

ORIGINAL ARTICLE

Problematic Social Media Use for Mood Modification: Its Associations with Shame, Guilt, Anger, and Difficulties in Emotion Regulation

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Main Points

- Shame directly predicted problematic social media use for mood modification, but guilt did not.
- Problematic social media use for mood modification was predicted by shame through anger-in and difficulties in emotion regulation.
- The guilt-prone individuals are more likely to use different emotion regulation strategies rather than soothing their moods with online activities.

Abstract

Problematic social media use is increasingly becoming one of the major concerns of both the research and clinic community. Social media can be used as a way of emotion regulation since it is a powerful tool for getting acceptance and support from others. However, how some negative emotions (i.e., shame, guilt, and anger) relate to problematic social media use has not been known yet. The aim of this study is to examine the mediator role of difficulties in emotion regulation and types of anger (anger-in and anger-out) on the relationship between shame and problematic social media use for mood modification. Similarly, the mediator role of difficulties in emotion regulation on the relationship between guilt and problematic social media use for mood modification was also investigated. A total of 393 university students completed the Shame and Guilt Scale, Trait Anger – Anger Expression Inventory, Difficulties in Emotion Regulation Scale, and Social Media Addiction Scale. Path analysis showed that problematic social media use for mood modification was predicted by shame through anger-in and difficulties in emotion regulation. In addition, difficulties in emotion regulation negatively mediated the relationship between guilt and problematic social media use for mood modification. The findings were also discussed.

Keywords: Anger, emotion regulation, guilt, problematic social media use, shame, social media addiction

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Introduction

Problematic Social Media Use and Its Relationship with Emotion Regulation

In the last decades, rapid growth in the use of social media makes people steadily in communication with one another (Stone & Wang, 2018). In 2021, 3.78 billion people have been using social networking sites such as Facebook, YouTube, and Instagram (Statista, 2021). The excessive use of social media

can turn into an addiction problem for some individuals, especially for adolescents (Boer et al., 2020; Kuss & Griffiths, 2017). As with other behavioral addictions (e.g., gambling, gaming, and cybersex addiction), researchers mostly found that individuals with social media addiction show addiction-specific characteristics including salience, tolerance, withdrawal, control, conflict, mood modifications, and relapse (Dalvi-Esfahani et al., 2021). However, it is not easy to reach an agreement on a common

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description of social media addiction due to variations among the users of social media. Therefore, problematic social media use, which is a term representing significant disruptions in an individual's daily life because of the excessive use of social media, has been widely used in the literature (Shensa et al., 2017). In a similar manner, the term "problematic social media use" is preferred to refer to the maladaptive behavioral pattern of social media use in this article.

A growing body of research supports the evidence of different predictors of problematic social media use. For instance, fear of missing out (Blackwell et al., 2017), life satisfaction (Longstreet & Brooks, 2017), narcissism (Andreassen et al., 2017), and emotion-focused coping to deal with stress (Sriwilai & Charoensukmongkol, 2016) are significantly associated with problematic social media use. Moreover, a recent study found that maladaptive cognitive emotion regulation strategies (i.e., rumination, catastrophizing, self-blame, and other blame) were positively associated with problematic social media use (Zsido et al., 2021). Besides, some studies showed that people may have different motives for using social media such as social interaction, information seeking, pastime, expression of opinion (Whiting & Williams, 2013), and tension release (Zolkepli et al., 2018).

Social media use is also very common to alter or regulate emotions by sharing content about a person's self or environment, especially among adolescents (Rimé, 2009; Van Ingen et al., 2015; Vermeulen et al., 2008). Regarding mood regulation, sharing one's emotions with others on a social platform by describing the emotional event and the emotions may lead to form a socially shared language; in turn, those sharing allows one to receive attention, feedback, support, or acceptance (Vermeulen et al., 2008). In a recent study (Casale & Fioravanti, 2017), it was found that the relationship between shame and problematic social network use was mediated by escapism. Moreover, shame also directly predicted problematic social network use. In addition, Akter (2014) found that there was a significant correlation between spending more time on Facebook than initially intended and using it to reduce feelings of guilt. However, the relationship between anger and social media use may be more complex. Regarding gender differences, females spent more time on positive content to dissipate their angry moods, whereas males sustained their moods and spent less time on negative media content in a provoking situation (Knobloch-Westerwick & Alter, 2006). Those results may be explained by the mood modification feature of social media use. For instance, a recent study (Myrick, 2015) revealed that participants reported a significant increase in each type of positive emotion (i.e., hope, happiness, contentment) and less of each type of negative emotion (i.e., anxiety, annoyance, sadness, guilt) after viewing online cat videos and/or photos. Similarly, a study (Throuvala et al., 2019) investigating motivational themes for social media use found that individuals were likely to use social media for emotional regulation and enhancement. In a similar vein, a study with 343 Malaysian undergraduates (Cheak et al., 2012) showed that there was a significant positive correlation between mood modification and social networking addiction.

