REVIEWING THE RELATIONSHIPS BETWEEN RUMINATION AND SHAME, GUILT, ENVY, AND JEALOUSY

Author:
Jonathan S. Oflazian

Faculty Sponsor:
Ashley Borders
Department of Psychology

ABSTRACT

Guilt, shame, jealousy, and envy are known as self-conscious, or self-focused emotions. These common feelings are considered "self-conscious" because the individual takes into account the real (and imagined) reactions of others to their experience of the emotion(s) and subsequently incorporates those reactions into their emotional experience. Recent research has substantially explored the relationships between these self-conscious emotions and rumination, or the negative, redundant thinking about a prior event. It would seem odd then that not a single comprehensive literature review exists on the associations between these constructs. Thus, the purpose of this paper is to define rumination and each of the four emotions, assess the statistical relationships between them, identify limitations in current orthodoxy and methodology, note clinical implications, and suggest directions for future research. Results indicate a reciprocal relationship between rumination and the self-conscious emotions, with the presence of each intensifying and facilitating the experience of the other. This cyclic relationship is strongest for shame and rumination, and jealousy and rumination. Though a mere two studies have examined envy and rumination together, a positive correlation between them exists. Results related to guilt and rumination are more ambiguous and difficult to interpret objectively. Interventions for these emotions and rumination include mindfulness meditation and self-compassion treatments among others.

INTRODUCTION

Guilt, shame, jealousy, and envy are emotions commonly experienced at one point or another, with some being more frequent and/or persistent than others. They are not pleasant feelings and they turn our focus inward, to the self. For this reason, these emotions are classified as self-conscious, or self-focused emotions. Because of the emphasis on the self which is elicited by these emotions, a subject such as rumination is likely to become of particular relevance in the literature, and indeed it has. Researchers have recently begun to examine the effects of the self-conscious emotions on rumination, which is known to have several deleterious impacts itself and therefore needs to be studied in association with the self-conscious emotions. There exists, however, no comprehensive review of the intersectional relationships between self-conscious emotions and rumination. Though, this is puzzling, as a search of the term "rumination" on the psycINFO database yielded 5,897 results as of May 15, 2020 and searches of guilt, shame, jealousy, and envy yielded a combined total of 37,713 results. Given the popularity of these variables among researchers, a literature review of self-conscious emotions and rumination that assesses directionality, effects, outcomes, moderators, mediators, treatments, and implications is certainly in order. Thus, the primary question this paper will seek to answer is: What is the relationship between rumination and self-conscious emotions, specifically guilt, shame, envy, and jealousy?

WHAT IS RUMINATION?

Several researchers use the term "rumination" in ways that differ widely from one another; for the purposes of this paper, rumination shall refer to "a class of conscious thoughts that revolve around a common instrumental theme and that recur in the absence of immediate environmental demands requiring the thoughts" (Martin & Tesser, 1996, p. 7). More simply, rumination can be understood as thinking negatively and repetitively about past events (Gohm et al., 1997), and this thinking is typically

harmful. Rumination is hardly uncommon in the general population (Harvey et al., 2004) and is distinct from other kinds of self-focused mental processes despite persistent conflation of the term with other similar yet separate constructs. Three of these constructs include worry, reflection, and problem solving. Worry is quite similar to rumination, but has a key focus on repetitively thinking about something in the *future* (Eisma et al., 2020), often accompanied by counterfactuals (mentally generated, often negative, possible outcomes to a situation) about the future event (Wyer, 1996). Reflection can be thought of as an intellectual self-attentiveness, involving a heightened awareness of the self in an inquisitive, curious, imaginative, explorative, and/or enjoyable manner, whereas rumination is something of a neurotic self-attentiveness (Trapnell & Campbell, 1999). Individuals who ruminate will often state about their ruminative habits that they are simply attempting to solve problems (Caselli et al., 2017), but other research suggests that problem solving is completely distinct from rumination (D'Zurilla & Goldfried, 1971).

