Investigation of the Psychometric Properties of the Anti-Mattering Scale: An Adaptation Study*

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Abstract

This study aims to examine the psychometric properties of the Anti-Mattering Scale. The Anti-Mattering Scale was developed by Flett et al. (2022). The Anti-Mattering Scale (AMS) is a five-item scale that assesses feelings of anti-mattering toward others. Psychometric analyses of data obtained from an adolescent sample confirmed that the AMS contains a factor with high internal consistency and adequate validity. The scale was administered to 472 high school students. The one-dimensional model consisting of 5 items was found to be consistent in the confirmatory factor analysis. Internal consistency, item, and factor analysis studies were conducted to examine the psychometric properties of the scale. Reliability analyses revealed a Cronbach's Alpha coefficient of .89 for the entire scale. Item-total correlations ranged from .69 to .79. Exploratory factor analysis showed a KMO sample adequacy coefficient of .87. The one-dimensional scale explained 70% of the variance. Confirmatory factor analysis results indicated that the one-dimensional model of the scale was suitable for the Turkish sample. In conclusion, the study determined that the scale is reliable and valid.

Keywords: Anti-mattering, adaptation, scale

INTRODUCTION

At the root of human attitudes and behaviors throughout life lies a balance between feeling valued and contributing value to oneself, others, one's work, and society—two complementary psychological experiences (Prilleltensky, 2020). In this context, the concept of "mattering" is defined as a positive psychological construct in which an individual perceives themselves as important to others or as making a difference in their lives (Flett et al., 2022; Rosenberg & McCullough, 1981). The literature indicates that mattering is fundamental to an individual's well-being (Oyserman et al., 2007) and a critical variable for self-esteem in the interplay between perfectionism and depression (Cha, 2016). Furthermore, mattering—rooted in the experience of feeling valued—has a protective effect on mental health indicators such as depression (Flett et al., 2012), consistent with evidence that perceived social support similarly buffers against poor mental health (Milner et al., 2016).

In contrast, the chronic feeling of being unimportant, excluded, or invisible to others is termed "anti-mattering" (Flett et al., 2022; Flett, 2018). Anti-mattering is not simply the opposite of mattering, but a specific area of vulnerability with its own unique risk factors (Flett, 2018). This emotional state causes individuals to internalize negative thoughts such as "I'm not worth paying attention to" or "I'm not worth listening to" (Flett et al., 2022). Research shows that this pattern is a precursor to depressive symptoms (Etherson et al., 2022) and that there is a positive, mutually predictive correlation between anti-mattering and depression (Krygsman et al., 2022). Furthermore, this situation can increase vulnerability to depressive symptoms through socially determined perfectionism (Etherson et al., 2022).

When the social dimensions of anti-mattering feelings are examined, it has been found that these feelings are highly correlated with loneliness (MacDonald et al., 2020) and that there is an inverse correlation between social media addiction and feelings of worthlessness (Watson et al., 2022). Individuals who feel "invisible and unimportant" are more susceptible to labeling (Shannon et al., 2020), and a superficially significant relationship has been found between feeling worthless and life satisfaction (Giangrasso et al., 2022). In terms of demographic determinants, Flett et al. (2022) found no significant difference according to gender; however, Atkey (2015) reported that men who feel worthless experience more stigma when seeking psychological help. Flett et al. (2021) found that lower levels of mattering were associated with insecure attachment and greater self-criticism, including self-hate.

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*This study was previously presented as an abstract paper at the 9th TURKCESS International Congress on Education and Social Sciences and was utilized in the master's thesis conducted by the first author under the supervision of the third author.

Flett and Nepon (2020) emphasized that feeling valuable signals self-improvement, whereas feeling worthless signals a defensive orientation. In particular, a history of emotional neglect is known to be associated with a low sense of self-worth (Flett et al., 2016). Although the concept of "mattering" has attracted attention in the Turkish psychology literature since 2012 (Demir et al., 2012; Sari & Karaman, 2018), the need to adapt "anti-mattering"- focused scales remains. This study aims to make a scientific contribution to the literature on adolescents' perceptions of worthlessness by examining the validity and reliability of the Turkish form of the Anti-mattering Scale (AMS) developed by Flett et al. (2022).