Considering all information mentioned above, we aimed to investigate the extent to which negative emotions (i.e., shame, guilt,

and anger) predict problematic social media use through difficulties in emotion regulation. Therefore, the nature of those emotions and their relationship with emotion regulation were more closely examined in the next section.

Shame, Guilt, Anger, and Their Relationship with Emotion Regulation

Shame and guilt are strong negative emotions mostly related to the image of self or self-related behaviors (Niedenthal et al., 1994). They appear when socially inappropriate behaviors are displayed; thus, the occurrence of feeling shame and guilt could be protective against these acts such as aggressive attacks (Tangney et al., 1996b). Although some people use the terms shame and guilt interchangeably, they are two distinct emotions with different features. One of the main differences between them is that shame occurs more with the public exposure of a transgression or incompetence than guilt does (Smith et al., 2002). Moreover, it was found that if a person thought the transgression was not compatible with his or her standard in implicit public exposure conditions, then shame also increased. Secondly, the object of shame is the actual self, whereas the object of guilt is an unpleasant act (Tangney et al., 1996a). Therefore, when an individual feels ashamed, the perception of self is likely to be damaged. However, compensative behaviors are likely to occur to repair the negative effects of behaviors when this individual feels guilt (Niedenthal et al., 1994). In addition, shame is closely linked with both nonmoral and moral experiences of incompetence or inferiority; however, guilt is largely related to violations of moral principles (Smith et al., 2002).

The appraisal model of self-conscious emotions (Tracy & Robins, 2004) suggests that when individual experiences that the emotion-relevant event is related to one's self-representation, self-conscious emotions (shame, guilt, pride, and embarrassment) emerge. Notably, both shame- and guilt-prone individuals are more likely to make internal attributions (Tracy & Robins, 2006). However, the situation differs when it comes to external attributions. Tracy and Robins (2006) found that there was a positive relationship between shame-proneness and chronic external attributions but not event-specific shame and attributions. As an emotion regulation strategy, shame-prone people may use blaming others for failure to ease the pain of impaired self-image. Tangney and Dearing (2002) argue that anger toward others may preserve the self by refocusing on another object rather than the self-threatening experience of shame and give a sense of control. Retzinger (1991) posits that since an angry reaction to shame is itself a shame-eliciting situation, it may create a loop leading to further defensive aggressive behavior. Some research shows that shame leads to decrease in self-regulation and heightens anger and aggression (Thomaes et al., 2011). Of interest, angry reaction to criticism was positively correlated with shame-proneness (Hejdenberg & Andrews, 2011). However, the existing evidence for the relationship between shame-proneness and aspects of anger is not consistent. Tangney et al. (1996b) found that shame-prone individuals with the feeling of anger tended to not express their anger, rather they had self-directed hostility. In contrast to shame, the relationship between guilt and the tendency to make external attributions was negative (Tracy & Robins, 2006). Since negative evaluation is attributed to an act rather than the self in guilt, it has a function of fixing the situation with compensatory behaviors (e.g., apology) (Tangney & Dearing, 2002).

Consistently, guilt was found to be negatively correlated with direct or displaced anger (Tangney et al., 1996b).

Although both shame-proneness and guilt-proneness are correlated positively with internal attributions, research revealed that they show distinct characteristics in terms of some other attribution dimensions. More specifically, there was a positive correlation between shame-proneness and making stable, uncontrollable, and global self-attributions; in contrast, guilt-proneness was positively correlated with the unstable and controllable self-attributions (Tracy & Robins, 2006). Those differences in cognitive appraisals about self may turn into emotion dysregulation experiences for shame-prone individuals (Cândeia & Szentágotai-Tătar, 2020). Hughes et al. (2011) found that those adolescents prone to shame reported higher suppression strategies (i.e., maladaptive), while those adolescents prone to guilt reported higher reappraisal strategies (i.e., adaptive). Similarly, increased levels of maladaptive and decreased levels of adaptive emotion regulation strategies were positively associated with shame-proneness, whereas vice versa for guilt-proneness (Szentágotai-Tătar & Miu, 2016). Moreover, shame-prone individuals are more likely to have difficulties in regulating their anger constructively (Wright et al., 2008).

