

Basic Need Satisfaction and Self-Forgiveness: The Mediating Role of Emotion Regulation Difficulties*

Temel İhtiyaç Doyumu ve Kendini Bağışlama: Duygu Düzenleme Güçlüğü'nün Aracı Rolü

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Abstract

Though the concept of self-forgiveness has received much attention within the empirical literature lately, the explanations of the antecedents of the construct still remain limited. The purpose of the current study is to broaden the limits of self-forgiveness and to provide a better understanding regarding the process. In this study, the relationship between basic psychological needs and self-forgiveness through the mediating role of emotion regulation difficulties was examined. The model provides a novel perspective for understanding self-forgiveness through the Self-Determination Theory. The sample consists of 451 university students (365 females and 86 males) between the ages 19 to 28 who completed questionnaires assessing tendencies of self-forgiveness, basic need satisfaction, and emotion regulation difficulties. Results indicate that emotion regulation difficulties partially mediate the relationship between basic need satisfaction and self-forgiveness. Consistent with our model, results reveal that as the satisfaction of the basic psychological needs increases, emotion regulation difficulties diminish, which results in an increase in self-forgiveness.

Keywords: Self-Forgiveness, Basic Need Satisfaction, Self-Determination Theory, Emotion Regulation Difficulties.

Öz

Kendini bağışlama kavramının son zamanlarda görgül araştırmalarda çok dikkat çekmesiyle birlikte, kavramın öncüllerine dair açıklamaların sınırlı kaldığı görülmektedir. Mevcut çalışmanın amacı, kendini bağışlama sürecinin anlaşılmasına katkı sağlamaktır. Bu çalışmada, temel psikolojik ihtiyaçlar ile kendini bağışlama arasındaki ilişkide duygu düzenleme güçlüğü'nün aracı rolü incelenmiştir. Bu modelin, Kendini Belirleme Kuramı aracılığıyla kendini bağışlamayı anlamak için yeni bir bakış açısı sağlayacağı düşünülmektedir. Çalışmanın örneklemini, yaşları 19-28 arasında değişen 451 üniversite öğrencisinden (365 kadın ve 86 erkek) oluşturmaktadır. Katılımcılardan kendini bağışlama eğilimlerine, temel ihtiyaç doyumuna ve duygu düzenleme güçlüğüne yönelik ölçümler alınmıştır. Sonuçlar, duygu düzenleme güçlüklerinin temel ihtiyaç doyumuna ile kendini bağışlama arasındaki ilişkiye kısmen aracılık ettiğini göstermektedir. Beklendiği şekilde, temel psikolojik ihtiyaç düzeyindeki artış duygu düzenleme güçlüğü'nün azalmasını ve bu yolla kendini bağışlama eğiliminin artmasını açıklamaktadır.

Anahtar Kelimeler: Kendini Bağışlama, Temel Psikolojik İhtiyaçlar, Kendini Belirleme Kuramı, Duygu Düzenleme Güçlüğü.

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Basic Need Satisfaction and Self-Forgiveness: The Mediating Role of Emotion Regulation Difficulties

In the field of psychology, self-forgiveness has been labelled as the stepchild of interpersonal forgiveness (Hall & Fincham, 2005). The concept of self-forgiveness has taken place among philosophical, theoretical and empirical discussions. In the psychology literature, Enright (1996) defined forgiveness as the “willingness to abandon self-resentment” (p. 116), Bauer et al. (1992) explained the construct as making peace with oneself and feeling at home again. Hall and Fincham (2005) described the process on a more motivational basis, in which one becomes “more motivated to act benevolently towards the self” (p. 622) and less motivated to self-punish.

Although several definitions have been proposed and the process of self-forgiveness have been more elaborated on, research remains restricted. In the current study, self-forgiveness is examined based on a novel model involving basic need satisfaction and emotion regulation difficulties, in which emotion regulation difficulties is predicted to be the mediator between basic need satisfaction and self-forgiveness.