METHOD

AIM AND METHODOLOGY OF THE RESEARCH

This study aimed to examine the psychometric properties of the Turkish version of the Anti-mattering Scale. The pilot application of the study, which investigates individuals' expressions of anti-mattering and was developed by Flett et al. (2022), was conducted on 472 high school students.

PARTICIPANTS and SAMPLING

The participants of this study consisted of 472 high school students enrolled in public high schools in three provinces representing different regions of Türkiye (Sakarya, Çanakkale, and Konya). A convenience sampling method was employed to recruit participants. This non-probability sampling technique was preferred because it allowed the researchers to access participants who were readily available and willing to participate in the study.

The participants ranged in age from 14 to 18 years. Of the 472 participants, 307 (65.0%) were female and 165 (35.0%) were male. Regarding grade level, 196 participants (41.5%) were enrolled in Grade 9, 122 (25.8%) in Grade 10, 94 (19.9%) in Grade 11, and 60 (12.7%) in Grade 12.

SCALE DEVELOPMENT PROCESS

The original scale developed by Flett et al. (2022) was used in four studies with different sample groups. The first three studies were conducted with university students, and the fourth with adolescents. The second study was conducted separately as 2a and 2b. The Cronbach's Alpha coefficients for the studies were: Study 1 (.86), Study 2a (.91), Study 2b (.92), Study 3 (.85), and Study 4 (.77).

The original scale was a five-item system designed to measure the degree to which individuals feel unimportant to others. The goal was to develop a short, reliable, and valid one-dimensional scale. The initial pool of 12 items was narrowed through self-assessments of item content adequacy and then psychometrically evaluated via item analysis.

In the original form, the items were rated on a four-point Likert-type scale ranging from 1 (Not at all) to 4 (A lot). In the Turkish adaptation process, the response format was revised to a five-point Likert-type scale by adding a midpoint option ("Moderately") between "A little" and "A lot". This modification was made to enable participants to express their perceptions more precisely and to reduce forced-choice responses (Chyung et al., 2017). Previous studies have also shown that five-point response formats can preserve psychometric quality and may provide greater measurement precision than four-point formats (Adelson & McCoach, 2010; Østerås et al., 2008). Accordingly, all validity and reliability analyses reported in the present study were conducted using data obtained from the five-point version of the scale. Within the scope of linguistic equivalence, the items of the scale were reviewed in both Turkish and English by experts in guidance and psychological counseling, educational sciences, and English language teaching, and the final version was prepared.

In line with recommended procedures for the cross-cultural adaptation of psychological instruments (Brislin, 1970), the linguistic equivalence phase summarized above followed a forward-and-backward translation design. The original English items were first independently translated into Turkish by three faculty members from the Department of English Language Teaching, Faculty of Education, and the resulting Turkish versions were then back-translated into English by a translator who had not seen the original items. The original and back-translated English versions were compared item by item, and any meaning discrepancies were resolved through discussion within the research team until full consensus was reached. The pre-final Turkish form was then submitted to a panel of five experts in guidance and psychological counseling, educational sciences, and English language teaching, who independently evaluated each item for semantic,

idiomatic, and conceptual equivalence with the original English form; items were revised in line with the experts' feedback before the scale was finalized for administration. It should also be noted that the specific translation and adaptation procedures followed for the AMS have not always been transparently reported in the international literature (Ding et al., 2025), a gap that the detailed reporting above is intended to help address.

