



## The Mediating Role of Loneliness in the Relationship Between Maladaptive Thinking Styles and Emotional Expressivity<sup>1</sup>

Hayri Koç, Res. Assist., Necmettin Erbakan University, Turkey, hayri5067@gmail.com

 0000-0002-4589-8999

Coşkun Arslan, Prof. Dr., Necmettin Erbakan University, Turkey, coskunarslan@erbakan.edu.tr

 0000-0003-0247-9847

### Keywords

Maladaptive thinking styles  
Emotional expressivity  
Loneliness  
Structural equation modeling

### Article Info:

Received : 14-09-2021  
Accepted : 17-03-2022  
Published : 11-04-2022

DOI: 10.52963/PERR\_Biruni\_V11.N1.07

### Abstract

This study investigated the mediating role of loneliness in the relationship between maladaptive thinking styles and emotional expressivity. Participants were 1042 [776 (%74.5) female and 266 (%25.5) male, range age = 17–28, M age = 20.02, SD age = 1.69] young adults enrolled at university. “Berkeley Expressivity Scale” to determine their emotional expressivity, “Maladaptive Thinking Styles Scale” to determine the maladaptive thinking styles, and “UCLA Loneliness Scale (ULS-8)” to determine their loneliness levels were used. In the study, the data were analyzed with the structural equation model. Also, the bootstrapping method was used to test the significance of the indirect effect. As a result of the structural equation model, loneliness has been found to play a partial mediating role in the relationship between maladaptive thinking styles and emotional expressivity. In other words, maladaptive thinking styles predict emotional expressivity both directly and through loneliness. Also, the result of the bootstrapping method has shown that this indirect effect is significant. The findings discussed in the context of the relevant literature and recommendations for future research given.

**To cite this article:** Koç, H., & Arslan, C. (2022). The mediating role of loneliness in the relationship between maladaptive thinking styles and emotional expressivity. *Psycho-Educational Research Reviews*, 11(1), 93-107. doi: 10.52963/PERR\_Biruni\_V11.N1.07

<sup>1</sup> This manuscript was derived from the doctoral dissertation that prepared by Hayri Koç under the supervision of the second author

## INTRODUCTION

Emotions are of great importance in human life. Emotions are one of our most basic mechanisms that both reveal inner states and make sense of behavior. Emotions contribute to our socialization by helping us understand other people (Gala, 2017). The fact that individuals feel any emotion does not mean that they will express it. While some emotions are suppressed and not reflected, some of them can be easily expressed (Gross & John, 1997). Reflection of felt emotions on behavior is called expressivity (Gross & John, 1998). Individual differences can be observed in expressivity. While some individuals can express their emotions very easily, others suppress their emotions (Trierweiler, Eid, & Lischetzke, 2002). Many emotions expressed benefit both physical and psychological health (Akın, 2011; Nyklíček, Temoshok, & Vingerhoets, 2004; Sayed Ismail & Dhaidan Al-Dhaidan, 2020). Suppression of emotions can cause individuals to experience psychological problems such as depression (McClain, Younginer & Elledge, 2020; Nezlek & Kuppens, 2008), anxiety (Hayes et al., 2004), and borderline personality disorder (Herpertz et al., 2001). It is important to reveal and evaluate the emotions that are suppressed and harm the individual (Hackney & Cormier, 2008). For this evaluation, it is necessary to focus on the thoughts that can affect emotional expression. Many researchers have stated that thinking styles are effective on an individual's emotions and behaviors (Beck & Alford, 2009; Dryden, 2012; Ellis, 1962; Lazarus, 1991).

Thinking styles can contribute to the quality of life of the individual but also be the source of his problems. Thinking styles affect individuals' interpretation of events either correctly or incorrectly. Individuals who can interpret events correctly; they can choose flexibly, be anti-catastrophic and show high tolerance to frustration (Dryden & Neenan, 2014). Misinterpretation of events is associated with individuals experiencing problems such as depression (Beck, 2011), anger and aggression (Askari, 2019), stress (Muran & Motta, 1993), panic attacks (Hedley, Hoffart, Damme, Ekeberg, & Friis, 2000). Faulty thinking styles have been dealt with under different names in counseling theories. These thinking styles have been termed, cognitive distortions by cognitive therapy (Beck, 1976), as irrational beliefs by rational emotional behavioral therapy (Ellis, 1958). Cognitive analytical therapy stated emotions and behaviors as rituals and evaluated faulty thinking as target problems to be solved (Ryle, 1991). Target problems are grouped dilemmas, traps, and snags (Ryle, 1979a). These thinking structures are named as "maladaptive thinking styles" because they disrupt the life adaptation of individuals. Individuals who have dilemma-style thinking believe that they must choose one of two alternative ways. Individuals with this thought feel that they cannot be happy in either situation (Ryle, 1979b). Individuals with trap-style thinking constantly make negative inferences in their relationships. Individuals have the belief that what they do will either do not change the negative result or makes it worse (Ryle, 1995). The individual's thinking that he or she cannot achieve his goals or desired roles is called snags. Sometimes it can be the opposition of others and sometimes the individual's own personal evaluation. Because of the snags, individuals think that they cannot set goals regarding their lives (Ryle, 1985).

Similar faulty thoughts negatively affect the intimate relationships of individuals (Hamamcı, 2005). Intimate relationships are one of the basic needs of human beings (Maslow, 1954). People basically need the presence of people who value themselves, can communicate, plan and work together, live together, and take care of their offspring (Cacioppo & Patrick, 2008). Intimate relationships are very important in young adulthood (Masten & Coatsworth, 1998). Young adults expand their networks by getting closer to their friends and romantic partners (Collins, Gleason, & Sesma, 1997; Erikson, 1968). Also to the importance of friends and romantic relationships, acceptance and support by the family is very important in young adulthood (Paradis et al., 2011). Individuals who have trouble forming close relationships in young adulthood often suppress their emotions. Because mutual feelings in intimate relationships can be easily expressed (Hamarta, 2004). Because of not being able to build intimate relationships, individuals experience a feeling of loneliness (Peplau & Perlman, 1982). Loneliness can be seen quite commonly; it affects every individual regardless of characteristics

such as race, gender, age, or cultural history (Rokach & Bacanlı, 2001). In large-sample studies of loneliness, approximately 10-16% of people stated that they feel loneliness at any time in their lives (Beutel et al., 2017; Lasgaard, Friis, & Shevlin, 2016; Stickley et al., 2015). Among university students, most of whom are in their young adulthood, this rate is 43% (Karaoğlu, Avşaroğlu, & Deniz, 2009). Loneliness negatively affects the lives of individuals (Arslantaş et al., 2015). Studies have shown that loneliness; depression (Cacioppo et al., 2010), stress (Kearns, Whitley, Tannahill, & Ellaway, 2015), suicidal thoughts (Rudatsikira, Muula, Siziya, & Twa-Twa, 2007), sleep problems (Pressman et al., 2005). revealed that it is associated with adverse conditions such as memory impairment (Wilson et al., 2007), more rapid illness (Kiecolt-Glaser et al., 1984), and early death (Cacioppo, Capitanio, & Cacioppo, 2014).