Evidence has accumulated indicating that shame-proneness is a predictor of some emotional disorders (Candeia & Szentagotai, 2013). For instance, Pineles et al. (2006) found that guilt-free shame-proneness was positively correlated to psychological symptoms, whereas guilt-proneness was not. Moreover, guilt-free shame-proneness was associated with post-traumatic

stress disorder symptoms and somatization symptoms, whereas shame-free guilt-proneness was not. Research also revealed that how shame is regulated may be a matter of concern. It was found that different coping styles such as avoidant coping (De Rubeis & Hollenstein, 2009) or rumination (Cheung et al., 2004) mediated the relationship between shame and depression. These findings support the general view that self-conscious emotions are maladaptive when it is experienced in a dysregulated way (Leary & Tangney, 2011). When individuals are not able to regulate their emotions effectively, the risk of having psychological problems increases (Gratz & Roemer, 2004). Several studies demonstrated the relationship between difficulties with emotion regulation and psychological disorders such as depressive symptoms (Mennin & Fresco, 2015), personality disorders (Glenn & Klonsky, 2009), eating problems (Haynos et al., 2015), and some substance (e.g., alcohol) (Berking et al., 2011) as well as non-substance (e.g., Internet) addictions (Yıldız, 2017).

To our knowledge, no study has examined the association of problematic social media use with shame, guilt, anger, and difficulties in emotion regulation. Answering this research question could allow us to understand the emotional dynamics of this problematic behavior. Thus, we hypothesized that (1) the relationship between shame and problematic social media use for mood modification will be mediated by anger (i.e., both anger-in and anger-out) and difficulties in emotion regulation (Figure 1), and (2) guilt will be negatively associated with problematic social media use for mood modification through difficulties in emotion regulation (Figure 2).

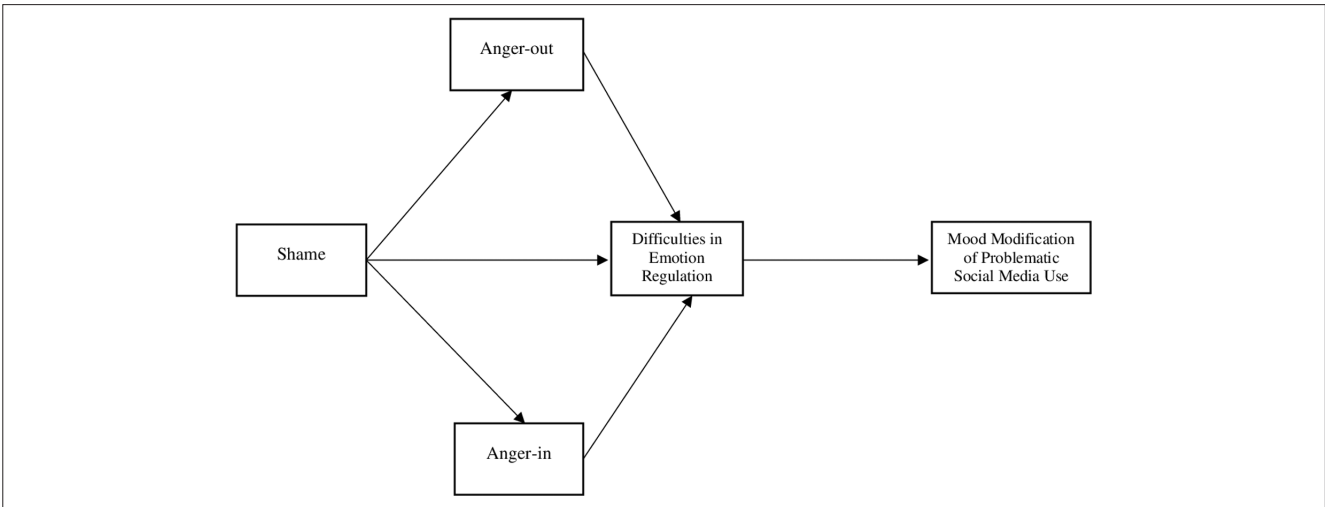


Figure 1. Proposed Model for the Association Between Shame and Problematic Social Media Use for Mood Modification.

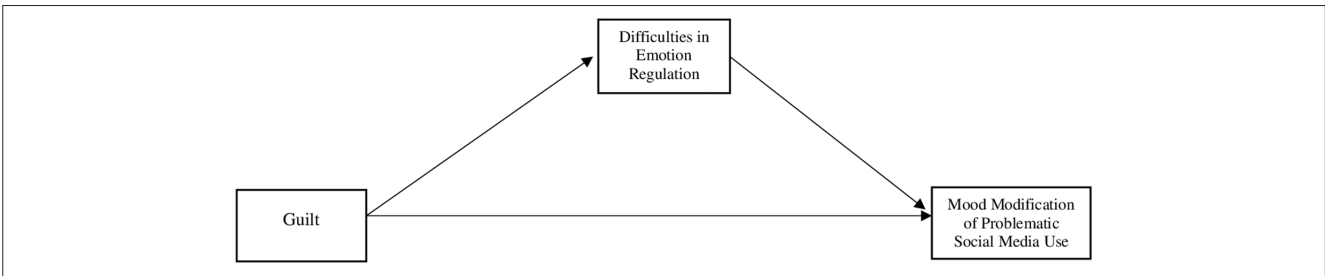


Figure 2. Proposed Model for the Association Between Guilt and Problematic Social Media Use for Mood Modification.

