In addition to individual sessions and group work carried out at the RBSs, psychological counseling and guidance services are also provided in the dormitory. If an emergency occurs, a counselor will rush to the dormitory from home. Others carry out counseling services during their night shifts as teacher-counselors in the dormitory. Counselor Mehmet, who feels this role increases the teacher-counselors' responsiveness to address any issues that may arise, states, *"I had a night shift first day of the first week of school. Someone called me to the dormitory after bed time. One of the students, who just started fifth grade at our school, was crying. I spent an hour to calm him down. But I was able to follow up with him just because I had another night shift a couple of days later."* Counselor Ahmet adds; *"I often get phone calls in the evenings. A kid had fainted... Another is crying because she misses her mom... And I just go the dormitory to see these kids."* Counselor Kerem expresses the importance of being able to spend time with students in the dormitory: *"We have beanbag chairs in the dormitory for the students to use while studying, to read a book or to just chill. I also hang out with them there, reading a book. Sitting down for dinner or lunch together with the students who have problems but aren't willing to talk about them is also helpful."* In light of these findings, it can be observed that school psychological counselors attempt to address students' adjustment issues through individual sessions and group work, with group work being considered more suitable for students who do not adhere to school rules or experience difficulties in maintaining personal hygiene. Furthermore, the preference for individual sessions in emergency situations or family issues, and the active involvement of psychological counselors in ensuring the safety and well-being of boarding school students, is noteworthy.

"One for All, All for One". All of the participants highlight that working together with a shared vision is vital to finding solutions for students suffering from adaptation problems. Counselor Kerem explains, *"It is necessary to come up with a common strategy as a whole school. Me deciding on strategies alone, only works to a certain extent. Adaptation problems become visible to the teachers first when the student starts crying in the lesson. Thus, we need to decide on a common strategy all together."* Counselor Ahmet suggests, *"We need to include school administration and other teachers. People own things when they work for it themselves, when they put effort in it, and they understand they will benefit from it indirectly if not directly. Teachers and the administration would benefit the most if we didn't have any adaptation problems."* Counselor Hanife's statement relays the importance of the school administrations that create financial resources to handle adaptation problems and the teachers who spend quality time with students. She states, *"I have experienced three different styles of school administration at RBSs. Our last principal was an exception on account of communicating with the children. Children know that someone cares for them if you ask questions like 'Do you like the food here?' and 'Are your rooms comfortable?' This increases the chances of adapting to the school environment. I think that educational materials are also important. We had two sets of chess at school and kids used to play chess all the time. It is important to create resources for such materials. Moreover, music and art teachers can carry out extra activities in their spare time. I mean it is not actually related to the subject you teach. It is important to spend some quality time with the students."* Counselor İsmail provides another example of activities that have helped resolve adaptation problems: *"We decide on an activity calendar for the students with adaptation problems at the beginning of each academic year. Activities like creative mind games, origami, chess and board games. We also have movie days and drama clubs. Teachers can organize activities based on their own interests and abilities. A teacher who knows how to play a musical instrument can organize a music night or introduce this instrument to the kids and teach them how to play. We benefited from this a lot. Both teachers and the school administration were bias against these types of activities at first. But they saw how beneficial these could be and changed their minds. The number of activities increased. Administrations approve these activities especially when they are organized for the whole town in the town center because they feel proud of their schools."*

These findings indicate that, in order to assist students experiencing adaptation issues and overcome these problems, it is crucial for all school staff and administration to work together with a shared strategy and vision. Additionally, teachers who spend quality time with students and school administrations that allocate financial resources for this purpose play a significant role in resolving adaptation problems.

"Sense of Belonging". Another notion which emphasizes the importance of reducing adaptation problems is students' 'sense of belongingness.' Each of the participants mention that calming thoughts and feelings are associated with a sense of belonging to the school. Counselor Serdar thinks, *"A sense of belonging is the most important factor that brings the adaptation problems to a minimum. We now have very few students who impatiently wait to be picked up to go home every weekend. The main reasons for this are the opportunities provided by the school to the kids, especially from mountain villages. Newcomers want to stay at school over the weekends in order to benefit more from the facilities and games etc... They want to have fun a bit. They have the freedom to play games at school, so they feel that they belong to school."* Counselor Meltem sums of the relationship between a sense of belonging and playing games. She states that, *"When we asked ourselves how we could bring the adaptation problems to a minimum, we came up with the idea of playing games. If children spend quality time with their peers, if they have fun here, adaptation problems will decrease. Thus, we need to make this place more attractive to the children by building more playgrounds and theatres, by starting more drama clubs and by taking kids to more social activities."*

With regard to the importance of collaboration, Counselor Ayşe explains that, *"Maybe the problem is that we can't make these children feel at home here. School principals and teachers sometimes don't fully understand that children need activities that help them feel at home at school. For example, students take a dislike to school when they are immediately asked to do intense studies. Teachers and principals don't respond to us when we ask them to keep the study hours shorter for the newcomers and to show special interest to them."* Counselor Mehmet discusses what can be done to increase this sense of belongingness: *"Students and I organize surprises for the newcomers. We make a confetti rain when they first enter their rooms. Talking to them and making jokes with them are also helpful in the transition period. Dormitory life should feel normal not unusual for the kids to feel at home."* These findings indicate that a sense of belonging to the school plays a significant role in reducing adaptation problems among students. It is observed that offering students opportunities to have enjoyable experiences and play games with their peers, particularly, has a mitigating effect on adaptation issues. Additionally, the importance of the school administration and teachers providing special attention to new students and making them feel like the school is a home has been emphasized.