Expressing emotions help process emotional experiences (Slanbekova et al., 2019). There may be many reasons why the individual's tendency to express his emotions is less. However, individuals with maladaptive thinking cannot always be expected to have less emotional expressions. Similarly, individuals with high emotional expressions cannot always be expected to have less maladaptive thinking. Different researchers have stated that such emotions are mediated by the thought-behavior relationship (Beck, 1976; Ellis, 1958; Ryle, 1991). Therefore, the difference between individuals with maladaptive thinking showing less or more emotional expression maybe because of loneliness. Cognitive processes determine the severity of loneliness (Peplau & Perlman, 1982). Especially the maladaptive thinking of individuals cause intense loneliness (Young, 1982). Individuals with maladaptive thinking can be expected to have a low level of emotional expression because they experience a sense of loneliness. In this context, we think that maladaptive thinking styles may be related to emotional expression and that the feeling of loneliness plays may be a mediating role in this relationship.

In this study, we aimed to test the following questions in the light of the above theoretical information.

1. Do maladaptive thinking styles significantly predict emotional expressivity?
2. Do maladaptive thinking styles significantly predict loneliness?
3. Does loneliness significantly predict emotional expressivity?
4. Does mediating loneliness role of in the relationship between maladaptive thinking styles and emotional expressivity?

## **METHOD**

### **RESEARCH DESIGN**

This study is a relational study that tests whether loneliness can play a mediating role in the relationship between young adults' maladaptive thinking and emotional expressivity. The main purpose of relational research is to determine whether two or more variables change together. If a relationship is found, determining the direction and degree of it is also within the scope of relational research (Akabay, 2019).

### **SAMPLE**

Our participants consisted of 1042 Turkish-speaking college students. The distribution of participants was as follows: 285 (27.4 %) were first-year students, 257 (24.7 %) were second-year students, 277 (26.6 %) were third-year students, and 223 (21.4 %) were fourth-year students. 776

(74.5%) of the participants are female and 266 (25.5%) of them are male. The ages of the participants ranged from 17 to 28, with a mean age of 20.02 and a standard deviation of 1.69.

#### **DATA COLLECTION**

In the study, the "Maladaptive Thinking Styles Scale" was used to determine the maladaptive thinking styles of the participants, the "Berkeley Expressivity Scale" to determine the emotional expression levels and the "Short Form UCLA Loneliness Scale" to determine the levels of loneliness. Comprehensive information about the measurement tools used in the study is presented below.

#### ***MALADAPTIVE THINKING STYLES SCALE***

This scale was used to measure the maladaptive thinking styles of the participants. The scale was developed by Koç and Arslan (2021). The Maladaptive Thinking Styles Scale consists of three sub-dimensions. These; dilemmas, traps, snags. The scale consists of 10 items (e.g. "I will not be able to do what I want to do because of people close to me.", and "I will either try controlling everything and get overwhelmed or I will give up control and panic."). Individuals are asked to answer the scale as a 5-point Likert type (1 = None and 5 = Always). The authors found that the items explained 57.8% of the total variance and had acceptable internal consistency (Cronbach alpha = 0.81).

#### ***BERKELEY EXPRESSIVITY SCALE***

It was developed to measure behavioral (eg facial, vocal, postural) changes in emotional experiences. The scale was developed by Gross & John (1995). The Berkeley Expressivity Scale consists of three sub-dimensions. These; positive expressivity, negative expressivity, impulse strength. The scale consists of 16 items (e.g. "I experience my feelings very intensely" and "I laugh when someone tells me a joke that sounds funny"). Individuals are asked to answer the scale as a 7-point Likert type (1 = None and 5 = Always). The Turkish adaptation of this scale was made by Akın (2011). In the Turkish version of the scale, the authors found that the items explained 58% of the total variance and had acceptable internal consistency (Cronbach alpha = .74-.84). The Cronbach Alpha reliability coefficient obtained in this study is .82.

#### ***UCLA LONELINESS SCALE (ULS-8)***

It was developed to measure the feeling of loneliness. The scale was developed by hay and DiMatteo (1987). UCLA Loneliness Scale consists of unidimensional. The scale consists of 8 items (e.g. there is no one I can refer to. I feel excluded). Individuals are asked to answer the scale as a 4-point Likert type (1 = Not at all suitable and 4 = Fully suitable). The Turkish adaptation of this scale was made by Doğan, Akıncı-Çötök, Göçet-Tekin (2011). As a result of the explanatory factor analysis, a single dimension compatible with the original form, which explains 36.69% of the total variance, was determined. Internal consistency reliability coefficient was reported as 0.72 in the Turkish version of UCLA Loneliness Scale (ULS-8). The Cronbach Alpha reliability coefficient obtained in this study is .82.

#### **DATA ANALYSIS**

The relationships among maladaptive thinking styles, loneliness, and emotional expressivity of young adults were analyzed with the structural equation model (SEM). This study was conducted in two stages as suggested by Kline (2019). In two-stage structural equation models, the structural model is tested after the measurement model is tested. In this study, parceling was carried out with the balancing approach to obtain the latent variables of loneliness. In the balancing approach, items are ranked according to item-total correlations. Then, the items with the lowest correlation value and the highest correlation value are assigned to the first parcel, the following items to the second parcel, and the following items to the third parcel. This type of parceling yields better results than a one-dimensional structure (Little et al., 2002). The frequency, mean, standard deviation, skewness, kurtosis, correlation and reliability analysis in the study was conducted with the IBM SPSS Statistic 21

program. Structural equation modeling and bootstrapping were performed using AMOS Graphics program.

## FINDINGS

### DESCRIPTIVE STATISTICS AND CORRELATIONS OF VARIABLES

As shown in Table 1, all variables are statistically significant, except for some of the maladaptive thinking style subscales of impulse intensity and their meaningless relationships with some of the loneliness parcels. Impulse intensity and maladaptive thinking styles are completely meaningless with their sub-dimensions. The impulse intensity is meaningless with parcel 2 and parcel 3 from loneliness plots.

Maladaptive thinking styles with positive expression ( $r = -.28$ ,  $r = -.23$ ,  $r = -.23$ ) and loneliness ( $r = -.43$ ,  $r = -.36$ ,  $r = -.37$ , respectively) are in the negative direction. has a meaningful relationship. Also, maladaptive thinking styles with negative expression ( $r = -.19$ ,  $r = -.16$ ,  $r = -.12$ ) and loneliness (respectively  $r = -.22$ ,  $r = -.25$ ,  $r = -.18$ ) are negative. It has a meaningful relationship in the direction. However, the impulse intensity has a significant negative relationship with parcel1 ( $r = -.18$ ) from loneliness parcels.

**Table 1.** Descriptive statistics and correlations (N = 1042)

	1	2	3	4	5	6	7	8	9
1. positive expressivity	-								
2. negative expressivity	.39**	-							
3. impulse strength	.33**	.27**	-						
4. dilemmas	-.28**	-.19**	.01	-					
5. traps	-.23**	-.16**	-.06	.41**	-				
6. snags	-.23**	-.12**	-.01	.44**	.30**	-			
7. lon. pars1	-.43**	-.22**	-.18**	.30**	.17**	.20**	-		
8. lon.pars2	-.36**	-.25**	-.05	.40**	.21**	.30**	.55**	-	
9. lon.pars3	-.37**	-.18**	-.06	.37**	.17**	.31**	.52**	.63**	-
Mean	21.68	24.88	31.89	7.19	8.74	7.79	4.99	4.83	3.11
SD	3.99	5.91	5.88	2.71	2.82	2.61	1.47	1.91	1.23
Minimum	6	6	11	3	4	3	3	3	2
Maximum	28	42	42	15	20	15	12	12	8

Note. SD= Standard deviation; Lon.Par= parcels of Loneliness

As shown in Table 6, the dilemmas are positively relationship with the parcels of loneliness (respectively  $r = .30$ ,  $r = .40$ ,  $r = .37$ ); the traps are positively relationship with parcels of loneliness (respectively  $r = .17$ ,  $r = .21$ ,  $r = .17$ ); the snags are positively relationship with parcels of loneliness (respectively  $r = .20$ ,  $r = .30$ ,  $r = .31$ ).

