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Relationship between Rumination and Forgiveness among University Students: Role of Anger

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Abstract

The aim of the present study was to examine the role of anger in the relationship of rumination and forgiveness among University students. A convenient sample comprising 404 students from University of Sargodha was taken. Men and women both were given representation in the sample and their ages ranged from 18 to 25 years (Mean= 20.5, SD= .84). Heartland forgiveness scale (Thompson et al., 2005), rumination scale (McCullough et al. 2007) and State trait anger expression inventory (Spilberger 1999) were used to measure forgiveness, rumination, and anger respectively. Regression analysis revealed that rumination and anger are significant negative predictors of forgiveness. Moreover it was also found that anger significantly mediates in the negative relationship of rumination with forgiveness. Results of current study validated the postulates of the Cognitive neoassociation model. Findings of current study can play an important role in the development of positive traits in university students. Limitations and practical implication of current study are discussed.

Keywords: *Rumination, Forgiveness, Anger.*

Introduction

Rumination means recursive and insistent thinking in reaction to life situations (Robinson & Alloy 2003). It is stated that rumination is highly linked with emotional and cognitive disturbance (Whitmer & Banich 2007). Rumination might be considered as contrary to positive emotions and is a vital facet of forgiveness (Bergland, 2015). The current study is designed on the basis of literature related to the importance of rumination regarding negative emotions such as anger. Previously it has also been claimed that rumination is inversely related to forgiveness (Nolen Hoeksema 2000). It has been found by empirical studies that

there is a relation between rumination tendency and emotional and cognitive disturbance such as lack of ability to inhibit information that is not relevant and difficulty in changing from older to novel data (Whitmer & Banich 2007), depression (Spasojevic´ & Alloy 2001), anxiety (Nolen-Hoeksema 2000), and lessened feelings of control (Nolen-Hoeksema & Jackson 2001). Furthermore, significant role of rumination in the maintenance of negative states of mood accompanying interpersonal hurts was demonstrated (McCulloug et al. 2007). Keeping in view the available literature and significance of forgiveness in the life of human beings, the current study was designed to investigate those variables, which inhibit forgiveness such as rumination about an interpersonal offense and negative emotion such as anger.

Rumination has an impact on forgiveness by sustaining the distress of a person about a particular offense (McCullough 2000). Forgiveness is a motivational social psychological factor comprising positive social and motivational behavior according to the social Psychological determinants Model of Forgiveness. This model also posits rumination as an important factor that has direct impact on the process of forgiveness in interpersonal relationships. Rumination as a personality trait is negatively related with forgiveness (Berry et al. 2005). Research indicates that people who forgive others more are less ruminating (Berry et al. 2001; Locus et al. 2010; McCullough et al. 2001; Yamhure et al. 2003).

In a previous study in order to investigate the relationship between rumination and forgiveness, a sample from different faculties of Pamukkale University was taken. The sample consisted of 840 students (380 males, 460 females). The sample was taken through random cluster sampling method. Self-reported questionnaires were used. According to the result of this study, rumination was negatively associated with forgiveness (Oral & Arslan, 2017). To see the relationship of rumination with forgiveness another study was conducted with college students. The result of this study showed that rumination is negatively associated with interpersonal forgiveness because those students who have poor control on their ruminative thoughts have less ability to forgive as compared to others (Zhang et al. 2017).

In addition, rumination is considered as an influential factor in process aggression (Miller et al. 2003). Rumination has been found to be a significant determining factor of forgiveness. Rumination is a responding method to distress which passively and repetitively focuses on distress symptoms and on potential causes and effects of these symptoms. Ruminating people stay focused on their emotions and problems related to them without any effort to resolve them (Nolen-Hoeksema et al. 2008).

Literature Review and Theoretical Grounds

It is claimed in previous researches that relationship between rumination and forgiveness is explained by various type of emotions. For instance, The Cognitive neoassociation model (CNA) of aggression (Miller et al. 2003) provides the explanation that relationship between forgiveness and rumination can be explained through negative emotions such as anger. According to this model, thinking about wrongdoings evokes negative emotions in the offended that eventually stimulate other thoughts, feelings, motivations, and a reduced tendency to forgive. According to this model rumination of the days, weeks and hours when the bad event occurred, again stimulates the associated network that is typically stimulated when wrongdoing was performed. By rehearsing thoughts and images of wrongdoing, the little bit of negative influence that a wrongdoing had stimulated is re-stimulated and this negative affect again evokes thoughts and motivations that prepare body for fight and flight. Therefore, rumination may be a cause to re-experience the thoughts, affect, motivations and bodily response of wrongdoing as if it was happening again, but maybe to a lesser degree. (McCullough et al. 2003).

