

Ruminating about depression: thinking thought theory and evidence

[Food & Diet](#)



**ASSIGN
BUSTER**

The literature review will be looking at the nature of depression and rumination and outline two prominent theories relating them in discussion today, the S-REF model (Wells & Matthews, 1996) and the response styles theory (Nolen-Hoeksema, 1991). Physiological and experimental evidence of the relationship between rumination and depression will be outlined, including evidence that looks at additional factors such as social problem solving and alcohol use. This will open up the review to experiential avoidance, with an examination of whether this has an impact on ruminative thinking.

The Nature of Depression

Symptoms and diagnosis. The Diagnostic and Statistical Manual of Mental Disorders (DSM) defines a Major Depressive Episode as ' a period of at least 2 weeks during which there is either depressed mood or the loss of interest or pleasure in nearly all activities.' A Major Depressive Disorder is then one or more Major Depressive Episodes. The DSM criteria for diagnosis of a Major Depressive Episode consists in part of; a depressed mood indicated by subjective report or observation, significant weight loss/gain, consistent insomnia/hypersomnia, fatigue or energy loss and feelings of worthlessness or excessive guilt. Prevalence. Depression is a common psychological disorder, however as many people do not seek help for the condition, exact prevalence is hard to estimate. The 2006 Behavioral Risk Factor Surveillance Survey collected data from 217, 379 participants and found that the prevalence of depressive symptoms at the time was 8. 7% (Strine et al. 2008). The DSM lists education, income, ethnicity and marital status as not appearing to have an effect on prevalence rates, however there does seem <https://assignbuster.com/ruminating-about-depression-thinking-thought-theory-and-evidence/>

to be a gender difference. More women than men experience depression (Nolen-Hoeksema, 2001) with twice as many women being diagnosed, and a pattern of incidence rates occurring across a life span. For instance, childbearing years in women coincide with peak depression rates (Sagud et al. 2002).

The Nature of Rumination

Definition. Rumination disorder, not to be confused with the ruminative thinking addressed in this review, is an eating disorder where one regurgitates their food, in order to re-chew it. Somewhat similarly, ruminative thinking involves 'regurgitating' thoughts, in an unhealthy, persistent manner (Rippere, 1977); usually concerning present distress (Conway et al. 2000). Rumination is both common and consistent as a response to low moods (Rippere, 1977) and as a style of coping. One study conducted on students found that 83% were consistent in ruminating or not ruminating throughout mood diaries (Nolen-Hoeksema et al, 1993).

Cause or effect? Many studies have found a positive correlation between rumination and depression (i. e. Cribb, Moulds and Carter, 2006). Yet the role of rumination in depression forms a circular argument. The more one ruminates, the more depressed they feel about their situation. Nolen-Hoeksema, Parker and Larson (1994) have shown that it is rumination, above all other negative cognitions, that predict depression. But the more depressed the individual, the more they will ruminate, thereby completing the circular argument. A ruminative response style to depression actually maintains and makes worse the depressive symptoms (Nolen-Hoeksema, <https://assignbuster.com/ruminating-about-depression-thinking-thought-theory-and-evidence/>

1991). This is because rumination is seen as a passive response to negative events which interferes with problem solving.

Gender Differences. As we have seen, depression is more prevalent in women than in men. This gender difference is of interest within the context of rumination, gender differences in rumination may be able to explain gender differences in depression. Gender differences in rumination have been found to be mediated by a combination of the following beliefs; the belief about the controllability of emotions, responsibility for emotional tone in relationships and mastery over negative events (Nolen-Hoeksema & Jackson, 2001). In a lab based study conducted by Butler and Nolen-Hoeksema (1994), men were less likely to attend to their moods and less likely to engage in rumination. These findings were replicated in a naturalistic study (Nolen-Hoeksema et al. 1993) where women responded to distress with a ruminative response style.

