

Received: November 25, 2023

Accepted: December 25, 2023

<http://dergipark.org.tr/rep>

e-ISSN: 2602-3733

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December 2023 • 7(3) • 545-557

Research Article

<https://doi.org/10.54535/rep.1395957>

Adaption of the Loneliness in Intimate Relationships Scale (LIRS) to Turkish

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Abstract

The aim of this study is to investigate how loneliness is experienced in intimate relationships adapt, validate and assess the reliability of the Loneliness in Intimate Relationships Scale developed by Rokach, Sha'ked and Ben-Artzi (2022) for Turkish culture. The study group consists of 363 participants (229 females, 124 males) selected through an appropriate sampling method, ranging in age from 18 to 54. The translation-back-translation method was used during the process of translating the scale into Turkish. This scale consists of three factors with 14 items: separation, hurt, and guilt. The factor structure of the original scale was examined through confirmatory factor analysis, and it was found that the model exhibited acceptable fit. According to the analysis results, item factor loadings ranged from .46 to .64, showing variability. The reliability analysis resulted in a Cronbach's Alpha coefficient of .85 to establish the validity of the scale for the sample, the Beck Depression Inventory and the Experiences in Close Relationships Revised-II Scale were administered to a total of 123 individuals. Based on the analysis, it can be said that the original scale has acceptable criterion-related validity based on its positive relationship with anxious attachment and depression. The results of the study indicate that the Turkish version of the Loneliness in Intimate Relationships Scale has validity and reliability properties, making it suitable for use in scientific studies conducted in Türkiye.

Key Words

Loneliness • Intimate relationships • Validity • Reliability

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Citation: Ekşi, H. & Kısırk, S. (2023). Adaption of the Loneliness in Intimate Relationships Scale (LIRS) to Turkish. *Research on Education and Psychology (REP)*, 7(3), 545-557.

Intruduction

A human being is a social creature who forms and sustains intimate relationships with their surroundings so a person becomes human with another (Gençtan, 2014). When we consider an individual's life, it becomes apparent that they engage in various relationships during different stages of life. These relationships can include family, friendships, as well as partnerships driven by expectations and needs. The form of relationship known as intimate or romantic relationships is defined as interactions that require mutual consent and are often characterized by expressions of love and existing or expected sexual behaviors (Collins, et al., 2009). Intimate relationships are a fundamental need for every individual. While this need initially arises as a way to fulfill physiological requirements for survival, over time, it extends beyond physiological needs to become a necessity for meeting both psychological and social needs (Hacıoğlu, 2019).

From an evolutionary perspective, it is known that our ability to survive is also dependent on forming successful intimate relationships with other individuals. However, at times, maintaining these relationships can become a challenging process, leading to inevitable loneliness (Rokach & Goldberg, 2021). Loneliness is a universal phenomenon faced by individuals of all age groups, from children to the elderly (Akgül, 2020). Individuals can experience feelings of loneliness even when they are in intimate relationships, as if nobody is there. While attempting to form intimate relationships with others, sometimes these efforts can lead to negative outcomes, resulting in people exhibiting a tendency toward loneliness (Baumeister & Leary, 1995 as cited in Kavaklı, 2019). Loneliness is a subjective experience and, therefore, has been defined in various ways by scientists. Looking at these definitions, Jones and Hebb (2003) described loneliness as originating from an individual's internal processes, as an unwanted experience, a deficiency or lack in social relationships, and as a result of one's expectations. Weiss (1973) argued that the concept of loneliness should not be considered as a single dimension. According to Weiss, loneliness should be examined in two dimensions: social and emotional. Social loneliness refers to a sense of deficiency arising from problems in social relationships, while emotional loneliness is a mood stemming from the absence of a close bond (Weiss, 1973; Demirbaş & Haşit, 2016). "It has been stated that loneliness is fundamentally a result of an individual's own choice, even though it may involve solitude and leading a life isolated from social groups" (Gençtan, 2014 pp.106-107). On the other hand, Ünlü (2015) suggested that loneliness is not one-dimensional but rather a synthesis of the desire to form intimate relationships with others in cognitive, emotional, and behavioral contexts. Taking these definitions into account, when making a common description that characterizes loneliness, it can be said that loneliness is an emotion felt when an individual cannot fulfill their need for closeness in social relationships (Kılınç, 2005; Koçak, 2008; Kozaklı, 2006).