Self-Forgiveness

In psychology, the common view on self-forgiveness is that it is a process rather than a simple construct. Bauer et al. (1992) explained self-forgiveness as a phase that includes self-awareness, feelings of discomfort that comes with the realization of one’s own mistakes, taking responsibilities for one’s wrongdoings and making amends that will lead to a feeling of “being at home” and making peace with oneself. Moreover, Flanigan (1996) explained self-forgiveness as an interpersonal issue which creates a closed door between the self and others that would lead to an isolation from others in the beginning as a result of a committed wrongdoing.

Furthermore, in order to conceptualize self-forgiveness as a psychological construct Enright (1996) have proposed a triad model of forgiveness which includes interpersonal forgiveness, self-forgiveness and receiving forgiveness from others. Moreover, Hall and Fincham (2005) made a significant contribution since they have proposed the first empirical model of self-forgiveness. This model solely focuses on the self-forgiveness process which consists of emotional determinants such as shame, guilt and empathy; social-cognitive determinants such as attributions; offense related determinants such as the severity of offense, perceived forgiveness and conciliatory behavior. Accordingly, when one commits a transgression, guilt is the emotion that would help them wonder about the incident by putting oneself in the others’ shoes, since guilt is an “others-oriented” emotion. The sense of responsibility leads to conciliatory behaviors such as apologizing, which then leads to a decrease in guilt (Hall & Fincham, 2008; Witvliet et al., 2002; Zechmeister & Romero, 2002), and through perceived forgiveness from others and from the divine, one acquires self-forgiveness.

On the other hand, Ranganadhan and Todorov (2010) argued that shame is one of the most important predictors of self-forgiveness due to its role in relaying more focus on the self rather than on the behavior, hence resulting in self-blame and isolation from others (Fisher & Exline, 2006; Macaskill, 2012; McCann, 2009). Further studies show that self-forgiveness is positively correlated with well-being (Avery, 2008), emotional clarity and expression (Hodgson & Wertheim, 2007; Kozan et al., 2017), psychological well-being (Davis et al., 2015), guilt-proneness (Carpenter et al., 2016), dealing with negative emotions (Liao & Wei, 2015), age (Carpenter et al., 2019) and negatively correlated with difficulties in emotion regulation (Worthington & Wide, 1999), shame-proneness (Reamillo, 2015).

As self-forgiveness literature reveals, two major self-conscious emotions play a crucial role in the process; shame and guilt, which are referred to as negative emotions. Shame plays a non-adaptive role

due to its an attack on one's self (Flanigan, 1996). Rather than focusing on the situation, the person focuses on the self, questions their competencies and lacks the will and power to maintain healthy relationships. Also, shame has been found to be positively associated with punishing and excusing oneself; thus, negatively related to self-forgiveness (Griffin et al., 2016). On the other hand, the feeling of guilt is important in terms of empathy with the other party, taking responsibility and making amends which initiates the process of self-forgiveness (Covert et al., 2003; Flanigan, 1996). Additionally, guilt is negatively related with excusing oneself from taking responsibility, thus positively related to self-forgiveness (Griffin et al., 2016).

Additionally, research draw attention to the problems related to the conceptualization of self-forgiveness. Hall and Fincham (2005) evaluated *pseudo self-forgiveness* which results from thinking that one did not act in a wrong way, evaluating the situation only depending on external factors, and avoiding taking the responsibility on their part. Other studies have also revealed similar results. For example, Zechmeister and Romero (2002) found that people who tend to forgive themselves, tend to blame the person for whom the misdeed is committed, seeking ways to confirm their behavior. In addition, perpetrators who forgive themselves frequently reported that the victim has caused the problem. Moreover, people with narcissistic tendencies seem not tend to accept the guilt (Gramzow & Tangney, 1992) and therefore they may not take the adequate responsibility on their part, which then results in pseudo self-forgiveness. Strelan (2006) found that self-forgiveness is positively associated with both narcissism and self-worth. The fact that people with narcissistic tendencies have difficulty taking responsibility supports the idea of pseudo self-forgiveness.

