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The Relationship Between Rumination, Gender, Age, and Posttraumatic Stress

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The purpose of the present study was to assess the relationship between rumination and posttraumatic stress, and to determine the effects of gender and age on that relationship. Responses on brooding and reflective subscales of a rumination measure were compared across adult age groups, and evaluated in relationship to an individual's gender and emotional response to trauma. Women demonstrated higher levels of rumination than men, and younger adults demonstrated higher levels of rumination than older adults. In a college sample, total rumination score was a positive indicator of whether an individual was emotionally bothered by a traumatic experience. In a community sample, age was a negative indicator of whether an individual was emotionally bothered by trauma.

Keywords: rumination, posttraumatic stress, age differences, gender differences

Posttraumatic stress disorder, or PTSD, is a disorder that can develop in an individual who has experienced a traumatic event. For a diagnosis of PTSD to be given, symptoms of re-experiencing, emotional numbing, and hyperarousal must be present and last longer than a month (American Psychiatric Association, 2013). Factors such as rumination tendencies, gender, and age may all influence the manner in which one responds to a traumatic event, and may also play a role in how one recovers from the experience. Therefore, research that sheds light on the relationship between individual characteristics and responses to trauma may provide important information for the development of effective treatment methodologies.

Women are twice as likely to be diagnosed with PTSD as men (Wisco, Marx, & Keane, 2013); and gender influences the age at which an individual is most vulnerable to posttraumatic stress disorder, with women most likely to be diagnosed in their early 50s and men most likely to be diagnosed in their early 40s (Ditlevsen, 2010; Nauert, 2010). Age has been found to influence both the assessment of PTSD and an individual's openness to treatment, with younger adults

more likely than older adults to report symptoms and seek and complete treatment (Lu, Carlson, Duckart, & Dobscha, 2012; Lunney, Schnurr, & Cook, 2014).

Posttraumatic stress disorder has an interesting and complex relationship with rumination, which is defined as "a mode of responding to distress that involves repetitively and passively focusing on symptoms of distress and on the possible causes and consequences of these symptoms" (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008, p. 400). Rumination is not a problem-solving mechanism, involves no efforts to alter circumstances, and causes the ruminator to focus solely on emotions without making an effort to alleviate the situation.

Gender moderates levels of rumination in individuals, with women more likely to ruminate than men. This is true in overall rumination, as well as in rumination subscales that assess brooding and reflective tendencies. Reflective rumination is considered to be an adaptive method, while brooding is considered a maladaptive method to problem-solving. Rumination is directly related to explicit avoidance of a thought; and like cognitive avoidance and thought suppression, rumination is strongly related to higher rates of

depressive symptoms, posttraumatic stress, and prolonged grief symptoms (Eisma et al., 2014). Sutterlin, Paap, Babic, Kubler, and Vogeles (2012) found that older individuals are less likely than younger adults to ruminate, and those who do ruminate, are more likely to experience detrimental health effects.

Rumination and posttraumatic stress disorder interact in a manner that increases stress symptoms, depressive symptoms, and further disrupts sleeping patterns. Because rumination encourages the evaluation of the specific circumstances leading to the traumatic event, rather than addressing the emotions provoked by the experience, rumination is a significant contributor to the maintenance of posttraumatic stress disorder (Birrer & Michael, 2011; Hu, Koucky, Brown, Bruce, & Sheline, 2014; Michael, Halligan, Clark, & Ehlers, 2007).

In efforts to treat PTSD symptoms, clinicians must understand the ruminative process and how it interacts with posttraumatic stress. By reducing ruminative thoughts, it may be possible to reduce the severity of PTSD symptoms, and thereby facilitate an individual's recovery from a traumatic experience. The purpose of the present study was to further our understanding of the relationship between ruminative tendencies and responses to trauma, and to determine the influences of age and gender on that relationship. Clarifying how these factors relate is an important step in the development of effective PTSD treatments, and may provide information that could help in the prevention of posttraumatic stress symptoms.

Methods

Participants

College students (N=195) and community residents (N=75) were recruited to serve as participants; 176 were female and 94

were male. The college students ranged in age from 18-24. Community residents were aged 25 and older, with 25 in the youngest group (aged 25-44), 20 in the middle group (aged 45-64), and 30 in the oldest group (aged 65 and older).

Measures

10-item Rumination Scale. This scale, created by Treynor, Gonzalez, and Nolen-Hoeksema, consists of 5 items to measure brooding tendencies and 5 items to measure reflective tendencies, for a total of 10 items to measure rumination behavior as a whole.

Trauma History Screen. This scale is a self-reported 14-item measure of traumatic experiences. It contains 13 specific events, such as sexual abuse, military service, and natural disasters, along with one general event indicating trauma.

Procedure

Data collection took less than 15 minutes. Participants were given test booklets that included a basic demographic questionnaire, the 10-item rumination scale, and the trauma history screen, in that order.

