

Loneliness among University Students: Predictive Power of Sex Roles and Attachment Styles on Loneliness*

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Abstract

This study examined the predictive power of sex roles and attachment styles on loneliness. A total of 188 undergraduate students (114 female, and 74 male) from Gazi University completed the Bem Sex Role Inventory, UCLA Loneliness Scale, and Relationship Scales Questionnaire. Hierarchic Multiple Regression analysis and t-test were used to test hypotheses. Results indicated that there was no gender difference in loneliness. Also results revealed from Hierarchic Multiple Regression analyses that loneliness was predicted by fearful attachment, secure attachment, and masculinity, respectively in total samples. Additional analysis indicated that predictive power of masculinity was significant on loneliness only for men.

Key Words

Loneliness, Gender, Sex Roles, Attachment.

Loneliness is one of the most painful experiences (Russell, Peplau, & Cutrona, 1980; Wei, Shaffer, Young, & Zakalik, 2005) that can be encountered in all periods of life, from adolescence to old age (Cacioppo, Hughes, Waite, Hawkey, & Thisted, 2006). Each individual can define the loneliness issue in his or her own terms, regardless of ethnic origin, religion, socio-economic status, gender or age (Rokach, 2004). However, loneliness is by nature a subjective experience, which can be evaluated ac-

ording to what a person expects from his or her relationships with others and the personal satisfaction obtained from these relationships. People may perceive themselves as lonely in a crowd while they may not feel loneliness when they are alone (Qualter & Munn, 2002). Peplau and Perlman (1982) define loneliness as an unpleasant subjective psychological state when happens inconsistency difference between existing social relationships and desired social relationships. In the literature some disagreement exists in terms of whether loneliness is unidimensional or not. For example, Russell, Peplau, and Cutrona (1980) assume that loneliness is a unidimensional universal phenomenon affecting all aspects of life. On the other hand, Weiss conceptualizes that loneliness has two dimensions: Social loneliness and emotional loneliness. Also Sadler and Johnson (1980) claim that loneliness is a multi-dimensional construct consisted of cosmic, social, interpersonal, and emotional.

In last three decades, researches on loneliness have significantly contributed on understanding of antecedents and consequences of loneliness. In this studies, some factors such as social skills deficits (Deniz, Hamarta, & Ari, 2005; DiTommaso,

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Brannan-McNulty, Ross, & Burgess, 2003), negative expectations and attributions (Jones, Hobbs, & Hockenbury, 1982; Peplau, Russell, & Heim, 1979; Vitkus & Horowitz, 1987), shyness (Wei, Shaffer Young, & Zakalik, 2005), insecure attachment (Bogaerts, Vanheule, & Desmet, 2006; DiTommaso, Brannen, & Burgers, 2005), deficiency in perception of social support (Yılmaz, Yılmaz, & Karaca, 2008) and maladaptive family structure (Demirci-Yoraz & Demir, 2009) are shown as reasons of loneliness. Depend on degree and aspect of loneliness, physiological and psychological problems such as depression (Alpass & Neville, 2003; Cacioppo et al., 2006; Weeks, Michela, Peplau, & Bragg, 1980), cardio-vascular problems (Hawkey, Burleson, Bertson, & Cacioppo, 2003), suicide attempts (Wenz, 1977), substance uses (McWhirter, 1990), poor life satisfaction (Çeçen, 2007a) could occur.

Weiss (1973) has pointed out attachment styles as one of the reasons for loneliness. According to Weiss, loneliness is separation distress when someone leaves a person to whom he or she is attached. Firstly, when the relationship between a child and mother or caregiver did not establish a feeling of confidence in early childhood, the feeling of loneliness occurs each time the person leaves an object of significant emotional importance. According to attachment theory (Bowlby, 1969, 1973), the ties between child and the mother, or the person who looks after the child, brings children their first understanding that they are not alone while discovering the world and they have someone to trust. To gain this perception plays an important role not only in childhood but in all the close relationships in the future. Ainsworth, Blehar, Waters, and Wall (1978) investigated mother-child attachment patterns in their studies and found three different attachment styles (i.e., secure, anxious-ambivalent and avoidant). Shaver and Hazan (1989) examined how mother-child attachment patterns manifest in adult relationships and obtained similar structures. This finding showed that adult attachment patterns were based on childhood experiences.