After a careful review of the scientific literature, it could be summarized that self-forgiveness is associated with positive outcomes such as psychological adjustment, and people who have difficulty forgiving themselves, also have difficulties dealing with negative emotions and are more prone to internalizing problems. In this respect, examining the factors that increase the level of forgiveness is crucial. Although the process of self-forgiveness has been subject to empirical research, the models that have been proposed so far have revealed mixed results. Therefore, there is more to be examined regarding self-forgiveness. In order to assign a new perspective on the concept of self-forgiveness, the current study relays attention on the Self-Determination Theory (Deci & Ryan, 2000) which highlights the critical role of inner resources to pursue growth and regulation through the basic need satisfaction in order to attain self-motivation which may be significant for self-forgiveness.

Basic Need Satisfaction

Self Determination Theory (SDT) (Deci & Ryan, 2000; Ryan & Deci, 2017) is a meta-theory focusing on the significance of intrinsic motivation and how human behavior is determined by these internal factors. The focus of the theory is the development and progress of human beings in cognitive, social and behavioral areas, based on the assumption that human beings are internally motivated to learn and progress. In order to maintain the developmental balance, the three basic psychological needs should be satisfied; autonomy, competence and relatedness. The core of the theory signifies the crucial role of basic need satisfaction to attain higher self-motivation. Thus, the satisfaction of the basic psychological needs is crucial for well-being and high functionality, and the needs are universal and innate. Moreover, the degree of satisfaction of the psychological needs may vary depending on the social context. As these needs are satisfied, the level of personal growth, integrity and well-being increase.

Autonomy is to navigate one's own behavior by their free-will and personal choices (Deci & Ryan, 2000; Ryan & Deci, 2010). Competence is defined as the ability to stay connected to one's environment and developing mastery in certain tasks. Relatedness is a bidirectional need, defined as the need for being connected with others. Research shows that the satisfaction of the basic psychological needs is

allied with life satisfaction and well-being (e.g., Deci et al., 2001; Ryan & Deci, 2000). Further positive outcomes are self-control (Moller et al., 2006), less defensive responses in stressful situations (Yıldırım, 2021), self-esteem (Deci et al., 2001; Demirtaş et al., 2017), vitality (Bryan, 2014), meaning in life and positive affect (Tang et al., 2020), adaptive emotion regulation skills (Benita et al., 2020; Shalchi & Shahna, 2018), emotion regulation difficulties (Han & Lee, 2017), and forgiveness (Lawler-Row & Piferi, 2006; Yıldırım, 2016).

Furthermore, SDT also examines basic need satisfaction on a more motivational and regulatory basis. Ryan and Deci (2000) described “authentic motivation” which refers to a more self-endorsed type of motivation that involves personal interest and confidence in one’s actions, resulting in creativity, persistence and higher self-esteem. Authentic motivation is categorized as a type of intrinsic motivation; which is also shaped by emotional acknowledgment and the ability to make choices. Thus, as basic psychological needs are satisfied, one’s authentic motivation increases which is directed by free will. Research particularly highlights the role of meeting the need for autonomy. Accordingly, as the need for autonomy is satisfied, one’s choices and behaviors are directed based on their own preferences, and therefore they can take responsibility for their actions (Chirkov et al., 2003; Deci & Ryan, 2000).

Scientific literature signals that these innate and universal needs are related to many positive psychological constructs. Although the process of self-forgiveness is distressing, one could visualize the process through the lenses of basic psychological need satisfaction. As the need satisfaction increases, self-forgiveness, which is also related to psychological adjustment (e.g., self-esteem, well-being, life satisfaction), would be expected to increase, through the diminishing role of emotion dysregulation. In other words, the more one’s basic psychological needs are satisfied, it is highly expected for them to manage their own behaviors, take responsibility for their actions and overcome stressful situations by their effective problem-solving skills, which would also be expected to increase tendency to self-forgive.