### TESTING THE MEASUREMENT MODEL

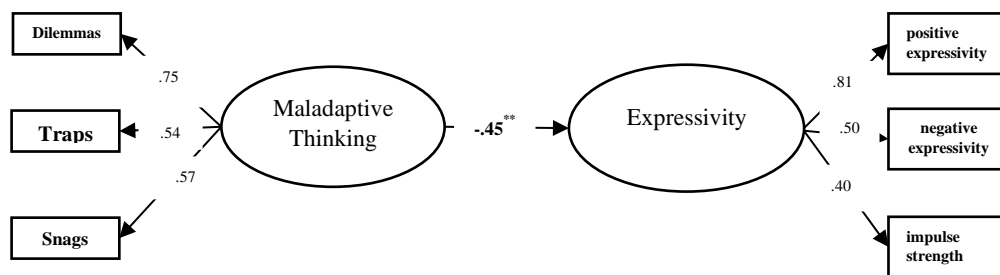
The measurement model of the relationships between emotional expressivity, maladaptive thinking styles and loneliness was tested. Standardized regression coefficients ranged from .38 to .86 ( $p < .01$ ). In the measurement model, the data have acceptable goodness-of-fit indices ( $\chi^2$  (24, N = 1042) = 133,757,  $p < .001$ ; GFI = 0.97; CFI = 0.95; NFI = 0.94; TLI = 0.93; SRMR = 0.05; RMSEA = 0.07). According to Kline (2019), in the measurement models, all path coefficients should be significant, goodness-of-fit values should be within acceptable limits, and the paths between variables should be

less than 85. Additionally, for the normal distribution of the results obtained from the variables, the skewness and kurtosis values should be between  $-2$  and  $+2$  (Bachman, 2004). In this study, the paths between the variables varied between  $-.56$  and  $.59$ , and the skewness and kurtosis values ranged between  $-.69$  and  $1.20$ .

**TESTING THE STRUCTURAL MODEL**

To test the mediating variable effect of loneliness on the relationship between maladaptive thinking styles and emotional expressivity, a three-step regression analysis proposed by Baron and Kenny (1986) was conducted. Baron and Kenny state that to mention a mediating effect, there must be three situations: (1) The independent variable (maladaptive thinking styles) must affect the mediator variable (loneliness). (2) The independent variable (maladaptive thinking styles) should affect the dependent variable (emotional expressivity). (3) When the mediator variable (loneliness) is included in the regression analysis in the second step, the effect of the independent variable (maladaptive thinking styles) on the dependent variable (emotional expressivity) should decrease, while the intermediate variable (loneliness) should have a significant effect on the dependent variable (emotional expressivity). Two different models were tested to investigate the mentioned effects. The effect of the independent variable on the dependent variable is presented in Model 1. Path analysis results with latent variables in Model 1 are presented in Figure 1.

**Figure 1.** Model Structural Equation Model Test Results Between Maladaptive Thinking Styles and Expressivity.

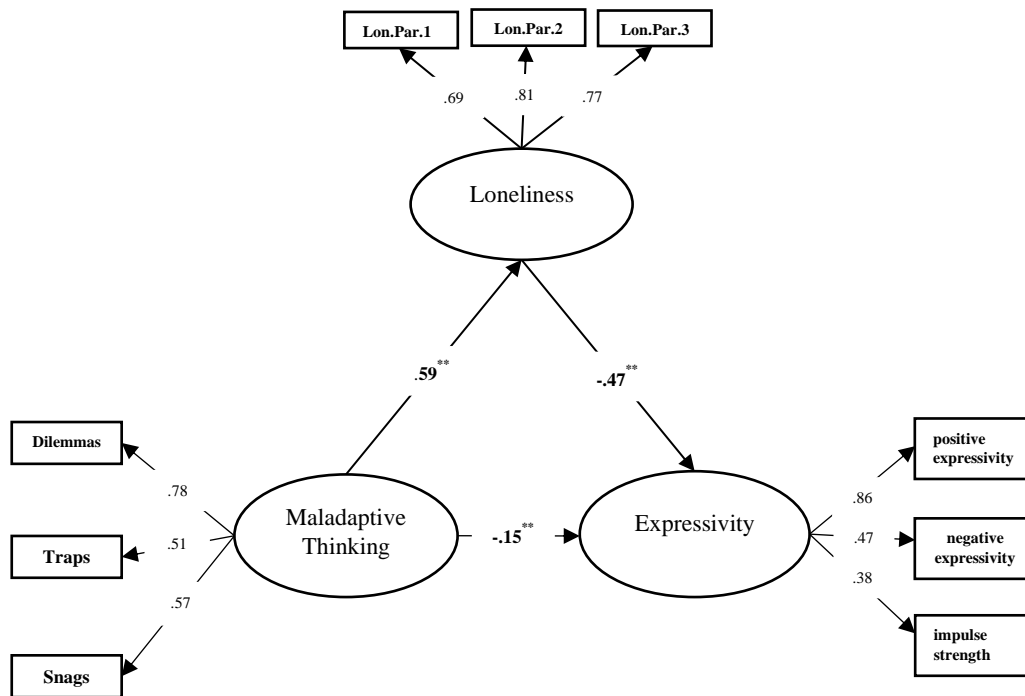


Note. N = 1042;  $**p < 0.01$

It is seen that the path coefficients in the structural equation model that affect the emotional expressivity of maladaptive thinking styles of young adults presented in Figure 1 are significant. Considering the effects obtained as a result of SEM, maladaptive thinking styles negatively predicted emotional expressivity ( $\beta = -.45, p < .01$ ). Considering the goodness of fit indices of Model 1, all goodness of fit indices are at acceptable levels. Model 1's goodness of fit indexes is as follows;  $\chi^2(8, N = 1042) = 43.716, p < .001$ ; GFI = 0.99; CFI = 0.96; NFI = 0.92; TLI = 0.92; SRMR = 0.04; RMSEA = 0.06. As a result of Model 1, the condition that the independent variable put forward by Baron and Keny for mediation affects the dependent variable is provided.

Model 2 was investigated to test two effects. First, this model was determined the effect of the independent variable on the mediator variable. Second, when the mediator variable was included in the regression analysis, it was tried to determine whether the effect of the independent variable on the dependent variable decreased or not and the effect of the intermediate variable on the dependent variable.

**Figure 2.** Structural Equation Model Test Results Among Maladaptive Thinking Styles, Expressivity, and Loneliness



Note. N = 1042;  $^{**}p < 0.01$ .