"Children with Similar Experiences". It is relatively easier to re-solve adaptation problems if students have older siblings and/or friends from the same village at school. Peer support has a vital role here. According to Counselor Kerem, *"In addition to the students with severe adaptation problems, we have children who can adapt to the school environment easily. Peer support, I mean kids helping out one another, is very important at this point. For example, kids explain the rules to the newcomers using a 'we language.' 'This is our dormitory, we stay here. We use the telephone at this hour. We behave like this in the dining hall.' Children try to teach one another, and I like that."*

Counselor Hanife strongly agrees with this opinion and offers, *"Students without adaptation problems can make the transition period easier for others. Newcomers are able to dive into school and dormitory life, as if they had studied in the school for years, following the steps of their peers. This is only possible when the students communicate with the new ones."* Counselor İsmail agrees, *"Kids from the same village can be more effective than us in the adaptation process. Their experiences feel closer to heart when they talk about their own adaptation period. I sometimes ask a student who had adaptation problems in the past to be there with me when I talk to a newcomer."* Counselor Ayşe believes that, *"Peer mentoring is very valuable. Children can notice a newcomer with adaptation problems because they themselves went through similar situations. And when they notice such a peer, they try help him/her. When the kids are younger than them, they see them as a sibling and support them in school life. They talk about the fun activities they do in the dormitory and inform the newcomers about the possibilities that the future school life holds for them."* In light of these findings, it is believed that the peer support system among students at school has a significant impact on resolving

adaptation problems. This peer support plays an important role in explaining the school's rules and way of life to new students, guiding them, and making them feel like they are a part of the school. Therefore, school administration and counseling services can focus on promoting and strengthening this peer support system.

Discussion and Conclusions

This study explores students' adaptation problems in regional boarding schools based upon the perspectives and experiences of the employed school psychological counselors. The findings of the study illustrate that the participants agree on the themes of the causes for the adaptation problems of RBS students, noticing the adaptation problems, and solving them.

When all themes are considered, we concluded the most likely underlying reasons for adaptation problems of RBS students include: homesickness, family structure, getting used to the different practices at school, and envying other students. Students' adaptation problems are normally reported directly to the school counseling services or diagnosed indirectly by observations of mood swings, risky behaviors, somatic pains, frequency of making phone calls and absenteeism. The focus group discussion also presented common practices to reduce the number of adaptation problems experienced by the students. Key practices that were found common amongst the participants were that providing counseling and guidance services during and after working hours and having a collaborative relationship between the administration, teachers and counseling services assist in alleviating adaptation problems. Further, organizing activities to increase a sense of belongingness and peer support are also contributing factors. This study highlights the findings obtained through the perspectives and experiences of school psychological counselors to understand and address adaptation problems in regional boarding schools. The findings provide important insights into the causes, diagnosis, and solutions of adaptation problems, offering key factors that can assist schools in more effectively intervening with adaptation issues. Therefore, it is important for schools to consider these findings to better understand and resolve students' adaptation problems.

Findings reveal the most underlying reason that inhibits the students from fully integrating in the RBS is homesickness. It is believed to be one of the most important problems that RBS students experience; however, it is not the direct reason of adaptation problems (Mallon, 2013). Students at RBSs have to continue their education away from their families without seeing them for a long time. They struggle to adapt to the specific rules of the school; while as the same, experience homesickness (Charbonneau-Dahlen, 2010; Kashti, 1998). When the examples of boarding schools in different parts of the world are examined, it is seen that the difficulties brought by separation from the family are common for all children. Bobongie (2017) also conducted focus group and individual interviews with students who attended a regional boarding school where only female students were accepted, and those who studied at this school in the past. The research findings are in parallel with the findings of this study and showed that the girls who left their communities to continue their education in this boarding school experienced academic difficulties, had cultural problems in adapting to the rules of the school, and longed for family. Similarly to these research findings, in their study conducted by Mander and Lester (2023), they investigated homesickness symptoms and their dimensions, coping strategies, and their relationship with resilience, emotional, and mental health factors in 29 male adolescents aged 11-12 who were in their first year at boarding schools in Australia. They reported that one in five participants experienced recurring homesickness throughout the first year.

Differences in family structure, such as coming from a broken family and/or experiencing the loss of a parent also affects the adaptation period negatively (Demirel, 2013). Students who are sent off to a boarding school by their families may experience feelings of abandonment or not being loved enough (Robbins et al., 2006; Yeo, 2010). In a study that investigated the mental health of 299 participants aged 10-15 who continued their education in a boarding school, Xing et al., (2021) reported that staying in a boarding school increased parental alienation and negatively affected mental health. Moreover, the feeling of being left behind is another negative factor. Students who see their friends go home every weekend or are visited by their families on a regular basis make up a considerably large group. In contrast to this study, it is noteworthy that in the international literature, the feelings of abandonment experienced by students in boarding schools have been predominantly discussed within the frameworks of cultural, political, and migration issues (Bass, 2013; Dawson, 2012; Wang et. al., 2017). The theme labelled "Everything Is So Different" emerged due to the participants' opinions concerning

the students' first year of boarding school. Students have to learn how to use facilities such as toilets and showers, handle different teacher attitudes, and overcome the drop in academic success during their first year. In a cross-sectional study conducted with 97 participants, similar to the results of this study, Rianti et al. (2019) found that personal hygiene practices were lacking in boarding schools and increased the incidence of infectious diseases.