The Mediating Role of Emotion Regulation

The purpose of this study is to examine the mediating role of emotion regulation difficulties in the relationship between the satisfaction of the basic psychological needs and self-forgiveness among university students. It is hypothesized that as one’s basic psychological needs (i.e., autonomy, competence, and relatedness) are met, the individual's difficulty in emotion regulation will decrease and as a result self-forgiveness will increase. Today, it is well known that the choice of regulative strategies plays a significant role in how one forms and maintains a relationship with others, how one communicates to others and how one experiences clinically diagnosed disorders (Gratz & Roemer, 2004; Gross, 2002). According to Gross’s (2001) Path Model, there are five distinct emotion regulation strategies such as situation selection, situation modification, attentional deployment, reappraisal, and suppression. Nonetheless, this model lacks details regarding maladaptive strategies leading to emotion regulation difficulties.

Furthermore, Garnefski et al. (2001) conceptualized emotion regulation by grouping them into two distinct categories as adaptive and maladaptive strategies. Accepting personal experiences, taking actions and concentrating on planning, to focusing on positive events, to compare different perspectives and to assign positive meaning to the unfortunate experience have been grouped as adaptive regulatory actions. Gratz and Roemer (2004) argued that emotion regulation requires awareness and acceptance of emotions, engaging in goal directed behavior and avoidance of impulsive behavior, using adaptive strategies that are suitable across situations; if one experiences difficulties among any of these domains, this would indicate a possibility to experience emotion regulation difficulties.

Recent research show that experiencing emotion regulation difficulties is negatively linked with the satisfaction of the basic psychological needs, meaning that when need satisfaction increases, emotion regulation difficulties diminish (Emery et al., 2015; Martín-Albo et al., 2015; Shalchi & Shahna, 2018). Research additionally reveal that emotion regulation difficulties are associated with low self-esteem (Loess, 2015), low levels of self-compassion (Aktaş, 2017) and diminished ability to deal with stressful situations (Sünbül, 2016). Therefore, it is suitable to take into account the role of emotions in self-forgiveness since being able to manage emotions and being aware of one's emotions play an important role in the process of self-forgiveness (Hodgson & Wertheim, 2007). Thus, experiencing high levels of emotional difficulties, such as less awareness of emotions or suppression, is expected to hinder self-forgiveness.

Within the scope of this study, emotion regulation is thought to be a significant part in the relationship between basic psychological needs and self-forgiveness. Researchers have conducting various researches and developed theories about how emotions occur, which factors determines emotions, which emotions are adaptive or not, and how each emotion is regulated. Emotions are the most important factors that lead to physiological and psychological changes, including behavior and thoughts, so emotions are known to have a significant power over behavior (Gross & Barret, 2011). There are also some difficulties brought by some emotions that differ depending on the person, situation and emotion. In addition, emotion regulation also affects life experiences (Garnefski et al., 2001; Gross, 2001). Studies show that emotion regulation difficulties are associated with psychopathologies like panic disorder, anxiety disorder, depression, and dependent personality disorder (Sheppes et al., 2015).

In the current study, it is hypothesized that as a result of autonomy need satisfaction, one will be able to take adequate levels of responsibility for their own wrongdoings resulting in an increased level of awareness and acceptance of their negative emotions and behaviors. This phase that involves awareness and acceptance is also expected to motivate one to solve the problematic situation through competence satisfaction. In addition, as relatedness is a bidirectional path in which one cares for their relationships and expects to be cared by others, the satisfaction of the need is expected to make one more motivated to correct their wrongdoings towards others in order to maintain a healthy relationship. Thus, the more appeased the basic psychological needs are, it is expected to result in a decrease in emotion regulation difficulties; which in turn will foster a more adaptive way for dealing with negative emotions, therefore increase self-forgiveness; that results in a less punitive way for dealing with personal mistakes. Since self-forgiveness has been a rarely studied construct, the current study may be one of the pioneering studies in the self-forgiveness literature and will illuminate future studies on factors that may play a crucial role in determining the level of self-forgiveness and also during the process.

Method

Participants

This study was conducted at Maltepe University, located in Istanbul, Turkey. Convenience sampling was used in this study to collect data. Questionnaires were distributed to 471 undergraduate students, but 20 participants' data were removed from the data set based on the univariate and multivariate outlier analysis. The final sample consisted of 451 students between the ages of 19 to 28 ($M_{age}=21.22$, $SD=1.57$). The sample consists of 365 females (80.9%) and 86 males (19.1%); predominantly single (97.8%), unemployed (90.2%) and living in dorms (79.8%).