Relationship between rumination and forgiveness can also be explained through stress-and-coping theory of forgiveness. This theory states that rumination works on emotional and cognitive level and alters the level of forgiveness by bringing a change in thoughts and emotions (Worthington 2006). Wrongdoings of someone generate rumination and anger in individuals. As a result of rumination over transgressions, it

refreshes the feeling of being hurt and decreases the level of forgiveness in the victim (McCullough et al. 2007).

To investigate the mediating role of anger in relationship between rumination and forgiveness, a study was conducted in China with college students. According to the result of this study, anger was a predictor of forgiveness and individuals who showed ruminative thinking were experiencing anger more frequently. It is stated that if people are haibitual of over thinking about any transgression then they will develop anger and as a result they will be less likely to forgive (Wu et al. 2019).

Study conducted by Schweres (2012) also found the same results and they concluded that forgiveness and rumination are not simply correlated but anger plays an important role by mediating this effect. Keeping in view the importance of forgiveness in the mental health of individuals, the current study was designed to validate the CAN model in Pakistani context. Though these variables have already been studied in various other cultures but they have not yet been explored in the Pakistani indigenous context. As these variables are culturally specific, it is important to test this model in the Pakistani collectivistic culture.

Method

Participants

The Convenient sample of the study comprised 404 university students. Women (n=254) and men (n=150) were given representation in the sample. Participants were taken from different departments of pure sciences and social sciences from University of Sargodha. Age of the sample ranged from 18 to 25. Only those students were recruited who were enrolled in regular sessions.

Measures

Rumination Scale

A modified version of the scale of intrusiveness for rumination inspired by impact event scale was used for assessment of the construct of rumination (McCullough et al. 2007). In the current study Urdu translated version of the scale was used (Kinza & Ghayas, 2021). There are eight items in the scale and response pattern of scale is five point Likert scale. High internal consistency was demonstrated by the original measure with Chronbach's alpha level of .94. Alpha reliability of Urdu translated version was .90.

State Trait Anger Expression Inventory-2(STAXI-2)

To measure the trait anger, Urdu translated State Trait Anger Expression Inventory-2 (Spielberger 1999) was used. Only trait subscale was used . This subscale consists of 10 items. The items of this scale are scored on 4 point likert scale ranging from 1 = almost never to 4 = almost always. The value of alpha reliability for the original scale is .81 to .91, and the value of test-retest reliability is r = .70 to .77 (Spielberger 1999). The value of alpha reliability for Urdu translated version is .79 (Younis, 2019).

Heartland forgiveness scale

In the current study to examine forgiveness among participants, the Urdu translated version of heartland forgiveness scale (Riffat, 2010) was used. Heartland forgiveness scale is a self-reported measure with 18 items. It consists of three subscales: forgiveness of self, forgiveness of others, and forgiveness of situation. Each subscales consists of 6 items. The items are scored on a 7 point likert scale ranging from 1 (Almost always more false than true) to 7(Almost always true of me). High score of participants on each subscale indicates higher level of forgiveness in each domain. The alpha reliability for the overall heartland forgiveness is .84 to .87 and the value of test-retest reliability is .82 (Thompson 2005). In Urdu version, the

alpha reliability for the subscale of forgiveness of self is .68, forgiveness of others is .73, forgiveness of situation is .65 and for the overall scale is .71 (Riffat, 2010).

Procedure

Participants were university students who were enrolled in graduate, undergraduate and post graduate courses. For the data collection those participants were taken who gave their consent. All participants who were part of the research were provided with the informed consent form and were instructed to read it carefully. In the informed consent sheet, the purpose of the study was mentioned and it was stated that they may discontinue the research at any time, Participants were assured that the information taken from them would only be utilized for research purpose and will be kep confidential. There were total 450 questionnaires which were distributed among the participants. From these, 430 questionnaires were returned by the participants and from these 430, 26 questionnaires were discarded. Finally 404 questionnaires were left whose responses were used for the present study.