One of the most comprehensive model on adult attachment patterns was suggested by Bartholomew (1990). Bartholomew' approach has based his model on internal working model (the self and others model) and the three attachment styles of Ainsworth et al. (1978) and Main (Main, Kaplan, & Cassidy, 1985). According to the two-dimensional model, different combinations of positive and negative views of self and others result in four different attachment styles (i.e., secure, preoccupied,

dismissing, and fearful) (Bartholomew & Shaver, 1998). In many studies where attachment is addressed on the basis of the self and others model (Akbağ & İmamoğlu, 2010; Bernardon, Babb, Hakim-Larson, & Gragg, 2011; Demirci-Yoraz & Demir, 2009; Deniz, Hamarta, & Arı, 2005; DiTommaso, Brannen-McNulty, Ross, & Burgess, 2003; Man & Hamid, 1998) was found that individuals with insecure attachment were lonelier than individuals with secure attachment. However, in some studies was stated that the highest loneliness levels were found in individuals who had fearful and preoccupied attachment (Bogaerts et al., 2006; Man & Hamid), and the lowest loneliness levels in individuals who were dismissing and secure attachment. On the other hand, some studies indicated that individuals who had avoidant attachment (Kobak & Sceery, 1988) were lonelier than the individuals who have other attachments styles. In the studies where loneliness is addressed in a multi-dimensional way, the findings are consistent with the assumptions of attachment theory (Bartholomew, 1990; Bartholomew & Horowitz, 1991; Bowlby, 1969, 1973). For example, Bernardon et al. (2011) reported that when the marital status was controlled, social, family and emotional loneliness dimensions had negative correlation with insecure attachment; and had positive correlations fearful, preoccupied and avoidant attachment styles.

Besides the attachment styles, sex and gender roles has been investigated in loneliness researches. In the literature, there are many studies which state that males are lonelier than females. However in several studies where the UCLA scale was used, significance gender differences were found (Demirci-Yoraz & Demir, 2009; Deniz et al., 2005; Russel et al., 1980; Schultz & Moore, 1986), while other studies were stated that there was no gender difference in loneliness (Berg & Peplau, 1982; Cramer & Neyedley, 1998; Çeçen, 2007b; DiTommaso & Spinner, 1997). In the studies considering loneliness as a multi-dimensional, especially in emotional loneliness dimension, (Çeçen, 2007a) was found that males were lonelier than females. On the contrary, Borys and Perlman (1985) found that females were lonelier than males when loneliness was measured with one item.

The Current Study

When the relevant studies are examined, it can be seen that there is no strong consistency in terms of sex and gender difference in loneliness. Moreover, in the studies conducted in especially individualist

cultures (Avery, 1982; Berg & Peplau, 1982; Witenberg & Reis, 1986) indicated that androgynous individuals perceived themselves as less lonely than individuals who had only masculinity, femininity or undifferentiated gender roles. Since social expectations are one of the most important effects of gender roles, it is assumed that consideration of gender roles in investigating the loneliness levels of individuals from other cultures can make significant contributions to this subject. For this reason, it is considered more important to conduct the current study about the relationship between loneliness and gender roles in the societies where autonomous-related selves (Kağıtçıbaşı, 1998, 2005) are observed like Turkey rather than collectivistic and individualistic selves (Markus & Kitayama, 1991; Triandis, 2001). There are many studies where loneliness is examined in terms of gender (Çeçen, 2007a, 2007b; Demirci-Yoraz & Demir, 2009; Deniz et al., 2005; Karaoğlu, Avaroğlu, & Deniz, 2009); however to the best of my knowledge no research has examined the relationship between loneliness and gender roles in Turkey.

In the present study, attachment styles were also considered as important. In the literature, studies which examine the relationships between loneliness and attachment (Bogaerts et al., 2006; DiTommaso et al., 2003; Man & Hamid, 1998) found that individuals who had a secure attachment style had the lowest level of loneliness. However there are also some incongruities in individuals with which attachment styles have the highest loneliness level. In the current study considered that it was worth examining what are the predictive power of gender, gender roles and attachment styles on loneliness in all the participants. Answers were sought for the following questions:

1. Does the level of loneliness differ by sex?
2. Is the predictive power of gender roles on loneliness significant?
3. Which of insecure attachment styles predict loneliness more?