As shown in Figure 2, loneliness is partially mediated in the relationship between maladaptive thinking styles and emotional expressivity, and it is seen that all path coefficients are significant. According to Model 2, maladaptive thinking styles predicted loneliness positively ( $\beta = .59, p < .01$ ), loneliness negatively predicted emotional expressivity ( $\beta = -.47, p < .01$ ), maladaptive thinking styles predicted emotional expressivity negatively ( $\beta = -.15, p < .01$ ). When the indirect effect is examined, the standardized indirect effect coefficient in which maladaptive thinking styles affect emotional expressivity mediating of loneliness is  $-.28$ .

Considering the goodness of fit indices of Model 2, all goodness of fit indices are at an acceptable level. The goodness of fit indices of Model 2 are as follows;  $\chi^2 (24, N = 1042) = 133.757, p < .001$ ; GFI = 0.95; CFI = 0.95; NFI = 0.94; TLI = 0.93; SRMR = 0.045; RMSEA = 0.066. As a result of Model 2, the condition that the independent variable put forward by Baron and Keny has a significant effect on the mediating variable was provided for mediation. Additionally, when the mediator variable was included in the regression analysis in the second step, the effect of the independent variable on the dependent variable decreased, while the condition that the mediating variable had a significant effect on the dependent variable was provided. In conclusion, considering the above-mentioned values, loneliness shows a partial mediation between maladaptive thinking styles and emotional expressivity. At this point, it can be stated that maladaptive thinking styles in young adults can directly reduce emotional expressivity, as well as weaken the emotional expressivity by increasing loneliness. To provide additional evidence on whether the direct and indirect effects of this model are significant or not, the bootstrapping coefficient and the lower and upper limits of the 95% confidence intervals (C.I.) as a result of the bootstrapping process performed through 10,000 resampling are presented in Table 2.

**Table 2. Bootstrapping Results of the Model**

Model Paths	Coefficient	95% C.I.	
		Lower Limit	Upper Limit
<b>Direct effect</b>			
Maladaptive Thinking Styles → Loneliness	.59	.52	.66
Maladaptive Thinking Styles → Expressivity	-.15	-.27	-.05
Loneliness → Expressivity	-.47	-.58	-.36
<b>Indirect effect</b>			
Maladaptive Thinking Styles → Loneliness → Expressivity	-.28	-.36	-.21

It is stated that the effect examined is significant when the confidence intervals do not include zero in the bootstrapping process (Preacher & Hayes, 2008). As seen in Table 2, it can be concluded that all the effects in the model are significant. The bootstrapping confidence intervals of both direct and indirect effects exclude zero lower and upper bounds. Therefore, it can be stated that the bootstrapping process supports the conclusion that the maladaptive thinking styles of young adults affect emotional expressivity through loneliness. In this study, first, direct effects and then indirect effects were discussed in line with the findings obtained from the model established on the basis of the theoretical infrastructure.

## DISCUSSION AND CONCLUSION

In line with the expectation of the study, it was seen that maladaptive thinking styles had a direct effect on emotional expressivity. As the level of maladaptive thinking style increases, the level of expression of emotion decreases. The interaction of emotions and thoughts occurs in both emotion theories (Frijda, 1993; Izard, 1993; Lazarus, 1991) and counselling theories (Beck, 1976, Dryden, 2012; Ellis, 1962; Ryle & Kerr, 2002). According to cognitive theory, if the thought structures of individuals can be determined, it can predict both how individuals emotionally react to stressful events and inferences during these events (Dryden, Ferguson, & Clarck, 1989). Cognitive theories focus on changing negative thoughts by creating awareness of thoughts that negatively affect individuals' emotions and behaviours (Beck, 1976, Dryden, 2012; Ellis, 1962; Ryle & Kerr, 2002). Repetitive maladaptive patterns of interpersonal behaviour and emotions result from individuals' cognitive distortions (Beck, Davis, & Freeman, 2015). Faulty thoughts are incompatible thoughts that disrupt the functionality of the individual. Individuals with faulty thinking styles tend to view life negatively. Negative perspectives on life and the emotions they create cause psychological problems in the individual (Ellis, Harper, & Powers, 1975). Negative emotions experienced can easily be expressed by some individuals and not by others. Emotions that cannot be expressed create a residual experience in individuals (Akkoyun, 2001). Expressing emotions provides an opportunity for insight by creating a cognitive structure on the life of the individual (Pennebaker, 1989; Saad & Kamel, 2020). Types of therapy such as psychoanalytic theory (Freud, 1957), individual-centered therapy (Rogers, 1961), Gestalt therapy (Voltan-Acar, 2019), and emotion-focused therapy (Greenberg, 2018) from psychological counseling theories state that expressing emotions contributes to the psychological health of the individual. Therefore, it can be expected that there is a negative relationship between maladaptive thoughts that can cause psychological problems and emotional expressivity that contribute to psychological health.

The finding of the study is consistent with the findings in the literature that cognitive distortions positively predict suppression of emotions (Chung, Jalal, & Khan, 2014) and that there is a positive relationship between depressive symptoms caused by cognitive distortions and suppression of emotions (Yıldız, 2017). Both cognitive distortions and suppression of emotions are factors that



negatively affect the psychological health of the individual. Therefore, it is thought that there is a positive relationship between the two variables. Since the suppression of emotions can be considered as the opposite of emotional expression, the results of these studies support the findings of the study. Additionally, studies on the expression of anger, which is one of the basic emotions, have also reported findings similar to the results of the study. Additionally, the positive relationship between the inability to express anger healthily and cognitive distortions (Azoulay, 2000; DiGiuseppe and Froh, 2002) and irrational beliefs (Martin and Dahlen, 2004; Hazaleus and Deffenbacher 1985) also support the findings of the study. Cognitive distortions and irrational beliefs are similar to maladaptive thinking styles because they cause the individual to perceive events differently than they are. Although these concepts are classified with different names by various theorists there is a deterioration in the functionality of life arising from the thoughts of the individual.

Another finding obtained as a result of the study is that maladaptive thinking styles directly affect loneliness. In this effect, a positive and significant relationship was found between maladaptive thinking styles and loneliness, and it was revealed that maladaptive thinking styles predicted loneliness significantly. This effect is the strongest in the model. According to cognitive therapy approaches, the cause of loneliness is the dysfunctional and unrealistic thoughts that individuals have (Burns, 1985). Young (1982) stated that it has clinical value to address negative automatic thoughts through cognitive-behavioural therapy to reduce the feelings of loneliness of people with a diagnosis of depression. Theeke et al. (2016) reduced the feeling of loneliness by restructuring maladaptive thoughts. Cognitive therapies are an effective method for understanding the development of loneliness and reducing feelings of loneliness (Hyland et al., 2019). Meta-analytical findings also concluded that addressing maladaptive cognitive processes can be an effective way to treat loneliness (Masi, Chen, Hawkley, & Cacioppo, 2011). As a result of all these results, a strong positive relationship can be expected between maladaptive thinking styles and loneliness.