As for the theories surrounding rumination, Watkins (2008) argued in an extensive literature review that three main theories of repetitive thought each offer a substantial framework to best understand rumination. The first theory outlined is the ruminative response styles approach, which argues depressive rumination is best understood through its relation to depressed mood (Nolen-Hoeksema, 1991, 2000, 2004b). It involves persistently thinking about the causes and effects of one's depressive symptoms and the level of associated distress without any positive behavior change as a result of the thinking. Nolen-Hoeksema (2008) notes that individuals experiencing depressed mood, either dysphorically (mildly) or clinically (more seriously), are more likely to ruminate, which leads to the experience of more negative thoughts, issues solving problems, issues implementing instrumental (constructive) behavior, and worsening social support. The second set of theories Watkins (2008) analyzes is the literature surrounding cognitive processing. These theories argue that rumination is induced when an individual is abruptly confronted by particularly distressing information they have not yet considered or been exposed to, which becomes difficult to process against existing beliefs that vary from the novel information. This difficulty in cognitive processing is what leads to rumination (Janoff-Bulman, 1992). The best lens through which repetitive thought can be understood, argues Watkins (2008), is control theory, which states that all behaviors are governed by a series of bottom-up state self-perception and subsequent feedback loops. More simply, individuals become aware of their present psychological state and their behavior and subsequently contrast these with relevant and important values to them, such as their goals, beliefs, occupation, and/or lifestyle. It is thought that discrepancies between the current state and the goal state(s) or value(s) is what contributes to rumination as the restorative behavior that seeks to reduce or eliminate this discrepancy. We all have discrepancies between where we are and where we want to be; however, rumination is initiated when the process of restoring this discrepancy is delayed, flatlined, or inhibited in some way. This effect is more pronounced for goals that are more abstract and particularly meaningful to the individual (W. D. Mcintosh et al., 1995; W. D. McIntosh & Martin, 1992).

WHAT ARE SELF-CONSCIOUS EMOTIONS?

There are a number of self-conscious, or self-focused emotions studied in the literature, but for the purposes of this paper only four will be focused on: guilt, shame, jealousy, and envy. The reason for the focus on these four in particular is their clinical relevance; many clients often start going to therapy for reasons of having experienced abnormal and distressing levels of guilt, shame, jealousy, and/or envy without any way to reduce their potency (Tangney & Salovey, 2010). When it is said that an emotion is *self-conscious,* it means that the emotion is both influenced by our own perception of feeling it and how we think others will view us for this feeling; in other words, we take feedback from ourselves and our anticipated opinions of others into account when experiencing these emotions and this information contributes to our experience of the emotion (Tangney et al., 2007).

Until recently, shame and guilt had been construed as the same concept. There are, however, real and noted differences between the two. Both shame and guilt are negative self-conscious emotions. Guilt is a feeling experienced when failing to meet an ethical or moral standard, often occurring in response to a specific interpersonal interaction (Orth et al., 2006). Shame likewise encompasses the same features of an emotional experience but includes failures in meeting social (in addition to moral) standards and is

regarded as a more painful and degrading experience than guilt (Tangney, 1993). Shame goes further in that the individual views their whole self as being globally inadequate or incompetent, instead of incompetent at a single, specific behavior (Tracy et al., 2007; Orth et al., 2006). Perhaps most importantly, guilt increases while shame decreases empathy, and guilt encourages conciliatory behavior while shame enhances avoidant and aggressive behavior (Orth et al., 2006). Furthermore, Stuewig et al. (2015) found that guilt acts as a protective factor in child development and shame acts as a risk-factor. This longitudinal study assessed children in fifth grade and then ten years later, measuring proneness to shame and guilt. It found that guilt-proneness was predictive of fewer sexual partners, less illegal drug use, and less criminal activity, whereas shame-proneness predicted exactly the opposite outcomes in the child's future. These disparities in results help to illustrate the point that there are real, empirically derived differences between guilt and shame beyond mere conceptual definitions, providing evidence for discriminant validity of both emotions as distinct constructs.

Between jealousy and envy, there are also significant differences. Envy is the emotion experienced upon noticing some possession, feature, or quality of high value that belongs to another person and subsequently desiring that object with great enthusiasm (Tangney & Salovey, 2010). Jealousy, while sometimes similar to envy in its careful consideration of what another individual has, is distinct in that the jealous individual already has whatever object of high value is desired and is afraid of losing it (Tangney & Salovey, 2010). For example, person A is dating a very attractive and wholesome person B. Person C wants to be dating person B, for they are highly desirable; this is called envy. If person A becomes fearful or paranoid that they will lose their desirable partner (person B) to some desirable quality of person C, or to anyone desirable for that matter, then we can say that person A has become jealous out of feeling as though they lack the quality or qualities that might more strongly attract their partner (person B).