Methods

Participants and Procedure

The overall sample consisted of a total of 393 university students in this study. The exclusion criterion was determined as being under the age of 18 years. All participants resided in Turkey. The participants were recruited from the students at Maltepe University which is a private university in İstanbul. Before application, necessary approval was taken from the Maltepe University Scientific Research and Publication Ethics Committee (No. 2019/01-07) in accordance with the Helsinki declaration, and written consent was obtained from each participant. The participants were asked to answer a set of questionnaires anonymously, and those who volunteered to participate were given extra course credit. The order of instruments was counterbalanced to eliminate an ordering effect. The mean age of participants was 21.51 (standard deviation (SD) = 2.95), and it ranged between 18 and 53. Moreover, 321 of them were women (81.7%) and 72 of them were men (18.3%). The mean number of social media platforms used by students was 3.36 (SD = 1.28). In addition, WhatsApp, Instagram, and YouTube were rated as the top 3 most frequently used social media platforms for all students.

Measures

Trait Anger—Anger Expression Inventory

To assess the expression of anger, Trait Anger—Anger Expression Inventory (TAXI) (Spielberger et al., 1983) which is a 34-item self-report measure was used. The 4-point Likert-type scale consists of 10 items evaluating trait anger and 24 items evaluating three types of anger expression: (1) anger-in (i.e., internalizing anger), (2) anger-out (i.e., externalizing anger), and (3) anger control (i.e., handle anger and regulate its expression). The scale ranges from 1 (never) to 4 (always). Higher scores indicate a high level of trait anger, anger control, suppressed anger, and anger expression. The reliability and validity of the Turkish version of TAXI (Özer, 1994) were found reliable and valid. Cronbach's alpha was found as ranging from .82 to .90 for trait anger, .85 for anger control, .76 for anger-out, and .74 for anger-in (Özer, 1994). The examples of items are "I boil inside, but I don't show it" for anger-in subscale and "I strike out at whatever infuriates me" for the anger-out subscale (Spielberger et al., 1983). In this study, anger-in and anger-out subscales were used, and their Cronbach's alpha values were .66 and .80, respectively.

Shame and Guilt Scale

The scale was developed in Turkey to measure the feelings of shame and guilt (Şahin & Şahin, 1992), based on the Dimensions of Conscience Questionnaire (Johnson & Noel, 1970). It has 24 items taking the form of first-person statements which participants are asked to rate on a 5-point Likert-type scale. It consists of 12 items for the shame subscale and 12 items for the guilt subscale. Higher scores indicate greater levels of shame and guilt. Cronbach's alpha was .81 for the guilt subscale and .80 for the shame subscale (Şahin & Şahin, 1992). "Harming someone although he does not deserve it" and "Revealing a secret that someone gave you" are examples of the guilt subscale and "To learn that an idea which you defended passionately during a discussion is wrong" and "Going to an invitation or meeting in casual clothes and seeing everyone wearing formal clothes" are examples of the shame subscale. The Cronbach's alphas in this study were .79 for shame and .87 for guilt.

Difficulties in Emotion Regulation Scale

It is a 36-item self-report measure of difficulties for different emotion regulation strategies (Gratz & Roemer, 2004). It is a 5-point Likert-type scale. It has six subscales (awareness referring to lack of emotional awareness, clarity referring to lack of emotional clarity, non-acceptance referring to non-acceptance of emotional responses, strategy referring to limited access to effective emotion regulation strategies, goals referring to inability in engaging goal-directed behavior, and impulse referring to impulse control difficulties) that can be summed for a total score. The Turkish form of the Difficulties in Emotion Regulation Scale (Rugan & Gençöz, 2010) has strong psychometric properties. Cronbach's alpha value was measured as .94 for the Turkish version (Rugan & Gençöz, 2010). Additionally, Cronbach's alpha ranged from .75 to .90 for subscales. The test – retest reliability was measured as .83 for the scale. In this study, the total score was used, and its Cronbach's alpha was .92.

