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The contribution of rumination and internal working models of attachment to psychological symptoms

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Abstract

This study examined the relations of ruminative tendency and internal working models of attachment (Self-Model and Other-Model) to psychological symptoms among the Turkish university students. The sample comprised of 610 university students with 288 female and 319 male participants (3 unknown). The results revealed that both rumination and internal working models (self-model and other-model) significantly correlated with the higher level of psychological symptoms. However, after controlled for the impact of rumination, the relationship of self-model and psychological symptoms was no longer significant. Therefore, ceasing the rumination is suggested as a coping strategy to deal with psychological symptoms.

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Keywords: Rumination, internal models, psychological symptoms.

1. Introduction

University years are critical in one's life because young adults leave their home and move to a different city for their education (Özgül, 1989). It is a transition period that they need to achieve some developmental tasks. They become subject to different potential source of problems such as career, educational, familial, personal and social to solve out (Çoruh, 1989). Therefore, being resilient to the life stressors becomes crucial in coping with psychological symptoms. Some researchers consider the psychological symptoms as the self-defeating thoughts, attitudes, perceptions and memories leading to unnecessary long-lasting psychological sufferings (Bruno, 1993). The question originated from this assumption may be how some people cope with these self-defeating factors while others do not. Several risk and protective factors for the development of the psychological symptoms have been proposed. Among these factors, rumination and the internal working models of the attachments were the main interest for this study.

Internal working models of attachment (IWMs) develop as a result of the responsiveness and availability of the care-giver (Bowlby, 1973). IWMs encode the belief of one's lovability and competence of self (self-model) along with the trust-worthiness and dependability of others (other-model) in the eyes of child. IWMs with a low sense of self-worth and distrust to others influence how the person perceives and interprets the events. For example, the low sense of self worth forces the self-defeating thoughts; '*I am not a person worth being loved,*' and distrust to others strengthens the self-defeating thoughts; '*others will not be ready to help me when I need and they are not trustable to depend on*' (Bowlby, 1973). These internal models can also be dichotomized as positive and negative (Bartholomew & Horowitz, 1991). For instance, one person may have positive self-model and negative other-model

(or vice versa) or both models positive or negative. These internal models are closely related to attachment patterns; they are the substructure of the attachment patterns (Berman & Sperling, 1994) and the attachment patterns are the behavioral manifestations of the internal models (Rothbard & Shaver, 1994).

The internal models (positive or negative) have been reported as related with the psychological symptoms (Hankin, Kassel & Abela, 2005; Mikulincer & Shaver, 2007). For example, in a study, the university students with positive internal models (secure attachment pattern) reported the expectation to have better coping resources than the students with negative internal models (insecure) (Buelow, Lyddon & Johnson, 2002). Along the same line, other studies reported that students with the negative internal models tend to report more psychological symptoms than the students with positive internal models (see Shorey & Snyder, 2006). Moreover, IWMs manipulate emotional, behavioral and cognitional tendencies of the people in interpersonal relation network (Fraley, 2007). Upon the hardships in social network such as loss, separation or relationship problems, the insecure people tend to recall more negative memories and arouse more negative affect or leave the aroused negative feelings without solved. Yet, people with secure pattern having positive self-model and other-model tend to recall more positive memories that help them to cope better with the problems in their life (Pereg & Mikulincer, 2004).

Another line of studies reported close relationships between ruminative tendency and psychological symptoms (e.g., Nolen-Hoeksema, 1991). Ruminative people paralyzed to take action to solve their problems; people question their competence, self-worth, and their situation but without any concrete deed to solve the current problem (Nolen-Hoeksema, 1991). Excessive rumination increases the negative mood, eases the access to negative memories and reduces motivation of the people to solve the problem (Ward, Lyubomirsky, Sousa, & Nolen-Hoeksema, 2003). In addition to the more negative memory access, ruminative people are more probable to have poor problem solving ability that deteriorates the recovering from the negative mood and develop maladaptive strategies against psychological symptoms such as constantly thinking about them (Lymbursky & Nolen-Hoeksema, 1995). As a result, rumination triggers further sadness and anxiety (Wood, Saltzberg, Neale, Stone, & Rachmiel, 1990); hence the concrete plans of actions are diminished. The reduced concreteness and increased abstraction impair problem solving, leaving personal concerns unresolved, and thereby trigger further rumination (Watkins, & Moulds, 2005).