In Rokach's (2007) study on the loneliness experienced by women who have been subjected to abuse, it was noted that loneliness can be detrimental to individuals' lives. It was suggested that loneliness can deplete an individual's life energy, leading them to various negative experiences. Particularly, loneliness can expose individuals to a chaotic situation created by feelings of jealousy and possessiveness, causing harm to partners, especially in the context of love and closeness. In a qualitative research study by Erbaş (2019) that examined the relationship between internet usage and loneliness, it was reported that participants who reported+ feelings of loneliness in romantic

relationships attributed their experiences of loneliness to a lack of communication, similar to their relationships with friends or family. Additionally, individuals who felt lonely in romantic relationships mentioned that this feeling stemmed from factors such as separation, indifference, cultural differences, and gender disparities. In [Güren's \(2017\)](#) study, it was concluded that factors such as family support, the opportunity for social sharing, and spousal support have an impact on the perception of loneliness among married individuals. Loneliness in marriage is a condition that naturally emerges over time, and one of the biggest reasons for this feeling of loneliness is the lack of an understanding of personal space. Additionally, factors such as being disregarded, taking a back seat, and indifference also play a role in how spouses feel lonely ([Sezen, 2020](#)). When examining the research in the field, more emphasis has been placed on the relationship between loneliness and attachment, and meaningful results have been achieved. The 'Experiences in Intimate Relationships II Scale,' adapted by [Selçuk, Günaydın, Sümer, and Uysal \(2005\)](#), consists of two subscales: anxious and avoidant attachment, with a total of 36 items. This scale has revealed that loneliness in relationships is associated with an individual's attachment style.

When reviewing the recent scale adaptation and development studies conducted in Türkiye: A measurement tool titled "Social and Emotional Loneliness Scale for Adults (Selsa-S)," developed by [Akgül \(2020\)](#), underwent an adaptation study for Turkish culture. [Çelikbaş and Tatar \(2021\)](#) developed the "Loneliness Scale," "Loneliness Preference Scale," and "Social Isolation Scale," and conducted development and initial validity studies. [Kaşıkçı and Zaferoğlu \(2021\)](#) introduced the "Positive Loneliness Scale." [Ekşi \(2022\)](#) adapted the "RULS-6 Loneliness Scale (6-Item Short Form)." [Sarıçam \(2023\)](#) conducted a study on "Loneliness in Adults After COVID-19," specifically focusing on the psychometric properties of the UCLA Loneliness Scale Short Form.

This study aims to adapt, validate, and assess the reliability of the Loneliness in Intimate Relationships Scale developed by Ami Rokach, Ami Shaked, and Elisheva Ben-Artzi to Turkish culture. The study intends to provide a tool for evaluating individuals' perception of loneliness in intimate relationships, aiming to understand their experiences of loneliness in social interactions.

Method

Research Participants

The study group was formed using the non-probability sampling method known as convenient sampling. In this method, participants are selected based on their motivation and relevance to the study ([Creswell, 2017](#)). In this context, individuals with at least one relationship experience were chosen when selecting the sample group for the research. The study was conducted with 363 participants aged between 18 and 54 who voluntarily participated in the research, with an average age of 27. Examining the gender distribution of participants, it consisted of 229 females (63.1%) and 134 males (36.9%), showing a distribution close to the original scale. Data was collected from.