According to Nolen-Hoeksema (1991), the response style used to deal with depression can explain the gender differences. It may be that women ruminate as their response, i. e. they have a ruminative response style (see section x for more on the response styles theory). This theory was tested by Jose and Brown (2007) who studied a non-clinical sample of 1, 218 adolescents. It has been found that the gender differences in depression can occur in the early adolescent years (Holsen et al, 2000). Jose and Brown measured stress, rumination and depression in adolescents, with the finding that girls scored higher than boys on all three variables. Interestingly, the gender difference in rumination started occurring at 12 years of age.

Rumination was also found to mediate the effect of gender on depression from the age of 13.

Theories and Models of Rumination

The S-REF model. The Self-Regulatory Executive Function model is a model of emotional disorder by Wells and Matthews (1996) which focuses on how information is integrated to form a coping strategy. The model comprises of three levels (see Figure 1.) which interact. The lowest level pertains to the automatic processing of external, cognitive and body state information. The highest level pertains to self-beliefs, both declarative and procedural. The middle level of the structure is the supervisory executive where information from the lower and higher levels is gathered. Its main purpose is self-regulatory processing, i. e. removing any discrepancies from incoming objects, and when one exists, choose a suitable coping strategy (Matthews & Wells, 1996). This is performed through a loop of action control and appraisal.

In context of this model, rumination is perceived to be the chosen coping strategy. If ruminating while depressed, the automatic level takes the automatic aspects of rumination (e. g. intrusive thoughts) and feeds it upwards for the supervisory executive to try and control. At the same time, the self-beliefs of a ruminator will be negative and their goals unrealistic. The process of rumination may be seen by them as a form of problem solving.

For this reason the self-belief level feeds the supervisory executive information that rumination is an emotion-focused coping strategy. As a ruminative coping strategy acts to maintain depressive symptoms, and likewise the depressive symptoms maintain rumination, the automatic

<https://assignbuster.com/ruminating-about-depression-thinking-thought-theory-and-evidence/>

aspects of rumination will feed back into the automatic level of the model. This shows how rumination and depression can follow a cyclic pattern.

The response styles theory. The response styles theory of depression (Nolen-Hoeksema, 1991) is able to account for the relationship between rumination and depression. According to the theory, the way in which the individual responds to their depressed mood is vital in determining the duration of depression. If the individual engages in adaptive behaviours, such as concrete thinking and seeking social support, it will lead to effective problem solving and subsequently the reduction in depressive symptoms.

However, if the individual engages in maladaptive behaviour, i. e. rumination, they will not engage in effective problem solving and the depression will be maintained. If the latter approach to depression is taken, the individual is said to possess a ruminative response style. Ruminating in response to depression plays an important role in maintaining depression by at least four mechanisms (Nolen-Hoeksema, tb) as described in detail by Lyubomirsky and Tbach (tb).

Negatively biased thinking. Rumination will be negatively bias people's thoughts. It has been found that ruminators overgeneralise their failures and make negative self-evaluations (Lyubomirsky and Nolen-Hoeksema, 1995). The accompanying ruminative thoughts when depressed will be used to understand future depressed moods.

Poor problem solving. Rumination detracts from concrete thinking, allowing the individual to be overcome by their problems (Lyubomirsky et al., 1999).

This in turn interferes with effective problem solving (discussed in further detail in section x).

Inhibition of instrumental behaviour. When an individual ruminates they become focused on their own depressive symptoms. As a result this reduces the motivation to engage in instrumental behaviour, which in some cases can be very serious. For instance, Lyubomirsky, Kasin and Chang (2003) found that women with a ruminative response style had more anxiety when they discovered a potential health risk. More importantly, they delayed seeking medical help for at least two months more than non-ruminators, thereby not engaging in instrumental behaviour.

Impaired social support. Individuals who chronically ruminate in response to depression will impair social relationships due to being poorly viewed (Schwartz and McCombs Thomas, 1995). This is caused by the associations found between rumination and wanting revenge (McCollough et al., 1998), assuming excess responsibility for others (Nolen-Hoeksema and Jackson, 2001) and neediness (Sparsojevic and Alloy, 2001).

