

# Adaptation of Social Media Rumination Scale into Turkish and Its Association with Social Media Anxiety

Elif MANUOĞLU(\*)

## Abstract

*The common usage of social media has raised some concerns over the psychological well-being of users in recent years. Thus, examining the role of social media use on the well-being of individuals has gained more importance. The goal of the present study is two-sided. Firstly, it aims to investigate the psychometric properties of the Turkish version of the Social Media Rumination Scale. Secondly, it aims to test the link between social media anxiety and social media rumination, which are two psychological phenomena observed in social media. This study was conducted with 467 university students (female 69%, Mage = 21.90, and SD = 2.88). Confirmatory Factor Analysis confirmed the single-factor model of the Social Media Rumination Scale; however, one item was eliminated due to the poor loading of this item to the factor (Item 10). Moreover, only the shared content anxiety, one of the subscales of the Social Anxiety Scale for Social Media Users, predicted social media rumination controlling for gender and the average social media use duration. Given the limited research to measure rumination and anxiety with specially designed tools in social media contexts, this study provided the first direct evidence that social media rumination is related to social media anxiety.*

**Keywords:** Social Media, Rumination, Anxiety, Scale Adaptation, Young Adults.

## Original Research Article

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(\*) Researcher Ph.D., Palacký University Olomouc.

**E-mail:** manuogluelif@gmail.com

**ORCID ID:** <https://orcid.org/0000-0003-3652-321X>



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# Sosyal Medya Ruminasyon Ölçeği'nin Türkçe'ye Uyarlanması ve Sosyal Medya Kaygısı ile İlişkisi

Elif MANUOĞLU(\*)

## Öz

Sosyal medyanın yaygın kullanımı, son yıllarda kullanıcıların psikolojik esenlik hallerine ilişkin bazı endişeleri artırmıştır. Buna bağlı olarak, sosyal medyanın bireylerin refahı üzerindeki rolünü anlamak daha fazla önem kazanmıştır. Bu çalışmanın amacı iki yönlüdür. İlk olarak Sosyal Medya Ruminasyon Ölçeği'nin Türkçe formunun geçerlik ve güvenilirliğini test edilmesi amaçlanmaktadır. İkinci olarak, bu çalışma sosyal medyaya özgü iki psikolojik fenomen olan sosyal medya kaygısı ile sosyal medya ruminasyonu arasındaki ilişkiyi incelemeyi amaçlamaktadır. Bu çalışmaya 467 üniversite öğrencisi katılmıştır (kadın %69, ORTyaş = 21,90 ve SS = 2,88). Doğrulamalı Faktör Analizi, Sosyal Medya Ruminasyonu Ölçeği'nin tek faktörlü yapısının veriye iyi uyum sağladığını göstermiştir; ancak bir maddenin faktöre zayıf yüklenmesi nedeniyle bu madde modelden silinmiştir (Madde 10). Ayrıca, sadece Sosyal Medya Kullanıcıları İçin Sosyal Kaygı Ölçeği'nin alt boyutlarından biri olan paylaşılan içerik kaygısı, cinsiyet ve ortalama sosyal medya kullanım süresi kontrol edildiğinde sosyal medya ruminasyonunu yordamaktadır. Sosyal medya bağlamında özel olarak geliştirilmiş araçlarla ruminasyon ve kaygıyı ölçmek için yapılmış sınırlı araştırma göz önüne alındığında, bu çalışma sosyal medya ruminasyonunun sosyal medya kaygısı ile ilişkili olduğuna dair doğrudan kanıt sağlamaktadır.

**Anahtar Kelimeler:** Sosyal Medya, Ruminasyon, Kaygı, Ölçek Uyarlama, Genç Yetişkinler.

## Özgün Araştırma Makalesi

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(\*) Araştırmacı, Dr., Palacký Üniversitesi Olomouc.

**E-posta:** manuogluelif@gmail.com

**ORCID ID:** <https://orcid.org/0000-0003-3652-321X>



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## Introduction

Social media use has become a daily routine for individuals, especially in recent years.<sup>1</sup> The increasing diversity in social media platforms offers a variety of new options and tools for individuals to self-presentation and stay in contact with their friends almost continuously.<sup>2</sup> Thus, it is crucial to investigate the role of social media usage on the psychological well-being of individuals. Rumination is a coping style and is related to a decrease in well-being.<sup>3</sup> Social media rumination is a particular form of general rumination.<sup>4</sup> Thus, it can be informative to investigate the link between social media use and social media rumination rather than the association between general rumination and social media anxiety. The present study has two aims. First, it aimed to adapt the Social Media Rumination Scale (SMRS) into Turkish to evaluate its psychometric properties in Turkish university students.<sup>5</sup> The second aim of the current study is to examine the predictors of social media rumination depending on social media anxiety.