Process

The process of adapting the Loneliness in Intimate Relationships Scale to Turkish began by obtaining permission from the responsible author, and communication was established through email. The translation process utilized the translation-back translation method. The scale was translated into Turkish by individuals with expertise in both

English language grammar and the relevant field. For each item, translations were compared based on the responses provided by all experts, and the most appropriate translation was selected by the researchers to create a Turkish form. The translation process involved a total of 5 experts, including 1 foreign language English teacher, 2 Turkish English teachers, 1 translator-writer, and 1 psychological counselor. Translations were consolidated into a single form through a panel study conducted by 3 psychological counselors. The Turkish form created in this process was then back-translated into English independently by two experts without influence from the previous translation process. Comparisons were made, and a Turkish form was reconstructed based on the translations. The final form of the scale was created by considering the recommendations of experts in Measurement and Evaluation, Turkish Language and Literature, Guidance and Psychological Counseling, taking into account language and grammar structure. During the data collection process, a pilot application was first conducted with 10 participants to test the comprehensibility of the scale. Subsequently, the main scale was administered to a sample of 353 individuals, and data were collected. For criterion validity, data were collected from 64 individuals for the Beck Depression Inventory and 59 individuals for the Relationship Experiences in Intimate Relationships Scale. The collected data were analyzed using the SPSS 26 program in a computerized environment analysis.

Data Collection Tools

Loneliness In Intimate Relationships Scale (LIRS): In this study, a scale developed by [Rokach, Sha'ked, and Ben-Artzi \(2022\)](#) called the Loneliness in Intimate Relationships Scale (LIRS) was adapted into Turkish and named the "Yakın İlişkilerde Yalnızlık Ölçeği." The development of the scale involved a four-stage process. In the first stage, structured interviews were conducted with 108 participants (70 women) aged 19-59 in Israel to obtain qualitative data, leading to the second stage. In this stage, quantitative data were collected from 215 participants (181 women) aged 20-64. Thirty percent of these participants reported being in a regular relationship. A 66-item scale was created with the obtained data and reduced to 14 items using exploratory factor analysis. This final form was then administered to the participants in Study 2. The scale, applied in Study 3 to the English-speaking Israeli population for structural evaluation, consisted of a total of 306 voluntary participants (158 women, 148 men). Finally, in Study 4, data obtained from Study 3 were used to test the criterion validity, and the psychometric properties of the scale were analyzed. The scale is scored on a scale of 1-6 and consists of 14 items and 3 subscales. The minimum score that can be obtained from the scale is 14, while the maximum score is 84. The subscales include separation, hurt, and guilt. To calculate for each subscale, the average of the ratings of the relevant items is taken. Higher scores reflect more feelings of separation, hurt, and guilt. In the original study, reliability values ($\alpha = 0.86, 0.87, 0.64$) were found for the subscales of separation, hurt, and guilt, respectively. Overall, the English version of the scale is considered a high-validity and reliability measurement tool.

Experiences In Close Relationships-Revised II: Created by [Fraley and colleagues \(2000\)](#), was conducted by [Selçuk, Günaydın, Sümer, and Uysal \(2005\)](#). The scale comprises a total of 36 items, with 18 items measuring avoidant attachment and the remaining 18 measuring anxious attachment. For the avoidant attachment dimension, the average of even-numbered items is calculated, while for the anxious attachment dimension, the average of odd-

numbered items is used. The reverse-coded items in the scale are 4, 8, 16, 17, 18, 20, 21, 22, 24, 26, 30, 32, 34, and 36.