Best of the authors' knowledge, the relative contributions of the rumination and internal working models to the psychological symptoms have not been tested yet. Therefore, this study aimed to bring these variables together to examine their relations to psychological symptoms. It is hypothesized that rumination and internal models may converge on predicting psychological symptoms. As it is explained, rumination as a thinking pattern can perform a crucial role in activation of the previously constructed mental sets. Rumination may worsen the individuals' inclination to consider the 'others' and 'self' negatively because rumination spreads negative affect by activating generalizations (e.g. about the self and others) derived from the past disturbing memories upon life distress (Nolen-Hoeksema, 1998). Therefore people being more negative about themselves and others with higher level of rumination would be experiencing higher level of psychological problems.

2. Method

2.1. Participants and procedures

The participants of the study consisted of 610 (288 female, 319 male, and 3 unknown) university students coming from 9 different universities located in Istanbul and Ankara. The age of the participants ranged from 19 years old to 29 years old ($M = 22.42$; $SD = 2.19$). Forty of the participants (6.6%) were graduate, and 545 (89.3%) of the participants were undergraduate students.

2.2. Measures

Brief Symptom Inventory (BSI): This self report inventory was developed in 1992 by L. R. Derogatis and widely used to screen the psychological symptoms. Participants are asked to respond to 53 items on a 5-point Likert type

scale ranging from “not at all” (0) to “always” (4). BSI was adapted to Turkish by Şahin and Durak (1994). The internal consistency of the instrument for this study was .95.

Relationship Questionnaire (RQ): The Relationship Questionnaire was developed by Bartholomew and Horowitz (1991). Adaptation of the RQ is performed by Sümer and Güngör (1999) and reported as valid and reliable measure. RQ includes four short descriptive paragraphs. Each paragraph describes one of the four prototypical attachment patterns: secure, dismissing, fearful, and preoccupied. The paragraphs measure the respondents’ attitude as it applies to general close relationships. Participants are asked to evaluate how much they correspond to each paragraph separately. For example, the secure prototype is as follows: “It is easy for me to become emotionally close to others. I am comfortable depending on others and having others depend on me. I do not worry about being alone or having others not accept me.”

Ruminative Response Scale (RRS): Ruminative response scale was originally developed by Nolen-Hoeksema and Morrow (1991). And translate into Turkish by Erdur (2002). RRS has 22 items on a 4-point Likert type scale. In this research, internal consistency of the scale was found as .85.

3. Results

Descriptive and multiple hierarchical regression analyses were utilized for data analyses. Necessary assumptions were checked prior to the main analyses and no gross violation was observed. The strongest correlation was revealed between rumination and psychological symptoms ($r = .64, p < .01$). The weakest significant correlation was between other-model and rumination ($r = .08, p < .05$). In Table 3.1, the correlation coefficients were depicted among the research variables.

Table 3.1 Intercorrelations of the Research Variables

Variables	Symptoms	Rumination	Self-Model	Other-Model
Symptoms	-			
Rumination	.638**	-		
Self-Model	-.192**	-.237**	-	
Other-Model	-.191**	-.083*	.094*	-

Note: $n = 589$. ** $p < .01$, two-tailed. * $p < .05$, two-tailed.