Comparison of theories. Brotman and Dembeis (tb) talk in depth about similarities and differences of the two perspectives, and how they can potentially be combined to provide a deeper insight into rumination. They explain that the response styles theory is a more direct approach to rumination as it focuses on negative states. This is not true of the S-REF model which focuses on rumination as a response to self-discrepancies, with the recurring thoughts being positive or negative. Both theories do agree that rumination is maladaptive and contributes to the maintenance of

<https://assignbuster.com/ruminating-about-depression-thinking-thought-theory-and-evidence/>

depression. However they vary in that the response styles theory sees rumination as a thought style corresponding to depression whereas the S-REF model sees rumination as a possible result of a range of emotional disorders.

The two models can work together to explain why there are gender differences in rumination. One of the strengths of Nolen Hoeksema's (1991) work is her use of longitudinal studies, finding gender differences in rumination. She made the important finding that women ruminate as a response to depression more than men. The S-REF model would explain this in terms of the coping strategy that is adopted - perhaps women activate rumination more than men. Reasons for the gender difference may be found in the self-beliefs layer of the model, which is where the response styles theory would complement.

The intervention styles of both theories differ. The response styles theory promotes teaching children problem solving strategies to prevent rumination. The S-REF model proposes that the meta-cognitive beliefs of the individual need to be studied. For instance, if ruminators think that ruminating is an effective problem solving strategy (as found by Papageorgiou and Wells, 2001) then they should be challenged to examine their thoughts. The effectiveness of these two intervention styles would be interesting to examine, to subsequently show which theory has stronger implications for treatment.

Physiological Evidence

Inhibited feedback loops. Rumination can also be explained in terms of physiology according to Siegle and Thayer (Book). They suggest that the repetitive brain activity that would occur during the recyclic thinking in rumination would be caused by uninhibited feedback loops. This means that the response to the stimulus (i. e. the ruminating response) would be continuously reactivated. Teasdale (1988) explains this through the activation of negative thoughts when depressed. These negative thoughts cause the resurfacing of the depressed state sustaining a cycle of brain activation. An example of this in the brain is between the amygdala and the hippocampus. While the amygdala has been linked to recognition and generation of negative emotions, the hippocampus has been implicated in recollecting existing associations. So when the amygdala recognises emotion in a source, the hippocampus' memory of the personal event is activated. This in turn creates emotional associations in the feedback loop.

In people who ruminate, mechanisms that inhibit these loops will be less active than in those who don't ruminate. When the loops are not inhibited, the emotional thoughts continue to reoccur. The cause of this lack of inhibition may be found within the prefrontal cortex (Davidson, 2000). For instance the frontal lobes are neutrally linked to the amygdala and the hippocampus. In individuals with depression, there is limited blood flow in the prefrontal cortex (Barter et al., 1989). In order to measure the relationship between physiological activity and rumination both central and peripheral methods can be adopted.

Central methods. Central methods involve neuroimaging to try and measure activity in the amygdala and hippocampus and decreased activity in the prefrontal cortex. Positron Emission Tomography (PET) and fMRI scans have found that in individuals with depression the amygdala is overactive (Abercrombie et al., 1998). Bazter et al. (1989) also showed that in depressed populations dorsolateral prefrontal activity was less than in non-depressed populations.

Peripheral methods. Pupil dilations respond to structures in the brain involved in emotional activity which are also linked to rumination such as the amygdala (Fernandez de Maline and Hunsberger, 1962). When cognitive load is being sustained at a high level, pupil dilation remains constant (Beatty, 1982, b). The prediction follows that when ruminators are faced with sustained emotional load there will be constant pupil dilation. Siegle et al (2003) examined the relationship between rumination and pupil dilation in response to emotional stimuli with findings that support the prediction. Levels of self-reported rumination correlated with pupil dilation in response to the negative emotional stimuli.