Both studies conducted on university students and studies conducted on different groups show a parallel with the findings of the study. It has been revealed a relationship between university students' positive or negative evaluation of events and less loneliness or more loneliness (Anderson, Horowitz, & French, 1983). In another study conducted with university students, it was stated that cognitive distortions, especially cognitive distortions related to avoidance of intimacy, were effective on loneliness (Hamamcı & Duy, 2007). A finding similar to this finding was reported by Høglund and Collison (1989) in a study on university students, which reported a significant and positive relationship between irrational thoughts and the level of loneliness. Additionally, in another study conducted on university students, the result that irrational beliefs in rational emotional behavioural therapy (obligations, catastrophizing, self-deprecation) explained 36% of the variance in loneliness was obtained using the structural equation model (Hyland et al., 2019). Finally, in a five-year longitudinal study conducted on older adults, it was reported that there was a positive correlation between depressive symptoms caused by cognitive distortions and loneliness (Cacioppo, Hawkley, & Thisted, 2010). Considering these findings in the literature the inconsistency in the mentality of individuals is related to the feeling of loneliness. Additionally, maladaptive thoughts can be considered a factor that cause the individual to feel lonely. Therefore, the stated findings support the study findings.

Another finding obtained as a result of the study is that loneliness directly affects emotional expressivity. In this effect, a significant negative relationship was found between loneliness and emotional expressivity, and it was revealed that loneliness significantly predicted emotional expressivity. Most emotional experiences are expressed in social environments (Averil, 1982; Kemper, 1991). People state that they are happier when they are with their friends than when they are alone (Csikszentmihalyi & Hunter, 2003). Individuals who are not in a social context are more likely to feel joy, anger, and sadness than those in a social context (Babad & Wallbott, 1986). As social skills decrease, the level of loneliness increases (Hamarta, 2000). The individual who feels lonely may not express his feelings by thinking that others cannot understand him. For these reasons, a negative

relationship can be expected between loneliness and emotional expressivity. Like the findings of the study between emotional expression and loneliness, studies conducted on university students (Akin, 2012; Burgin et al., 2012) concluded that there is a negative relationship between loneliness and emotional expression. Additionally, it is stated that loneliness reduces the expression of non-verbal emotion (Gerson & Perlman, 1979). These findings in the literature are consistent with the study findings. Only one study was found in which no significant relationship could be found between loneliness and emotional expression. This study was conducted by Kumar (2015) with 60 people over the age of 60, and it was reported that there was no significant relationship between emotional expression and loneliness at the end of the study. It is thought that the difference between the findings may be due to the age difference in the study groups or the number of people in the study group.

The indirect effect in this study is also significant. It has been understood that the effect of maladaptive thinking styles on emotional expressivity is both direct and indirect. It has been determined that loneliness mediates the relationship between maladaptive thinking styles and emotional expressivity in young adults. As maladaptive thoughts increase, the level of loneliness increases, and as loneliness increases, the level of emotional expressivity decreases. While maladaptive thoughts can directly reduce emotional expressivity; however, it can indirectly reduce emotional expressivity through loneliness. According to many theorists (Beck, 1976; Ellis, 1958; Ryle, 1991), emotions mediate the thought-behaviour relationship. From this viewpoint, the maladaptive thoughts of individuals can cause them to feel negative emotions. Individuals with maladaptive thoughts may make inferences that the events they encounter will result in negative outcomes or that an obstacle will appear in front of them while performing the behaviour. Some implications may be related to social relations. Information processing errors in social relations mediate the individual's feeling of loneliness (Cacioppo & Hawkley, 2009; Qualter et al., 2013). Loneliness is a feeling that harms the individual in both social and emotional dimensions (de Jong Gierveld et al., 2006). While negative and dysfunctional perceptions in social relations may cause the individual to withdraw socially, they may also have a negative effect on the individual's expression of emotions. Therefore, individuals without realistic thoughts about themselves and their environment may feel lonely by having problems in interpersonal relationships, and emotional expression behaviour may decrease due to this loneliness.

The current study has several limitations. First, the participants consist of students enrolled in two different universities. In the study, in which a convenient sampling method was used, this limitation was tried to be overcome with the bootstrapping method. Second, the number of female participants in the study is considerably higher than that of males. It is recommended to test the researched model with more balanced participants according to gender. Despite these limitations, this study has an important contribution to the literature as it reveals that maladaptive thinking reduce emotional expressivity and do this through the feeling of loneliness. During group counselling/psychoeducation activities aimed at reducing maladaptive thoughts, the feeling of loneliness can be reduced by focusing on purposes such as developing social skills, providing social support, and coping with loneliness. Thus, it can be contributed to increasing the emotional expressivity of individuals who have maladaptive thinking and feel loneliness.

## REFERENCES

- Akbay, L. (2019). İlişkisel arařtırmalar. S. řen & İ. Yıldırım (Ed.), *Eđitimde arařtırma yöntemleri içinde* (s. 117-135). Nobel Yayın Dađıtım.
- Akin, A. (2011). The validity and reliability of the Turkish version of the Berkeley Expressivity Scale. *Procedia-Social and Behavioral Sciences*, 30, 27-33. <https://doi.org/10.1016/j.sbspro.2011.10.006>
- Akin, A. (2012). Emotional expressivity and loneliness in religious and moral studies education students. *The Online Journal of Counselling and Education* 1(3), 31-40.
- Akkoyun, F. (2001). *Gestalt terapi*. Nobel Yayın Dađım.

- Anderson, C. A., Horowitz, L. M., & French, R. D. (1983). Attributional style of lonely and depressed people. *Journal of Personality and Social Psychology*, 45(1), 127. <https://doi.org/10.1037/0022-3514.45.1.127>
- Andersson, L. (1998). Loneliness research and interventions: A review of the literature. *Aging & Mental Health*, 2(4), 264-274. <https://doi.org/10.1080/13607869856506>
- Arslantaş, H., Adana, F., Ergin, F. A., Kayar, D., & Acar, G. (2015). Loneliness in elderly people, associated factors and its correlation with quality of life: A field study from Western Turkey. *Iranian Journal of Public Health*, 44(1), 43.
- Askari, I. (2019). The role of the belief system for anger management of couples with anger and aggression: A cognitive-behavioral perspective. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 37(3), 223-240. <https://doi.org/10.1007/s10942-018-0307-5>
- Averill, J. R. (1982). *Anger and aggression: An essay on emotion*. New York: Springer-Verlag. <https://doi.org/10.1007/978-1-4612-5743-1>
- Azoulay, D. (2000). *Cognitive distortions in the experience and expression of anger* (Yayınlanmamış doktora tezi). Ohio Adler School of Professional Psychology, Ohio.
- Babad, E. Y., & Wallbott, H. G. (1986). The effects of social factors on emotional reactions. K. S. Scherer, H. G. Wallbott, & A. B. Summer- field (Ed.), *Experiencing emotion: A cross-cultural study* içinde (s. 154-172). Cambridge University Press.
- Bachman, L. F. (2004). *Statistical analyses for language assessment*. Cambridge University Press <https://doi.org/10.1017/CBO9780511667350>
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. International Universities Press.
- Beck, A. T., & Alford, B. A. (2009). *Depression: Causes and treatment*. University of Pennsylvania Press.
- Beck, A. T., Davis, D. D., & Freeman, A. (Ed.). (2015). *Cognitive therapy of personality disorders*. Guilford Publications.
- Beck, J. S. (2011). *Cognitive behavior therapy: Basics and beyond (2nd ed.)*. Guilford Press.
- Bell, R. C. (1990). Analytic issues in the use of repertory grid technique. *Advances in personal construct psychology*, 1, 25-48.
- Beutel, M. E., Klein, E. M., Brähler, E., Reiner, I., Jünger, C., Michal, M., ... & Tibubos, A. N. (2017). Loneliness in the general population: prevalence, determinants and relations to mental health. *BMC psychiatry*, 17(1), 97. <https://doi.org/10.1186/s12888-017-1262-x>
- Burgin, C. J., Brown, L. H., Royal, A., Silvia, P. J., Barrantes-Vidal, N., & Kwapil, T. R. (2012). Being with others and feeling happy: Emotional expressivity in everyday life. *Personality and Individual Differences*, 53(3), 185-190. <https://doi.org/10.1016/j.paid.2012.03.006>
- Burns, D. D. (1985). *Intimate connections: the new and clinically tested program for overcoming loneliness developed at the Presbyterian*. William Morrow & Co.
- Cacioppo, J. T., & Hawkley, L. C. (2009). Perceived social isolation and cognition. *Trends in Cognitive Sciences*, 13(10), 447-454. <https://doi.org/10.1016/j.tics.2009.06.005>
- Cacioppo, J. T., & Patrick, W. (2008). *Loneliness: Human nature and the need for social connection*. WW Norton & Company.
- Cacioppo, J. T., Hawkley, L. C., & Thisted, R. A. (2010). Perceived social isolation makes me sad: 5-year cross-lagged analyses of loneliness and depressive symptomatology in the Chicago Health, Aging, and Social Relations Study. *Psychology and Aging*, 25(2), 453. <https://doi.org/10.1037/a0017216>
- Cacioppo, S., Capitanio, J. P., & Cacioppo, J. T. (2014). Toward a neurology of loneliness. *Psychological Bulletin*, 140(6), 1464. <https://doi.org/10.1037/a0037618>
- Cacioppo, S., Grippo, A. J., London, S., Goossens, L., & Cacioppo, J. T. (2015). Loneliness: Clinical import and interventions. *Perspectives on Psychological Science*, 10(2), 238-249. <https://doi.org/10.1177/1745691615570616>