This scale uses a 7-point Likert scale, with ratings ranging from 1 "strongly disagree" to 4 "neither agree nor disagree" and 7 "strongly agree." To ensure validity, principal component analysis was conducted on the 36 items, resulting in 7 factors with eigenvalues above 1. Subsequent statistical procedures reduced the factor count from 7 to 2. In the validity studies, it was found that the anxiety dimension showed a negative relationship with self-esteem and relationship satisfaction, and a positive and significant relationship with fear of rejection, separation anxiety, and people-pleasing. In the avoidance dimension, a negative relationship was observed with self-esteem and relationship satisfaction, while a positive and significant relationship was found with fear of rejection and enjoyment of loneliness. Additionally, it was determined that the avoidance dimension did not show a significant relationship with separation anxiety and people-pleasing. The internal consistency values for the avoidance and anxiety factors were calculated as 0.90 and 0.86, respectively. In a test-retest study conducted with 86 participants, the reliability value for the anxiety dimension was found to be 0.82, and for the avoidance dimension, it was 0.81. The finding indicating that individuals with high avoidance scores enjoy loneliness more is indicative of their tendency to be distant from attachment figures, self-sufficiency, and aligning with the fantasies of attachment theory, emphasizing their parallel tendencies.

The Beck Depression Inventory: Developed by Beck and colleagues (1988), aims to assess clinical observations and data to measure the severity of anxiety in psychiatric groups. The Turkish adaptation was carried out by Hisli (1989). The study involved 289 participants, second-year students at Ege University Faculty of Arts, with an age range of 17-23. The inventory consists of 21 items rated on a 4-point Likert scale. Factor analysis using the principal components method revealed 6 factors. Each item is scored from 0 to 3, and the total score is easily calculated. The maximum score that can be obtained from the inventory is 63. When calculating total scores, 0-9 points indicate minimal depression, 10-16 indicate mild depression, 17-29 indicate moderate depression, and finally, 30-63 indicate severe depression. The internal consistency coefficient of the inventory was found to be high. In the original study, the Beck Depression Inventory was used as one of the criterion validity measures to establish the relationship between loneliness and depression, confirming a relationship between loneliness and depression, consistent with the findings of the original study.

Data Analysis

Within the scope of the study, the Kaiser-Meyer-Olkin (KMO) Sample Adequacy test was applied to determine the suitability of the data obtained from 363 individuals for factor analysis, and the KMO value was calculated as .853 ($p < .0001$), while the Bartlett test yielded a result of 1753.725. To determine the normality of the distribution, the Kolmogorov-Smirnov Normality Test ($Z = 0.853$, $p = .001$) was conducted, considering that the sample size was above 50. The result, being above 0.70, indicates satisfactory level. The results of the Kaiser-Meyer-Olkin and Bartlett tests demonstrate that the sample size is adequate and suitable for factor analysis.

Construct Validity

To assess construct validity, confirmatory factor analysis (CFA) was conducted. The Loneliness in Intimate Relationships Scale consists of three factors: separation, hurt, and guilt. The goodness-of-fit indices, including the chi-square value, Normed Fit Index (NFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR), were considered in order to confirm the original structure. The AMOS program was employed for confirmatory factor analysis. The factor structure presented in Figure 1 indicates that factor loadings of the scale ranged between .44 and .83.

Finding

The values indicating the fit indices are presented in Table 1. According to the analysis results, it was determined that the fit index values of the three-dimensional model of the scale (model $\chi^2/df = 3.03$, RMSEA = 0.074, CFI = 0.912, TLI = 0.889, SRMR = 0.04) were sufficient and acceptable. When examining the factor loadings of each item in Figure 1, it can be stated that each item ranges from M8: 0.44 to M1: 0.83. Fit indices are used to evaluate how well the model fits the data. RMSEA is one of the fit indices, and low RMSEA values indicate a good fit of the model to the data. An RMSEA value of 0.084 supports this.

When looking at the critical ratios between factor loadings in the scale consisting of three factors, separation, hurt, and guilt, it is found that the relationship between factors in the range of 0.41 to 0.64 is significant.