School psychological counselors play a vital role in noticing students with adaptation problems (Balbernie, 2007). The majority of cases are referred to the counseling services indirectly, even though students are sometimes aware of their adaptation problems and seek help. Teachers and other students can apply to the counseling services when they notice a certain student is exhibiting mood swings or emotional outbursts and/or, as a result of these feelings, if they smoke, are continuously truant, and display risky behaviors. Risky behaviors can result in unexpected and unwanted personal, social and developmental situations (Jessor, 1998). In particular, risky behaviors of students at RBSs usually involve drug and alcohol abuse (Hicks, 1996; Robin et al., 2008), thoughts/attempts of suicide (Spero et al., 1989; Dinges and Duong, 1994), and depression (LaFromboise and Low, 1998). Riswan-Hadi (2021), in their research where they examined guidance and psychological counseling services based on the perspectives of counselors, administrators, and students, defined one of the most important roles of counselors as conducting individual or group activities to actively engage students in communicating, interacting, and socializing with their environments, in addition to intervening in risky behaviors.

Somatic pains and making frequent phone calls also help psychological counselors identify students with adaptation problems. There are some studies in the literature that reference the frequency of making phone calls of the students who live away from their families. Chen (2010), who researched Uyghur Turks who study at a boarding school, found that students continuously tried to reach their families by phone because they couldn't go home for a long time due to severe geographical conditions.

School psychological counselors play a key role in resolving problems of adaptation experienced by the students. One contributing factor is that counselors organize group work in order to explain the school rules and to give information on hygiene and dormitory life. They also conduct therapeutic individual sessions in cases of emergency, both during and after working hours, which has led to a new responsibility called "teacher-counselor." Atli (2018) found that school psychological counselors get to observe student behaviors both at school and in dormitory due to their teacher-counselor duties. Nevertheless, this often affects their relationship with the students negatively, as they have to undertake the authoritarian role. In addition, they emphasized that cooperation between the school and the teachers improves the effectiveness of the counseling services. Psychological counselors who participated in Atli's study also underlined the importance of making this collaboration as part of the school culture in reducing the number of adaptation problems. Adaptation problems can be kept to a minimum when the school administration creates resources for socio-cultural and sport events and when the activities that are planned collaboratively at the beginning of the semester are actualized. It is expected that the students would feel a sense of belongingness more and more with each activity and thus have fewer adaptation problems. In one study that detailed the expectations of RBS students from the teachers and the counseling services, Güven and Kutlu (2001) found that the students had high expectations of the orientation programs. This shows us the key role of sense of belonging in solving adaptation problems. Similarly, in interviews with 16 students from 4 different boarding schools where only boys were accepted, Mander, Cohen, and Pooley (2015) found that despite the cultural difficulties of being Aboriginal, students took receiving education as an opportunity. Moreover, they concluded that the students had academic difficulties, were homesick and sought peer support. In their research, the importance of creating a positive school climate, planning activities that would increase the sense of belonging to the school, and pedagogical training of staff were also mentioned. Also, in their longitudinal study that examined a 12-month period involving 7 students who started boarding school, Lester and Mandel (2020) concluded that orientation interventions conducted by the school were related to students' academic, emotional, and mental well-being.

Among the important findings of this study are the positive effects of counseling services that include peer support and orientation programs. While there are studies indicating that school psychologists working in

boarding schools frequently use peer counseling to increase students' self-esteem or enhance their coping skills (Hidayah & Sahari-Nordin, 2020; Gao et. al., 2021; Susilawati et. al., 2022), no research has been found that employs a peer counseling program for intervening in adaptation problems. Nonetheless, Aladağ (2009), in his study analyzing the effects of peer counseling on improving the adaptation process of university students, revealed that peer counseling is a significant source of social support. Therefore, it can be confidently stated that peer counseling can minimize conflicts, and perceived social support can facilitate the adaptation process.

In light of all these results, this study provides significant insights through the perspectives and experiences of school psychological counselors in understanding and addressing adaptation problems in boarding schools. The findings offer key factors that can assist schools in more effectively intervening with the causes, diagnosis, and solutions of adaptation problems.

Suggestions

Eight school psychological counselors who work at regional boarding schools in seven different regions of Türkiye participated in this study. Being limited with the experiences of these teachers decreases the generalizability of the study. Moreover, having only one focus group discussion can be counted as another limitation.

Further research can be carried out to describe how RBS students overcome being homesick and feeling abandoned. Qualitative research can be used to analyze the risky behaviors of RBS students in-depth. Psychoeducation programs aimed at the transition/orientation process of RBS students can be designed by benefiting from the findings of this research. Peer counseling can be integrated into the orientation programs at schools. The role conflict that the school psychological counselors have due to the teacher-counselor duties can be investigated from the student perspective. Ministry of National Education can prepare standardized activity calendars especially for the regional boarding schools. In-depth qualitative studies on family relations and education history can be carried out with the students with adaptation problems. Facilities at RBSs can be enhanced for the students to spend more quality time at school. In-depth studies on the attitudes of RBS teachers towards the students can be carried out. Similar studies can be done other RBSs across the country and the findings can be compared. Comparative studies aimed at the adaptation problems of the students from RBSs and other schools can be carried out.