- Chung, M. C., Jalal, S., & Khan, N. U. (2014). Posttraumatic stress disorder and psychiatric comorbidity following the 2010 flood in Pakistan: Exposure characteristics, cognitive distortions, and emotional suppression. *Psychiatry: Interpersonal & Biological Processes*, 77(3), 289-304. <https://doi.org/10.1521/psyc.2014.77.3.289>
- Collins, W. A., Gleason, T., & Sesma, A., Jr. (1997). Internalization, autonomy, and relationships: Development during adolescence. J. E. Grusec & L. Kuczynski (Ed.), *Parenting and children's internalization of values: A handbook of contemporary theory* içinde (s. 78–99). John Wiley & Sons Inc.
- Csikszentmihalyi, M., & Hunter, J. (2003). Happiness in everyday life: The uses of experience sampling. *Journal of Happiness Studies*, 4(2), 185-199. <https://doi.org/10.1023/A:1024409732742>
- de Jong Gierveld, J. (1998). A review of loneliness: concept and definitions, determinants and consequences. *Reviews in Clinical Gerontology*, 8(1), 73-80. <https://doi.org/10.1017/S0959259898008090>
- Doğan, T., Çötök, N. A., & Tekin, E. G. (2011). Reliability and validity of the Turkish Version of the UCLA Loneliness Scale (ULS-8) among university students. *Procedia-Social and Behavioral Sciences*, 15, 2058-2062. <https://doi.org/10.1016/j.sbspro.2011.04.053>
- Dryden, W. (2012). *Cognitive behaviour therapies*. Sage. <https://doi.org/10.4135/9781446288368>
- Dryden, W. (2014). *Rational emotive behaviour therapy: Distinctive features*. Routledge. <https://doi.org/10.4324/9781315749433>
- Dryden, W., & DiGiuseppe, R. (1990). *A primer on rational-emotive therapy*. Research Press.
- Dryden, W., & Mytton, J. (2016). *Four approaches to counselling and psychotherapy*. Routledge. <https://doi.org/10.4324/9781315626390>
- Dryden, W., & Neenan, M. (2014). *Rational emotive behaviour therapy: 100 key points and techniques*. Routledge. <https://doi.org/10.4324/9781315749464>
- Dryden, W., Ellis, A., & Dobson, K. S. (2001). *Rational emotive therapy*. Guilford.
- Dryden, W., Ferguson, J., & Clark, T. (1989). Beliefs and inferences: a test of a rational-emotive hypothesis 1. Performing in an academic seminar. *Journal of Rational-Emotive and Cognitive-Behavior Therapy*, 7(3), 119-129. <https://doi.org/10.1007/BF01076184>
- Ellis, A. (1958). Rational psychotherapy. *Journal of General Psychology*, 59, 35–49. <https://doi.org/10.1080/00221309.1958.9710170>
- Ellis, A. (1962). *Reason and emotion in psychotherapy*. New York: Lyle Stuart.
- Ellis, A. (2002). *Overcoming resistance: A rational emotive behavior therapy integrated approach*. Springer Publishing Company. <https://doi.org/10.1016/B0-12-343010-0/00177-X>
- Ellis, A. (2010). *Overcoming destructive beliefs, feelings, and behaviors: New directions for rational emotive behavior therapy*. Prometheus Books.
- Ellis, A., Harper, R. A., & Powers, M. (1975). *A New Guide to Rational Living*. Wilshire Book Co.
- Erikson, E. (1968). *Youth: Identity and crisis*. W. W. Norton & Company.
- Freud, S. (1957). *The standard edition of the complete psychological works of Sigmund Freud*. Hogarth Press.
- Frijda, N. H. (1993). The place of appraisal in emotion. *Cognition & Emotion*, 7(3-4), 357-387. <https://doi.org/10.1080/02699939308409193>
- Gala, N. M. (2017). *Emotional display rules of deaf culture: An evaluation of emotional expression* (Yayınlanmamış doktora tezi). Gallaudet University, Washington DC.
- Gerson, A. C., & Perlman, D. (1979). Loneliness and expressive communication. *Journal of Abnormal Psychology*, 88(3), 258. <https://doi.org/10.1037/0021-843X.88.3.258>
- Greenberg, L. S., (2018). *Duygu odaklı terapi: Danışanlar duygu koçluğu yapmak*. (S.B. Çelik, Çev. Ed.). Nobel Yayın Dağıtım.
- Gross, J. J., & John, O. P. (1995). Facets of emotional expressivity: Three self-report factors and their correlates. *Personality and Individual Differences*, 19(4), 555-568. [https://doi.org/10.1016/0191-8869\(95\)00055-B](https://doi.org/10.1016/0191-8869(95)00055-B)
- Gross, J. J., & John, O. P. (1997). Revealing feelings: facets of emotional expressivity in self-reports, peer ratings, and behavior. *Journal of Personality and Social Psychology*, 72(2), 435. <https://doi.org/10.1037/0022-3514.72.2.435>

