

2014

If it be love indeed tell me how much: Early core beliefs associated with excessive reassurance seeking in depression.

Lyndsay E. Evraire

David J. A. Dozois
University of Western Ontario, ddozois@uwo.ca

Follow this and additional works at: <https://ir.lib.uwo.ca/psychologypub>



Part of the [Psychology Commons](#)

Citation of this paper:

Evraire, Lyndsay E. and Dozois, David J. A., "If it be love indeed tell me how much: Early core beliefs associated with excessive reassurance seeking in depression." (2014). *Psychology Publications*. 240.
<https://ir.lib.uwo.ca/psychologypub/240>

**If It Be Love Indeed Tell Me How Much: Early Core Beliefs Associated with Excessive
Reassurance Seeking in Depression**

Lyndsay E. Evraire and David J. A. Dozois

The University of Western Ontario

Corresponding Author

David J. A. Dozois, Ph.D., C.Psych.
Professor and Director
Clinical Psychology Graduate Program
Department of Psychology
The University of Western Ontario
Westminster Hall, Rm. 313E
London, Ontario, CANADA
N6A 3K7

tel: (519) 661-2111 ext. 84678

email: ddozois@uwo.ca

Evraire, L. E., & Dozois, D. J. A. (in press). If it be love indeed tell me how much: Early core beliefs associated with excessive reassurance seeking in depression. *Canadian Journal of Behavioural Science*.

Abstract

This study explored cognitive variables associated with excessive reassurance seeking (ERS) in depression. Undergraduate students ($n = 303$) completed measures of early maladaptive schemas, attachment styles, ERS, and depression, along with a subsequent measure of depressive symptoms 6 weeks later. Anxious attachment, avoidant attachment, and an abandonment/instability schema each added to the prediction of ERS beyond the effects of depression. Moreover, avoidant attachment and the abandonment/instability schema moderated the relationship between ERS and depression over time. These results are consistent with the idea that individuals with early core beliefs reflecting insecurity in relationships seek reassurance. The findings also suggest that it may not be ERS behaviour per se, but rather characteristics of the individual in combination with ERS that are associated with depression.

Keywords: Core beliefs; Schemas; Depression; Dysphoria; Excessive Reassurance Seeking

If It Be Love Indeed Tell Me How Much: Early Core Beliefs Associated with Excessive Reassurance Seeking in Depression

Excessive reassurance seeking (ERS) within the context of depression has been defined as “the relatively stable tendency to excessively and persistently seek assurances from others that one is lovable and worthy, regardless of whether such assurance has already been provided” (Joiner, Metalsky, Katz, & Beach, 1999, p. 270). According to Coyne’s (1976) interpersonal theory of depression, individuals with mild depression, in response to their symptoms of guilt and low self-worth, seek reassurance from close others to test the security of their relationships. In the beginning, others willingly provide the requested support; however, if the individual with depression begins to question the authenticity of the feedback, and increases his or her reassurance seeking behaviour, close others may become frustrated and are more likely to reject the individual with depression (Joiner, Alfano, & Metalsky, 1992). The subsequent deterioration of close relationships may lead to an exacerbation of symptoms and create an environment of social isolation in which the individual with depression may have difficulty obtaining the necessary support to overcome his or her disorder (Joiner & Metalsky, 2001).

ERS and Depression

In support of Coyne's theory, a recent meta-analysis of the cross-sectional relationships between ERS and depression indicated that the average effect size was .32 across 38 studies ($N = 6,973$). Higher levels of ERS were associated with a greater number of depressive symptoms (Starr & Davila, 2008). Prospective studies also exist that support a positive relationship between baseline ERS and future symptoms of depression (Birgenheir, Pepper, & Johns, 2010; Davila, 2001; Haeffel, Voelz, & Joiner, 2007; Joiner & Metalsky, 1995; Joiner & Metalsky, 2001; Joiner

& Schmidt, 1998; Katz, Beach, & Joiner, 1998; Pothoff, Holahan, & Joiner, 1995; Shaver, Schachner, & Mikulincer, 2005).