Method

Participants

In the current study, convenient sampling method (Lunsford & Lunsford, 1995; Yu & Cooper, 1983) was used. The data was collected from 199 students (114 women and 74 men) enrolling Gazi University during spring 2009. Participants' ages ranged from 17 to 26 years ($M = 20.8$; $SD = 1.70$) and 52 students were freshman, 45 students sophomore, 43 students junior, and 48 students were senior.

Instruments

Demographics Questionnaire: This questionnaire was administered to assess some general information such as age, gender and level of education.

UCLA Loneliness Scale: The UCLA Loneliness scale was developed by Russell et al. (1980) and was adapted to Turkish by Demir (1989). The scale is a 20 items self-report measure that assesses of loneliness in everyday life. The UCLA Loneliness scale has 10 positive and 10 negative items ranging from 1 (never) to 4 (always). The total score ranging from 20 to 80 and the higher score means that grater loneliness. Russell et al. reported that internal consistency of the scale measure was high (coefficient alpha of .94) in college student populations. Demir reported that Cronbach's alpha coefficient of the Turkish version of the UCLA Loneliness was 0.96 and a 5-week test-retest reliability was .94 For the present study, coefficient alphas was .091.

Bem Sex Roles Inventory (BSRI): The BSRI was developed by Bem (1974) and was adapted by Dökmen (1991) to Turkish. It consists of 20 masculinity items, 20 femininity items, and 20 social desirable items for ranging from 1 (never true) to 7 (always true). Bem (1974) reported high internal consistency and test-retest reliability of the BSRI (Coefficient alphas for masculinity 0.86 and for femininity 0.82). The BSRI test-retest reliability scores proved to be highly reliable over the four-week interval (masculinity .90; femininity .90). Dökmen (1991) reported that Cronbach alphas ranged from 0.71 (masculinity) to 0.77 (femininity) for Turkish version of the BSRI. In Dökmen's another study (1999) was found that internal consistency were for masculinity and femininity 0.75 and 0.73 respectively. In the current study, internal consistency ranged from 0.65 (femininity) to 0.75 (masculinity).

Relationship Scales Questionnaire (RSQ): The RSQ was developed by Griffin and Bartholomew (1994) to assess adult attachment styles experienced in close relationships and was adapted to Turkish by Sümer and Güngör (1999). It consists of 17 statements serving the four attachment styles (secure, fearful, dismissing and preoccupied). Participants respond to this items using seven-point Likert type scale ranging from 1 (not at all like me) to 7 (very like me). Griffin and Bartholomew found internal consistency ranged from 0.41 to 0.70. and Sümer and Güngör reported the Turkish version of the RSQ coefficient alphas ranged from 0.27 to 0.61. For the present study coefficient alphas were

0.31, 0.31, 0.54, and 0.43 for the secure, preoccupied, fearful, and dismissing scores, respectively. In the literature, studies using the Relationship Scales Questionnaire were found that the scale had relatively poor Cronbach's alpha coefficients. For example, Okozi (2010) reported that Cronbach's alpha coefficients of the RSQ ranged from 0.31 to 0.62 and in another study (Guedeny, Ferமான, & Bifulco, 2010) was found that alphas ranged from 0.22 to 0.64. Schafer and Bartholomew (1994) and Griffin and Bartholomew (1994) posit that poor alpha coefficients of the RSQ stems from orthogonal two dimensional structure of the scale.

Procedure

A battery of questionnaires was administered to 30-50 groups of students in classroom setting approximately in 25 minutes. The participants were informed regarding purpose of the study and they were assured of their responses and confidentiality of the data. But the participants who put their nickname were informed about their scores after analyzing the data.

Results

Descriptive and Correlational Analyses

According to the results of the t-test analysis loneliness mean scores for males (X = 34.65) was higher than that of females (X = 34.49); however this difference was not significant (t = .61, p > .05). Before performed hierarchical multiple regression analysis, relationships between the variables in the regression models was examined with Pearson product-moment correlation. As can be seen in the Table 1, among gender roles only masculinity (r = -.18, p < .05) had the significant relationship with loneliness in all participants. On the other hand, loneliness was negatively correlated with secure attachment (r = -.33, p < .01), and was positively correlated with fearful attachment (r = .35, p < .01). According to the analysis performed on females, there was no relationship between loneliness and gender roles. Also it was found that loneliness was significantly related to secure attachment (r = -.37, p < .01), fearful attachment (r = .36, p < .01) and dismissing attachment styles (r = .19, p < .05). In the analysis performed on the answers of males, loneliness was negatively correlated with masculinity (r = -.36, p < .01) and secure attachment (r = -.32, p < .01); and was positively correlated with fearful attachment (r = .39, p < .01).