Given the high rate of social media use in recent years, especially among the younger population, there is a need to examine the antecedents of social media rumination. There are several studies concerning the link between online activities and social media rumination (e.g.).<sup>6</sup> However, there is no previous study examining social media use rumination with reference to social media anxiety. Therefore, the present research aims to extend the existing knowledge about social media rumination by adapting SMRS into Turkish and testing the associations between social media rumination and social media anxiety.

## Defining Social Media Rumination

Social media platforms have been aided by mobile devices in terms of convenience and constant access over the last few years. Particularly mobile devices enable individuals to stay connected almost constantly. The majority of Facebook, Snapchat, and Instagram users

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1 Lenhart Amanda, "Teens, Social Media & Technology Overview 2015," *Pew Research Center*, April 9 2015, accessed June 20 2022, <https://pewresearch.org/internet/2015/04/09/teens-social-media-technology2015>

2 Monica Anderson and Jingjing Jiang, "Teens, Social Media & Technology 2018," *Pew Research Center*, May 31 2018, accessed June 30 2022, <https://www.pewresearch.org/internet/2018/05/31/teens-social-media-technology-2018/>

3 Susan Nolen-Hoeksema et al., "Rethinking Rumination," *Perspectives on Psychological Science* 3(5), (2008): 400-424.

4 Leandra Parris et al., "Exploring Social Media Rumination: Associations with Bullying, Cyberbullying, and Distress," *Journal of Interpersonal Violence* 37, (2020): 1-20, DOI: 10.1177/0886260520946826

5 Ibid.

6 Daniel Lannin et al., "Youth Online Activity and Distress: The Role of Social Media Rumination," *The Social Science Journal*, (2021): 1-12, <https://doi.org/10.1080/03623319.2021.1985329>; Romita Mitra and Madhavi Rangaswamy, "Excessive Social Media Use and its Association with Depression and Rumination in an Indian Young Adult Population: A Mediation Model," *Journal of Psychosocial Research* 14(1), (2019): 223-231, <https://doi.org/10.32381/JPR.2019.14.01.24>; Leandra Parris et al., "Exploring Social Media Rumination: Associations with Bullying, Cyberbullying, and Distress," 1-20

indicated that they visit these websites daily and multiple times in a day.<sup>7</sup> This fact implies that social media has become an integral part of our daily life. Although social media platforms have been providing practical ways of staying connected with close others, this convenience can come with a serious cost that even individuals may not realize that they are bound to pay. Therefore, the widespread use of social media necessitates the examination of its associations with well-being. Only a single study is unlikely to capture the intricate link between social media use and well-being. However, a comprehensive approach can help to increase the current understanding regarding how dwelling on social media-related activities can impair well-being.

According to the Response Styles Theory, rumination may intensify the distress associated with a negative event and increase the likelihood of psychological problems.<sup>8</sup> Rumination, as a dysfunctional emotion regulation technique, is defined as repetitive and passive thoughts about a common instrumental theme when there is no environmental demand which requires this thinking. Individuals focus on the symptoms of distress about the meanings linked with that distress while ruminating.<sup>9</sup> It refers to an active thinking process including both cognition and emotions accompanied by future implications related to one's life. Ruminators believe that a repetitive thought process is beneficial.<sup>10</sup> Not surprisingly, rumination is linked to some adverse psychological outcomes such as distress, depression, negative affect, and well-being.<sup>11</sup>

Social media rumination is a specific form of rumination referring to persistent thoughts about one's social media activities and the consequences of these activities accompanied by situational factors linked to these activities.<sup>12</sup> Measuring social media rumination over social

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7 Brook Auxier and Monica Anderson, "Social Media Use in 2021," *Pew Research Center* (2021), <https://www.pewresearch.org/internet/2021/04/07/social-media-use-in-2021/>

8 Susan Nolen-Hoeksema, "Responses to Depression and Their Effects on the Duration of Depressive Episodes," *Journal of Abnormal Psychology* 100(4), (1991): 569-582.

9 Leonard Martin and Abraham Tesser. "Some Ruminative Thoughts," in *Ruminative Thoughts: Advances in Social Cognition*, ed. Robert S Wyer (New Jersey: Lawrence Erlbaum Associates, 1996), 1-81

10 Thomas Kubiak et al., "Positive Beliefs about Rumination are Associated with Ruminative Thinking and Affect in Daily Life: Evidence For a Metacognitive View on Depression," *Behavioural and Cognitive Psychotherapy* 42(5), (2014): 568-576, doi:10.1017/S1352465813000325

11 Susan Nolen-Hoeksema, "Responses to Depression and Their Effects on the Duration of Depressive Episodes," *Journal of Abnormal Psychology* 100(4), (1991): 569-582; Mark E. Boyes, Penelope A. Hasking, and Graham Martin, "Adverse Life Experience and Psychological Distress in Adolescence: Moderating and Mediating Effects of Emotion Regulation and Rumination," *Stress and Health* 32(4), (2016): 402-410, DOI:10.1002/smi.2635; Elisabeth S. Blanke et al., "Why Do My Thoughts Feel So Bad? Getting at The Reciprocal Effects of Rumination and Negative Affect Using Dynamic Structural Equation Modeling," *Emotion* (2021): 1-14, <https://doi.org/10.1037/emo0000946>; Rick Harrington and Donald A. Loffredo, "Insight, Rumination, and Self-Reflection as Predictors of Well-Being," *The Journal of Psychology* 145(1), (2010): 39-57. <https://doi.org/10.1080/00223980.2010.528072>