Special Considerations. A sustained physiological basis for rumination has to be approached with caution (Siegle and Theyer). On one hand some of the evidence for this basis has come from alternative contexts and therefore may not be specific to rumination. On the other physiological links to rumination can have beneficial implications on depression treatments. The S-REF (Self-Regulatory Executive Function) model (Wells and Matthews, 1984) which has been discussed in section x, has its roots in physiology and was

the basis for an intervention by Wells (2000). The intervention involved attending and reacting to sounds which has been found to have potential benefits for depression.

Experimental Evidence

Problem Solving. In depressed individuals, rumination can have a negative impact on problem solving ability (Donaldson and Lam, 2004). Correlations have found ruminators to be significantly less likely to employ successful problem solving methods (Nolen-Hoeksema and Morrow, 1991), thereby prolonging their depressed mood (Nolen-Hoeksema et al. 1993). In a ruminating condition, dysphoric students performed worse on problem solving tasks (Lyubomirsky and Nolen-Hoeksema, 1995). This was one of the first studies linking rumination with poor problem solving abilities and further shows the effects of ruminative depression.

Watkins and Baracaia (2002) advanced on Beck's (1976) finding that social problem solving is symptomatic of depression, by testing if the impairment is an effect of state-oriented (e. g. why the problem exists) rumination. In the state-oriented rumination condition, those in the recovered depressed group performed as poorly as those in the depressed group on social problem solving tasks. This is despite having performed just as well as those in the never depressed group before the rumination condition. The results are important in showing how state-oriented rumination can lead to impaired social problem solving in individuals with depression.

Alcohol Misuse. A national survey conducted by Grant and Harford (1995) analysing the comorbidity of the two DSM-IV disorders, alcohol use and major depression, found a strong co-occurrence. This leads to two lines of thinking by Cassell et al. (2008) as to why rumination may be a good predictor of alcohol misuse: (1) Rumination predicts depression and in turn, depression predicts alcohol misuse. This relationship comes from findings by Nolen-Hoeksema (1991) which shows that the more one ruminates the more depressed they will become. Kodl et al. (2008) shows the effects that depression can have on alcohol misuse. For instance, one of the effects is the weakening of resolve to withhold from alcohol. (2) Alcohol is used to control ruminative thinking. Rumination may predict alcohol misuse because the latter can be adopted as a form of self-regulatory function (Nolen-Hoeksema et al. 2007) to control ruminative thinking. This opens up the subject of rumination and experiential avoidance which will be looked at in more detail in the next section.

In Casselli et al's. (2008) study both community and clinical populations were tested in an attempt to see whether ruminative thinking is predictive of alcohol misuse. Importantly they found that this relationship occurred independently of depression. This is evidence of the second line of thinking mentioned above as it emphasises that alcohol can be used as a cognitive self-regulatory function, i. e. it can be used as a form of experiential avoidance to avoid and/or control ruminative thoughts, regardless of depression.

The researchers suggest that in an attempt to reduce alcohol misuse, cognitive behavioural therapy (CBT) interventions would do well to focus on rumination. Caselli et al. (2009) went on to test this suggestion. They investigated whether focusing on rumination in the CBT treatment of alcohol misuse would show rumination as a predictor of drinking status and quantity consumed after 3, 6 and 12 months. The results support previous findings that rumination is a predictor of alcohol use. Baseline rumination levels before undergoing CBT predicted alcohol use at 3, 6 and 12 months. Due to the independence of depression in these findings, they also support the role of alcohol in cognitive self-regulatory function.

While the findings were independent of baseline depression rates, there is still a roll for depression in the relapse into alcohol use after treatment (Caselli et al. 2009). This occurs in terms similar to the rumination depression cycle mentioned in section x. Firstly, rumination creates the negative thinking resulting in low mood or depression. In an attempt to control and/or avoid ruminative thinking, alcohol misuse can occur. The alcohol misuse can be followed by a substance induced depression, and this depression can maintain and create ruminative thinking. The researchers suggest that this cycle promotes how using alcohol as a cognitive regulatory function is maintained long term. This shows that engaging in avoidance activities such as drinking can not only be predicted by rumination, but can also contribute to the maintenance of ruminative thinking.