MAIN FINDINGS

Now that both rumination and the self-conscious emotions in review have been described, we can turn our focus to the complex relationships between them. Most findings reveal that rumination is associated with shame but not guilt. Orth et al. (2006) used latent variables and structural equation modeling to examine predictive effects of guilt and shame on rumination. They found significant predictive relationships between shame and rumination, and guilt and rumination when assessing them separately. However, they found that shame predicted rumination when analyzing guilt simultaneously, but guilt did *not* predict rumination when simultaneously analyzing shame. This conjunctive analysis of guilt, shame, and rumination together allows for a more accurate assessment of the unique effects of guilt and shame by dissecting out the presence of the other in the analysis and preventing conflation of the two constructs. The results of Orth and colleagues suggest that elevated levels of guilt-free shame, but not shame-free guilt, can predict elevated levels of rumination. In a sample of university undergraduates with features of borderline personality disorder (BPD), Peters and Geiger (2016) found that higher shame was predictive of elevated levels of anger rumination, which can be understood as rumination about an emotionally angering event and is itself a risk factor for aggressive behavior (Denson, 2013). Peters and Geiger (2016) also found that lower levels of guilt predicted higher levels of aggression, but not rumination. This suggests that while excessive levels of shame are predictive of anger rumination, insufficient levels of guilt are not associated with angry ruminative thinking in people exhibiting features of BPD. Joireman (2004) found that self-rumination and shame individually were shown to mediate the relationships between each other (reciprocally) and personal distress.

Findings concerning guilt and rumination are far more mixed. The aforementioned research has yielded predominantly insignificant relationships between guilt and rumination; although, some researchers have obtained contrasting results. Like Orth et al. (2006), Riek et al. (2014) reported positive partial correlations between rumination and shame-free guilt, and rumination and guilt-free shame. However, when Riek and colleagues analyzed shame and guilt simultaneously, they found rumination predicted both shame *and* guilt. This significant association between rumination and guilt — even when separating out shame from guilt and guilt from shame — stands in opposition to previously mentioned

findings. Although, the researchers did note it was possible their measure of rumination (adapted from McCullough et al., 2007) did not adequately disentangle rumination from reflection and their significant results concerning guilt and rumination may be explained by this possibility. Such a line of reasoning argues that rumination is primarily related to shame only (Joireman 2004), and reflection may sometimes be related to guilt only (Joireman et al., 2002). Thus, whereas the findings of Riek et al. (2014) report significant associations between guilt and rumination, these findings may have been explained by the presence of items assessing reflection in their rumination measure that are in fact related to guilt. Indeed, while Camacho et al. (2018) found that the guilt experienced after the unexpected death of a loved one was worsened as a result of ruminating on it, their measure of rumination was designed specifically for individuals experiencing bereavement, without clear distinction between rumination and reflection. Saintives and Lunardo (2016) found rumination to moderate the relationship between guilt and emotional support seeking, suggesting that rumination is related to guilt. However, this study also used the same McCullough et al. (2007) rumination scale as Riek et al. (2014), which fails to distinguish between rumination and reflection. Wang et al. (2020) found intrusive (or unwelcomed and seemingly uncontrollable) rumination to be positively associated with survivor guilt (guilt about being lucky enough to stay alive) in a longitudinal study of 408 Chinese adolescents with post-traumatic stress disorder resulting from the Ya'an earthquake. Though their measures distinguished well between rumination and reflection, the researchers only assessed guilt, without respect to shame in any capacity. This means that shame may have been conflated with guilt, explaining the significant relationship observed between "guilt" and rumination. In one study, van Dijk et al. (2017) measured rumination using a scale that distinguished between reflection, and also distinguished between guilt and shame. Their results revealed that rumination still predicted guilt. It can therefore be said that findings on guilt and rumination are less consistent and are in part dependent on the measures used and distinctions drawn between them.

Empirical results on envy, which seems to have mostly maladaptive associations, will be discussed with respect to rumination. Błachnio and Przepiorka (2015) examined the relationship between envy and several other key variables including rumination. Their data, drawing from a sample of more than 1200 Polish participants, showed envy was positively related to rumination. Lian et al. (2017) found that the moderating role of rumination on envy was higher in boys than in girls in an adolescent sample of 836 high school students. No other known research has examined the relationship between envy (as distinct from jealousy) and rumination.