12 Leandra Parris et al., "Exploring Social Media Rumination: Associations with Bullying, Cyberbullying, and Distress," *Journal of Interpersonal Violence* 37, (2020): 1-20, DOI: 10.1177/0886260520946826; Daniel Lannin et al., "Youth Online Activity and Distress: The Role of Social Media Rumination," *The Social Science Journal*, (2021): 1-12, <https://doi.org/10.1080/03623319.2021.1985329>

media-related activities may be a better representation of psychological functioning than the measures of general rumination in social media.<sup>13</sup> However, previous research mainly utilized general measures of rumination to test the association between social media activities and rumination (e.g.,).<sup>14</sup>

Only recently, rumination on social media has started to be utilized as a context-specific measure of rumination in a few studies.<sup>15</sup> Recent research reported that youth using social media more frequently tend to report increased distress via its relationship with social media rumination.<sup>16</sup> Moreover, Parris and colleagues demonstrated that materialistic value orientation is related to increased social media rumination since adolescents may be worried about their self-presentation resulting from their social media activities.<sup>17</sup> As these studies indicated, it is important to utilize a specific social media rumination measure instead of general measures of rumination in social media. However, the research investigating rumination specific to the social media context is limited. Following this line of research, we utilized the SMRS in the current study.

Individuals who have concerns over their activities on social media platforms may feel pressured to present certain materials or aspects of themselves and engage in certain activities. The worries about self-presentation can be relevant to another social media-specific construct, social media anxiety.

### **The Link between Social Media Rumination and Social Media Anxiety**

Social media anxiety, as a specific form of social anxiety, was started to be utilized in social media research (e.g.,) recently.<sup>18</sup> Previous studies measured general anxiety rather than anxiety

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13 Daniel Lannin et al., "Youth Online Activity and Distress: The Role of Social Media Rumination," 1-12,

14 B. Dibb and M Foster, "Loneliness and Facebook Use: The Role Of Social Comparison and Rumination," *Heliyon* 7(1), (2021): e05999, <https://doi.org/10.1016/j.heliyon.2021.e05999>; Lien Faelens et al., "Social Media Use and Well-Being: A Prospective Experience-Sampling Study," *Computers in Human Behavior* 114, (2021): 106510. <https://doi.org/10.1016/j.chb.2020.106510>; Brian Feinstein et al., "Negative Social Comparison on Facebook and Depressive Symptoms: Rumination as a Mechanism," *Psychology of Popular Media Culture* 2(3), (2013): 161-170, DOI: 10.1037/a0033111; Pengcheng Wang et al., "Can Social Networking Sites Alleviate Depression? The Relation Between Authentic Online Self-Presentation and Adolescent Depression: A Mediation Model of Perceived Social Support and Rumination," *Current Psychology* 38(6), (2019): 1512-1521, <https://doi.org/10.1007/s12144-017-9711-8>

15 Daniel Lannin et al., "Youth Online Activity and Distress: The Role of Social Media Rumination," 1-12; Parris et al., "Exploring Social Media Rumination: Associations with Bullying, Cyberbullying, and Distress," 1-20.

16 Daniel Lannin et al., "Youth Online Activity and Distress: The Role of Social Media Rumination," 1-12.

17 Parris et al., "Exploring Social Media Rumination: Associations with Bullying, Cyberbullying, and Distress," 1-20.

18 Ercan Aktan, "Sosyal Medya ve Sosyal Kaygı: Sosyal Medya Kullanıcıları Üzerine Bir Araştırma," (Social Media and Social Anxiety: A Social Media Research On Users) *Selçuk İletişim* 11, (2018): 35-53; Chang Liu and Jianling Ma, "Social Media Addiction and Burnout: The Mediating Roles of Envy and Social Media Use Anxiety," *Current Psychology* 39(6), (2020): 1883-1891.

associated with social media use (e.g.,).<sup>19</sup> Socially anxious individuals experience heightened fear and worry when they have an expectation of being judged and evaluated in social situations. Anxiety-provoking social events lead to rumination over these events even after some time has passed since individuals process these events in detail and strongly encode them into memory.<sup>20</sup> For example, the reflection of anxiety-provoking events tended to be persistent and intrusive in people with elevated social anxiety.<sup>21</sup> Perini and colleagues also reported that individuals with social phobia engaged in negative rumination after an anxiety-provoking performance (impromptu speech) in an experimental study.<sup>22</sup> Moreover, participants' perceptions of their own performance predicted negative rumination in another experimental study.<sup>23</sup> These results suggest that anxiety-evoking social situations can lead to persistent thoughts about these situations.