Experiential Avoidance (EA)

Depression and EA. Experiential avoidance is the attempt to escape internal stressors, for instance, the attempt to stop certain thoughts (Hayes, 1987). It is significantly correlated to both depression and rumination (Moulds et al. 2007). The behavioural activation (BA) model of depression (xxxxx) focuses on environmental causes of depression These are life events that don't lead to positive reinforcement in one's life, consisting of anything from daily stressors to bereavement. When faced with these stressors, one is at danger of engaging in avoidance behaviour.

Ferster (1973) refers largely to the mechanism of complaining when describing depressed individuals attempts at experiential avoidance. He explains that complaints are frequently negatively reinforced in daily life, with the example of asking to turn down the radio volume. As these minor complaints are usually reinforced, the depressed individual continues this behaviour even when it is ineffective at problem solving in other situations. This behaviour has been called 'extended' (Skinner, 1957 pp41-48) as the individual is attempting to extend past successes into new situations.

Agitated activities tend to accompany complaints (e. g. pacing) which are a form of avoidance as they allow escape from aversive conditions (e. g. silence). This reduces the likelihood of the individual engaging in problem-solving behaviours, which in turn means they will not receive positive reinforcement. The lack of positive reinforcement given during avoidance behaviours will act to maintain depression (Cribb et al. 2006). Unfortunately experiential avoidance has not been studied in depth in the context of depression; however it appears to be a necessary topic for future research

with the potential of leading to new assessments and treatments (Cribb et al. 2006).

Rumination and EA. The BA model is able to include rumination under the proposition that rumination acts in the same way as avoidance. The reduced ability to engage in problem solving (see section x) and a lack of engagement with the environment is characteristic of avoidant behaviour and rumination (Moulds et al. 2007). With rumination and avoidance appearing to act in the same way, Watkins and Moulds (2004) were able to use the avoidance theory of worry (sometimes referred to as the reduced concreteness theory of worry) (Barkovec, Ray and Stoker, 1998) to explain how ruminative behaviour is maintained.

The avoidance theory of worry proposes that the process of worrying involves reduced concrete thinking (specific, descriptive, factual) and more abstract thinking (ambiguous, generalised). This type of thinking maintains worry as the lack of specific detail limits the ability to create clear action plans. It also reduces the amount of arousal (physiological and emotional) produced as concrete thinking imposes limitations on imagery created by thoughts. The reduced arousal prevents emotional processing (Foa and Kozak, 1986) which in turn maintains the worry.

Both worrying and rumination can be classified as cognitive avoidance strategies. They have been found to have common characteristics, most importantly their maladaptive cognitive styles (Watkins and Moulds, 2004). Ethers and Steil (1995) found that rumination acts as a form of cognitive avoidance when trying to stop the processing of anxiety-eliciting memories

<https://assignbuster.com/ruminating-about-depression-thinking-thought-theory-and-evidence/>

during instances of posttraumatic stress. This further satisfies the view that rumination has avoidant properties. Similarly to the characteristics of worry, rumination also produced more abstract descriptions of problems, showing that both cognitive styles are related to reduced concreteness (Watkins and Moulds, 2004). Therefore, with rumination, as it is with worry, the abstract thought reduce the clear imagery produced and limits the physiological and emotional arousal needed for productive and healthy emotional processing.

While little research has been done into the relationship between experiential avoidance and rumination, Cribb et al. (2006) made some important findings which will serve as a strong baseline for future research. Firstly, as expected, depressed individuals were more likely to engage in rumination. Secondly, these individuals experienced higher levels of experiential avoidance, even when anxiety was controlled for. And thirdly, instead of engaging in problem solving behaviour, depressed individuals ruminate, suggesting that the purpose of rumination is strongly linked in the role of avoidance. It is important to test whether these findings are universal. 48% of the participants the study were Asian, and therefore cultural differences may create problems generalising the findings to western cultures.