More research has been conducted on jealousy and rumination, albeit mostly in romantic couples. Elphinston et al. (2013) found that romantic jealousy (jealousy in a romantic relationship) predicted elevated levels of rumination. Carson and Cupach (2000) found relationship-specific rumination (rumination about the relationship) to be related to several facets of jealousy; relationship-specific rumination was negatively correlated with trust (low trust is a trait of jealous relationships) and positively correlated with a host of jealous factors, including possessiveness, surveillance/restriction, manipulation, threats about the relationship, expression of negative affect, denigrating rivals, violent communication, violence toward objects, and avoidance/denial, to name just a few. In a sample of German women who had experienced infidelity, Steis et al. (2019) used fMRI technology to monitor brain activity while participants listened to a description of either their own experience of jealousy and infidelity or that of another person. Their imaging results indicated that the brain regions most active while listening to descriptions of personal experiences of jealousy were the insula, anterior cingulate cortex, and medial prefrontal cortex, which are commonly implicated in the presence of negative affect and such cognitive processes as rumination. This suggests that jealousy-inducing information may elicit rumination. Aside from samples consisting of couples, Lavallee (2009) studied 325 adolescents aged 11-14 and showed that subjects who ruminated about their friendship problems were at a higher risk of developing jealousy than their non-ruminative peers. These findings, be they scant, suggest a reciprocating relationship between jealousy and rumination.

TYING IT TOGETHER

In sum, the interplay of rumination with shame in a cyclic manner is consistent across samples and methodologies. This effect varies when discussing guilt, as guilt appears to be either unrelated or positively related to rumination and depends on the distinctions between rumination and reflection and between guilt and shame. The connections between rumination and envy are sparse, suggesting still a positive correlation. Jealousy is more robustly positively and reciprocally associated with rumination in romantically and non-romantically jealous samples. A visual diagram summarizing these results can be found in Figure 1, for illustration purposes.

Figure 1
Correlational Relationships Between Rumination and Shame, Guilt, Envy, and Jealousy
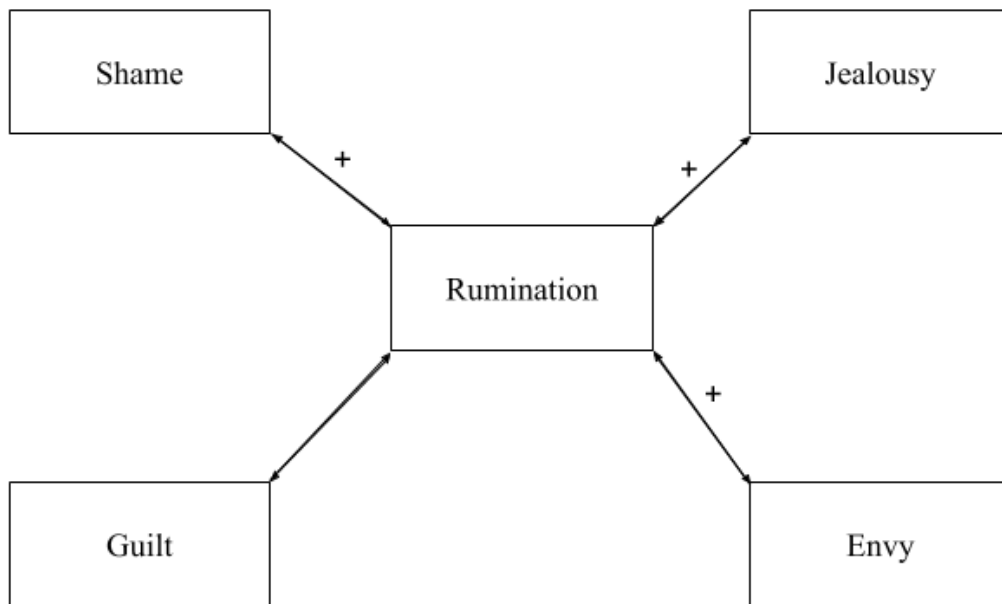
Note. A "+" refers to a positive association. The guilt-rumination path is shown but lacks a "+" to indicate mixed results of this relationship.