Social Media Addiction Scale

It is a 41-item self-report instrument that assesses the use of social media across four subscales (i.e., preoccupation, mood modification, relapse, and conflict/problems) (Tutgun-Ünal & Deniz, 2015). The item "When I don't check social media for a while, the thought of checking it occupies my mind" belongs to the preoccupation subscale. "When I get bored of my problems, the best place that I shelter is social media" is related to the mood modification subscale. "I make useless efforts in order to regulate the use of social media" is related to the relapse subscale. "I use social media more although it negatively affects my profession/studies" refers to the conflict subscale (Tutgun-Ünal & Deniz, 2015). Items are rated on a 5-point Likert-type scale from never to always. Higher scores were indicative of greater reports of problematic use of social media. Cronbach's alpha coefficient was found to be .97 (Tutgun-Ünal & Deniz, 2015). In this study, a mood modification subscale was used, and its Cronbach's alpha was .90. The corresponding mean scores of mood modification subscale for symptom severity are as follows: 5 – 8 = no addiction, 9 – 12 = mild addicted, 13 – 16 = moderate addicted, 17 – 20 = high addicted, and 21 – 25 = severe addicted (Tutgun-Ünal & Deniz, 2015). In this study, the mean score of the mood modification subscale was found 13.30 (SD = 5.30) indicating moderate addiction level for the participants.

Statistical Analysis

Statistical analyses were run with the Statistics Package for Social Sciences Program (Green et al., 1997). Descriptive and correlational analyses were conducted. To test the proposed model, path analysis and simple mediation analysis were performed using AMOS 24 (Arbuckle, 2009). Lastly, AMOS 24.0 estimands and plugins (Gaskin & Jim, 2018) were used to test the specific indirect effects.

Results

Means, SDs of the scores, and zero-order correlations between variables are presented in Table 1. The findings of correlation analysis showed that shame was positively correlated with guilt ($r = .51, p < .01$), difficulties in emotion regulation ($r = .17, p < .01$), anger-in ($r = .19, p < .01$), and problematic social media use for mood modification ($r = .20, p < .01$). Moreover, problematic social media use for mood modification was positively

Table 1.
Zero-Order Correlations and Descriptive Statistics for the Study Variables ($N = 393$)

Variables	Mean	SD	1	2	3	4	5	6
1. Shame	40.36	7.91	1					
2. Guilt	49.29	8.46	.51**	1				
3. DERS total	90.08	20.62	.17**	-.17**	1			
4. Anger-out	16.94	4.41	.06	-.08	.32**	1		
5. Anger-in	17.49	3.89	.19*	-.08	.43**	.30**	1	
6. PSMUMM	13.80	5.29	.20**	-.11*	.40**	.20**	.24**	1

Note: * $p < .05$; ** $p < .01$; *** $p < .001$. DERS total = total score of difficulties in emotion regulation; PSMUMM = problematic social media use for mood modification.

correlated with both anger-in ($r = .20, p < .01$) and anger-out ($r = .24, p < .01$). However, guilt was negatively correlated with difficulties in emotion regulation ($r = -.17, p < .01$) and problematic social media use for mood modification ($r = -.11, p < .05$). There was no correlation between shame and anger-out, whereas guilt does not correlate with both anger-in and anger-out. To test the significant difference in problematic social media use for mood modification between female and male participants, an independent sample t -test was performed. The findings showed that there was no difference between gender groups.

In this study, the direct and indirect associations among exogenous (shame and guilt), mediator (difficulties in emotion regulation and anger), and endogenous (problematic social media use for mood modification) variables were widely investigated. Two path analyses with the maximum likelihood method were separately performed by IBM AMOS 24.0 (Arbuckle, 2009) to test the proposed mediation models. According to MacKinnon et al. (2004), the bootstrapping method, which is a procedure that composes random subsamples of the same size as the major sample, is more powerful than other methods of mediation testing to examine indirect effects. To estimate the indirect effects of mediational variables for the proposed models, a bias-corrected bootstrapping method

with 5000 resamples and a 95% confidence interval was used in this study. In addition, each specific indirect effect was examined by using AMOS 24.0 estimand and plugin (Gaskin & Lim, 2018).

According to the findings of path analysis, the proposed model for shame provided poor fit to the data ($\chi^2(N = 393, df = 3) = 12.675$; $\chi^2/df = 4.225, p < .01$; root mean square error of approximation (RMSEA) = .091 (90% CI: [.043 – .145]), $p_{close} = .075$; Goodness-of-fit index (GFI) = .987; Adjusted goodness-of-fit index (AGFI) = .937; comparative fit index (CFI) = .957; Tucker – Lewis index (TLI) = .857). Further, the modification indices showed that shame directly predicted problematic social media use for mood modification. After this correction, the results indicated that the proposed model was a good fit to the data ($\chi^2(N = 393, df = 2) = 3.957$; $\chi^2/df = 1.978, p = .138$; RMSEA = .05 (90% CI: [.000 – .123]), $p_{close} = .394$; GFI = .996; AGFI = .970; CFI = .991; TLI = .957). Moreover, the result of squared multiple correlation ($R^2 = .179$) pointed out that the predictors (i.e., shame, difficulties in emotion regulation, and types of anger) of problematic social media use for mood modification explained the 18% of its variance. Standardized regression estimates of the tested model are shown in Figure 3 with continuous lines indicating the significant paths and dashed lines indicating the non-significant paths.