Measures

Heartland Forgiveness Scale

The Heartland Forgiveness Scale was developed by Thompson et al. (2005) and adapted by Bugay and Demir (2010). The scale is an 18-item, 7-point Likert type scale (1=*almost always false*, 7= *almost always true*) aimed at measuring dispositional self-forgiveness. This self-report questionnaire consists of three subscales: forgiveness of self, forgiveness of others and forgiveness of situations. Internal consistency of the subscale for forgiveness of self was reported as .75. The internal consistency of the Turkish version of the Heartland Forgiveness Scale was reported high ($\alpha = .81$), and the internal consistency of the subscale for forgiveness of self was reported as .64. For the purpose of this study, only the subscale for forgiveness of self was used. High scores received from the measure indicate high proneness to self-forgiveness. In the current study, internal consistency of the subscale was found to be .58.

Basic Psychological Needs Scale-Revised Form

This scale was developed by Yıldırım (2015) based on other measures of need satisfaction (Gagné, 2003; Sheldon & Hilpert, 2012) by adding culture specific items. The measure is a 26-item, 7-point Likert type scale (1=*completely false*, 7=*completely true*). The total internal consistency of the scale is high ($\alpha = .91$). The internal consistencies for the dimensions of relatedness, competency and autonomy were reported as .86, .87 and .88, respectively. High scores obtained on each dimension indicate high satisfaction. In the current study, internal consistency of the scale was found to be .92.

Difficulties in Emotion Regulation Scale

The original Difficulties in Emotion Regulation Scale was developed by Gratz and Roemer (2004) to measure the degree of emotional difficulties and tendencies. This 36-item scale is a 5-point Likert type scale and answers vary between 1= *almost never* and 5= *almost always*. The scale is made up of 6 different dimensions; nonacceptance, goals, impulse, awareness, strategies and clarity. 12 items are reversely coded. The internal consistencies of the subscales were reported to vary between the range of .80 and .89. The high scores obtained from the scale indicate high emotional difficulties.

The Turkish version of the scale was adapted by Rugancı (2008) in which the dimensions and factor structure were kept the same as in the original scale. Internal consistency was reported to be high ($\alpha = .94$) and test-retest reliability was reported to be .83. In the current study, internal consistency of the scale was found to be .90.

Procedure

Participants were informed about the subject and the purpose of the study in advance, both verbally and in a written format. They were informed about their right to resign at any time during the study. Participation was based on informed consent and anonymity. Procedure lasted between 15 to 25 minutes.

Data analysis

In order to examine gender differences, independent sample *t*-tests were conducted. Bivariate correlations were also calculated to explore the associations among the variables of interest in the current study. Overall scores obtained from the questionnaires were analyzed. To test the mediating role of difficulties in emotion regulation in the relationship between basic need satisfaction and self-forgiveness, the PROCESS macro for SPSS (Hayes, 2013) was used. This macro is used within social

sciences for estimating mediation and moderation among variables. The program offers regression pathways and mediation templates for researchers in order to test the direct and indirect effects of single and/or multiple mediators.

Results

Preliminary Analyses

Prior to mediation analysis, independent sample t-tests were conducted to investigate gender differences. The results demonstrated that there were no gender differences for basic need satisfaction ($t_{(449)} = .18, p = .861$), emotion regulation difficulties ($t_{(449)} = -.91, p = .364$), and self-forgiveness ($t_{(449)} = .83, p = .407$).

Correlation analysis revealed a positive relationship between self-forgiveness and basic need satisfaction ($r = .25, p < .01$). Moreover, a negative relationship was obtained between emotion regulation difficulties and self-forgiveness ($r = -.36, p < .01$). As people experience less emotional difficulties, their tendency to self-forgive increase. Lastly, a negative relationship between basic need satisfaction and emotion regulation difficulties was observed ($r = -.30, p < .01$). The results indicate that as the satisfaction of basic psychological needs increase, the experience of the regulatory difficulties decreases (See Table 1).