Since we have shown that rumination and shame are reciprocally related, it is plausible to assume that treatments targeting one or the other should help, at the very least, to slow and mitigate the strength of the cycle. Johnson and O'Brien (2013, Study 2) assigned participants to one of three writing task conditions after being asked to recall a shameful experience at three separate times in a single week: express one's feelings about the experience, write self-compassionately about the experience, or do neither of the two. They found state shame and negative affect were reduced immediately after the writing task in the self-compassion group and that these individuals reported less shame-proneness and depressive symptoms at a two-week follow up. Proeve et al. (2018) enrolled 32 clinically anxious or depressed participants in a mindfulness-based cognitive therapy program (which has been shown to

increase self-compassion) and found decreased shame-proneness and rumination after treatment. Clearly, two promising treatments of reducing shame-proneness are mindfulness and self-compassion, and are thus recommended for individuals who are shame-prone. This decrease in shame-proneness is likely also to reduce ruminative behavior, given the reciprocal relationship between the two.

Treatments for envy and jealousy have been similar, focusing primarily on mindfulness and self-compassion. Thus far, envy has only been regarded as desiring a possession or quality belonging to another and has only been associated with negative outcomes. In order to see how there might be some constructive aspect of envy, it is useful to distinguish between its two subtypes, benign and malicious envy, such that treatment can be applied accordingly. The latter obviously carries an element of malevolence, in that the desired object is sought to be obtained by bringing down the possessor, and this bringing down may be more important to the envious desirer than obtaining the desired object (Crusius and Lange, 2014). The former is fairly harmless. It is the emotion experienced when a person observes something desirable in someone else and subsequently seeks to acquire the desired object, thereby elevating oneself in the process without any knocking down of the possessor (van de Ven et al., 2009). Benign envy can be quite motivating to an individual who wants to elevate themselves, as the possessor of the desired trait can be viewed as a role model, inspiring similar greatness in others. Dong et al. (2019) found in a Chinese sample of 676 undergraduate students that mindfulness was negatively related to malicious envy but not benign envy, suggesting that mindfulness treatments are helpful for individuals experiencing malicious envy only. Several treatments involving self-compassion and mindfulness are available for romantic jealousy (see White & Mullen, 1989, for a review) but because the context in which jealousy occurs is so specific and often limited to intimate relationships, few options offer non-romantically related treatments. Targeting jealousy as an aversive emotion in therapy can likely help to reduce rumination in this way as well, again because of the positive relationship between them.

Unfortunately, whereas the independent fields of rumination and self-conscious emotions have matured, research assessing their interrelatedness is still sprouting and using primarily cross-sectional, self-report scales. Self-report can be a powerful tool in getting to the root of the behavior or mental process by hearing directly from the participant, but it is limited in its capturing of the unconscious and in other known biases associated with the technique. Moreover, little research has examined these constructs together while comparing across clinical and nonclinical samples. Future research should attempt to consider and attenuate these limitations of methodology in the dyadic field of rumination and self-conscious affect. The literature could also benefit from expanding use of relevant biometrics and sensors, such as electroencephalograms, to further validate individuals' self-reports of their perceived emotional states. Further research on both rumination and the self-conscious emotions, particularly envy, is necessary to supplement the currently scant literature and provide a more well-rounded understanding of the relationships between them. Whereas some research has performed regression statistics, several studies have used only correlational analyses to understand these interrelations, preventing conclusions on directionality from being drawn. Further, making more frequent distinctions between benign and malicious envy could be of value; currently, several researchers use the broader envy as a lone construct when discussing correlates and outcomes. Because the two have been shown to be empirically distinct and predict different outcomes, this conflation of the two terms can create ambiguity to readers and thus, increased possibility for confusion. This view has, however, been met with opposition (for a counterargument, see Cohen-Charash & Larson, 2017).