The change from a four-point to a five-point response format constitutes a methodological modification relative to the original scale (Flett et al., 2022) and therefore warrants explicit discussion of its possible psychometric implications. Adding a midpoint category is generally understood to increase the precision with which respondents can express moderate levels of a construct and to reduce forced-choice error, but it may also marginally alter response variance and inter-item correlations relative to a four-point format (Chyung et al., 2017; Adelson & McCoach, 2010). Because a four-point version of the scale was not separately administered to the present sample, it is not possible to empirically isolate the effect of the format change from other potential sources of sample-to-sample variation (e.g., cultural or developmental differences between the Turkish and the original North American samples). Consequently, the slightly higher item-total correlations (.69–.79) and Cronbach's Alpha (.89) obtained in the present study relative to several of the original coefficients (.77–.92; Flett et al., 2022) should be interpreted with caution; this is noted explicitly as a limitation of the present study (see Limitations). Future research directly comparing the four-point and five-point versions of the AMS within the same sample — for example, through a split-half or crossover design — would allow this question to be tested empirically.

DATA COLLECTION PROCESS

Prior to data collection, permission to administer the study scale was obtained from the scale developers (Flett et al., 2022). Following this approval, data were collected during the 2022–2023 academic year via Google Forms. The online questionnaire began with an introduction explaining the study's purpose and significance, followed by a personal information form and the study scales.

Participation in the study was entirely voluntary. Participants were informed about the purpose of the research and completed the questionnaire anonymously. Completion of the online forms was considered to indicate informed and voluntary consent to participate in the study.

LIMITATIONS OF THE STUDY

In addition to the suggestions above, several limitations of the present study should be acknowledged explicitly.

- **Sample and generalizability:** The sample consisted of a convenience sample of high school students from three provinces (Sakarya, Çanakkale, and Konya) and may not be representative of Turkish adolescents more broadly; findings should be generalized to other regions, school types, or age groups with caution.
- **Cross-sectional, self-report design:** Data were collected at a single time point using self-report measures administered online, which precludes conclusions about temporal stability and may be subject to social desirability or common-method bias, particularly for items describing feelings of worthlessness.
- **Absence of test–retest reliability:** Because the scale was administered only once, the temporal stability of AMS scores could not be evaluated in this study, as also noted in the Suggestions above.
- **Response-format modification:** The conversion of the response format from four to five Likert points, while conceptually justified, is a deviation from the original scale that limits the direct comparability of the reliability and item statistics obtained here with those reported by Flett et al. (2022).
- **Same-sample EFA and CFA:** As discussed in the Results section, EFA and CFA were conducted on the same sample rather than on independent subsamples, which is acceptable under some methodological guidelines (Worthington & Whittaker, 2006) but not others (Fabrigar et al., 1999); this decision should be taken into account when interpreting the reported fit indices.

- **Lack of external convergent/discriminant validity evidence:** The present study did not administer additional, previously validated measures (e.g., of self-esteem, loneliness, or attachment) alongside the AMS, so the convergent and discriminant validity of the Turkish form could not be evaluated; this is recommended as a priority for future research.

FINDINGS

This section presents the findings from the validity and reliability analyses of the Turkish form of the Anti-mattering Scale (AMS). Prior to the analyses, the dataset was screened for outliers and missing values. The data obtained from the 472 participants were suitable for subsequent analyses.

To examine the construct validity of the scale, Exploratory Factor Analysis (EFA) was first conducted, followed by Confirmatory Factor Analysis (CFA) to verify the resulting factor structure. Cronbach's Alpha internal consistency coefficients and item-total correlations were calculated to assess the scale's reliability. The eigenvalue graph for the scale is presented below.

Because EFA and CFA were both conducted on the same sample of 472 participants, this methodological choice merits explicit justification. Some methodologists consider it acceptable to apply EFA and CFA to the same sample when the sample size is adequate and the goal is to confirm a well-established, theory-driven factor structure — as is the case here, given that the one-dimensional structure of the AMS had already been established by its developers (Flett et al., 2022) — rather than to explore an unknown structure (Worthington & Whittaker, 2006). Other methodologists, however, recommend randomly splitting a sufficiently large sample into two independent subsamples and applying EFA to one half and CFA to the other to avoid capitalizing on sample-specific variance (Fabrigar et al., 1999). In the present study, the total sample was not split because doing so would have reduced the resulting subsamples to sizes below those generally recommended for stable CFA parameter estimation with a five-item model. This decision and its implications for the interpretation of the model-fit results reported below are explicitly acknowledged as a methodological limitation of the study (see Limitations).