Table 1

Correlations among Variables

	1	2	3	<i>M</i>	<i>SD</i>
1. Self-forgiveness	1			27.91	5.68
2. Basic need satisfaction	.25*	1		144.83	20.34
3. Emotion Regulation Difficulties	-.36*	-.30*	1	91.72	20.58

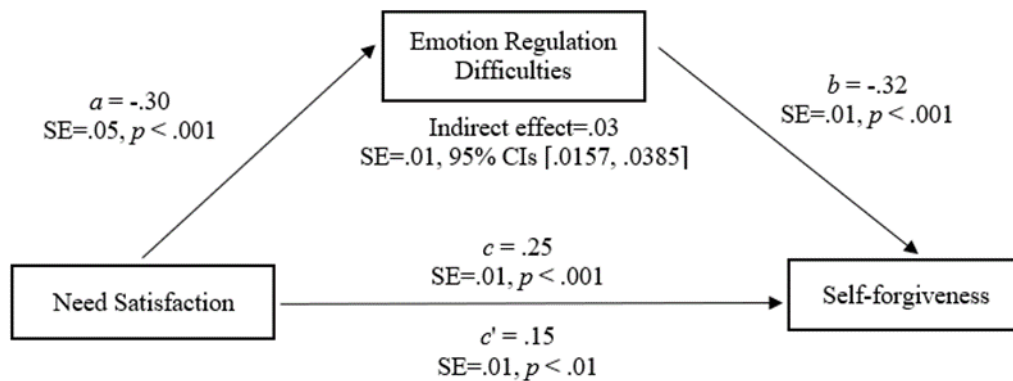
* $p < .01$

Mediation Analysis

To test the mediating role of emotion regulation difficulties in the relationship between basic need satisfaction and self-forgiveness, PROCESS macro (Hayes, 2013) was used. The mediation results were evaluated by the confidence intervals and by the Bootstrapping of 5000 resamples (Preacher & Hayes, 2008). The total effect of basic need satisfaction on self-forgiveness was positively significant ($\beta = .25, t_{(449)} = 5.37, SE = .01, 95\% \text{ CI } [.0435, .0937]$). In addition, as can be seen in Figure 1, need satisfaction negatively predicted emotion regulation difficulties ($\beta = -.30, t_{(449)} = -6.59, SE = .05, 95\% \text{ CI } [-.3903, -.2110]$). Emotion regulation difficulties also negatively predicted self-forgiveness ($\beta = -.32, t_{(448)} = -6.97, SE = .01, 95\% \text{ CI } [-.1124, -.0629]$).

Figure 1

The Role of Emotion Regulation Difficulties as a Mediator between Basic Need Satisfaction on Self-Forgiveness



Note: c = total effect of need satisfaction on self-forgiveness, c' = direct effect of basic need satisfaction on self-forgiveness after accounting for the indirect effect of emotion regulation difficulties

Moreover, the indirect effect of basic need satisfaction on self-forgiveness through the mediating role of emotion regulation difficulties was also positively significant (SE=.01, 95% CI [.0127, .0385]), although the direct effect of basic need satisfaction was still significant (SE=.01, 95% CI [.0172, .0672]). In other words, as basic need satisfaction increases, self-forgiveness increases through a decrease in emotion regulation difficulties. This proposed model accounted for 15% of the variance ($F_{(2,448)} = 40.25, p < .001$), confirming emotion regulation difficulties as a partial mediator in the relationship between basic needs satisfaction and self-forgiveness.

Discussion

In the current study, SDT was used to establish a framework to explain the process of self-forgiveness. Emotion regulation difficulties were hypothesized to mediate the relationship between basic need satisfaction and self-forgiveness. Results indicated that emotion regulation difficulties partially mediated the relationship between basic need satisfaction and self-forgiveness. Accordingly, the satisfaction of the basic psychological needs (i.e., autonomy, competence, and relatedness) will yield a decrease in emotion regulation difficulties, which results in an increase in self-forgiveness.