Envy is sometimes followed by guilt about feeling an emotion perceived as wrong (the envy, e.g. "I shouldn't feel this way about someone else's possessions because it is immoral"; Parrott, 1991) and researchers have yet to explore the relationships between envy and guilt with respect to rumination in a single study. It is possible that the experience of envy and its association with rumination is in fact moderated by the subsequent experience of guilt, perhaps such that an increase of post-envy guilt weakens their association (through the mitigating effect of guilt on envy. It is also plausible that the positive correlations between shame-free guilt and rumination, and between envy and rumination, allow for rumination to mediate the relationship between envy and post-envy guilt. Assessing post-envy guilt with respect to rumination (as mentioned) and the maladaptive outcomes of shame and rumination such as procrastination for example, would prove useful in treatment application and provide answers to the

posed questions. Fee and Tangney (2000) demonstrated in a correlational analysis that shame-proneness but not guilt-proneness was related to procrastination. Constantin et al. (2018) showed that rumination independently mediated the relationships between depression and procrastination and anxiety and procrastination. Despite these links between shame and procrastination and between rumination (as a mediator) and procrastination, no research has examined the interrelations of shame, rumination, and procrastination in a single mediational model. Such a study, ideally with college students, could yield invaluable insight on predictors of procrastination and further substantiate the harmful relationship between shame and rumination.

Tying together the constructs of rumination and self-conscious emotions, we can make several key statements about their interconnectedness. Rumination and the self-conscious emotions reviewed are positively and bidirectionally associated with one another, creating a cyclical process whereby each perpetuates the other. This phenomenon is most robust with respect to shame and rumination and jealousy and rumination. Findings concerning guilt and rumination still yield mixed results. Research is extremely scant on envy and rumination, but a positive relationship exists nonetheless. Additionally, several interventions can help to attenuate maladaptive outcomes and experiences of self-conscious emotions and rumination, the most prominent of which are mindfulness meditation and self-compassion exercises.

REFERENCES

Błachnio, A., & Przepiorka, A. (2015). I want to have what you have and I do not want you to have it. *Studia Psychologica*, *57*(4), 243–254. doi:10.21909/sp.2015.04.697.

Camacho, D., Pérez-Nieto, M. Á., & Gordillo, F. (2018). The role of rumination in the guilt associated with bereavement according to cause of death. *Psychiatry Research*, *270*, 1053–1058. doi:10.1016/j.psychres.2018.04.065.

Carson, C. L., & Cupach, W. R. (2000). Fueling the flames of the green-eyed monster: The role of ruminative thought in reaction to romantic jealousy. *Western Journal of Communication*, *64*(3), 308–329. doi:10.1080/10570310009374678.

Caselli, G., Offredi, A., Martino, F., Varalli, D., Ruggiero, G. M., Sassaroli, S., Spada, M. M., & Wells, A. (2017). Metacognitive beliefs and rumination as predictors of anger: A prospective study. *Aggressive Behavior*, *43*(5). doi:10.1002/ab.21699.

Cohen-Charash, Y., & Larson, E. C. (2017). An emotion divided: Studying envy is better than studying "benign" and "malicious" envy. *Current Directions in Psychological Science*, *26*(2), 174–183. doi:10.1177/0963721416683667.

Constantin, K., English, M. M., & Mazmanian, D. (2018). Anxiety, depression, and procrastination among students: Rumination plays a larger mediating role than worry. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, *36*(1), 15–27. doi:10.1007/s10942-017-0271-5.

Crusius, J., & Lange, J. (2014). What catches the envious eye? Attentional biases within malicious and benign envy. *Journal of Experimental Social Psychology*, *55*, 1–11. doi:10.1016/j.jesp.2014.05.007.

Denson, T. F. (2013). The multiple systems model of angry rumination. *Personality and Social Psychology Review*, *17*(2), 103–123. doi:10.1177/1088868312467086.

Dong, X., Xiang, Y., Zhao, J., Li, Q., Zhao, J., & Zhang, W. (2019). How mindfulness affects benign and malicious envy from the perspective of the mindfulness reperceiving model. *Scandinavian Journal of Psychology*. doi:10.1111/sjop.12596.

D'Zurilla, T. J., & Goldfried, M. R. (1971). Problem solving and behavior modification. *Journal of Abnormal Psychology*, *78*(1), 107–126. doi:10.1037/h0031360.

Eisma, M. C., Lang, T. A., & Boelen, P. A. (2020). How thinking hurts: Rumination, worry, and avoidance processes in adjustment to bereavement. *Clinical Psychology & Psychotherapy*. doi:10.1002/cpp.2440.