It is likely that socially anxious individuals also ruminate about their performances on social media, in which almost all actions are performed in front of a larger audience. Thus, social media platforms can create anxiety-provoking situations for some individuals. Different Facebook activities (e.g., sharing, exploring, liking, and friending) were categorized in recent research, but these activities are common on other platforms as well.<sup>24</sup> These activities may induce a certain degree of anxiety since social media users perform these activities in front of an audience. The Social Anxiety Scale for Social Media Users (SAS-SMU) was developed to measure a more specific form of social anxiety on social media platforms.<sup>25</sup> The tool has four subscales, shared content anxiety, privacy concern anxiety, interaction anxiety, and self-

19 Yan Jiang, "Problematic Social Media Usage and Anxiety Among University Students During the COVID-19 Pandemic: The Mediating Role of Psychological Capital and the Moderating Role of Academic Burnout," *Frontiers in Psychology*, (2021), <https://doi.org/10.3389/fpsyg.2021.612007>; Ariel Shensa et al., "Social Media Use and Depression and Anxiety Symptoms: A Cluster Analysis," *American Journal of Health Behavior* 42(2), (2018): 116-128, <https://doi.org/10.5993/AJHB.42.2.11>; Anna Vannucci, Kaitlin M Flannery, and Christine M Ohannessian, "Social Media Use and Anxiety in Emerging Adults," *Journal of Affective Disorders* 207, (2017): 163-166, <https://doi.org/10.1016/j.jad.2016.08.040>

20 David M Clark and Adrian Wells "A Cognitive Model of Social Phobia," in *Social Phobia: Diagnosis, Assessment and Treatment*, ed. Richard, G Heimberg, Michael R Liebowitz, Deborah A Hope, and Franklin R Schneier (Guilford Press, 1995), 69-93.

21 Stanley Rachman, Jackie Grüter-Andrew, and Roz Shafran, "Post-Event Processing in Social Anxiety" *Behaviour Research and Therapy* 38(6), (2000): 611-617, [https://doi.org/10.1016/S0005-7967\(99\)00089-3](https://doi.org/10.1016/S0005-7967(99)00089-3)

22 Sarah Perini, Maree J. Abbott, and Ronald M. Rapee, "Perception of Performance as a Mediator in the Relationship Between Social Anxiety and Negative Post-Event Rumination," *Cognitive Therapy and Research* 30(5), (2006): 645-659, <https://doi.org/10.1007/s10608-006-9023-z>

23 Judy B. Zou and Maree Abbott, "Self-Perception and Rumination in Social Anxiety," *Behaviour Research and Therapy* 50(4), (2012): 250-257, <https://doi.org/10.1016/j.brat.2012.01.007>

24 Elif Manuoğlu and Ahmet Uysal, "Motivation for Different Facebook Activities and Well-Being: A Daily Experience Sampling Study," *Psychology of Popular Media* 9(4), (2020): 456-464, <http://dx.doi.org/10.1037/ppm0000262>

25 Yunus Alkis, Zafer Kadirhan, and Mustafa Sat, "Development and Validation of Social Anxiety Scale for Social Media Users," *Computers in Human Behavior* 72, (2017): 296-303, <https://doi.org/10.1016/j.chb.2017.03.011>

evaluation anxiety and the tool is useful for measuring the social anxiety of college students on social media platforms.<sup>26</sup> Following this earlier work, we also utilized the scale to assess the social anxiety of university students and explore the association between social anxiety and rumination on social media. Therefore, the social media anxiety scale was used in detecting the criterion-based validity of the social media rumination scale. In light of the information above, it was expected that social anxiety on social media would be positively associated with social media rumination.

## The Present Study

Two aims are pursued in the current study. Firstly, the goal of the present study is to adapt the social media rumination scale to Turkish and test its psychometric properties in a Turkish university students sample. Secondly, we aimed to examine the associations between social media anxiety and social media rumination. Social media anxiety was hypothesized to be positively related to social media rumination since anxiety-provoking social situations have a significant role in maintaining rumination. We did not formulate specific hypotheses about the subscales of social media anxiety due to the exploratory nature of the study.

Since both measures of anxiety and rumination used in the present study were developed as context-specific tools, they represent better psychological functioning than the general measures of anxiety and rumination on social media. Given the limited attempts to measure rumination and anxiety with specially designed tools on social media, this study also aimed to address this limitation.

## METHOD

### Participants

Undergraduate university students ( $N=516$ ) from different departments of Middle East Technical University in Turkey participated in the current study. They were provided extra course credits for their participation. After deleting invalid responses (when participants only answered a few questions in the demographic information part and did not continue the rest of the survey), 467 participants left for the analysis. There were no outliers in the data with the use of a  $p < .001$  criterion for Mahalanobis distance.<sup>27</sup> More than half were female (69%), and the average age was 21.90 ( $SD = 2.88$ ).