Results

College Participants

Of the 195 college-aged participants, 68 were male and 128 were female. Women (M = 13.291, SD = 5.716) were found to have higher total rumination scores than men (M = 11.206, SD = 5.635) ($t(193) = -2.440, p = .016, 95\% \text{ CI}:[-3.771, -.400]$), and women (M = 6.9134, SD = 3.0758) had higher brooding scores than men (M = 5.588, SD = 3.229) ($t(193) = -2.818, p = .005, 95\% \text{ CI}:[-2.253, -.398]$). No significant difference was found between the reflective tendencies of men (M = 5.618, SD = 3.181) and women (M = 6.38, SD =

3.462)($t(193) = -1.503, p = .135, 95\% \text{ CI}:[-1.758, .238]$).

A Mann-Whitney U test was calculated examining the ranks of total rumination scores, brooding scores, and reflective scores of men and women. Women had higher ranks of total ruminative tendencies (M rank = 105.25) than men (M rank = 84.46, $U = 3397.500, p = .014$). Women also had higher ranks of brooding (M rank = 106.22) than men (M rank = 82.65, $U = 3274.500, p = .005$). No significant difference was found in the ranks of reflective scores ($U = 3842.000, p = .203$) of men (M rank = 91) and women (M rank = 101.75). This nonparametric measure was consistent with the findings of the parametric measure.

Finally, a binary logistic regression was used to see what factors can predict whether or not an individual was emotionally bothered by a traumatic experience. Total rumination scores, brooding scores, reflective scores, and gender were all measured to see their influences on emotional bothering. Total rumination was a positive indicator of whether or not an individual was emotionally bothered by a traumatic experience ($B = .184, \text{Wald} = 9.317, p = .002$); the higher the scores of overall rumination, the more likely an individual was to be emotionally bothered by trauma. Brooding was a marginally significant indicator of whether or not an individual was emotionally bothered by a traumatic experience ($B = -.206, \text{Wald} = 3.810, p = .051$); the higher an individual's brooding score, the less likely he or she was to report being emotionally bothered by a traumatic experience. Gender did not serve as a predictor for whether or not an individual was emotionally bothered by trauma ($B = .452, \text{Wald} = 1.911, p = .167$).

Community Participants

The youngest community residents demonstrated high levels of rumination, more

similar to the college-age participants than to the older community residents (see Table 1).

Of the 74 community residents, 26 were male and 48 were female. A negative correlation was found between age and their total rumination scores ($r(69) = -.482, p < .001, r^2 = .232$) indicating that as age progresses, ruminative tendencies decrease. Negative correlations were also found between age and brooding tendencies ($r(70) = -.351, p = .003, r^2 = .123$) and between age and reflective tendencies ($r(70) = -.464, p < .001, r^2 = .215$). These correlations indicate that aging is associated with decreases in both brooding and reflective tendencies.

A Spearman ρ correlation coefficient was calculated for the relationship between age and total rumination, brooding, and reflective scores. A negative correlation was again found between age and total ruminative tendencies ($\rho(69) = -.482, p = .000, r^2 = .232$). Negative correlations were also found between age and brooding tendencies ($\rho(70) = -.333, p = .004, r^2 = .111$) and between age and reflective tendencies ($\rho(70) = -.478, p = .000, r^2 = .228$). This nonparametric measure was consistent with the findings of the parametric measure that ruminative tendencies, brooding subscale scores, and reflective subscale scores all tend to decrease as age increases.

Finally, a binary logistic regression was used with a block entry method, to determine what factors predict whether the community participants were emotionally bothered by a traumatic experience. Total rumination scores, brooding scores, reflective scores, age and gender were all measured to assess their influences on emotional bothering. In this sample, only age was found to be a predictor of whether or not an individual was emotionally bothered by trauma ($B = -.043, \text{Wald} = 4.224, p = .040$); as age increased, an individual was less likely to be bothered by emotional trauma. Total rumination ($B = .015, \text{Wald} = .017, p = .895$), brooding ($B = -.074, \text{Wald} = .166,$

$p=.684$), and gender ($B=.752$, $Wald=1.470$, $p=.225$) were not significant predictors, and reflective tendencies did not enter the equation.

Discussion

The present research replicates and extends the findings of previous research concerning the relationships between posttraumatic stress and rumination, posttraumatic stress and age, and posttraumatic stress and gender. The study design combined these factors to further establish the link between ruminative tendencies and posttraumatic stress responses, and to clarify the effects of gender and age. A clear understanding of how an individual's personal characteristics influence one's response to emotional or physical trauma is essential to the development of effective strategies to prevent and treat PTSD.

As expected, women were more likely to ruminate than men, or at least more likely to report ruminative tendencies. This finding may be explained by societal norms and expectations regarding gender roles. It is considered acceptable for women to be emotional, while it is seen as unmasculine for men to exhibit the same emotional behaviors in response to trauma.

Younger participants were more likely to ruminate than older participants. While biological aging may be a causative factor, it is also possible that age-related differences in rumination tendencies are due to generational differences in experiences and attitudes, or that older adults have benefitted from the time they have had to ponder their experiences and understand the emotions attached.