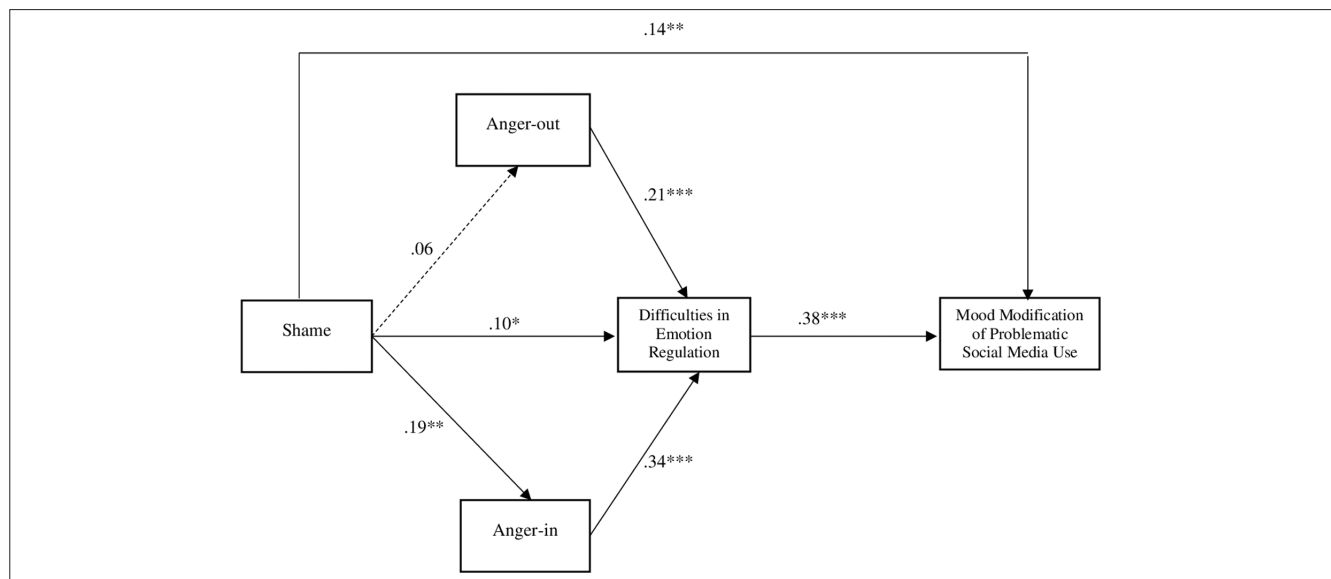


Figure 3. The Standardized Parameter Estimations of the Proposed Model for the Association Between Shame and Problematic Social Media Use for Mood Modification.

Table 2.

Direct Effects for the Proposed Model for the Association Between Shame and Problematic Social Media Use for Mood Modification

Pathways	β	SE	Lower	Upper	p
Shame→Anger-out	.06	.05	-.021	.138	.218
Shame→Anger-in	.19**	.05	.108	.265	.002
Shame→DERS total	.10*	.05	.018	.179	.044
Shame→PSMUMM	.14**	.04	.063	.204	.003
Anger-out→DERS total	.21***	.05	.133	.286	.001
Anger-in→DERS total	.34***	.05	.261	.424	.001
DERS total→PSMUMM	.38***	.05	.302	.451	.001

Note: * $p < .05$; ** $p < .01$; *** $p < .001$. DERS total = total score of difficulties in emotion regulation; PSMUMM = problematic social media use for mood modification.

Regarding direct associations, the findings showed that shame significantly predicted anger-in ($\beta = .19, p < .01$), difficulties in emotion regulation ($\beta = .10, p < .05$), and problematic social media use for mood modification ($\beta = .14, p < .01$). However, there was no significant association between shame and anger-out. Moreover, difficulties in emotion regulation was significantly predicted by both anger-out ($\beta = .21, p < .001$) and anger-in ($\beta = .34, p < .001$). In addition, problematic social media use for mood modification was significantly predicted by difficulties in emotion regulation ($\beta = .38, p < .001$). The direct associations are listed in Table 2.

Hypothesis 1 proposed that the relationship between shame and problematic social media use for mood modification would be mediated by difficulties in emotion regulation and anger (i.e., both anger-in and anger-out). The hypothesis was partially confirmed. It was found that the relationship between shame and predicted problematic social media use for mood modification was mediated through anger-in and difficulties in emotion regulation ($\beta = .05, p < .01$). However, the indirect association

between these variables was not significant through anger-out and difficulties in the emotion regulation pathway. All indirect pathways are summarized in Table 3.