Author Contributions: Dr. Canan Çitil Akyol is the lead author of this study and has conducted the research design, data collection process, and analysis. Prof. Dr. Mustafa Kutlu has critically reviewed the article and contributed to the discussion and conclusion sections.

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

Conflicts of Interest: None of the authors declared any conflict of interest

Data Availability: Not applicable.

Ethics Approval and Consent to Participate: Inonu University Scientific Research and Ethics Committee, Social and Human Sciences Scientific Research Ethics Committee Document Date and Number: 02/02/2022-E.140245

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The Psychometric Properties of the Adlerian Courage Scale in a Sample of Turkish Adolescents

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ARTICLE HISTORY

Received: 03.08.23

Accepted: 27.08.23

KEYWORDS

Courage, Adolescence,
Scale Adaptation, Validity,
Reliability

ABSTRACT

Courage has received considerable attention in recent years. However, courage research has been limited due to a lack of appropriate measurement tools for adolescents. In this field, there is a measurement tool for courage from an Adlerian perspective for adults, but it is lacking for adolescents. Therefore, the present study aimed to examine the psychometric properties of the Adlerian Courage Scale – Adolescents Form within an adolescent sample in Türkiye. The scale was administered to 618 Turkish adolescents aged between 14-18. The confirmatory factor analysis results indicated that the scale's one-dimensional structure was confirmed with high factor loadings for the items. Additionally, the internal reliability coefficient ($\alpha = .93$) and test-retest reliability score (.95) illustrated that the items of the scale were reliable. Overall, considering reliability and validity results, the findings suggested that Adlerian Courage Scale – Adolescent Form is a valid and reliable measure to investigate the concept of courage in the context of positive psychology within the Turkish adolescent context.

Psychopathology-based approaches have drawn criticism in the latter half of the 20th century for failing to consider characteristics that improve people's lives, such as hope, courage, and optimism (Daniel, 2009). Many aspects of these approaches have been questioned by postmodern perspectives which take into consideration subjective realities, personal meanings, and interpretations (Sandage & Hill, 2001). This attention shift gave an impetus to positive psychology research in which individuals' strengths are the focal point rather than weaknesses (Seligman & Csikszentmihalyi, 2000; Seligman et al., 2005). Based on this emphasis, counselors have paid attention to their client's strengths to improve their daily functioning (Scheel et al., 2013; Niemiec & Pearce, 2021; Wong, 2006). Positive psychology literature posited that courage is an essential strength for individuals in their daily activities (Dahlsgaard et al., 2005). Consistent with its importance, courage has been regarded as a key component of the counseling process for children, adolescents, and families (Ergüner-Tekinalp & Işık, 2021).

The virtue of courage is defined as “emotional strengths that involve the exercise of will to accomplish goals in the face of external or internal opposition” (Peterson & Seligman, 2004, p. 29). The individual takes action based on awareness of the danger and a belief in the functionality of the result (Yang et al., 2009). Similarly, the Adlerian approach in the context of positive psychology considers courage as one of the character strengths which enables individuals to channel their energy for coping with life tasks (Adler, 2013). Accordingly, a courageous person is expected to have characteristics such as cognitive flexibility, adaptability to new changes, and the ability to develop alternative perspectives when faced with any problem (Dinkmeyer & Dreikurs, 2000; Yang et al., 2009).

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Despite the importance of courage, previous research has failed to consider courage from the perspective of the Adlerian approach. Rather, it is obvious that courage literature generally rests on the concept of fear-based courage (e.g., Pury et al., 2007; Woodard, 2004; Woodard & Pury, 2007). For instance, a well-known courage scale evaluates self-perceived courage which is defined as perseverance despite fear (see Norton & Weiss, 2009). Nevertheless, such a focus mainly ignored the multidimensional structure of courage (Howard & Alipour, 2014).

Another issue in courage research is a lack of emphasis on adolescents' courage. Courage, which motivates individuals to face difficulties (Wetterneck et al., 2013), enables them to have a more functional perspective regarding themselves and life (Hannah et al., 2007). There is a large volume of empirical research describing the critical role of courage in growth after stressful life events (Maddi, 2006a, 2006b). This aspect of courage explains the adolescents' ability in terms of managing their fears, their ability to cope with different challenging situations, and their motivation to reach their goals. Many recent studies (e.g., Chiesi et al., 2022; Grau et al., 2021; Hannah et al., 2007, 2010; Lodi et al., 2022; Maddi, 2004, 2006a) yielded that courage gives rise to psychological well-being and functioning effectively. Additionally, recent findings in Türkiye pointed out that there is a positive relationship between courage and resilience (Altıntaş, 2023; Üzbe-Atalay, 2019). Also, Altıntaş (2023) reported that courage is associated with self-compassion and prosocial behavior tendencies in adolescents. Overall, this line of research indicated that courage was found to be associated with the value of optimism, a sense of hope, growth, competence, creativity, social awareness, meaning, and purpose (Blagen & Yang, 2009; Bockorny & Youssef-Morgan, 2019; Dinkmeyer & Dreikurs, 2000).