### Measures

The translation of the items was made by using the translation back-translation method by the author of the study and an expert from the education faculty with a Ph.D. who is fluent in both Turkish and English. First, the author translated the items of the instrument into

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26 Ibid.

27 Barbara G Tabachnick and Linda S Fidell, *Using Multivariate Statistics* (Boston: Pearson, 2013), 497-516.

Turkish. Then, the expert from the education faculty translated this version into English. The final version was compared with the original version and decided by the study's author and the expert from the education faculty after a discussion section.

*Social Media Rumination Scale* (SMRS) is a single-factor scale including 12 items.<sup>28</sup> A sample item from the scale: "I don't post on social media because I am afraid I won't get many likes." Items were scored on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). Higher scores reflected higher social media rumination. SMRS was adapted into Turkish in the present study. Confirmatory factor analysis (CFA) verified the single-factor structure of the scale (details of the analyses are presented in the Results section) without Item 20 which was deleted due to its poor loading to the factor. In the original study, the  $\alpha$  coefficient was reported as .86, which is close to the  $\alpha$  coefficient in the present study ( $\alpha = .88$ ). The construct validity evidence includes the positive associations between social media rumination and distress, social media use, and being the recipient of bullying in the original study.<sup>29</sup>

*Social Anxiety Scale for Social Media Users* (SAS-SMU) has four factors with 21 items.<sup>30</sup> Example items from the scale: "I feel anxious about the fact that others might find my actions awkward" (shared content anxiety), "I would be concerned if my personal space is accessed without my consent" (privacy concern anxiety), "I feel anxious when talking with people I have just met" (interaction anxiety), and "I am concerned about people thinking poorly of me" (self-evaluation anxiety). A 7-point Likert scale (1 = *never*, 7 = *always*) was used to rate the items. Higher ratings reflect higher social media anxiety. Cronbach's  $\alpha$  is .91 for shared content anxiety, .89 for privacy anxiety, .94 for interaction anxiety, and .90 for self-evaluation anxiety in the present study. This instrument was used as a criterion measure in the present study.

*Ruminative Responses Scale-Short Form* (RRS-SF)<sup>31</sup> was used to assess rumination. The scale was adapted to Turkish by Erdur-Baker and Bugay.<sup>32</sup> It is a 10-item measure and rated on a scale of 1 (*almost never*) to 4 (*almost always*). The psychometric properties of the short form were excellent (e.g.,  $\alpha = .86$  to  $.90$  in the original study) so this version was used instead of using the longer version to prevent participants' fatigue. The instrument has two dimensions, reflection and brooding. Example items from the scale: "Go someplace alone to think about your feelings" (reflection), and "Why do I always react this way?" The valence of the reflection items is neutral and described as performing contemplation to mitigate negative mood. Brooding items, on the other hand, are negatively valenced and used to describe "moody pondering". Cronbach's

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28 Lannin, Hynes, and Yezedjian, "Exploring Social Media Rumination: Associations with Bullying, Cyberbullying, and Distress," 1-20.

29 Ibid.

30 Alkis, Kadirhan, and Sat, "Development and Validation of Social Anxiety Scale for Social Media Users," 296-303.

31 Wendy Treynor, Gonzalez Richard, and Susan Nolen-Hoeksema, "Rumination Reconsidered: A Psychometric Analysis," *Cognitive Therapy and Research* 27(3), (2003): 247-259.

32 Özgür Erdur-Baker and Asli Bugay, "The Short Version of Ruminative Response Scale: Reliability, Validity and its Relation to Psychological Symptoms," *Procedia-Social and Behavioral Sciences* 5, (2010): 2178-2181, <https://doi.org/10.1016/j.sbspro.2010.07.433>

$\alpha$  is .78 for reflection and .79 for brooding in the present study. This scale was used to provide construct validity evidence in the present study.

*Demographic information* included questions about gender, the average duration of social media use, and age.

## Procedure

First, the university's institutional review board, where the data were collected, provided ethical approval. The data of the present study were collected between April 2021 and March 22. Participants completed surveys through Qualtrics, which is an online survey tool. The informed consent form was completed before starting the survey.