Results

Table 1: Descriptive Statistics of Each Scale

	M	SD	Reliability
1. Forgiveness	80.81	10.02	.77
2. Anger	20.67	5.72	.79
3. Rumination	19.31	9.38	.91

Table 1 shows descriptive statistics for each study variable.

Table 2: Correlation among Study Variables

Variables	1	2	3
1. Forgiveness	1		
2. Anger	-.30**	1	
3. Rumination	-.34**	.39**	1

**p<0.01(2-tailed)

Table 2 shows significant correlation among the all variables of the study.

Table 3: Multiple Linear Regression Analysis for Rumination and Anger as Predictor of Forgiveness

Predictor	B	ST error	ß	95%CI		R^2
			Forgiveness	LL	UL	
Rumination	-.25	.05	-.23***	-.35	-.14	.20
Anger	-.25	.08	-.14***	-.42	-.07	

****p*<.001. ***p*<.01. **p*<.05.

Multiple linear regression analysis is used to test rumination and anger as predictors of forgiveness. Results are showing that rumination (β= -.23, t= 4.7, p<.001), and anger (β= -.14, t= -.2.8, p<.05) are significant negative predictors of forgiveness. Value of R^2 .20 is illustrating that 20% variance is shared by predictors in forgiveness F= (1, 400) = 34.78 p<.001).

Table 4: Direct and Indirect Effect of Rumination through Anger on Forgiveness (N= 404)

Outcome	predictors	Direct effect			Indirect effect		
Y	X	B	LL	UL	B	LL	UL
Anger	Rumination	.24***	.18	.29			
Forgiveness	Rumination	-.28***	-.38	-.17	-.08**	-.13	-.04
	Anger	-.34**	-.51	-.17			

***p<.001. **p<.01. *p<.05.

Table 4 shows the mediating analysis conducted through PROCESS macro SPSS (Hayes, 2013). This Table shows the direct, indirect effect and mediation of anger in relationship between rumination and forgiveness. In the model of Forgiveness, Rumination predicted Anger (Mediator) in positive direction (β= .24, t= 8.5, p<.001) and explained 15% variance in it, which is statistically significant (R^2=.15, F=73, p<.001). Anger (β= -.34, t= -3.9, p <.01) and Rumination (β= -.28, t= -5.24, p<.001) predicted Forgiveness (dependent variable) in negative direction and both explained 14% variance in it, which is statistically significant (R^2=.14, F=35, p<.001). The indirect effect of rumination through anger on forgiveness was significant in negative direction with 95% confidence interval which did not include zero and confirmed the mediating effect.

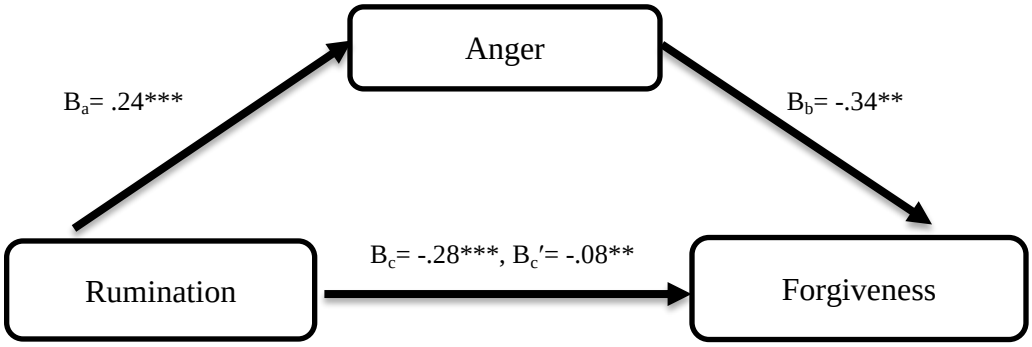

Figure 1: Schematic presentation of mediating role of anger in relationship between rumination and forgiveness.

Discussion

Current study was designed to measure the role of anger in relationship between rumination and forgiveness. Psychometric properties of all scales were ensured. Initial correlation analysis revealed that all variables are significantly correlated with each other.