Table 1.
Means, Standard Deviations, and Correlations Among Variables

Variables		M	SD	1	2	3	4	5	6	7
All Participants (N = 186)	Loneliness	34,55	7,77	1						
	Masculinity	104,65	14,34	-,18*	1					
	Feminility	110,45	11,60	-,01	,02	1				
	Secure	21,10	4,75	-,33**	,31**	,04	1			
	Fearful	14,86	4,41	,35**	,01	,00	-,37**	1		
	Preoccupied	13,59	3,20	,01	-,12	,18*	-,08	-,08	1	
	Dismissing.	20,26	4,65	,12	,28**	-,05	-,03	,37**	-,38**	1
	Variables	M	SD	1	2	3	4	5	6	7
Female (N = 114)	Loneliness	34,49	8,25	1						
	Maculinity	100,70	13,98	-,12	1					
	Feminility	112,11	11,02	,00	,05	1				
	Secure	19,85	4,60	-,37**	,23*	,05	1			
	Fearful	15,86	4,44	,36**	,24*	,05	-,27**	1		
	Preoccupied	13,66	3,24	,04	-,09	,15	-,18	-,05	1	
	Dismissing.	20,33	4,86	,190*	,31**	-,05	,02	,43**	-,34**	1
	Variables	M	SD	1	2	3	4	5	6	7
Male (N = 72)	Loneliness	34,65	6,99	1						
	Maculinity	110,92	12,65	-,36**	1					
	Feminility	107,81	12,08	-,02	,17	1				
	Secure	23,08	4,33	-,32**	,21	,19	1			
	Fearful	13,28	3,90	,39**	-,13	-,22	-,38**	1		
	Preoccupied	13,49	3,16	-,03	-,17	,22	,10	-,16	1	
	Dismissing.	20,15	4,32	-,02	,29*	-,06	-,10	,29*	-,47**	1

Note. **p < .01, *p < .05.

Hierarchical Multiple Regression Analyses

Hierarchical multiple regression analyses were performed in order to examine to what extent attachment styles and gender roles (femininity and masculinity) predict loneliness in three stages (Table 2). To eliminate for inflation of type 1 error (Cohen & Cohen, 1983) ratio of alpha was set at .017 (i.e. 0.5/3) for total sample of the multiple regression and was set at .025 (i.e. .05/2) for each male and female samples of multiple regression. Gender, the control variable, was entered in the first stage; gender roles were entered in the second stage, and attachment styles were entered in the third stage. According to the findings, gender did not predict loneliness [$F_{(1, 184)} = .00, p > .017$]. Gender roles, which were entered in the second stage, significantly predicted loneliness. However, only the masculine role contributed on variance of loneliness [$F_{(2, 182)} = 4.69, p < .01$]. Masculine roles uniquely explained 5% of the variance in loneliness scores. Attachment styles, which were entered into the analysis at the end, explained 17% of the variance in loneliness. The attachment styles which made the most significant contribution to predicting loneliness were fearful attachment and secure attachment [$F_{(4, 178)} = 9.30, p < .001$]. On the other hands, preoccupied attachment and dismissing attachment styles did not have predictive power on loneliness.

Aside from the hierarchical multiple regression analyses made on all the participants, the predictive power of gender roles and attachment styles on loneliness was examined separately for both genders. The hierarchical multiple regression analyses were performed in two stages. Gender roles made a significant addition to the prediction of loneliness scores in only males [$F_{(2, 70)} = 5.35, p < .01$]. On the other hands attachment styles made a significant addition to the prediction of loneliness scores in both genders. Fearful attachment and secure attachment were found to be significant predictors of loneliness scores in females ($\beta = .27, p = .01$; $\beta = -.20, p < .025$, respectively). Preoccupied attachment and dismissing attachment were not predictors of loneliness. Only fearful attachment ($\beta = .27, p < .01$) made a significant contribution to the prediction of loneliness in males [$F_{(4, 66)} = 3.72, p < .01$].