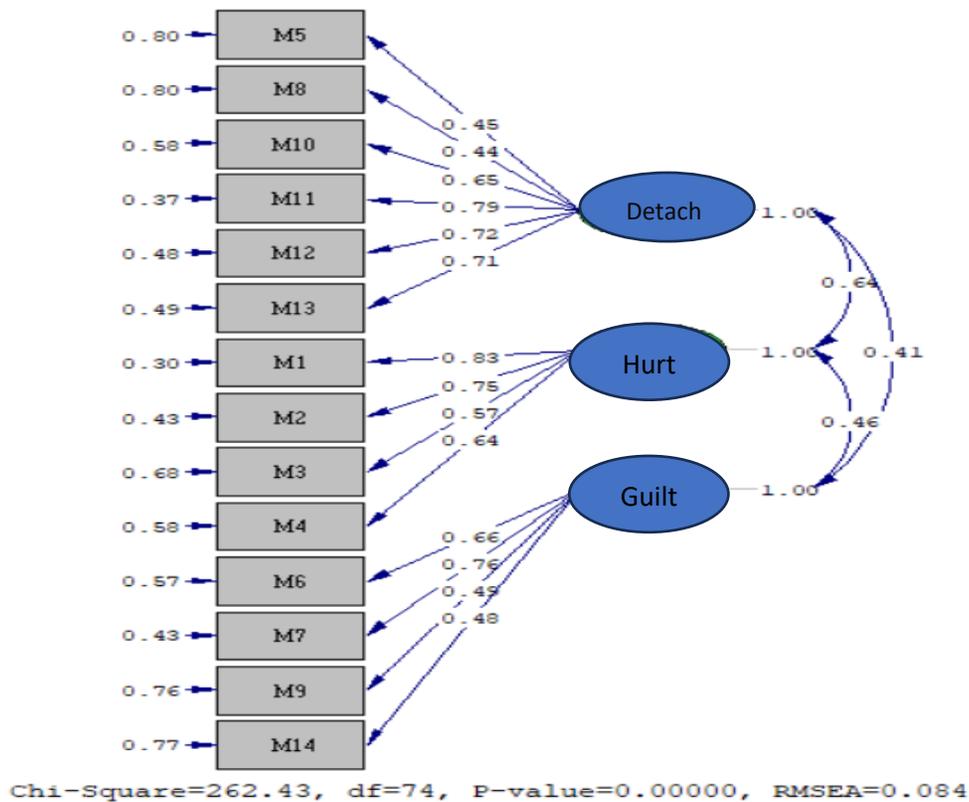


Figure 1. Path diagram and factor loadings for the Loneliness in Intimate Relationships Scale

Table 1

Factor Items and Item Factor Loading Values

Item	Factor		
	Detachment	Hurt	Guilt
M1		0.83	
M2		0.75	
M3		0.57	
M4		0.64	
M5	0.45		
M6			0.66
M7			0.76
M8	0.79		
M9			0.49
M10	0.65		
M11	0.79		
M12	0.72		
M13	0.71		
M14			0.48

"There are no reverse-scored items. It is rated on a scale of 1 to 6. 1- Totally Not Describes My Situation. 6-Totally Describes My Situation."

The loneliness levels between the lower and upper groups of the Loneliness in Intimate Relationships Scale were examined. Loneliness levels of 98 individuals in the lower group were compared with those of 98 individuals in the upper group using t-tests. As a result, it was observed that the distribution of the upper 27% group ($\bar{X} = 41.58$, $SS = 2.568$) had significantly higher maladjustment scores than the lower 27% group ($\bar{X} = 28.41$, $SS = 6.311$) ($t_{112} = 23.44$, $p = .000$, $d = 0.91$). As seen in Table 2, these findings are supportive evidence for the validity of the scale. Additionally, in the analysis based on sub-dimensions, participants in the upper group had higher scores for separation, hurt, and guilt compared to those in the lower group.

Table 2

T-test Results for the 27% Lower and Upper Groups

Group	N	\bar{X}	SS	Std. Error	t
Lower Group	98	28.11	6.3	.63	19.56
Upper Group	98	41.58	2.56	.25	

When examining the average differences between the lower and upper groups in Table 2, significant differences in favor of the upper group are observed at the item level of the scale. This finding indicates that individuals in the upper group have lower levels of loneliness according to the items of the loneliness scale. In other words, individuals in the upper group experience less loneliness, have stronger social relationships, and possess a better social support network. This finding suggests that the scale is effective in capturing differences in loneliness levels between the lower and upper groups.