Elphinston, R. A., Feeney, J. A., Noller, P., Connor, J. P., & Fitzgerald, J. (2013). Romantic jealousy and relationship satisfaction: The costs of rumination. Western Journal of Communication, 77(3), 293–304. doi:10.1080/10570314.2013.770161.

Fee, R. L., & Tangney, J. P. (2000). Procrastination: A means of avoiding shame or guilt? *Journal of Social Behavior & Personality*, *15*(5), 167–184.

Gohm, C. L., Isbell, L. M., & Wyer, R. S., Jr. (1997). Some thoughts about thinking. In R. S.Wyer (Ed.), *Ruminative thoughts: Advances in social cognition* (*Vol. 9*, pp. 81–95). Hillsdale, NJ: Erlbaum.

Harvey, A. G., Watkins, E., Mansell, W., & Shafran, R. (2004). *Cognitive behavioural processes across psychological disorders*. Oxford, United Kingdom: Oxford University Press.

Janoff-Bulman, R. (1992). Shattered assumptions: Towards a new psychology of trauma. New York: Free Press.

Johnson, E. A., & O'Brien, K. A. (2013). Self-compassion soothes the savage ego-threat system: Effects on negative affect, shame, rumination, and depressive symptoms. *Journal of Social and Clinical Psychology*, *32*(9), 939–963. doi:10.1521/jscp.2013.32.9.939.

Joireman, J. A., Parrott, L., III, & Hammersla, J. (2002). Empathy and the Self-Absorption Paradox: Support for the Distinction Between Self-Rumination and Self-Reflection. *Self and Identity*, *1*(1), 53–65. doi:10.1080/152988602317232803.

Joireman, J. (2004). Empathy and the self-absorption paradox II: Self-rumination and self-reflection as mediators between shame, guilt, and empathy. *Self and Identity*, *3*(3), 225–238. doi:10.1080/13576500444000038.

Lian, S., Sun, X., Niu, G., & Zhou, Z. (2017). Upward social comparison on SNS and depression: A moderated mediation model and gender difference. *Acta Psychologica Sinica, 49*(7), 941–952. doi:10.3724/SP.J.1041.2017.00941.

Martin, L. L., & Tesser, A. (1996). Some ruminative thoughts. In R. S. Wyer Jr. (Ed.), *Ruminative thoughts.* (pp. 1–47). Lawrence Erlbaum Associates, Inc.

McCullough, M. E., Bono, G., & Root, L. M. (2007). Rumination, emotion, and forgiveness: Three longitudinal studies. *Journal of Personality and Social Psychology*, *92*(3), 490–505. doi:10.1037/0022-3514.92.3.490.

McIntosh, W. D., & Martin, L. L. (1992). The cybernetics of happiness: The relation of goal attainment, rumination, and affect. In M. S. Clark (Ed.), *Emotion and social behavior.* (pp. 222–246). Sage Publications, Inc.

McIntosh, W. D., Harlow, T. F., & Martin, L. L. (1995). Linkers and nonlinkers: Goal beliefs as a moderator of the effects of everyday hassles on rumination, depression, and physical complaints. *Journal of Applied Social Psychology*, *25*(14), 1231–1244. doi:10.1111/j.1559-1816.1995.tb02616.x.

Nolen-Hoeksema, S. (1991). Responses to depression and their effects on the duration of depressive episodes. *Journal of Abnormal Psychology, 100,* 569–582.

Nolen-Hoeksema, S. (2000). The role of rumination in depressive disorders and mixed anxiety/depressive symptoms. *Journal of Abnormal Psychology, 109,* 504–511.

Nolen-Hoeksema, S. (2004b). The response styles theory. In C. Papageorgiou & A. Wells (Eds.), Depressive rumination (pp. 107–124). Chichester, United Kingdom: Wiley.

Nolen-Hoeksema, S., Wisco, B. E., & Lyubomirsky, S. (2008). Rethinking rumination. *Perspectives on Psychological Science*, *3*(5), 400–424. doi:10.1111/j.1745-6924.2008.00088.x.

Orth, U., Berking, M., & Burkhardt, S. (2006). Self-Conscious Emotions and Depression: Rumination Explains Why Shame But Not Guilt is Maladaptive. *Personality and Social Psychology Bulletin*, *32*(12), 1608–1619. doi:10.1177/0146167206292958.