Discussion

Limitations in the study of rumination. Matthews and Wells (tb) outline some of the limitations and uncertainties in rumination literature, firstly; the definition of rumination. While some authors (e. g. Martin and Tesser, 1989) outline rumination as thoughts which can be either positive or negative,

<https://assignbuster.com/ruminating-about-depression-thinking-thought-theory-and-evidence/>

other authors (e. g. Nolen-Hoeksema, 1991) refer to rumination only in terms of depression. Secondly, there are issues with assessment. Nolen-Hoeksema (1991) developed the Ruminative Response Scale which has been widely used to measure rumination. However it actually measures two styles of rumination, symptom-focused and self-focused. There has been doubt over whether symptom focused rumination predicts depression. Thirdly, many experiments have taken findings into the study of worry and generalised these to rumination. For instance, Watkins and Moulds (2004, see section x) used the avoidance theory of worry to show how rumination can be maintained. While it has been found that worry and rumination are very similar (Watkins, Moulds and Mackintosh, 2005), it is not completely reliable to overlap the two constructs completely.

Lastly, the uncertainties that exist stand in the way of developing successful treatments for rumination. Rumination cannot be treated clinically without certainty of its relationship with other disorders and/or cognitions. It is important to establish for definite that rumination both causes and maintains depression as evidence suggests, as opposed to it being mistaken for more than a symptom of negative affect. Further research needs to be conducted to see what factors may mediate the relationship between rumination and depression.

Future Research and Hypothesis for Research Paper. Future research needs to consider both the uncertainties present within rumination literature, as well as the mounting evidence that shows experiential avoidance may play a role in the relationship between rumination and depression. Firstly, the

uncertainties; in order to understand the relationship between rumination and depression with the hopes of finding definite answers that can lead to treatment, it has to be accepted that rumination is maladaptive, and therefore a negative style of thinking. It would be wise to adopt Nolen-Hoeksema's (1991) view that research into rumination has the most promising results in the context of depression. Future research would do well to not overlap concepts, i. e. measure levels of rumination directly, as opposed to worry. This could be done by using the Ruminative Response Scale (Nolen-Hoeksema & Morrow, 1991) which measures symptom-focused and self-focused rumination.

Secondly, the research by Cribb et al. (2006) has shown the importance of experiential avoidance specifically in the context of rumination and depression. Even when anxiety was controlled for, the three variables were still significantly correlated. This shows that experiential avoidance may be important when clinically diagnosing and subsequently treating depression. On the basis of the evidence examined, it would be interesting to see whether experiential avoidance actually mediates the relationship between rumination and depression. The research paper to be produced in 2011 will study the relationship between these three variables. If the findings of previous studies are replicated, and a relationship between rumination and depression is found, then experiential avoidance will be examined as the mediating variable.

While Watkins and Moulds, (2004) classify rumination as an avoidance strategy itself, the literature into alcohol misuse suggests that avoidance

comes into play after the onset of rumination. In an attempt to stop the negative, cyclic thoughts, it is predicted that ruminators engage in avoidance behaviour. Similar to rumination, experiential avoidance also inhibits the production of problem solving strategies, and therefore the depression will be maintained (Moulds et al. 2007). Therefore, the hypotheses of the research paper are as follows. It is predicted that there will be a positive correlation between rumination and depression, as shown by Nolen-Hoeksema, Parker and Larson (1994) who found that it is rumination above all other negative cognitions that predict depression. It is predicted that there will be a positive correlation between rumination and experiential avoidance, as found in the significant correlations by Moulds et al. (2007). It is predicted that there will be a positive correlation between experiential avoidance and depression reflected by the findings of a strong co-occurrence of the avoidance behaviour alcohol misuse and depression (Grant and Harford, 1995). And lastly, it is predicted that experiential avoidance will be found to be a mediating variable. If this last prediction is found to be correct, then this insight into how the relationship between rumination and depression functions may be a step forward into improving the treatment of depression.