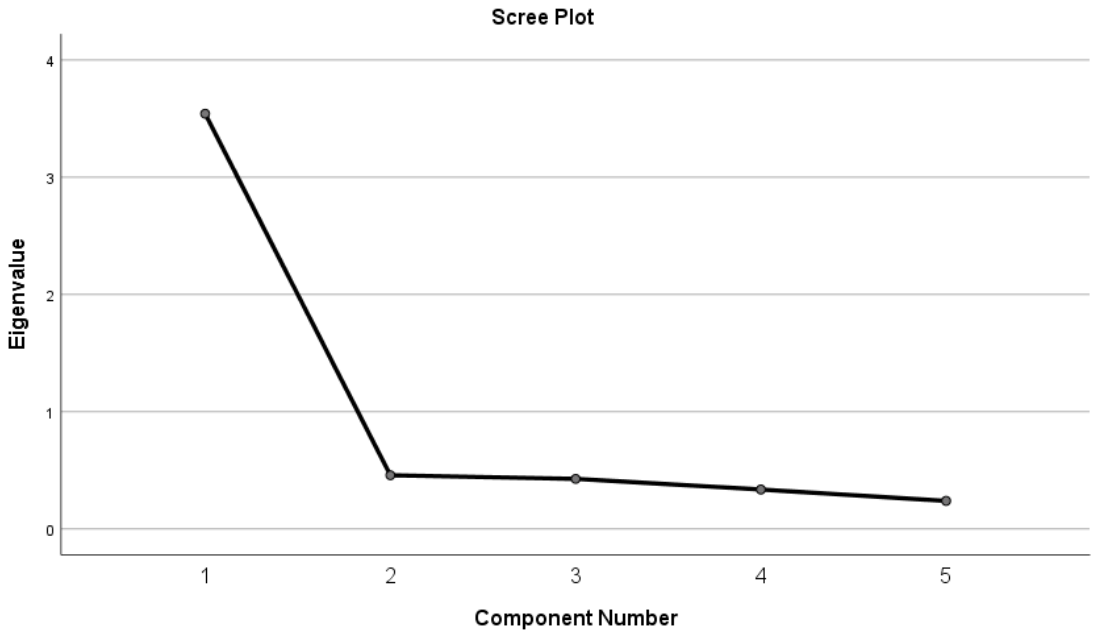


Figure 1: Anti-mattering Scale Eigenvalue Graph

Examining the eigenvalue plot (Scree Plot) presented in Figure 1, it is observed that there is a sharp drop in the curve after the first factor, and the curve follows a horizontal course from the second factor onwards. The presence of a single dominant factor with an eigenvalue above 1 constitutes strong evidence that the scale exhibits a one-dimensional structure. This finding supports the conclusion that the one-dimensional structure of the original scale is preserved in the Turkish sample and that the items measure the same psychological construct. The analysis determined that this one-dimensional structure explains 70% of the total variance. The table below presents the results of the item analysis conducted to assess the scale items' discrimination and the scale's internal consistency.

Table 1. Item-Total Statistics

Items	Item Total Correlation
1. Kendinizi ne kadar değersiz hissediyorsunuz?	.69
2. Ne sıklıkla size değersiz olduğunuzu hissettirecek şekilde muamele gördünüz?	.73
3. Ne sıklıkla görmezden gelindiğinizi hissettiniz?	.79
4. Bazı insanlar için asla önemli olmayacağınızı ne ölçüde hissediyorsunuz?	.72
5. Ne düşündüğünüzün veya söylediğinizin umursanmadığını ne sıklıkla hissediyorsunuz?	.76

The item-total correlations for the scale range from .69 to .79. The KMO sample adequacy coefficient from exploratory factor analysis was .87. The one-dimensional scale explains 70% of the variance.