There were positive and significant relationships between the total score of the scale and separation ($r = .88$, $p < .001$), hurt ($r = .80$, $p < .001$), and guilt ($r = .65$, $p < .001$). Additionally, positive and significant relationships were observed between separation and hurt ($r = .57$, $p < .001$) and between guilt and hurt ($r = .34$, $p < .001$). Furthermore, a positive and significant relationship was detected between hurt and guilt ($r = .38$, $p < .001$). Results of Reliability Analysis; The Cronbach's Alpha coefficient and McDonald Omega values were calculated for the reliability analysis. For all scale values, both Cronbach's Alpha coefficient and McDonald Omega were found to be .85. When considered separately for each subscale, the Cronbach's Alpha coefficient was found to be 0.81 for the separation subscale, 0.78 for the hurt subscale, and 0.66 for the guilt subscale. These results indicate both the overall scale and its subscales exhibit high levels of reliability.

Table 3

Inter-Scale Correlation Coefficients

Sub-dimensions	Anxious Attachment	Beck Depression
Hurt	.51**	.26*
Detachment	.54**	.37**
Guilt	.39**	.24*

The relationships between the Loneliness in Intimate Relationships Scale, Experiences in Close Relationships-Revised II, and the Beck Depression Inventory were examined to assess criterion-related validity. The Experiences in Close Relationships-Revised II, one of the scales used for criterion-related validity, consists of two subscales: avoidance and anxiety attachment styles. In this study, the relationship with the anxious attachment sub-dimension was examined, revealing a moderate correlation. Upon reviewing Table 3, a significant relationship was found between the loneliness scale's sub-dimension of hurt ($r=.51$, $p<.001$) and anxious attachment. Similarly, significant

relationships were observed between the total scores of the Beck Depression Inventory ($r=26$, $p<.001$) and the loneliness scale's sub-dimension of avoidance ($r=54$, $p<.001$) with anxious attachment. Additionally, a significant relationship was found between the loneliness scale's sub-dimension of guilt ($r=39$, $p<.001$) and anxious attachment, as well as the total scores of the Beck Depression Inventory ($r=24$, $p<.001$).

Discussion

The primary objective of this research is to evaluate the applicability and consistency of the Loneliness in Intimate Relationships Scale, as developed by [Rokach, Sha'ked, and Ben-Artzi \(2022\)](#), within the context of Turkish culture. To determine the scale's structural validity, confirmatory factor analysis (CFA) was utilized. The outcomes of the CFA revealed that the original three-dimensional structure of the scale remained intact in its Turkish adaptation. The fit indices indicated satisfactory values, substantiating the scale's validity within the study's parameters.

Additionally, the criterion-related validity was established by employing the Beck Depression Inventory and the Experiences in Close Relationships Revised-II Scale. Correlation analysis demonstrated a positive and noteworthy association between the Beck Depression Inventory and the Loneliness in Intimate Relationships Scale. Similarly, a substantial and positive correlation was observed between the Loneliness in Intimate Relationships Scale and the Experiences in Close Relationships Revised-II Scale's anxious attachment subscale. Attachment theory elucidates the link between feelings of loneliness in intimate relationships and different attachment styles, indicating that early attachment experiences can shape adult relationships. Individuals with secure attachment experiences generally foster healthy, supportive intimate relationships, thereby experiencing reduced loneliness. Conversely, those with insecure attachment experiences might encounter heightened feelings of loneliness, particularly individuals with anxious or avoidant attachment styles often experience loneliness within intimate relationships. Furthermore, existing literature supports the association between loneliness and depression, a connection that was also identified in this study. Statistical analyses disclosed substantial distinctions between lower and upper groups, reinforcing the reliability of the Loneliness in Intimate Relationships Scale. The examination of Table 3 distinctly illustrates the correlation between loneliness and depression. Comparisons of scores between lower and upper groups, assessed via independent t-tests, revealed statistically significant differences across all scale items, further validating the scale's reliability in intimate relationship assessments.