Rumination was associated with a negative response to trauma in the college sample. In that group, those with high rumination scores were more likely to report being emotionally bothered by a traumatic experience. This finding is consistent with the notion that

rumination perpetuates the reexperiencing of posttraumatic stress symptoms.

In the community sample, increasing age was associated with a less negative response to trauma. Older community residents were less likely to report being emotionally bothered by traumatic experiences. Although age was negatively correlated with rumination scores, rumination tendencies were not predictive of the community residents' responses to trauma. This finding suggests that there are factors beyond rumination tendencies that contribute to age differences in emotional responses to trauma.

Based on published research and the current findings, it is recommended that treatment methods consider ruminative tendencies as well as emotional responses to traumatic experiences. An approach that addresses both mental health issues, and considers the individual's age and gender, is likely to be more effective in reducing posttraumatic stress symptoms.

References

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* 5th ed.). Arlington, VA: American Psychiatric Association.
- Birrer, E., & Michael, T. (2011). Rumination in PTSD as well as in traumatized and non-traumatized depressed patients: A cross-sectional clinical study. *Behavioural and Cognitive Psychotherapy*, 39, 381-397.
- Borders, A., McAndrew, L.M., Quigley, K.S., & Chandler, H.K. (2012). Rumination moderates the association between PTSD and depressive symptoms and risky behaviors in U.S veterans. *Journal of Traumatic Stress*, 25(5), 583-586.
- Borders, A., Rothman, D.J., & McAndrew, L.M. (2015). Sleep problems may mediate associations between rumination and PTSD and depressive symptoms among OIF/OEF veterans. *Psychological Trauma: Theory, Research, Practice, and Policy*, 7(1), 76-84.
- Brinker, J.K. (2013). Rumination and reminiscence in older adults: Implications for clinical practice. *Europe Journal of Ageing*, 10, 223-227.
- Ditlevsen, D.N., (2010). The combined effect of gender and age of post traumatic stress disorder: Do men and women show differences in the lifespan distribution of the disorder? *Annals of General Psychiatry*, 9.

- D'Hudson, G. & Saling, L.L. (2010). Worry and rumination in older adults: Differentiating the process. *Aging and Mental Health*, 15(5), 524-534.
- Eisma, M.C., Rinck, M., Stroebe, M.S., Schut, H.A.W., Boelen, P.A., Stroebe, W., & Bout, J.V.D. (2015). Rumination and implicit avoidance following bereavement: An approach avoidance task investigation. *Journal of Behavior Therapy and Experimental Psychiatry*, 47, 84-91.
- Erksine, J.A.K., Kvavilashvili, L., & Kornbrot, D.E. (2007). The predictors of thought suppression in young and old adults: Effects of rumination, anxiety, and other variables. *Personality and Individual Differences*, 42, 1047-1057.
- Hippel, W.V., Vasey, M.W., Gonda, T., & Stern, T. (2006). Executive function deficits, rumination, and late-onset depressive symptoms in older adults. *Cognitive Therapy Research*, 32, 474-487.
- Hu, E., Koucky, E.M., Brown, W.J., Bruce, S.E., & Sheline, Y.I. (2013). The role of rumination in elevating perceived stress in posttraumatic stress disorder. *Journal of Interpersonal Violence*, 29.
- Lunney, C.A., Schnurr, P.P., & Cook, J.M. (2014). Comparison of clinician- and self-assessments of posttraumatic stress symptoms in older versus younger veterans. *Journal of Traumatic Stress*, 24, 144-151.
- Lu, M.W., Carlson, K.F., Duckart, J.P., & Dobscha, S.K. (2012). The effects of age on initiation of mental health treatment after positive PTSD screens among veteran affairs primary care patients. *General Hospital Psychiatry*, 34, 654-659.
- Mezo, P.G., & Baker, R. M. (2010). The moderating effects of stress and rumination on depressive symptoms in women and men. *Stress and Health*, 28, 333-339.
- Michael, T., Halligan, S.L., Clark, D.M., & Ehlers, A. (2007). Rumination in posttraumatic stress disorder. *Depression and Anxiety*, 24, 307-317.
- Nauert, R. (2010). Risk for PTSD varies by gender, age. *Biomed Central*.
- Nolen-Hoeksema, S., & Davis, C.G. (1999). "Thanks for sharing hat": Ruminators and their social support networks. *Journal of Personality and Social Psychology*, 77(4), 801-814.
- Sütterlin, S., Paap, M. C. S., Babic, S., Kübler, A., & Vögele, C. (2012). Rumination and age: Some things get better. *Journal of Aging Research*. doi:10.1155/2012/267327
- Wisco, B.E., Marx, B.P., & Keane, T.M. (2013). Trauma and posttraumatic stress disorder. *Military Psychologists' Desk Reference*, 207-211. Oxford University Press, Oxford.

Appendix

Table 1

Mean Rumination Scores by Age Group

<u>Age Group</u>	<u>Total Rumination</u>	<u>Brooding</u>	<u>Reflective</u>
18-24	12.56	6.45	6.11
25-44	12.20	6.52	5.68
45-64	10.50	5.68	4.58
65+	6.32	3.96	2.36