- Gross, J. J., & John, O. P. (1998). Mapping the domain of expressivity: multimethod evidence for a hierarchical model. *Journal of Personality and Social Psychology, 74*(1), 170. <https://doi.org/10.1037/0022-3514.74.1.170>
- Hackney, H., & Cormier, S. (2008). Piskolojik danışma ilke ve teknikleri: piskolojik yardım süreci el kitabı (T. Ergene ve S.A Sevim, Çev.). *Mentis Yayıncılık*.
- Hamamcı, Z. (2005). Dysfunctional relationship beliefs in marital satisfaction and adjustment. *Social Behavior and Personality: an International Journal, 33*(4), 313-328. <https://doi.org/10.2224/sbp.2005.33.4.313>
- Hamamcı, Z., & Duy, B. (2007). The relationship among social skills, dysfunctional attitudes, irrational beliefs, interpersonal cognitive distortions and loneliness. *Eurasian Journal of Educational Research, 26*, 121-130.
- Hamarta, E. (2000). *Üniversite öğrencilerinin yalnızlık ve sosyal beceri düzeylerinin öğrencilerin özlük nitelikleri açısından incelenmesi* (Yayınlanmış Yüksek Lisans Tezi). Selçuk Üniversitesi Sosyal Bilimler Enstitüsü, Konya.
- Hamarta, E. (2004). *Üniversite öğrencilerinin yakın ilişkilerindeki bazı değişkenlerin (benlik saygısı, depresyon ve saplantılı düşünme) bağlanma stilleri açısından incelenmesi* (Yayınlanmamış doktora tezi). Selçuk Üniversitesi Sosyal Bilimler Enstitüsü, Konya.
- Hawkey, L. C., Hughes, M. E., Waite, L. J., Masi, C. M., Thisted, R. A., & Cacioppo, J. T. (2008). From social structure factors to perceptions of relationship quality and loneliness: The Chicago Health, Aging, and Social Relations Study. *Journal of Gerontology: Social Sciences, 63*, 375-384. <https://doi.org/10.1093/geronb/63.6.S375>
- Hayes, S. C., Strosahl, K., Wilson, K. G., Bissett, R. T., Pistorello, J., Toarmino, D., et al. (2004). Measuring experiential avoidance: A preliminary test of a working model. *Psychological Record, 54*(4), 553-578. <https://doi.org/10.1007/BF03395492>
- Hays, R. D., & DiMatteo, M. R. (1987). A short-form measure of loneliness. *Journal of Personality Assessment, 51*(1), 69-81. [https://doi.org/10.1207/s15327752jpa5101\\_6](https://doi.org/10.1207/s15327752jpa5101_6)
- Hazaleus, S. L., & Deffenbacher, J. L. (1985). Irrational beliefs and anger arousal. *Journal of College Student Personnel, 26*(1), 47-52.
- Hedley, L. M., Hoffart, A., Dammen, T., Ekeberg, & Friis, S. (2000). The relationship between cognitions and panic attack intensity. *Acta Psychiatrica Scandinavica, 102*(4), 300-302. <https://doi.org/10.1034/j.1600-0447.2000.102004300.x>
- Hepple, J., & Sutton, L. (Eds.). (2004). *Cognitive Analytic Therapy and Later Life: New Perspective on Old Age*. London: Routledge.
- Herpertz, S. C., Werth, U., Lukas, G., Qunaibi, M., Schuerkens, A., Kunert, H. J., ... & Sass, H. (2001). Emotion in criminal offenders with psychopathy and borderline personality disorder. *Archives of General Psychiatry, 58*(8), 737-745. <https://doi.org/10.1001/archpsyc.58.8.737>
- Hoglund, C. L., & Collison, B. B. (1989). Loneliness and irrational beliefs among college students. *Journal of College Student Development, 30*(1), 53-58.
- Hyland, P., McGinty, G., Karatzias, T., Murphy, J., Vallières, F., & McHugh Power, J. (2019). Can the REBT theory explain loneliness? Theoretical and clinical applications. *Cognitive Behaviour Therapy, 48*(1), 39-51. <https://doi.org/10.1080/16506073.2018.1475505>
- Izard, C. E. (1993). Four systems for emotion activation: Cognitive and noncognitive processes. *Psychological Review, 100*(1), 68. <https://doi.org/10.1037/0033-295X.100.1.68>
- Karaoğlu, N., Avşaroğlu, S., & Deniz, M. (2009). Yalnız mısın? Selçuk Üniversitesi öğrencilerinde yalnızlık düzeyi ile ilgili bir çalışma. *Marmara Medical Journal, 22*(1), 19-26.
- Kearns, A., Whitley, E., Tannahill, C., & Ellaway, A. (2015). Loneliness, social relations and health and well-being in deprived communities. *Psychology, Health & Medicine, 20*(3), 332-344. <https://doi.org/10.1080/13548506.2014.940354>
- Kemper, T. D. (1991). Predicting emotions from social relations. *Social Psychology Quarterly, 54*(4), 330-342. <https://doi.org/10.2307/2786845>
- Kiecolt-Glaser, J. K., Ricker, D., George, J., Messick, G., Speicher, C. E., Garner, W., & Glaser, R. (1984). Urinary cortisol levels, cellular immunocompetency, and loneliness in psychiatric inpatients. *Psychosomatic Medicine, 46*(1), 15-23. <https://doi.org/10.1097/00006842-198401000-00004>
- Kline, R. B. (2019). *Yapısal eşitlik modellemesinin ilkeleri ve uygulaması* (S. Şen, Çev. Ed.). Nobel Yayın Dağıtım.
- Kumar, M. V. (2015). Emotional expressivity, loneliness and subjective happiness as predictors of psychological wellbeing among the elderly. *Indian Journal of Health & Wellbeing, 6*(12).