Considering the significant role of courage as a protective factor for youth, little research has examined the predictors and outcomes of courage in adolescents. Besides, contrary to the traditional understanding of courage, there has been growing interest in the investigation of courage studies that contribute to resilience rather than fear-based courage. More recently, research is being conducted on the structure of courage which has a multidimensional nature (Woodard & Pury, 2007) and is believed to promote functionality within the context of positive psychology (e.g., Bowen, 2016; Chiesi et al., 2022; Lodi et al., 2022; Maddi, 2004, 2006a; Magnano et al., 2021; Üzbe-Atalay, 2019). Several studies of courage (Altıntaş, 2023; Bowen, 2016; Lodi et al., 2022; Magnano et al., 2021; Üzbe-Atalay, 2019) conclusively reported that courage acts as a protective factor for resilience and contributes to individuals' psychological well-being. Thus, through a comprehensive study of Adlerian courage that contributes to resiliency, a deeper understanding can be gained of how adolescents cope with challenging life experiences and achieve positive outcomes.

What this body of the literature points out that measurement tools for courage within the scope of positive psychology is limited. From the adolescent development perspective, focusing on adolescents' positive aspects and strengths has also been considered important, and studying positive concepts including courage has been encouraged among researchers (Chiesi et al., 2022). Given the absence of assessment tools specifically designed to measure courage among adolescents, the primary objective of this research was to adapt the Adlerian Courage Scale (ACS; Üzbe-Atalay, 2019) for use with adolescents and assess its psychometric characteristics in the context of Turkish adolescents. In line with this main objective, the following research questions were sought to be answered:

1. What is the factorial structure of the ACS - Adolescent Form?
2. Is the ACS - Adolescent Form is valid and reliable in the context of Turkish adolescents?

By accomplishing these goals, the study aims to adapt a scale that will enable researchers to investigate courage among adolescents in Türkiye.

Method

Participants

The inclusion criteria for this study is to be a high school student in private schools in Ankara. Convenience sampling was employed to reach out to participants. The data was collected in paper and pencil format between 2021 and 2022.

A total of 618 adolescents participated in the study voluntarily. To examine the factorial structure of the ACS - Adolescent Form with exploratory factor analysis and confirmatory factor analysis, the number of participants was randomly split into two groups. In the first group, the average age was found to be 16.73 ($SD = 1.19$), while in the second group, the average age was calculated as 16.22 ($SD = 1.33$). Table 1 displays the demographic characteristics of each group involved in the adaptation process of the ACS - Adolescent Form.

Table 1. Demographic Characteristics of the Participants

Variables			N	%
1 st Group:	Gender	Female	143	56.5
		Male	110	43.5
EFA	Grade Level	9 th Grade	38	15.0
		10 th Grade	36	14.2
		11 th Grade	66	26.1
		12 th Grade	113	44.7
		Total	253	100.0
2 nd Group:	Gender	Female	198	54.3
		Male	167	45.8
CFA	Grade Level	9 th Grade	133	36.4
		10 th Grade	67	18.4
		11 th Grade	44	12.1
		12 th Grade	121	33.2
		Total	365	100.0

As shown in Table 1, the first group was examined using Exploratory Factor Analysis (EFA) to analyze the factor structure of the scale. This group comprised 253 students, with 143 females (56.5%) and 110 males (43%). Among the participants, 38 were in 9th Grade (15%), 36 were in 10th Grade (14.2%), 66 were in 11th Grade (26.1%), and 113 the remaining were in 12th Grade (44.7%). The second study group, consisting of 365 high school students, was subjected to confirmatory factor analysis (CFA) to assess the model fit indexes. Within this group, there were 198 females (54.3%) and 167 males (45.8%). The distribution of participants across different grades was as follows: 133 students were in 9th Grade (36.4%), 67 students were in 10th Grade (18.4%), 44 students were in 11th Grade (12.1%), and the remaining 121 students were in 12th Grade (33.2%).

Data Collection Tools

In addition to ACS - Adolescent Form, the Child and Adolescent Resilience Scale (Aydoğan et al., 2012) and the Social Interest Scale (Kaynak & Işık, 2022) were used to seek concurrent validity evidence.

Adlerian Courage Scale - Adolescent Form. The aim of this study was to adapt the ACS scale, originally developed by Üzbe-Atalay (2019) for use in adult samples, to be suitable for adolescent sampling. The procedure section explains how the items in the original scale were revised to be appropriate for the adolescent sample. Regarding validity and reliability, the original scale's information is provided as follows. The Adlerian Courage Scale (ACS) was developed in a multi-step process involving three study groups, with a total of 1,321 adult individuals (age range 18-55) participating in the scale development process (Üzbe-Atalay, 2019). In the EFA study, the 12-item single-factor courage structure showed a variance explained rate of 42.36%, with factor loadings ranging from .59 to .70. To assess the criterion validity of the scale, positive and significant relationships were observed between courage and the sub-dimensions of the psychological hardiness scale, such as self-commitment, control, and challenge. Moreover, a positive and significant relationship was found between courage and stress coping strategies, while a negative and significant relationship was found between courage and passive coping strategies. In the subsequent CFA study on a different group, the single-factor courage structure consisting of 12 items demonstrated good fit indices [$\chi^2 = 151.35$, $\chi^2/df = 2.80$, $df = 54$, $p = .000$, RMSEA = .006, GFI = .93, AGFI = .90, NFI = .98, CFI = .99, SRMR = .03]. In the CFA study, the 12-item single-factor courage structure showed a variance explained rate of 51.41%. The internal consistency coefficient for the single-factor scale was calculated as .87 for the EFA study group and .92 for the CFA study group. Regarding test-retest reliability, the correlation coefficient was found to be .81 for intervals of three weeks.