This study illustrates the applicability and reliability of the Loneliness in Intimate Relationships Scale within the context of Turkish culture. Confirmatory Factor Analysis (CFA) has validated the scale's structural integrity, and its criterion-related validity has been established through meaningful associations with the Beck Depression Inventory and the Experiences in Intimate Relationships II Scale. These outcomes underscore the scale's significance in both psychological research and clinical investigations. The sensation of loneliness significantly impacts an individual's overall quality of life and psychological well-being. Hence, assessment tools such as the Loneliness in Intimate Relationships Scale play a pivotal role in evaluating and addressing loneliness within intimate relationships. The findings contribute substantially to comprehending the factors linked to loneliness within Turkish culture, fostering the formulation of relevant interventions.

In summary, this study affirms the suitability and dependability of the Loneliness in Intimate Relationships Scale within Turkish culture while also highlighting a noteworthy correlation between loneliness and depression. Consequently, this scale serves as a valuable instrument for assessing loneliness within intimate relationships and conducting associated research.

Conclusion & Suggestions

The outcomes of this investigation signify the Turkish adaptation of the Intimate Relationships Loneliness Scale as a valid and dependable assessment tool, as uncovered through the analyses conducted. The assessment encompassed the scale's validity, its psychometric attributes, and its interconnectedness with relevant variables. The study selected participants engaged in romantic relationships or with past relationship experiences to evaluate the scale's efficacy within this specific cohort. The outcomes from the confirmatory factor analysis verified the congruence of the Turkish rendition of the Intimate Relationships Loneliness Scale with its original structure. Additionally, it was established that the fit indices maintain satisfactory levels, asserting their validity within the study cohort. These discoveries underscore the reliability and validity of employing this scale within Turkish cultural contexts. Furthermore, they underscore the importance of conducting more extensive research utilizing a phenomenological approach to delve into the intricacies of the loneliness experience and unravel coping mechanisms. Such investigations would offer valuable insights into various facets of loneliness and individuals' coping strategies.

This scale offers researchers and clinical practitioners a valuable tool to comprehend and intervene in the realm of loneliness within intimate relationships. Utilizing this scale for gauging the extent and nature of individual loneliness levels is pivotal. It stands as a pivotal instrument in pinpointing the factors that impact the experience of loneliness within intimate relationships and elucidating how individuals cope with this feeling. This study represents a comprehensive exploration into the landscape of loneliness within intimate relationships, effectively bridging a considerable gap in the mental health domain. The outcomes underscore a correlation between loneliness in intimate relationships, depression, and intertwining attachment styles. These results stress the significance of understanding and addressing loneliness in intimate relationships during therapy and counseling sessions. Future studies should consider delving deeper into variables such as the degree and nuances of loneliness.

Moreover, exploring the relationship between loneliness, depression, and attachment using diverse measurement tools is essential. This methodological approach will contribute to a more profound comprehension of loneliness within intimate relationships and foster the formulation of effective intervention strategies. It's recommended to expand the utilization scope of the Intimate Relationships Loneliness Scale in future research. For example, validating and gauging its reliability across varied age brackets, cultural demographics, or different relationship types holds significance. Additionally, conducting qualitative research to glean richer insights into individuals' experiences in coping with loneliness would be invaluable.

Ethic

All procedures in this study involving human participants were carried out in accordance with the ethical standards of Marmara University Research Ethics Committee with file number 2023/07 and the 1975 Declaration of Helsinki.

Author Contributions

This paper was derived from the first author's master thesis. The second author is the thesis advisor.

Conflict of Interest

The authors declare that this research was conducted in the absence of any commercial or financial relationships that could be interpreted as a potential conflict of interest.

Funding

No scholarships or payments have been received from any institution for this article.

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