As is evident from Table 1, the scale has a one-dimensional structure. These findings indicate that the scale may have the same structure in Turkish culture. Therefore, it was decided to test this one-dimensional structure with confirmatory factor analysis.

CONFIRMATORY FACTOR ANALYSIS

To test the extent to which the factor structure determined by Exploratory Factor Analysis (EFA) fits the collected data, Confirmatory Factor Analysis (CFA) was applied. CFA uses statistical indices to determine whether a theory-grounded model is validated by observed data. In this context, the validity of the one-dimensional structure of the Anti-mattering Scale (AMS), as presented in its original form and supported by EFA results, was tested in a sample of Turkish high school students. The results of the confirmatory factor analysis applied to the scale are shown in Figure 2.

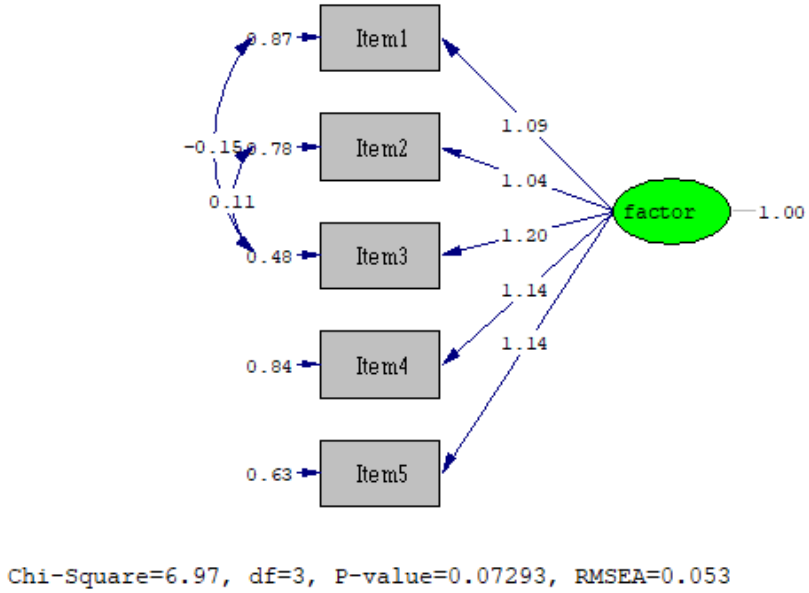


Figure 2: Results of confirmatory factor analysis of the Anti-mattering Scale.

The confirmatory factor analysis index values of the scale were found to be NFI=1.00; NNFI=.99; CFI=1.00; IFI=1.00; SRMR= .013; RFI=.99; RMR = 0.025; RMSEA= 0.053; GFI = 0.99; AGFI = 0.97; PNFI = 0.30. The

one-dimensional model of the scale shows suitability for the Turkish sample. These findings indicate that modifying the response format did not alter the scale's underlying factor structure. The confirmatory factor analysis results showed that the one-dimensional, 5-item model of the scale is suitable for the Turkish sample. The study concluded that the scale is reliable and valid. Table 2 below shows the fit indices for the Confirmatory Factor Analyses.

Table 2. Confirmatory Factor Analysis Fit Indices

Index	Criteria for Excellent Fit	Criteria for Acceptable Fit
$\chi 2/sd$	$0 \leq \chi 2/sd \leq 3$	$3 \leq \chi 2/sd \leq 5$
CFI	$0,95 \leq CFI \leq 1,00$	$0,85 \leq CFI \leq 0,95$
GFI	$0,90 \leq GFI \leq 1,00$	$0,80 \leq GFI \leq 0,90$
*AGFI	$0,95 \leq AGFI \leq 1,00$	$0,80 \leq AGFI \leq 0,90$
RMSEA	$0,00 \leq RMSEA \leq 0,05$	$0,05 \leq RMSEA \leq 0,08$
NFI	$0,95 \leq NFI \leq 1,00$	$0,80 \leq NFI \leq 0,95$
SRMR	$0 \leq SRMR \leq 0,05$	$0,05 \leq SRMR \leq 0,10$

Kaynak: Kline, 1998; Byrne, 2001; Hu, 1999; Schermelleh-Engel ve Moosbrugger, 2003; Brown, 2006.
***AGFI:** Greenspoon, P. J., & Saklofske, D. H. (1998).