ERS, Interpersonal Stress and Depression

Starr and Davila (2008) also examined the relationship between ERS and interpersonal rejection, and found a significant but weak effect size of .14 across 16 studies ($N = 2, 596$), with higher ERS predicting more rejection. Although weak in magnitude, this relationship is particularly important when considering the finding that individuals suffering from depression, who also excessively seek reassurance, tend to be at particular risk for negative evaluation by close others (Pettit & Joiner, 2006). In contrast, individuals with symptoms of depression and low levels of ERS, or anxious individuals with high levels of ERS, are not evaluated negatively by close others (Joiner & Metalsky, 1995; Pettit & Joiner, 2006). It would seem that symptoms of depression, including hopelessness and a sense of desperation (rather than symptoms of anxiety) when signaled to others through ERS, have negative interpersonal consequences. Thus, ERS may play a unique role in the interpersonal expression of the aversive qualities of depression. Along these lines, greater reassurance seeking behaviour is associated with stress generation (e.g., a greater occurrence of dependent interpersonal stress; Eberhart & Hammen, 2009; Pothoff et al., 1995; Shih & Auerbach, 2010).

The likely deterioration of the interpersonal relationships of individuals who engage in ERS may leave them at risk of decreased social support and thus vulnerable to stressful situations and to developing a sense of hopelessness and depressed mood (Joiner et al., 1999; Timmons & Joiner, 2008). Congruent with this hypothesis, individuals with high levels of reassurance seeking behaviour who also experienced an interpersonal (e.g., rejection by a close other) or achievement (e.g., receiving a low grade on an exam) stressor, were more likely than

low reassurance seekers, who experienced the same stressor, to exhibit increases in symptoms of depression (Joiner & Metalsky, 1995; Joiner & Schmidt, 1998). Furthermore, Potthoff et al. (1995) found that minor social stressors, with one's family, friends, or partner, mediated the relationship between ERS and subsequent depressive symptoms. That is, individuals with higher levels of ERS were more likely to generate interpersonal stressors which then lead to subsequent increases in symptoms of depression. Thus, research appears to support the idea that ERS may create problems in an individual's social network, which eventually predict increases in symptoms of depression.

Cognitive-Interpersonal Link in Depression Vulnerability

Notwithstanding empirical support for an association between ERS, the generation of stress in relationships, and symptoms of depression, research examining the mechanism(s) by which individuals come to engage in ERS is just beginning to grow and has yet to be integrated conceptually. One hypothesis is that ERS and depression may be linked through early experiences of interpersonal dysfunction. For example, researchers now look to adult attachment processes to explain the variation in social relationships that may increase vulnerability to depression, and the failure to use support from others during an episode of depression (Moran, Bailey, & DeOliveira, 2008). In attachment theory, early interactions between an infant and his or her caregiver lead to the development of an internal working model (IWM) about the self, others, and the relationship between the two. Internal working models of attachment not only influence the way individuals relate to others, but also their attributions, perceptions, and emotional understanding of these relationships (Moran et al., 2008). In adults, IWMs of attachment are conceptualized along two dimensions: avoidance, which involves feeling

discomfort in close relationships, and anxiety, which involves worrying about the availability of others to meet attachment needs and one's self-worth in relation to others.

Clear parallels exist between Bowlby's (1969/1982) attachment theory and Young's (1999) early maladaptive schemas (EMSs). Young's early maladaptive schemas (EMSs) also include a set of early core beliefs that originate from repetitious, aversive experiences in childhood (e.g., insecure attachments that result in unmet core emotional needs). These beliefs or EMSs, are defined as broad, pervasive themes or patterns comprised of memories, emotions, cognitions, and bodily sensations regarding self and one's relationships with others (Young, Klosko, & Weishaar, 2003). Early maladaptive schemas act as a priori truths and influence how an individual processes later experiences, thinks, acts, feels, and relates to others throughout life.