Child and Adolescent Resilience Scale. Child and Adolescent Resilience Scale was developed by Ungar and Liebenberg (2011), and Aydoğan et al., (2012) investigated its validity and reliability in Turkish. This scale which was developed to measure resilience consists of 28 items. The items included in the scale consist of 5-point Likert-type responses, where all items are rated on a scale of ("1 = *does not describe me at all*" to "5 = *describes me completely*"). In the original study, the reliability coefficient was calculated as .92 for the whole scale. Within the scope of this study, the internal consistency coefficient of the Child and Youth Resilience Scale was found to be adequate ($\alpha = .89$).

Social Interest Scale. The Social Interest Scale was developed by Kaynak and Işık (2022) for adolescents. This scale consists of 21 items and four subdimensions: belonging, sensitivity, coping, and helping. The scale was used with a Likert scale ranging from 1 (totally inappropriate) to 5 (totally appropriate). In the original study, Cronbach's α was .88 for the whole scale, .87 for the belonging, .77 for the sensitivity, .76 for the coping, and .67 for the helping subscale. As a result of the reliability analysis conducted within the scope of this study, the Cronbach's α coefficient was found to be .82 for the whole Social Interest Scale, .76 for the belonging subscale, .70 for sensitivity subscale, .70 for coping subscale and .66 for helping subscale.

Procedure

Initially, some items in Adlerian Courage Scale (Üzbe-Atalay, 2019) were modified for use with adolescents. Then, the modified items were presented to 8 experts from the field of Psychological Counselling and Guidance. These experts checked the items to see whether each item measured courage, comprehensibility, and appropriateness of the expressions for adolescents. After revising the items based on expert opinions, decisions were made regarding the response categories of the scale items. Next, regarding the clarity and suitability of the items for the adolescent age group, a focus group consisting of 10 adolescents was conducted, and their feedback and opinions were obtained. Accordingly, necessary adjustments were made to address any missing or unclear aspects of the items commended by adolescents.

Data Analysis

In the adaptation process, the researchers employed various statistical analyses, including Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA) for validity. For reliability analysis, bivariate correlation and reliability analysis are employed in the two different study groups.

In the initial stage of the EFA analysis, the data from the first group was inputted into the SPSS 21 program, and the necessary procedures were carried out to address normality assumptions. To ensure data quality, several measures were taken, such as identifying missing data, examining extreme values, and assessing normality, linearity, and multicollinearity assumptions. Subsequently, construct validity, concurrent validity, and reliability coefficients were examined for this particular research group.

Using the second study group's data, CFA was conducted to determine the factor structure and model fit indices. Several fit indices, such as χ^2 , RMSEA, SRMR, TLI, and CFI, were examined. All statistical analyses were carried out using STATA software (Acock, 2013). In this study group, item analysis, internal consistency coefficients, and test-retest reliability were also calculated.

Results

In this section, findings on the validity and reliability of the ACS-Adolescent Form are presented in the form of construct validity (EFA and CFA), concurrent validity, convergent validity item analysis, and reliability studies (internal consistency and consistency over time).

Validity

Construct Validity: Exploratory Factor Analysis. In the initial phase of the ACS-Adolescent Form adaptation study, the principal component analysis technique, which is commonly used for factorization in EFA, was utilized. The data collected for the first study was assessed for its suitability for EFA using the Kaiser-Meyer-Olkin (KMO) coefficient and the Barlett Sphericity test (Pallant, 2001). The analysis revealed a KMO value of .93 and a significant result for Barlett's test ($\chi^2=1369.725$; $p < 0.00$). These findings confirmed that the dataset was appropriate for factor analysis. In the first EFA, it was observed that the scale's eigenvalue was

concentrated within a single factor greater than 1. This single-factor structure accounted for 50.48% of the variance explained by the scale. The factor loadings of the EFA result are presented in Table 2.

Table 2. Factor Loading Values of the ACS-Adolescent Form Items

Item No	Factor 1
I01	.687
I02	.743
I03	.604
I04	.725
I05	.745
I06	.731
I07	.726
I08	.729
I09	.680
I10	.709
I11	.756
I12	.676
Eigenvalue: 6.058	
Total Variance Explained: 50.482	

Table 3 demonstrated that the factor loadings of the items in the ACS-Adolescent form range from .604 to .756, and the variance explained by this single-factor structure is 50.48%.

Concurrent Validity. In order to establish the concurrent validity of the scale within the first study group, where EFA analysis was conducted, the Social Interest Scale (SIS) developed by Kaynak and Işık (2022), and the Child and Youth Resilience Scale (CYRS) developed by Aydoğan et al. (2012) were employed. Table 3 presents the correlation coefficients calculated between the total scores obtained from the scales in the concurrent validity study of the ACS, which utilized the CYRS and the SIS sub-scales of belonging, sensitivity, coping, and helping.