Parrott, W. G. (1991). The emotional experience of envy and jealousy. In P. Salovey (Ed.), *The psychology of jealousy and envy.* (pp. 3–30). Guilford Press.

Peters, J. R., & Geiger, P. J. (2016). Borderline personality disorder and self-conscious affect: Too much shame but not enough guilt? *Personality Disorders: Theory, Research, and Treatment*, *7*(3), 303–308. doi:10.1037/per0000176.

Proeve, M., Anton, R., & Kenny, M. (2018). Effects of mindfulness-based cognitive therapy on shame, self-compassion and psychological distress in anxious and depressed patients: A pilot study. *Psychology and Psychotherapy: Theory, Research and Practice*, *91*(4), 434–449. doi:10.1111/papt.12170.

Riek, B. M., Luna, L. M. R., & Schnabelrauch, C. A. (2014). Transgressors' guilt and shame: A longitudinal examination of forgiveness seeking. *Journal of Social and Personal Relationships*, *31*(6), 751–772. doi:10.1177/0265407513503595.

Saintives, C., & Lunardo, R. (2016). How guilt affects consumption intention: The role of rumination, emotional support and shame. *Journal of Consumer Marketing*, *33*(1), 41–51. doi:10.1108/JCM-12-2014-1265.

Steis, N., Oddo-Sommerfeld, S., Echterhoff, G., Thiel, A., Thiel, J., Briem, K., Ciaramidaro, A., Freitag, C. M., Mecklinger, A., Unterhorst, K., & Stirn, A. (2019). The obsessions of the green-eyed monster: Jealousy and the female brain. *Sexual and Relationship Therapy*. doi:10.1080/14681994.2019.1615047.

Stuewig, J., Tangney, J. P., Kendall, S., Folk, J. B., Meyer, C. R., & Dearing, R. L. (2015). Children's proneness to shame and guilt predict risky and illegal behaviors in young adulthood. *Child Psychiatry and Human Development*, *46*(2), 217–227. doi:10.1007/s10578-014-0467-1.

Tangney, J. P. (1993). *Shame and guilt.*. In C. G.Costello (Ed.), *Symptoms of depression* (pp. 161–180). New York: Wiley.

Tangney, J. P., & Salovey, P. (2010). Emotions of the imperiled ego: Shame, guilt, jealousy, and envy. In J. E. Maddux & J. P. Tangney (Eds.), *Social psychological foundations of clinical psychology.* (pp. 245–271). The Guilford Press.

Tangney, J. P., Stuewig, J., & Mashek, D. J. (2007). Moral emotions and moral behavior. *Annual Review of Psychology, 58,* 345–372. http://dx.doi.org/10.1146/annurev.psych.56.091103.070145

Tracy, J. L., Robins, R. W., & Tangney, J. P. (Eds.). (2007). The self-conscious emotions: Theory and research. Guilford Press.

Trapnell, P. D., & Campbell, J. D. (1999). Private self-consciousness and the five-factor model of personality: Distinguishing rumination from reflection. *Journal of Personality and Social Psychology*, *76*(2), 284–304. doi:10.1037/0022-3514.76.2.284.

van de Ven, N., Zeelenberg, M., & Pieters, R. (2009). Leveling up and down: The experiences of benign and malicious envy. *Emotion*, *9*(3), 419–429. doi:10.1037/a0015669.

van Dijk, W. W., van Dillen, L. F., Rotteveel, M., & Seip, E. C. (2017). Looking into the crystal ball of our emotional lives: Emotion regulation and the overestimation of future guilt and shame. *Cognition and Emotion*, *31*(3), 616–624. doi:10.1080/02699931.2015.1129313.

Wang, W., Wu, X., & Lan, X. (2020). Rumination mediates the relationships of fear and guilt to posttraumatic stress disorder and posttraumatic growth among adolescents after the Ya'an earthquake. *European Journal of Psychotraumatology*, *11*(1). doi:10.1080/20008198.2019.1704993.

Watkins, E. R. (2008). Constructive and unconstructive repetitive thought. *Psychological Bulletin*, *134*(2), 163–206. doi:10.1037/0033-2909.134.2.163.

Wyer, R. S. (Ed.). (1996). *Ruminative thoughts: Advances in social cognition* (*Vol. 9*). Hillsdale, NJ: Erlbaum.