Table 2.
Hierarchical Multiple Regression Analysis Predicting Loneliness

		B	Standard Error	β		
All Participants (N=186)	First Step	Gender	.33	.54	.05	
	Second Step	Masculinity	-.12	.04	-.24**	
		Femininity	-.01	.05	-.02	
	Third Step	Secure	-.27	.12	-.19*	
		Fearful	.52	.13	.32***	
		Preoccupied	.01	.17	.01	
		Dismissing.	.05	.12	.03	
	<i>Note.</i> ; For the first step $R^2 = .00, p > .017$; for the second step $\Delta R^2 = .05, p = .01$; for the third step $\Delta R^2 = .17, p < .001$; Total $R^2 = .22, p < .001$ (* $p < .017$; ** $p < .01$; *** $p < .001$).					
			B	Standard Error	β	
	Female (N=114)	First Step	Masculinity	-.08	.05	-.14
			Femininity	-.01	.06	-.02
Second Step		Secure	-.32	.16	-.20*	
		Fearful	.45	.17	.27**	
		Preoccupied	.06	.22	.02	
		Dismissing.	.12	.16	.08	
<i>Note.</i> ; For the first step $R^2 = .02, p < .025$; for the second step $\Delta R^2 = .17, p < .001$; Total $R^2 = .19, p < .001$ (* $p < .025$; ** $p < .01$).						
		B	Standart Hata	β		
Male (N=72)		First Step	Masculinity	-.20	.06	-.37**
			Femininity	.02	.07	.04
	Second Step	Secure	-.25	.18	-.15	
		Fearful	.59	.21	.33**	
		Preoccupied	-.18	.27	-.08	
		Dismissing.	-.10	.20	-.06	
	<i>Note.</i> ; For the first step $R^2 = .13, p < .025$; for the second step $\Delta R^2 = .16, p < .025$; Total $R^2 = .29, p < .025$ (* $p < .025$; ** $p < .01$).					

Discussion

The present study examined the relationships between gender, gender roles, attachment styles and loneliness. According to the results of the t-test analysis, which was performed in order to determine whether or not loneliness differed by gender, it was seen that males had higher loneliness scores than females. However, this difference was not to be statistically significant. When the literature is examined, it can be seen that loneliness differ by gender (Demirci-Yoraz & Demir, 2009; Pielage, Lutejn, & Arrindell, 2005; Schmitt & Kurdek, 1985) or females are lonelier than males (Keskin, 2001; Schultz & Moore, 1986), or loneliness does not vary according to gender (Çeçen, 2007b; DiTommaso & Spinner, 1997). In other words, there is no consistency on this issue.

Borys and Perlman (1985) argued that this inconsistency, which appears in the measurements in the literature, can be explained by some other variables, such as self-esteem, gender roles or inter-personal relationships. Also some authors suggest that the variables such as self-disclosure (Berg & Peplau, 1982; Wittenberg & Reis, 1986), views of females and males towards loneliness (Cramer & Neyedly, 1998; Stokes & Levin, 1986) and attribution styles (Schultz & Moore, 1986) should be considered in order to address gender difference regarding loneliness. For instance, Berg and Peplau emphasize that these studies might have used group-oriented criteria more while assessing loneliness in males whereas they might have referred to personal relationship satisfaction quality in assessing females.

As stated above, the current study examined the contribution of such gender roles as masculinity and femininity in explaining loneliness. Three different hierarchical multiple regression analyses were conducted on the scores of males and females. In the analysis made on all the participants, it was seen that the masculine role had a negative contribution to loneliness; however the contribution of the feminine role was not found to have a significant contribution. When a similar analysis was repeated on the scores of females and males, it was found that the contribution of the masculine role was significant only in males. These findings point out that males who have a dominant masculine role perceive themselves to be less lonely than other participants.

In the present study, behaving in compliance with expectations (Bem, 1983) may be shown as the reason that males with a more dominant masculine role state that they are less lonely. When studies about the role of gender are conducted in Turkey (Dökmen, 2004; Güvenç, 1996; Vefikuluçay, Demirel, Taşkın, & Eroğlu, 2007), it is seen that males have a more traditional perception towards gender roles. When considered in this regard, males who have high identification with masculinity in accordance with the role of being "strong" that society expects might have perceived themselves to be less lonely, or they might simply have wanted to affect the appearance of being less lonely. The reason why males, who embody the masculinity role, perceive themselves to be less lonely may be peer role, as stated by Massad (1981). According to Massad, males with masculinity gender role are more accepted by their peers. This situation may cause males who have the masculinity role to perceive themselves as being less lonely.