Table 3. Concurrent Validity Results

	1	2	3	4	5	6	7
1. Courage	1.00	.526**	.471**	.280**	.245**	.646**	.228**
2. Resilience		1.00	.690**	.570**	.440**	.477**	.413**
3. Social Interest Total			1.00	.807**	.635**	.658**	.679**
4. Belonging				1.00	.200**	.412**	.344**
5. Sensitivity					1.00	.266**	.491**
6. Coping						1.00	.269**
7. Helping							1.00

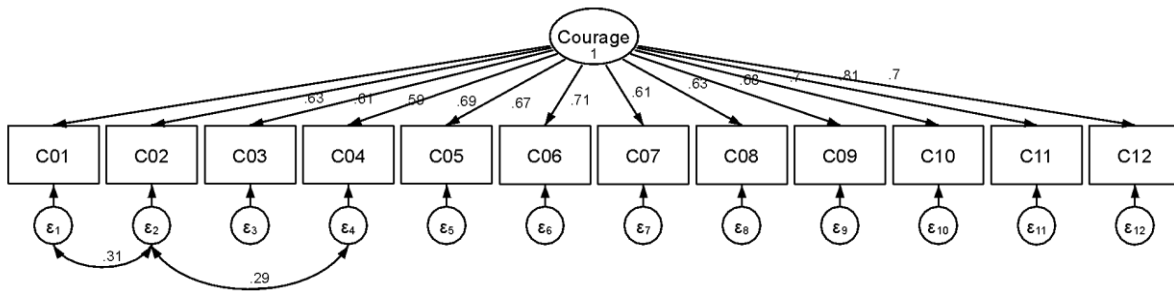
** $p < .001$

Table 3 shows that the concept of courage has positive and significant relationships with each sub-dimension of social interest: belonging ($r = .28, p < .001$), sensitivity ($r = .25, p < .001$), coping ($r = .65, p < .001$), helping ($r = .23, p < .001$), and total social interest score ($r = .47, p < .001$). In addition, it is observed that there is a positive and moderate relationship between courage and resilience ($r = .53, p < .001$).

Construct Validity: Confirmatory Factor Analysis. During the process of developing and adapting scales, CFA is often recommended as a technique within the framework of structural equation modeling. It is utilized to evaluate the validity of the structure derived from EFA when applied to a different sample (De Vellis, 2003; Kline, 2011; Tabachnick & Fidell, 2015).

In the first analysis performed without modification, the CFA results were found as [$\chi^2 = 251.577, df = 55, p = .00, \chi^2/df = 4.65$], CFI = .90, TLI = .87, RMSEA = .100, 90%CI[.08, 0.11], SRMR = 0.05. Two modifications were implemented as some modification index values fell within the acceptable fit criteria limits. The study presents the model fit index values from the CFA conducted on a separate research group in Table 4, along with the path diagram of the model depicted in Figure 1.

Figure 1. Path Diagram for the CFA of the ACS-Adolescent Form



The CFA results of the ACS-Adolescent Form are depicted in Figure 1. Based on the graphical structure derived from CFA, all items exhibit standardized load values above .61.

Table 4. Fit Indices for the CFA of the ACS-Adolescent Form

χ^2	df	TLI	CFI	SRMR	RMSEA
185.705	52	0.91	.93	0.047	0.080

Table 4 shows the goodness of fit values obtained as a result of the CFA of the ACS-Adolescent Form. According to these values, $\chi^2 / (df) = 3.57$ value less than 5, RMSEA value less than .08 and TLI and CFI values are above .90 can be considered as acceptable fit criteria scores (Marcoulides & Schumacher, 2001; Schermelleh-Engel et al., 2003).

Convergent Validity. AVE (Average Variance Extracted) and CR (Composite Reliability) are two important measures used in the context of SEM and CFA to assess the convergent validity and reliability of measurement scales. In this study, the AVE value calculated to provide evidence for convergent validity was found to be 0.45, while the CR value was found to be 0.94. The AVE value is recommended to exceed 0.5, and the CR value should be greater than 0.7 according to Hair et al. (2016). Significantly, the present research employed CR values because they are considered to be less stringent than AVE values, as noted by Malhotra and Dash (2011). Subsequently, the internal consistency coefficient was computed to assess the scale's reliability.

Item Analysis. In the process of developing or adopting scales, it is essential to conduct item analysis studies to determine the underlying psychological construct to which an item belongs, its association with other items, and the extent to which it fulfills its intended purpose (Erkuş, 2014). Within the first and second study groups, which involved both EFA and CFA analyses for item validity, item analyses were conducted on 12 items that constituted a single dimension determined through factor analysis. Item-total test correlations were calculated to assess the extent to which the selected items effectively measured the intended attribute. The findings are presented in Table 5.

Table 5. Item-Total Correlations for the ACS-Adolescent Form Items

Items		Item-Total Correlation	
EFA	CFA	EFA	CFA
I01	I01	.619	.628
I02	I02	.678	.629
I03	I03	.532	.561
I04	I04	.659	.681
I05	I05	.685	.651
I06	I06	.660	.656
I07	I07	.659	.576
I08	I08	.665	.594
I09	I09	.612	.645
I10	I10	.643	.654
I11	I11	.697	.756
I12	I12	.611	.643

Table 5 indicates that in the EFA study, the item-total correlation coefficients of the scale items varied between ($r = .53$) and ($r = .69$). In the CFA study, the item-total correlation coefficients varied between ($r = .56$) and ($r = .75$).

Reliability

Within this study, Cronbach's Alpha test was employed to assess internal consistency as part of the reliability analysis, which measures the extent to which the measured attribute is free from random errors. During the EFA study, the Cronbach's Alpha reliability coefficient for the 12-item single-factor scale was determined to be .91. Similarly, in the CFA study, the Cronbach's Alpha reliability coefficient was calculated as .90. For the test's test-retest reliability study, the Adlerian Courage Scale-Adolescent Form was administered to 16 high school students with a two-week interval, and the correlation coefficient between the two administrations was found to be .95. These scores illustrated that the scale was reliable for adolescents.