RELIABILITY ANALYSIS

This section presents the findings of reliability analyses conducted to evaluate the internal consistency of the Turkish form of the Anti-mattering Scale (AMS). The item reliability and the overall internal consistency coefficient of the scale were calculated using Cronbach's Alpha to assess the instrument's stability in the Turkish sample. The findings reveal the extent to which the scale yields stable results for measuring feelings of worthlessness in adolescents. Furthermore, to compare the psychometric consistency of the scale with the literature, a comparative analysis was conducted using reliability values obtained in different samples by its developer, Flett et al. (2022). The Cronbach's Alpha values for the study by Flett et al. (2022) are given below.

Table 3. ***Cronbach's Alpha Values for the Original Scale***

Madde Sayısı	Cronbach's Alpha (For this study)	Cronbach's Alpha Flett,vd. (2022) Study 1	Cronbach's Alpha Flett,vd. (2022) Study 2a	Cronbach's Alpha Flett,vd. (2022) Study 2b	Cronbach's Alpha Flett,vd. (2022) Study 3	Cronbach's Alpha Flett,vd. (2022) Study 4
5	0.89	0.86	0.91	0.92	0.85	0.77

Table 3 shows that the Cronbach's Alpha internal consistency coefficient obtained in this study is .89. The coefficients obtained in the original studies conducted by Flett et al. (2022) ranged between .77 and .92. As a result of reliability analyses, it was determined that the reliability levels obtained in the study are higher than the value of 0.70, which is considered valid in the field (Büyüköztürk, 2011). In light of these results, the Anti-mattering Scale used to analyze high school students' levels of feeling anti-mattering is reliable.

RESULTS, DISCUSSION, and SUGGESTIONS

This study was conducted to adapt the Anti-mattering Scale (AMS), developed by Flett et al. (2022), to Turkish culture and to examine its psychometric properties in a sample of high school students. The findings demonstrated that the Turkish form of the scale preserved the original one-dimensional structure consisting of five items. Although the response format was adapted from a four-point to a five-point Likert-type scale to enhance response sensitivity, the factor structure and psychometric properties of the original instrument were maintained. The results of the Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) showed that the scale demonstrated excellent fit in the sample of Turkish high school students.

The obtained fit indices indicate that the model fits the data well and that the scale's construct validity has been established. Furthermore, the Cronbach's Alpha coefficient of .89, calculated in the reliability analyses, is consistent with values reported in the original development studies (.77-.92), confirming that the scale is a reliable instrument with high internal consistency in Turkish culture.

These findings are consistent with recent psychometric evaluations of the AMS conducted in other cultural contexts, allowing the present results to be situated within a broader international body of evidence rather than considered in isolation. Among Lebanese adolescents (N = 793; mean age = 16.08 years, 62.4% female), the Arabic version of the AMS likewise supported the original one-factor structure with a good model fit and an internal reliability of ω = .87 (Cherri et al., 2025), closely paralleling the internal consistency coefficient (α = .89) obtained in the present Turkish sample. Similarly, in a large-scale study of 4,225 Chinese children and adolescents spanning primary, middle, and senior high school, the AMS demonstrated strong internal consistency at every developmental stage (ω = .88, .84, and .90, respectively) and achieved full measurement invariance across age groups, in contrast to the General Mattering Scale examined in the same study (Ding et al., 2025). Comparable psychometric robustness has also been reported for the AMS among Chinese university students (Liu et al., 2023). Taken together, these findings — obtained from linguistically and culturally diverse adolescent and young-adult samples spanning the Middle East, East Asia, and now Türkiye — provide converging cross-cultural evidence that the one-dimensional structure and high internal consistency of the AMS generalize well beyond the North American samples in which the scale was originally developed, and support Flett's (2018) contention that anti-mattering constitutes a distinct and culturally robust form of psychological vulnerability rather than a phenomenon confined to a specific cultural context. At the same time, it is worth noting that the translation and cross-cultural adaptation procedures of the AMS have not always been transparently reported in prior studies (Ding et al., 2025); the detailed description of the adaptation process provided in the Method section of the present study is intended to help address this gap in the literature.