Regression analysis revealed that rumination is a significant negative predictor of forgiveness. Empirical work shows a vigorous link between rumination and forgiveness (McCullough et al., 2007). The cognitive neoassociation model (CNA) explains the link between rumination and forgiveness and demonstrated that rumination can be significantly linked with forgiveness (Miller et al., 2003).Social psychological determinant model of forgiveness states that forgiveness is a motivational social psychological factor consisting of positive motivational and social behavior. According to this model, rumination is a factor having direct impact on forgiveness process in interpersonal relations. Negative association between forgiveness and rumination has been observed by showing the negative impact of rumination on psychological wellbeing and interpersonal behavior (Mccullough et al., 1998). Our results also revealed that anger is a significant negative predictor of forgiveness. These findings are in line with the previous studies that confirmed the negative relationship of anger with forgiveness (Fatfouta et al. 2015; Miller et al., 2003)

In the present study we hypothesized that Anger would mediate in the relationship between Rumination and Forgiveness. This hypothesis is supported by previous researches. The result of the present study shows that there is a negative relationship between Rumination and Forgiveness and this result is also supported from the literature. The link between forgiveness and rumination was explored longitudinally by (McCullough et al. 2007) in three studies. The researchers provided the validation of causal relationship between forgiveness and rumination. Research indicates that people who forgive others more are less ruminating (Berry et al., 2001; McCullough et al. 2001; Yamhure et al. 2003). Schweres (2012) investigated the relationship between rumination and forgiveness of others and the results of this study show that rumination and forgiveness of others have a significant negative relationship with each other. Therefore it can be stated that the result of this study is in conformity with the literature. Moreover Berkowitz (2012) has shown that ruminative thoughts force the victims to experience indignant feelings repeatedly that, eventually inhibit forgiveness. Moreover the researches have indicated that forgiveness is negatively predicted by rumination, and the probability of forgiveness can be enhanced by reducing rumination (Witvliet et al. 2015)

In the present research mediation analysis was done through the Process macro SPSS (Hayes 2013). According to the results of present study the direct effect of rumination on anger is positively significant and the direct effect of anger on forgiveness is negatively significant. While the direct effect of rumination on forgiveness and indirect effect of rumination through anger on forgiveness is also significantly negative and significant indirect effect is showing that anger has a mediating role in the relationship between rumination and Forgiveness. These findings are also supported through the previous researches. According to the cognitive neoassociative model (CNA) model individuals who ruminate about transgression will have tendency to produce negative emotions like anger or fear; these in turn stimulate other patterns in aggression related cognitive network. So the CNA model proposed that negative affect such as anger can mediate the link between the relationship of rumination and forgiveness (Miller et al. 2003). McCullough et al. (2007) also verified the mediating role of anger in relationship between rumination and forgiveness. According to the result of his study decrease in rumination was linked with increased forgiveness and these effects were partially mediated by anger. Morover a lot of studies conducted in various cultures supported the role of negative emotions in the link of rumination and forgiveness (Besharat et al. 2013; Besharat & Pourbohlool 2012; Bushman 2002; Ray et al. 2008).

Limitations and Future Directions

This study has several limitations. Cross sectional research design was used for the present study which just gives us the picture at one point in time. In the future through longitudinal research, the mediating role of Anger in the indirect effect of rumination on forgiveness should be tested. Secondly, in the present study, self-reported measures were used for data collection in which there are chances of subjectivity bias. So in the future, to control the chances of subjectivity bias, it is suggested that various types of methods for assessment should be used.

Implications

Result of the present study suggest that Rumination is a negative predictor of forgiveness and positive predictor of anger, among students. So we should introduce students with techniques such as CBT (Cognitive behavioral therapy) that would help them to cope with the ruminative problems and decrease negative emotions which emerge due to the ruminative thoughts. Students should be made aware of their ruminative behaviors and they should be trained in controlling the impulse of ruminative behaviors. Students should also introduced mindfulness techniques such as meditation, breathing methods, guided imagery etc. to reduce ruminative thoughts. Students should be taught anger reduction techniques such as identifying triggers and warning signs , reframing their thinking, deep breathing and muscle relaxation techniques.

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