In a hierarchical regression analysis, rumination was entered in the first step and the both internal models were entered in the second step. According to the results, the regression equation with rumination was significant ($R^2 = .407$, adjusted $R^2 = .406$, $F_{inc}(1, 587) = 402.98, p = .000$). Internal models (self-model and other-model) predicted psychological symptoms significantly over and above rumination ($\Delta R^2 = .02, F(2, 585) = 10.27, p = .000$). According to the results, the contribution of rumination was the largest. ($\beta = .61, p = .000$). However, the unique contribution of the internal working models displayed different patterns. That is, while the unique contribution of the other-models was significant ($\beta = -.14, p = .000$), the unique contribution of the self-model was not significant ($\beta = -.03, p = .312$) (see Table 3.2).

Table 3.2 Hierarchical Regression Results for Psychological Symptoms with Respect to Rumination and Internal Models

Variables	R^2	B	$SE B$	β	t	sr_i
Model 1	.407					
Rumination		2.44	.12	.63	20.07**	.64
Model 2	.427					
Rumination		2.36	.12	.62	19.12**	.62
Self-Model		-.26	.26	-.03	-1.01	-.04
Other-Model		-1.21	.28	-.14	-4.33**	-.18

Note: $n = 589$. ** $p < .001$

Testing the Meditational role of rumination between Internal Models and Psychological Symptoms

In order to test the meditational role of rumination, the steps of Baron and Kenny (1986) were followed. First, self-model regressed on psychological symptoms and result revealed significant relationship ($t(588) = -4.74, p = .000, \beta$

= -.192). Second, self-model regressed on rumination and the result showed significant relationship between self-model and rumination ($t(588) = -5.91, p = .000, \beta = -.237$). Third, rumination regressed on psychological symptoms and again results indicated significant relationship between rumination and psychological symptoms ($t(588) = 20.07, p = .000, \beta = .638$). The results of these three steps indicated that the mediation model meets the requirements as outlined by Baron and Kenny (1986). Finally, the meditational role of rumination was tested by including self-model in the first block and rumination in the second block. As expected, self-model was a significant predictor of psychological symptoms ($t(588) = -4.74, p = .000, \beta = -.192$). In the next block, when rumination was added to the equation, it predicted significant variance in psychological symptoms ($t(588) = 19.20, p = .000, \beta = .628$). However, self-model was no longer significant predictor of the psychological symptoms ($t(588) = -1.32, p = .185, \beta = -.043$) of university students for the current set of data (See Table 3.3). The Sobel test results also confirmed the significant indirect effect of self-model through rumination on psychological symptoms, z -value = 5.63, $p = .000$.

Table 3.3 Hierarchical Regression Results of Mediation Testing for Psychological Symptoms

Variables	R^2	B	$SE B$	β	t	sr_i
Model 1	.037					
Self-Model		-1.54	.32	-.19	-4.74**	-.19
Model 2	.409					
Self-Model		-.35	.26	-.04	-1.33	-.05
Rumination		2.40	.12	.63	19.2**	.62

Note: $n = 589$. ** $p < .00$

4. Discussion

Two different line of research indicated that rumination and internal working models were related to psychological symptoms. This study brought these variables together to examine their relative contribution to the psychological symptoms. The results showed that as rumination highly correlated with psychological symptoms, other-model was found to be also correlated but the relation of self-model to the psychological symptoms was found to be rather indirect as rumination seemed to be mediating. The relationships of rumination with psychological symptoms were parallel to the previous studies (e.g., Nolen-Hoeksema, 1998) as well as the relation of negative internal models (e.g., Mikulincer, Florian & Weller, 1993). This study adds to the existing literature that the contribution of the rumination appears higher than internal models and even rumination mediates the relation of self-model to psychological symptoms. That is, if people with negative internal models are ruminative they are more likely to report psychological symptoms. Ceasing rumination and negative internal models may soothe the psychological symptoms. Therefore, the counselors in university settings may help their students to find ways to reduce their ruminative tendencies and develop at least an awareness of their negative internal models as internal models are the mental structures that can not easy to change (Cohn et al., 1992). Finally, this study has a number of limitations such as usage of self report measures and convenient sampling. Therefore, future studies are needed to cross validate the result of the study.

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