## Statistical Analyses

CFA was conducted using AMOS Version 21 and SPSS Version 25. The Maximum Likelihood method was employed to estimate the parameter in the CFA. Several fit indices were chosen to evaluate the model fit:  $\chi^2$  (Chi-Square Index), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Goodness-of-fit Index (GFI), and Incremental Fit Index (IFI). The  $\chi^2$  should be nonsignificant to demonstrate a good fit but  $\chi^2$  is sensitive to sample size and it is rarely possible to obtain a nonsignificant test, which is the case in the current study.<sup>33</sup> The following criteria were used for acceptable model fit: RMSEA values between .06 and .08 indicate good fit and above .10 means poor fit. CFI, GFI, and IFI values above .90 indicate an acceptable fit, and above .95 indicates a good fit.<sup>34</sup> A two-step hierarchical regression analysis using SPSS Version 25 was performed to test the predictors of social media rumination. Gender and the average social media use time (in minutes) were entered into the equation in the first step to control them. Subscales of social media anxiety were entered in the second step. The multivariate normality assumption was tested utilizing skewness and kurtosis in AMOS. Results showed that skewness values ranged from -.68 to 1.80 and kurtosis values ranged from -1.02 to 2.57. Based on the criteria proposed by Curran et al., all items of the SMRS had sufficient normality.<sup>35</sup>

## RESULTS

### Confirmatory Factor Analysis of the SMRS

First, CFA was conducted to test the hypothesized one-factor structure of the Turkish version of the SMRS and the goodness of fit. The single-factor model without dependencies

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33 Paul Barrett, "Structural Equation Modelling: Adjudging Model Fit," *Personality and Individual Differences* 42 (5), (2007): 815-824, <https://doi.org/10.1016/j.paid.2006.09.018>

34 Barbara M Byrne, *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming* (Newyork: Taylor & Francis Group, 2010), 147-188.

35 Patrick Curran, Stephen G West, and John F Finch, "The Robustness of Test Statistics to Nonnormality and Specification Error in Confirmatory Factor Analysis," *Psychological Methods* 1(1), (1996): 16-29

between residuals showed a poor fit to data ( $\chi^2 (df = 55) = 364.55, p < .001, CFI = .86; RMSEA = .11, GFI = .87, and IFI = .82$ ). To further increase the model fit, six modifications were done by adding covariances between the errors of Item 2 and Item 3, Item 1 and Item 3, Item 3 and Item 5, Item 1 and Item 2, Item 7 and Item 8, and Item 8 and Item 12, respectively. We let these pairs of errors covariate since the items in pairs belong to the same factor. Fit indices of the final one-factor model showed that the model showed a good fit to data ( $\chi^2 (df = 38) = 164.02, p < .001, CFI = .94; RMSEA = .08, GFI = .94, and IFI = .94$ ). Figure 1 shows the single-factor model with the standardized solution.

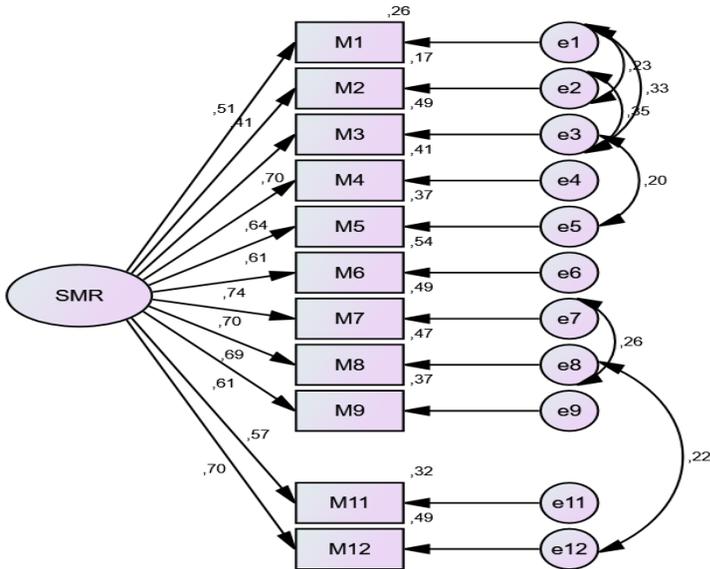


Figure 1. Standardized solution for the single-factor model of the SMRS

### Construct Validity

The Pearson correlations between the SMRS and the subscales of RRS-SF were examined as the convergent validity evidence (see Table 1). Positive correlations were observed between the factors of the SMRS and RRS-SF (ranging from .22 to .66, all  $p < .05$ ), as expected. As both the brooding and reflection dimensions of rumination increase, the dimensions of social media rumination also increase.

### Reliability Analysis

Cronbach's alpha coefficient was used to evaluate the internal consistency of the SMRS. According to standard criteria, internal consistency was satisfactory for the instrument ( $\alpha = .88$ )

## Hypothesis Testing

Descriptive statistics and correlations between variables were presented in *Table 1*. Briefly, results showed that social media rumination was correlated with all subscales of social media anxiety, gender, and the average duration of social media use.