To test the mediator role of difficulties in emotion regulation on the relationship between guilt and problematic social media use for mood modification, simple mediation analysis was run (Figure 4). The findings of this study indicated that guilt negatively predicted difficulties in emotion regulation ($\beta = -.17, p < .001$). Moreover, problematic social media use for mood modification was positively predicted by difficulties in emotion regulation ($\beta = .39, p < .001$). However, there was no significant direct association between guilt and problematic social media use for mood modification. *Hypothesis 2* proposed that guilt would be negatively associated with problematic social media use for mood modification through difficulties in emotion regulation. The hypothesis was supported. The results of simple mediation analysis showed that difficulties in emotion regulation negatively mediated the relationship between guilt and problematic social media use for mood modification, $\beta = -.06, SE_{boot} = .02, 95\% CI (-.107, -.030)$, indicating that individuals would be less likely to use social media for mood modification when they feel guilt and that they have fewer difficulties in emotion regulation. Standardized total, direct, and indirect effects are listed in Table 4.

Discussion

The study was aimed at exploring the association of problematic social media use with shame, guilt, anger, and difficulties in emotion regulation. This study provided the first empirical finding of the emotion-specific links of problematic social media use. In this study, it was found that problematic social media use for mood modification was correlated with all study variables. The results showed that there was no difference between female and male participants' problematic social media use for mood modification scores. Evidence about gender differences in problematic social media use is not consistent (Kuss & Griffiths, 2011). Moreover, Hou et al. (2019) found that gender was not significantly correlated with social media addiction.

The present findings showed that shame directly predicted problematic social media use for mood modification. In other words, the participants reporting higher scores on shame had increased

Table 3.

Standardized Indirect Effects for the Proposed Model for the Association Between Shame and Problematic Social Media Use for Mood Modification

Pathways	β	Lower	Upper	p
Shame→Anger-out→DERS total	.02	-.015	.108	.212
Shame→Anger-in→DERS total	.05**	.075	.190	.002
Shame→DERS Total→PSMUMM	.04*	.007	.050	.022
Shame→Anger-out→DERS total→PSMUMM	.02	-.001	.011	.189
Shame→Anger-in→DERS total→PSMUMM	.05***	.007	.020	.001
Anger-out→DERS total→PSMUMM	.11***	.098	.170	.001
Anger-in→DERS total→PSMUMM	.10***	.098	.170	.001

Note: * $p < .05$; ** $p < .01$; *** $p < .001$. DERS total = total score of difficulties in emotion regulation; PSMUMM = problematic social media use for mood modification.

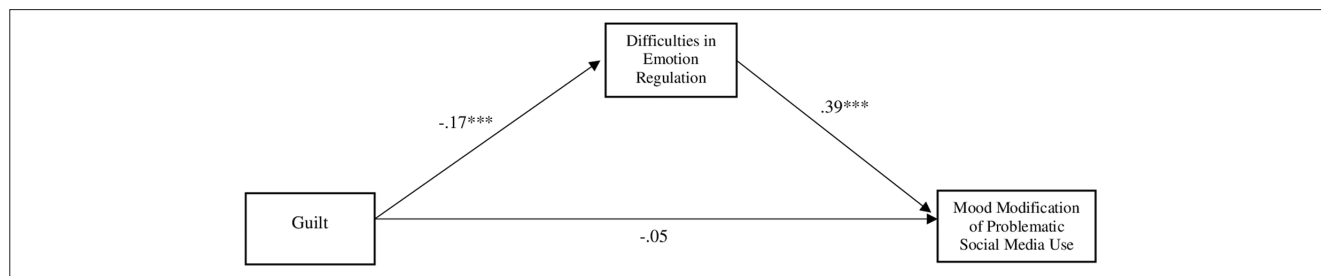


Figure 4. The Standardized Parameter Estimations of the Proposed Model for the Association Between Guilt and Problematic Social Media Use for Mood Modification.

Table 4.

Standardized Total, Direct, and Indirect Effects for the Proposed Model for the Association Between Guilt and Problematic Social Media Use for Mood Modification

	β	Lower	Upper	<i>p</i>
Total				
Guilt→DERS total	-.17***	-.251	-.074	.000
Guilt→PSMUMM	-.11**	-.201	-.025	.014
DERS total→PSMUMM	.39***	.299	.483	.000
Direct				
Guilt→DERS total	-.17***	-.251	-.074	.000
Guilt→PSMUMM	-.05	-.130	.034	.252
DERS Total→PSMUMM	.39***	.299	.483	.000
Indirect				
Guilt→PSMUMM	-.06***	-.107	-.030	.000

Note: * $p < .05$; ** $p < .01$; *** $p < .001$. DERS total = total score of difficulties in emotion regulation; PSMUMM = problematic social media use for mood modification.