Another variable which contributes positively to loneliness, along with gender roles, is attachment styles. In each of the three regression analyses, loneliness was predicted most accurately by attachment styles. The highest contribution to loneliness was made by fearful attachment, among other attachment styles, and is followed by secure attachment. The contributions of other attachment styles were not found statistically significant. These findings indicate that participants who have high score of secure attachment perceive themselves to be less lonely, and that participants who have high score of fearful attachment perceive themselves as lonelier. According to the self and others model (Bartholomew, 1990; Bartholomew & Horowitz, 1991), people who have secure attachment (positive self and positive others model) are defined as people who like closeness, who have self-confidence, who can establish a balance in their social and romantic relationships and who have high level of openness about themselves. For this reason, it is not surprising that individuals who have secure attachment experience less loneliness. On the other hand, people who demonstrate preoccupied attachment (negative self and negative others model) tend to have a low level of openness about themselves, have a low level of self-confidence and are usually unable to establish a balance in their social and romantic relations, having difficulty establishing closeness.

For this reason, in the current study, the fact that individuals who have fearful attachment feel more loneliness is an expected result. These findings are consistent with many research studies in the literature. In most of the previous studies (Demirci, 2007; DiTommaso et al., 2003; Man & Hamid 1998; Taylor-Hecht, & Baum, 1984), it was stated that the lowest levels of loneliness are found in people who have confident attachment and that the highest levels of loneliness are found in people who have anxious attachment.

In the present study, other reasons why the relationships between preoccupied and dismissing attachment and loneliness do not fulfill the expectations based on the findings in the literature are the fact that Relationship Scales Questionnaire (Griffin & Bartholomew, 1994) might not have included the styles that it purports to assess. In their studies where they compared the clinical and normal groups, Pielage et al. (2005) found that the secure and fearful attachment dimensions of Relationship Scales (Bartholomew & Horowitz, 1991) correlated with loneliness. On the other hand, when the authors used Adult Attachment Scale (De Jonge, 1995) all the dimensions were found to be correlated with loneliness. More interestingly, when the relationships between those two scales were examined, the relationship between two different styles (fearful and dismissing) was higher than other similar styles (dismissing and dismissing). In the present study, another reason why preoccupied and dismissing attachment did not predict loneliness may be explained by the reliability coefficient, which can be considered weak in the Relationship Scales Questionnaire. Even though Griffin and Bartholomew based the relatively weak internal coefficients of Relationship Scales Questionnaire to the two dimensional orthogonal structure of the scale, Fraley and Waller (1998) found that the two dimensional latent structure of attachment, which is defined as avoidance and anxious, had stronger psychometric properties in terms of validity and reliability rather than four-attachment typology, which is the categorical form of attachment. For this reason, Fraley and Waller stated that it would be more convenient to use the anxious and avoidance dimensions, which opposing considerations, rather than using four-attachment model in the studies. Similarly, in the factor analysis they made, Brennan, Clark, and Shaver (1998) found

that two-dimensional structure showed more reboots results than four-attachment model (Bartholomew, 1990; Bartholomew & Horowitz).

The current study has some limitations in terms of the participants and the instruments. First of all, this study was conducted in a cross-sectional, and by nature, it involves psychological processes in which the measurement was carried out. Studies to be conducted in the future can be designed longitudinally as well as in experimental design. Another limitation of the study is related to the participants. Repeating this study in larger sampling, including different age groups can help to improve comprehension of the gender roles' relationship with loneliness. Another point is related to the limitedness of the instruments. Some differentiations might not have been obtained, as the UCLA scale is mostly concerned with the social dimension of loneliness. In future studies, family and emotional or romantic aspects of loneliness may be addressed along with its social aspect. Moreover, the difference in loneliness according to gender can be examined with such variables as social desirable, labeling and attribution styles. Latent structures of attachment styles (anxious and avoidance) can also be used alongside the four-attachment typology of Bartholomew and Horowitz (1991). More accurate inferences can be made by comparing the findings of both assessments based on those two methods.

Recently, studies on loneliness have been increasing in number in Turkey. However, as far as it is known, there has not been a study addressing the relationships of gender roles with loneliness. For this reason, studies using a sample in Turkey may be conducted, and their results compared with the samples in individualistic and collectivistic cultures in order to better understand the role of gender roles in loneliness.

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