**Table 1: Descriptive statistics and intercorrelations of the study variables**

Variables	M	SD	$\alpha$	1	2	3	4	5	6	7	8	9
1. Gender				-								
2. Duration	178.16	107		-.21**	-							
3. Content	2.54	.97	.91	-.17**	.10*	-						
4. Privacy	3.14	1.06	.89	-.12*	.04	.34**	-					
5. Inter.	2.79	.1.07	.94	-.14**	.04	.48**	.25**	-				
6. Self-E.	3.01	1.08	.90	-.15**	.13**	.69**	.25**	.52**	-			
7. SMRS	2.26	.74	.88	-.17**	.15**	.75**	.26**	.33**	.53**	-		
8. Brooding	2.98	.88	.79	-.15**	.14**	.48**	.25**	.32**	.46**	.43**	-	
9. Reflection	3.17	.88	.78	-.28**	.07	.26**	.17**	.17**	.28**	.24**	.54**	-

Note. Duration: The average spend time on social media in minutes. Inter = Interaction, E = Evaluation. \* $p < 0.05$ ; \*\* $p < 0.01$

A two-step hierarchical regression analysis was performed for SMRS to examine the predictive role of social media anxiety, gender, and duration on social media rumination. The results are presented in detail in *Table 2*. The findings showed that gender ( $\beta = -.15$ ,  $SE = .07$ ,  $p < .01$ , 95% CI =  $[-.36, -.08]$ ) and duration ( $\beta = .12$ ,  $SE = .03$ ,  $p < .01$ , 95% CI =  $[.02, .15]$ ) were significant. Specifically, being female and the increased use of social media is related to increased social media rumination. In the second step, gender was no longer significant ( $\beta = -.03$ ,  $SE = .05$ ,  $p > .05$ ) but the duration was still significant ( $\beta = .06$ ,  $SE = .02$ ,  $p < .05$ , 95% CI =  $[.002, -.09]$ ). Only content anxiety ( $\beta = .74$ ,  $SE = .03$ ,  $p < .001$ , 95% CI =  $[.50, .63]$ ) was a significant predictor among the other social media anxiety dimensions. Specifically, those people who had high scores on content anxiety on social media also had high scores on social media rumination. Privacy, interaction, and self-evaluation anxiety did not predict social media rumination.

**Table 2: Summary of regression analyses for the variables predicting the first factor of social media rumination**

	b	SE	$\beta$	t	F Stat.
Step 1					
Constant	2.55	.10		25.77***	
Gender	-.22	.07	-.15	-3.12**	
Duration	.09	.03	.12	2.48*	
Step 2					
Constant	.91	.12		7.65***	
Gender	-.04	.04	-.03	-.91	
Duration	.05	.02	.06	2.03*	
Content	.56	.03	.74	16.75***	
Privacy	.01	.02	.02	.52	
Interaction	-.05	.03	-.07	-1.76	
Self-Evaluation	.02	.03	.03	.77	
Total R <sup>2</sup>	.57***				
F					100.53***
N					467

Note. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

## Discussion

The high accessibility of social media has brought along concerns about specific forms of psychological phenomena, such as social media rumination and social media anxiety. Thus, new tools have emerged to measure these particular forms of rumination and social anxiety in social media contexts. The SMRS was adapted into Turkish and its psychometric properties were tested on a Turkish university student sample in the current study. CFA confirmed the single-factor structure of SMRS; however, Item 10 was deleted because of the poor loading (items of the scale were presented in the Appendix). The reliability analysis of SMRS was performed by the calculation of the internal consistency coefficient (Cronbach Alpha). The results showed that the internal consistency of the instrument is acceptable. All in all, the Turkish version of SMRS has good psychometric properties and can be used in the university student sample.

Moreover, social media anxiety was associated with social media rumination by controlling for gender and the average duration of social media use, supporting the hypothesis. There have been limited attempts to measure both rumination and social anxiety specific to social media activities to date. Although the links between rumination and anxiety on social media were tested cross-sectionally, the present study provided the first evidence that particular forms of rumination and social anxiety are related in social media.

items of the SMRS concern perseverative thoughts about shared material on social media both by oneself and other users as well as one's worries regarding the self. Therefore, higher scores indicate that individuals ruminate more about the material to be shared or the material that other people share and also their image and perception in the eyes of others. That is why individuals can spend some time before sharing materials/posts on social media due to their fear of being judged by other users.

### **The Association between Social Media Rumination and Social Media Anxiety**

Shared content anxiety predicted social media rumination irrespective of gender and the average duration of social media usage. This component refers to the social anxiety that is stemmed from posting some content by individuals or by others related to these individuals on social media.<sup>36</sup> It is likely that the process of sharing any content and expecting some reactions after the sharing process may induce persistent thoughts in individuals. A recent study showed that social media has its unique way of causing rumination in users. In this study, it was shown that participants are worried mostly about how other users react to their posts on social media, and their decision to post something can be heavily influenced by these reactions.<sup>37</sup> Another common concern among people using social media is privacy concerns.<sup>38</sup> As the items of the SMRS indicated individuals are worried about the content of the posts, the responses they would obtain from others, and their perceived images after the sharing process. Previous research also showed that social media use is related to pressure about how to create and exhibit content which is related to rumination.<sup>39</sup> As the Response Styles Theory claims, rumination may increase the distress associated with an adverse incident and increase the likelihood of psychological difficulty.<sup>40</sup>

However, privacy anxiety was not a significant predictor in the present study although it was positively correlated with social media rumination. Interaction anxiety and self-evaluation anxiety were also not significant in predicting social media rumination indicating that the role of content anxiety is over and above the other forms of social media anxiety in social media rumination. However, we need longitudinal studies to test the temporal precedence between the variables to see the direction of the relationship. This can be an avenue for further research.