Discussion

The primary goal of this research was to adapt the Adlerian Courage Scale for adolescents and assess its psychometric characteristics. This study sought to emphasize and promote adolescents confronting challenges stemming from diverse life experiences while taking into account their strengths. It may shed light on these virtues, promoting a better understanding of how adolescents cope with various situations and grow stronger as individuals. The measurement instrument incorporates Adler's psychology approach and includes the traits associated with a courageous individual. The study confirmed the reliability and validity of this tool by employing a two-stage scale development process with significant participation. Consequently, based on the findings, it can be inferred that the ACS-Adolescent Form is a reliable and valid measurement tool for adolescents.

To assess the scale's construct validity, both exploratory and confirmatory factor analyses were employed. The EFA revealed a 12-item single-factor structure for the scale, and this structure was later confirmed by the CFA, which also indicated a good fit index for the model. Furthermore, the item validity study demonstrated that the ACS-Adolescent Form showed item-total correlations of .30 and above, suggesting its ability to effectively differentiate individuals based on the measured attribute (Nunnally & Bernstein, 1994). The reliability studies of the scale indicated high Cronbach's alpha values, indicating strong internal consistency among the scale items. Additionally, the test-retest reliability data demonstrated that the ACS-Adolescent Form maintains a high level of consistency over time.

In this study, the relationship between resilience and social interest was examined within the scope of criterion validity in line with the concept of courage. While the literature on courage within the Adlerian approach is limited, existing research has identified courage as a significant internal protective factor contributing to the development of resilience in both adolescents and adults (Altıntaş, 2023; Üzbe-Atalay, 2019). Coleman and Hagell (2007) pointed out that the majority of adolescents manage to cope effectively with adversities and potential risks, even amidst challenging transitions and negative experiences. When examining the attributes and experiences of adolescents who have triumphed over numerous difficulties, resilience is a prominent concept in the literature (Embury & Saklofske, 2014). In general, resilience, as defined by Masten et al. (1990), refers to the ability to adapt and thrive even when facing challenging and threatening situations. In this study, the presence of strong and positive correlations between the levels of resilience and courage among adolescents validates the concept of courage. Additionally, exploring this relationship and understanding the construct of courage could prove valuable in future research that focuses on adolescents facing potential risk factors.

The study found that the ACS-Adolescent Form has a positive relationship with all the sub-dimensions and total scores of social interest. According to Adler (1956), social interest encompasses the sense of community, the individual's interactions with others in society, cooperation within the community, and the individual's identification with others. Adler's perspective on courage is closely linked to his emphasis on social interest in his theory. He defines courage as a social attribute, emphasizing that it involves social functionality and should be present in individuals who perceive themselves as integral parts of society (Dinkmeyer & Dreikurs, 2000). The research findings align with the notion in the literature that courage is a crucial factor in fostering social

interest (Crandall,1980; Karcher & Lindwall, 2003; Manaster et al., 2003; Rareshide & Kern, 1991). Furthermore, the robust correlation between courage and coping, which represents one of the sub-dimensions of social interest, is consistent with the results obtained in the initial study that uncovered the structure of the courage concept (Üzbe-Atalay, 2019).

In summary, it can be affirmed that the ACS-Adolescent Form is a valid and reliable measurement tool appropriate for evaluating courage within the field of psychological counseling and guidance and related areas. The use of the concept of courage in research and practice can contribute to promoting the well-being and positive functioning of adolescents. Future studies should consider utilizing the concept of courage as a potential protective factor to facilitate adolescents' adaptation during their developmental stages. Especially for school counselors, the concept of courage can serve as an alternative approach to motivation. It enables them to assist students in exploring their strengths, fostering safe risk-taking abilities, social interest, and developing effective coping skills.

The above findings and conclusions should be interpreted with caution due to the following limitations. First, the findings may not be generalized to all adolescents as the convenience sampling method was used to recruit participants. Therefore, future studies should consider employing a wider and more representative sample to examine the reliability and validity of ACS-Adolescent Forms in Türkiye. Second, the ACS did not take into account the multidimensional aspect of courage in the current form. Subsequent studies may explore the multidimensional structure of courage in adolescents. Last, while the findings demonstrated significant correlations between the ACS-Adolescent Form and some related constructs, they did not provide evidence on the predictive role of courage within adolescent samples. Therefore, it is crucial to test the ACS-Adolescent Form's predictive role using structural equation modeling from the perspective of positive psychology in future studies. In conclusion, this scale is a useful tool that can be used in various research studies to understand and enhance adolescents in the light of positive psychology.

Author Contributions: ÖAA, NÜA and FÇ contributed to the construction of the research question, review of the literature and design of the study. ÖAA contributed to data collection and data analysis processes. NÜA contributed to the theoretical conceptualization and data analysis processes. FÇ contributed final reporting and theoretical foundations. All the authors contributed to the writing and interpretation of the article. All authors have read and approved the final version of the article.

Funding Disclosure: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

Data Availability: The authors would be ready to share the data sets as supplementary material upon request by the editor, co-editor, reviewers or other scholars.

Ethical Disclosure: The authors declare that they continue to work in accordance with scientific study ethics and the Helenski declaration in this study. Accordingly, the research was reviewed by the Social and Humanities Ethics Committee of Başkent University and was given permission (REF: 2022/ E-62310886-605.99-128468). In addition, the participants participated in the study on a voluntary basis.

Author Note: This article was presented as an orally presented at the 23rd International Psychological Counseling and Guidance Congress June 13-15, 2022 in Istanbul

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