Furthermore, level of self-forgiveness had not differed significantly according to gender. Several studies also support this finding (Bugay, 2010; Ranganadhan & Todorov, 2010). Miller et al. (2008) argued that during the process of self-forgiveness, one focuses more on the self which results in avoiding stereotyped gender roles; therefore, gender differences may not be playing a significant role in self-forgiveness. In addition, state and trait measures need to be differentiated; there may be a possibility that female and male differences in state measures may emerge since gender roles may arise in a specifically given scenarios.

Moreover, it was expected that basic need satisfaction would positively predict self-forgiveness; as one's needs are fulfilled, their ability to self-forgive would increase. Recent research has also supported the link between need satisfaction and forgiveness, although research remains restricted. Lawler-Row and Piferi (2006) have found that people who are more prone to forgive, are more autonomous, more competent, more accepting of themselves and can establish healthy relationships with others. Moreover, Yildirim (2016) found that as basic need satisfaction increased, so did self-esteem, which resulted in a tendency to be more self-forgiving. As SDT indicates, basic need satisfaction is also related to self-

motivation. As one's basic psychological needs are satisfied, their authentic motivation would be expected to develop. Taken from this perspective, self-forgiveness may be fostered if one's basic needs are satisfied as an antecedent. In other words, when one commits a wrongdoing, their authentic motivation may take place if their basic needs are fulfilled, and they would be able to take responsibility and make authentic choices regarding conciliatory behaviors which would make the self-forgiveness process more genuine, rather than pseudo.

Additionally, according to the mediation analysis, the role of emotion regulation difficulties as a partial mediator in the relationship between basic psychological need satisfaction and self-forgiveness was found to be significant. As expected, basic need satisfaction negatively predicted emotion regulation difficulties, which in turn resulted in an increase in self-forgiveness. The negative association in the relationship between basic need satisfaction and emotion regulation difficulties signals the importance of basic need satisfaction as an antecedent. According to Han and Lee (2017) basic need satisfaction and emotion regulation difficulties mediate the relationship between attachment insecurity and binge eating. This reveals that when the caregiver cannot be consistently responsive to a newborn's needs, basic psychological needs are not met. Therefore, elevated need for protection and unmet needs during early years in life, will lay a foundation for emotion regulation difficulties, and consequently unhealthy coping. For example, dissatisfaction or lack of fulfillment of these needs also known to be related with obsessive-compulsive disorder, eating disorders, depression and anxiety related problems (Ryan & Deci, 2017), difficulties maintaining self-control (Moller et al., 2006), and less adaptive styles of emotion regulation (Benita et al., 2020).

The satisfaction of each basic psychological need seems to preserve people from developing psychopathologies and psychological maladjustment. For example, autonomy is found to play a crucial role in developmental psychopathologies; thus, many intervention programs focus on autonomy support; also, autonomy is viewed as the regulation of the self and considered as a crucial element for psychological well-being for healthy functioning (Deci & Ryan, 2000; Ryan & Deci, 2010). In addition, Emery et al. (2015) found that the need for competence is essential to deal with difficult situations; and if this need falls short, one might be more prone to experience emotional difficulties. In another study, Martín-Albo et al. (2015) found a positive relationship between emotional repair and relatedness. Moreover, Shalchi and Shahna (2018) found that people whose basic need satisfaction are high, will be less prone to emotion regulation difficulties resulting in more adaptive interactions among family members. In line with the findings of previous studies, basic need satisfaction may contribute to psychological adjustment (i.e., self-forgiveness) by decreasing emotion regulation difficulties.

In summary, by satisfying the basic psychological needs, people may become more aware of their emotions and experiences, be more competent in accepting them, be motivated to take responsibility for their wrongdoings, to cope with negative emotions, and to maintain their relationships with others. Consequently, the process of basic need satisfaction and diminished emotion regulation difficulties may foster self-forgiveness for a committed wrongdoing.