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36 Alkis, Kadirhan, and Sat, "Development and Validation of Social Anxiety Scale for Social Media Users," 296-303.

37 Lannin, Parris, Yazedjian, and Hynes, "Youth Online Activity and Distress: The Role of Social Media Rumination, 1-12

38 Alkis, Kadirhan, and Sat, "Development and Validation of Social Anxiety Scale for Social Media Users," 296-303.

39 Feinstein et al., "Negative Social Comparison on Facebook and Depressive Symptoms: Rumination as a Mechanism," 166.

40 Nolen-Hoeksema, "Responses to Depression and Their Effects on the Duration of Depressive Episodes," 569-582.

Moreover, in a recent review, O'Day and Heimberg showed that social media is used by more socially anxious people to compensate for social inadequacies.<sup>41</sup> Additionally, people with severe social anxiety prefer computer-mediated communication to face-to-face conversation.<sup>42</sup> These results imply that individuals with higher social anxiety may desire more control over their interactions with others on digital platforms. However, these individuals also have to wait for a certain amount of time before a meaningful social conversation starts. They also cannot control the valence of the interaction, which is another reason to ruminate. The findings of these studies can be considered indirect evidence regarding the relationship between social media anxiety and rumination. The present study, on the other hand, provided the first direct evidence that the dimensions of social media anxiety and social media rumination are associated with utilizing specifically designed tools to measure these phenomena on social media.

### Limitations

Despite its strengths, the limitations of the study should be mentioned. First, the causal direction between the dimensions of social media anxiety and social media rumination cannot be clearly stated since the current research has a cross-sectional design. Second, asking about the average duration of social media use may be problematic because even if we instructed participants to check the screen time for social media on their phones, it is possible that they may provide this information without checking it. Last, the data of the present study were collected during the global COVID-19, which may intensify social media anxiety and social media rumination and influence the generalizability of the findings.

### Conclusion

Overall, we showed that SMRS has good psychometric properties to be used in Turkish university students. The original factor structure of the SMRS was retained without Item 10, which was deleted due to the poor loading of it to the factor. Moreover, the criterion-related validity of the social media rumination scale was proved by its association with the social media anxiety scale. Depending on the results of the current study, it can be claimed that shared content anxiety has a more prominent role in social media rumination as compared to other dimensions of social media anxiety. Our findings also highlighted the importance of investigating these psychological phenomena with tools specifically designed to measure them on social media. Since social media platforms remain popular, especially among the younger generation, social media rumination and social media anxiety seem to stay prevalent. There is a need for careful investigation to decrease social media rumination. Since rumination is a

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41 Emlý B O'Day and Richard G. Heimberg, "Social Media Use, Social Anxiety, and Loneliness: A Systematic Review," *Computers in Human Behavior Reports* 3, (2021): 100070, <https://doi.org/10.1016/j.chbr.2021.100070>

42 Cecilia Cheng et al., "Do the Socially Rich Get Richer? A Nuanced Perspective on Social Network Site Use and Online Social Capital Accrual," *Psychological Bulletin* 145(7), (2019): 734-764, <https://doi.org/10.1037/bul0000198>

maladaptive emotion regulation strategy and social media rumination is a form of it, cognitive-behavioral-based interventions may also be beneficial in reducing it.

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## Appendix

### Sosyal Medya Ruminasyon Ölçeği

1. Sosyal medya paylaşımlarımın kim olduğum hakkında ne söylediğinden endişe duyarım.
2. Sosyal medyada ne paylaşacağıma karar vermek için birkaç dakika harcarım.
3. İnsanların sosyal medya paylaşımlarına nasıl tepki vereceği hakkında endişelenirim
4. Sosyal medyada paylaşım yapmam çünkü çok "beğeni" almayacağımdan korkarım
5. Başkalarının paylaştığım şeyler yüzünden bana kızabileceğinden endişelenirim.
6. Sosyal medya paylaşımlarımda çekici görünmeyeceğim konusunda endişeliyim.
7. Sosyal medyada ne paylaşacağımı takıntı haline getiririm.
8. Sosyal medyada saçma bir paylaşım yaptığım için "kendimi hırpalarım".
9. Başkalarının sosyal medya paylaşımları hakkında kıskançlık hissederim.
10. Başkalarının sosyal medyada neler paylaştığını görmek kendimle ilgili öz farkındalık yaratır (bu madde silinmiştir).
11. Birilerinin sosyal medyada ne paylaştığını düşünmeden edemem.
12. Özsaygım, gönderilerimin kaç "beğeni" aldığına bağlı olabilir.