- Koç, H., & Arslan, C. (2021). Development of Maladaptive Thinking Styles Scale. *Journal of Cognitive-Behavioral Psychotherapy and Research*, 10(1) (2021): 19-27. <https://doi.org/10.5455/JCBPR.68769>
- Lasgaard, M., Friis, K., & Shevlin, M. (2016). "Where are all the lonely people?" A population-based study of high-risk groups across the life span. *Social psychiatry and Psychiatric Epidemiology*, 51(10), 1373-1384. <https://doi.org/10.1007/s00127-016-1279-3>
- Lazarus, R. S. (1991). Cognition and motivation in emotion. *American Psychologist*, 46(4), 352. <https://doi.org/10.1037/0003-066X.46.4.352>
- Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling*, 9(2), 151-173. [https://doi.org/10.1207/S15328007SEM0902\\_1](https://doi.org/10.1207/S15328007SEM0902_1)
- Martin, R. C., & Dahlen, E. R. (2004). Irrational beliefs and the experience and expression of anger. *Journal of Rational-Emotive and Cognitive-Behavior Therapy*, 22(1), 3-20. <https://doi.org/10.1023/B:JORE.0000011574.44362.8f>
- Masi, C. M., Chen, H. Y., Hawkey, L. C., & Cacioppo, J. T. (2011). A meta-analysis of interventions to reduce loneliness. *Personality and Social Psychology Review*, 15(3), 219-266. <https://doi.org/10.1177/1088868310377394>
- Maslow, A. H. (1954). The instinctoid nature of basic needs. *Journal of Personality*, 22, 326-347. <https://doi.org/10.1111/j.1467-6494.1954.tb01136.x>
- Masten, A. S., & Coatsworth, J. D. (1998). The development of competence in favorable and unfavorable environments: Lessons from research on successful children. *American Psychologist*, 53(2), 205. <https://doi.org/10.1037/0003-066X.53.2.205>
- McClain, C. M., Younginer, S. T., & Elledge, L. C. (2020). Social risk and internalizing distress in middle childhood: the moderating role of emotion regulation processes. *Journal of Child and Family Studies*, 29(1), 167-181. <https://doi.org/10.1007/s10826-019-01548-9>
- Muran, E. M., & Motta, R. W. (1993). Cognitive distortions and irrational beliefs in post-traumatic stress, anxiety, and depressive disorders. *Journal of Clinical Psychology*, 49(2), 166-176. [https://doi.org/10.1002/1097-4679\(199303\)49:2<166::AID-JCLP2270490207>3.0.CO;2-6](https://doi.org/10.1002/1097-4679(199303)49:2<166::AID-JCLP2270490207>3.0.CO;2-6)
- Nezlek, J. B., & Kuppens, P. (2008). Regulating positive and negative emotions in daily life. *Journal of Personality*, 76(3), 561-580. <https://doi.org/10.1111/j.1467-6494.2008.00496.x>
- Nyklíček, I., Temoshok, L., & Vingerhoets, A. (2004). *Emotional expression and health: Advances in theory, assessment and clinical applications*. Routledge. <https://doi.org/10.4324/9780203484104>
- Paradis, A. D., Giaconia, R. M., Reinherz, H. Z., Beardslee, W. R., Ward, K. E., & Fitzmaurice, G. M. (2011). Adolescent family factors promoting healthy adult functioning: A longitudinal community study. *Child and Adolescent Mental Health*, 16, 30-37. <https://doi.org/10.1111/j.1475-3588.2010.00577.x>
- Pennebaker, J. W. (1997). Writing about emotional experiences as a therapeutic process. *Psychological Science*, 8(3), 162-166. <https://doi.org/10.1111/j.1467-9280.1997.tb00403.x>
- Peplau, L. A. & Perlman, D. (1982). Perspectives on loneliness. L. A. Peplau & D. Perlman (Ed.), *Loneliness: A sourcebook of current theory, research and therapy* (s. 1-18). John Wiley & Sons.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879-891. <https://doi.org/10.3758/BRM.40.3.879>
- Pressman, S. D., Cohen, S., Miller, G. E., Barkin, A., Rabin, B. S., & Treanor, J. J. (2005). Loneliness, social network size, and immune response to influenza vaccination in college freshman. Correction to. *Health Psychology*, 24(4), 348. <https://doi.org/10.1037/0278-6133.24.4.348>
- Qualter, P., Brown, S. L., Rotenberg, K. J., Vanhalst, J., Harris, R. A., Goossens, L., ... & Munn, P. (2013). Trajectories of loneliness during childhood and adolescence: Predictors and health outcomes. *Journal of Adolescence*, 36(6), 1283-1293. <https://doi.org/10.1016/j.adolescence.2013.01.005>
- Rogers, C. R. (1961). *On becoming a person: A therapist's view of psychotherapy*. Houghton Mifflin.
- Rokach, A., & Bacanlı, H. (2001). Perceived causes of uses lonelines: a cross-cultural comparison. *Social Behavior and Personality: an International Journal*, 29(2), 169-182. <https://doi.org/10.2224/sbp.2001.29.2.169>

- Rudatsikira, E., Muula, A. S., Siziya, S., & Twa-Twa, J. (2007). Suicidal ideation and associated factors among school-going adolescents in rural Uganda. *BMC Psychiatry*, 7(1), 67. <https://doi.org/10.1186/1471-244X-7-67>
- Ryle, A. (1979a). The focus in brief interpretive psychotherapy: Dilemmas, traps and snags as target problems. *The British Journal of Psychiatry*, 134(1), 46-54. <https://doi.org/10.1192/bjp.134.1.46>
- Ryle, A. (1979b). Defining goals and assessing change in brief psychotherapy: A pilot study using target ratings and the dyad grid. *British Journal of Medical Psychology*, 52(3), 223-233. <https://doi.org/10.1111/j.2044-8341.1979.tb02519.x>
- Ryle, A. (1985). Cognitive theory, object relations and the self. *British Journal of Medical Psychology*, 58(1), 1-7. <https://doi.org/10.1111/j.2044-8341.1985.tb02608.x>
- Ryle, A. (1991). Object relations theory and activity theory: A proposed link by way of the procedural sequence model. *British Journal of Medical Psychology*, 64(4), 307-316. <https://doi.org/10.1111/j.2044-8341.1991.tb01669.x>
- Ryle, A. E. (1995). *Cognitive Analytic Therapy: Developments in theory and practice*. John Wiley & Sons.
- Ryle, A., & Kerr, I. (2002). *Introducing CAT principles and practice*. John Wiley & Sons.
- Slanbekova, G. K., Chung, M. C., Karipbaev, B. I., Sabirova, R. S., & Alimbayeva, R. T. (2019). Posttraumatic Stress and Interpersonal Sensitivity: Alexithymia as Mediator and Emotional Expressivity as Moderator. *Psychiatric Quarterly*, 90(1), 249-261. <https://doi.org/10.1007/s11126-018-9612-5>
- Saad, M. A. E., & Kamel, O. M. (2020). Arabic adaptation of adolescents version of the cognitive emotion regulation questionnaire: Validity and reliability. *International Journal of Psycho-Educational Sciences*, 9(1), 61-65.
- Sayed Ismail, H. M., & Dhaidan Al-Dhaidan, A. H. M. (2020). Effect of Cognitive Therapy Program on Increasing Personal Intelligence. *Psycho-Educational Research Reviews*, 9(2), 75-86.
- Stickley, A., Koyanagi, A., Leinsalu, M., Ferlander, S., Sabawoon, W., & McKee, M. (2015). Loneliness and health in Eastern Europe: findings from Moscow, Russia. *Public Health*, 129(4), 403-410. <https://doi.org/10.1016/j.puhe.2014.12.021>
- Theeke, L. A., Mallow, J. A., Moore, J., McBurney, A., Rellick, S., & VanGilder, R. (2016). Effectiveness of LISTEN on loneliness, neuroimmunological stress response, psychosocial functioning, quality of life, and physical health measures of chronic illness. *International Journal of Nursing Sciences*, 3(3), 242-251. <https://doi.org/10.1016/j.ijnss.2016.08.004>
- Trierweiler, L. I., Eid, M., & Lischetzke, T. (2002). The structure of emotional expressivity: Each emotion counts. *Journal of Personality and Social Psychology*, 82(6), 1023. <https://doi.org/10.1037/0022-3514.82.6.1023>
- Voltan-Acar, N. (2019). *Ne kadar farkındayım?: Gestalt terapi*. Nobel Yayın Dağıtım.
- Wilson, R. S., Krueger, K. R., Arnold, S. E., Schneider, J. A., Kelly, J. F., Barnes, L. L., ... & Bennett, D. A. (2007). Loneliness and risk of Alzheimer disease. *Archives of general psychiatry*, 64(2), 234-240. <https://doi.org/10.1001/archpsyc.64.2.234>
- Yıldız, M. (2017). Üniversite öğrencilerinde erken dönem uyumsuz şemaların depresif belirtilere etkisi. *Ihlara Eğitim Araştırmaları Dergisi IHEAD*, 2(2), 18-23.
- Young, J. E. (1982). Loneliness, depression and cognitive therapy: Theory and application. L. A. Peplau & D. Perlman (Ed.), *Loneliness: A sourcebook of current theory, research and therapy* içinde (s. 379-406). Wiley.