Limitations and Implications

There have been some limitations to this study. First, self-forgiveness subscale revealed low internal consistency in the current study (.58). There are several scales that measure self-forgiveness on a dispositional level. For example, Mauger et al. (1992) have developed the Forgiveness of Self subscale (FOSS) and additionally Tangney, Boone, Fee, and Reinsmith (1999) have developed a scenario-based measure of self-forgiveness, Multidimensional Forgiveness Scale (MFS). Strelan (2017) argues that these dispositional self-forgiveness scales are often measure "self-regard", which lacks details about the acceptance of the wrongdoing, taking responsibility and behaving in a more conciliatory manner.

Moreover, Strelan (2017) also critiques Thompson et al.'s (2005) Heartland Forgiveness Scale (HFS) as measuring "absence of self-condemnation". Therefore, for the sake of the reliability of dispositional measures studies must be broadened. This indicates a need for more reliable measurement tools for self-forgiveness. It is important to conduct studies with different age and gender groups to increase the accuracy of the measure. Therefore, in the light of these observations a need for a more reliable measures for self-forgiveness seems necessary. There is indeed a need for the development of new measures.

Furthermore, the sample used in the current study was a convenience sample consisted of undergraduates from Maltepe University. The number of male participants is less compared to female participants. Therefore, this study should be re-conducted with different samples within different age ranges. In addition, gender factor should be more balanced in order to maintain generalizability. Using a correlational design is another limitation of the study. Correlational analysis does not reveal a cause-and-effect relationship. In addition, this research is based on self-report measures, which may be subject to bias.

Results indicate that the relationship between basic psychological need satisfaction and self-forgiveness is partially mediated by emotion regulation difficulties. In other words, emotion regulation does not account for all the relation between the variables. Future studies may also focus on age differences (Carpenter et al., 2019), personality (Ranganathan & Todorov, 2010), attributional styles (Hall & Fincham, 2005) and moral emotions such as guilt and/or shame (Hall & Fincham, 2008) in order to clarify the process of self-forgiveness.

It is seen that research on self-forgiveness is limited in order to enlighten the scientific literature. As previously mentioned, self-forgiveness is known as the "stepchild" of forgiveness studies; and is still treated similarly in the Turkish literature. Defining self-forgiveness as a complex process indicates the necessity of condensation within this area. As self-forgiveness is defined as a "personal process"; it would be crucial to examine the self-forgiveness process, in terms of personality traits. It may also be thought that researchers' orientation towards self-acceptance and tolerance development will enlighten the self-forgiveness process more.

According to the results retrieved from this study, emotion regulation difficulties play an essential role in the relationship between basic need satisfaction and self-forgiveness. In the therapeutic field, experts may focus on patients' autonomy, competence and relatedness needs whom have difficulties in forgiving themselves, and they may also work with their patients on emotional regulation difficulties and focus on the change of non-adaptive emotion regulation strategies. In addition, difficulties in self-forgiveness may be related to traumatic events, so as for the patients whom have been clinically diagnosed with depression, anxiety disorder, eating disorders, obsessive-compulsive disorders, appropriate treatment programs may be developed.

Furthermore, basic psychological needs and self-forgiveness are associated with subjective well-being, psychological well-being, positive affect, adaptive emotion regulation skills, life satisfaction and high self-worth, positive self-perception of university students and positive attitudes towards others. Especially in educational institutions, it is important that guidance units put more attention on to positive self-perception through basic psychological needs. In addition, it can be thought that supporting basic psychological needs in workplaces will be beneficial in terms of emotion regulation skills, as well as for increased positive interpersonal communication.

Conclusion

Drawing from SDT, it appears that among undergraduates, as basic psychological needs for autonomy, competence, and relatedness are fulfilled, one is more able to make an authentic living, self-ruled choices and take responsibility. This would result in an increase in acceptance and awareness of emotions, diminished impulsive behavior and increased emotional expression. Hence, objective evaluation of the self, being able to take perspective, accepting responsibility and decreased emotion regulation difficulties will result in more self-forgiving and less harsh judgement of oneself.

Compliance with Ethical Standards

Ethical Approval

The research was carried out with the approval of the Ethics Committee of Maltepe University (approval no. 2018/07-11). Institutional and/or national research committee ethical standards and the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards were followed in all study procedures involving human participants.

Author Contributions

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Declaration of Conflicting Interests

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