their problematic social media behavior to enhance their moods. This result can be elaborated with the compensatory effect of social media on the self. Shame as a self-conscious emotion involves self-representation and self-awareness to enable evaluation of the whole self (Tracy & Robins, 2004). Social media can be accepted as a comparison tool between oneself and others. By means of social media, individuals have a chance to present themselves in a selective and positive manner via the advantage of technical possibilities such as edited personal stories and photos. These personal videos and stories elicit feedback from other users, which may promote positive self-impression (Fan et al., 2019). Thus, people may perceive themselves closer to their ideal selves when they choose and show some parts of their actual selves (Chua & Chang, 2016; Mendelson & Papacharissi, 2010), especially when they are fragile about their selves. However, the findings of this study revealed that there was no direct association between guilt and problematic social media use for mood modification. This result is consistent with the premise that the nature of guilt needs to build strategies since it includes specific bad behavior rather than the fault of the entire self.

Evidence showed that limited access to effective emotion regulation strategies had a link with an inclination to psychological

problems (Akıncı, 2015). In this study, it was revealed that difficulties in emotion regulation was a significant mediator on the relationship between shame and mood modification dimension of problematic social media use. It means that individuals with high levels of shame may excessively use social media to change those feelings if they lack effective emotion regulation strategies. This finding supports other research showing a positive association between emotion regulation and problematic social media use (Marino et al., 2020; Spada & Marino, 2017). The mediator role of difficulties in emotion regulation was also significant for the association between guilt and mood modification dimension of problematic social media use; however, the association was negative. According to an interpersonal approach, guilt has the function of improving relationships by taking responsibility for individuals' faults and trying to compensate them (Baumeister et al., 1994). It also leads to encouragement about placing importance and representing positive thoughts and feelings to significant others (Baumeister et al., 1994). It can be argued that guilt is a more adaptive emotion for interpersonal relationships, and the guilt-prone participants are more likely to use different emotion regulation strategies rather than soothing their moods with online activities. Therefore, it can be valuable that mental health professionals foster awareness of emotions and learning effective regulation strategies, especially for adolescents and young adults to reduce problematic social media use. This study may provide an opinion about the mechanism and pathways for better grasping mood modification of social media addiction. Shame is also related to poor therapeutic alliance and fear of intimacy (Black et al., 2013), so it can be difficult to build strong alliances while working with social media addiction. Thus, it may be valuable to work on a therapeutic relationship by regarding the possibility of shame to maintain a strong therapeutic relationship. Additionally, in the therapy process, modifying emotion regulation strategies can lead to less usage of social media for mood modification. To understand the functional part of the excessive usage of the Internet, it can be recommended to the client to write emotions and ideas while engaging with the Internet (King et al., 2012).

However, the hypothesis suggesting the mediator roles of difficulties in emotion regulation and anger (i.e., both anger-in and anger-out) on the relationship between shame and problematic social media use for mood modification was partially accepted. That is, problematic social media use for mood modification was predicted by shame through anger-in and difficulties in emotion regulation. It has been suggested that individuals with shame-proneness are inclined to show a more resentful way of anger which creates difficulty to open up (Tangney et al., 1996b).

Besides, shame is related to the complete self of an individual, and failure may be experienced as a sign of a deficiency or weakness in the whole self (Lewis, 1971). Anger-in refers to keeping anger-in and not expressing it (Özer, 1994). Thus, individuals with higher levels of shame can be inclined to turn anger to themselves because of the notion of deficiency in themselves and demonstrate limited expression of anger.

Limitations and Suggestions for Future Research

This study has some limitations. Since it consisted of university students, the age range of participants was limited. Difficulties in emotion regulation and social media use can change according to age. It was revealed that older adults had fewer difficulties in the regulation of emotions in comparison to young ones with the age-related development of these abilities (Orgeta, 2009). Thus, in further studies, different age groups can be examined. Participants mostly consisted of women in this study. The experience of shame can vary according to gender, which women were found as having more tendencies to experience than men (Ferguson & Crowley, 1997). Shame and guilt can also be influenced by gender roles; for instance, masculinity in women predicted lesser shame-proneness (Benetti-McQuoid & Bursik, 2005). Thus, gender differences can be evaluated with gender roles in further studies to consider changing attitudes of parents toward their children. Emotion regulation strategies and the experience of emotions can also vary according to gender (Conway, 2005). Moreover, being female was significantly associated with problematic social use (Andreassen et al., 2016). Research showed that attention-deficit hyperactivity disorder, obsessive-compulsive disorder, anxiety, and depression contributed positively to addictive social networking (Andreassen et al., 2016). In addition, it was found that narcissistic personality and social media addiction were positively correlated (Casale et al., 2016). Because negative emotions can be differently experienced in the context of any psychological problem, comorbidity with psychological disorders can be controlled in further studies. Lastly, since causal relationships cannot be inferred by cross-sectional methodology, longitudinal and experimental studies are warranted in the future.

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