From a theoretical perspective, the availability of a psychometrically sound Turkish form of the AMS allows researchers to test models in which anti-mattering operates as a distinct precursor of adolescent depressive symptoms (Etherson et al., 2022; Krygsman et al., 2022) and social vulnerability (Shannon et al., 2020), rather than being treated merely as the low end of general mattering — consistent with Flett's (2018) argument that anti-mattering represents a unique area of vulnerability with its own risk factors. From a practical perspective, school counsellors and mental health practitioners working with Turkish adolescents can use the AMS as a brief, five-item screening instrument to identify students who chronically feel overlooked, unimportant, or invisible to peers and teachers — a pattern that prior research links to elevated risk for depressive symptoms, social media addiction, and heightened susceptibility to negative social labeling (Etherson et al., 2022; Shannon et al., 2020; Watson et al., 2022). Given its brevity, the scale may be particularly well suited for integration into routine psychosocial screening batteries in Turkish secondary schools, where it could complement rather than replace existing self-esteem and loneliness measures.

The sample used for the scale's validity and reliability studies consisted exclusively of high school students. Based on the scope of this study, the following suggestions can be made for future research:

- **Sample Diversity**: The generalizability of the scale can be increased by conducting validity and reliability studies on samples with different age groups and demographic characteristics.
- **Stability Over Time:** To more thoroughly examine the stability of the scale, it is recommended that future studies determine the reliability level using a test-retest method.

- **Convergent Validity:** To strengthen the convergent validity of the scale and solidify its place in the literature, the connections between concepts can be examined through other validated and reliable scales that measure related concepts such as self-esteem, loneliness, or attachment.

In conclusion, the Turkish form of the Anti-mattering Scale has been added to the literature as a scientifically grounded and practical measurement tool for assessing high school students' feelings of "Anti-mattering."

Declarations

Conflict of Interest

No potential conflicts of interest were disclosed by the author(s) with respect to the research, authorship, or publication of this article.

Ethics Approval

Formal ethics approval for the study was obtained from the Education Research and Publication Ethics Committee of Sakarya University (Reference No.: E-61923333-050.99-222325; Date: 20 February 2023).

Funding

No specific grant was given to this research by funding organizations in the public, commercial, or not-for-profit sectors.

Research and Publication Ethics Statement

Hereby, we as the authors consciously assure that for the manuscript "Investigation of the Psychometric Properties of the Anti-Mattering Scale: An Adaptation Study" the following is fulfilled:

- This material is the authors' own original work, which has not been previously published elsewhere.
- The paper reflects the authors' own research and analysis in a truthful and complete manner.
- The results are appropriately placed in the context of prior and existing research.
- All sources used are properly disclosed

Contribution Rates of Authors to the Article

The authors provide equal contribution to this work.

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Appendix: Anti-Mattering Scale

No	Madde	Hiç (1)	Biraz (2)	Orta Düzeyde (3)	Oldukça (4)	Çok Fazla (5)
1	Kendinizi ne kadar değersiz hissediyorsunuz?	☐	☐	☐	☐	☐
2	Ne sıklıkla size değersiz olduğunuzu hissettirecek şekilde muamele gördünüz?	☐	☐	☐	☐	☐
3	Ne sıklıkla görmezden gelindiğinizi hissettiniz?	☐	☐	☐	☐	☐
4	Bazı insanlar için asla önemli olmayacağınızı ne ölçüde hissediyorsunuz?	☐	☐	☐	☐	☐
5	Ne düşündüğünüzün veya söylediğinizin umursanmadığını ne sıklıkla hissediyorsunuz?	☐	☐	☐	☐	☐