Cognitive Variables Associated with ERS

Attachment research in adults has established that individuals high in avoidance minimize the expression of negative emotions and use deactivating strategies (e.g., avoidance of proximity) to deal with distress. In contrast, individuals high in anxiety have a low threshold for activation of their IWM, maximize the expression of negative emotions and use hyperactivating strategies (e.g., proximity seeking) to manage distress (Cobb & Davila, 2009; Moran et al., 2008). More so than other attachment styles, a significant link has been established between an anxious attachment style and higher levels of overall and daily ERS (Davila, 2001; Katz, Petracca, & Rabinowitz, 2009; Shaver et al., 2005). Furthermore, when anxious attachment was broken down into its constituent dimensions (comfort with closeness and anxiety about abandonment), only the anxiety about abandonment component was positively associated with ERS (Davila, 2001). Shaver et al. (2005) also found that for women high on attachment anxiety, reassurance seeking on a given day was associated with more negative mood the next day;

however, for women low on attachment anxiety, reassurance seeking on a given day led to positive mood the next day. These findings suggest that it may not be the behaviour of ERS *per se*, but rather characteristics of the individual in combination with ERS that are associated with changes in mood or depression. That is, individual difference variables seem to moderate the association between ERS and depression, providing a potential explanation as to why the correlation between ERS and depression is generally modest (Starr & Davila, 2008). Further research is needed to clarify and confirm the moderating effects of attachment styles on the relationship between ERS and depression as some studies (e.g., Katz et al., 2009) have not found support for a moderation model.

Parrish and Radomsky (2010) took a unique approach to studying the origins of ERS by interviewing individuals with major depressive disorder (MDD), obsessive-compulsive disorder (OCD), and healthy controls, inquiring about the content, triggers, function, and termination criteria involved in their reassurance-seeking behaviour. The most common focus of reassurance seeking reported by individuals with MDD involved social threats (e.g., asking a fiancé if they love him or her). Individuals with MDD also sought reassurance about personal performance and/or competence (e.g., doubts regarding competence in everything from work to the ability to run a household) and general safety or harm concerns (e.g., making sure the door is locked). When discussing the types of situations that trigger their reassurance-seeking, individuals with MDD identified the most frequent triggers as perceived social threats (e.g., doubt or insecurity they are experiencing in a relationship) and doubts regarding personal performance and/or competence (e.g., feeling they cannot make a decision on their own). Similarly, individuals with MDD most commonly indicated that the function of reassurance-seeking was to increase their self-esteem, receive affection, decrease anxiety, and prevent social harm. In contrast, individuals

with obsessive compulsive disorder (OCD) reported seeking reassurance primarily about perceived general threats (e.g., theft or fire) to prevent harm, rather than seeking reassurance about social threats to reduce social harm. These findings augment the literature by offering additional support regarding the relationship between early core beliefs reflecting insecurity in interpersonal domains and ERS in individuals with depression.

Objectives

Empirical research on the cognitive variables associated with ERS is just beginning to flourish and a number of core beliefs remain to be explored in relation to this construct. The primary objective of this study was to examine the associations among attachment styles and EMSs, henceforth referred to as early core beliefs, and ERS. Consistent with Davila (2001), Katz et al. (2009) and Shaver et al. (2005), who demonstrated that an anxious attachment style was positively associated with ERS, higher attachment anxiety was expected to be associated with greater ERS (Hypothesis 1). Also, given that an anxious attachment style reflects a fear of abandonment, EMSs representing insecurity in relationships, particularly a fear of rejection and abandonment, were predicted to be positively related to ERS (Hypothesis 2).

The second objective of this study was to determine whether or not any of the early core beliefs associated with ERS would moderate the relationship between ERS and an individual's level of depression over time. Early core beliefs reflecting a fear of rejection and abandonment were predicted to moderate the relationship between ERS and levels of depression over time (Hypothesis 3).

Method

Participants

A total of 303 undergraduate students enrolled in first year psychology at the University of Western Ontario participated. The age of participants ranged from 17 to 48, with a mean of 18.73 ($SD = 0.81$) years. There were 244 females and 59 males. Reported ethnicity was 66.0% Caucasian, 21.5% Asian, 2% African Canadian, 0.7% First Nations or Native Canadian, 0.7% Hispanic, and 9.1% other, consistent with the underlying demographics of the university. Participants received class credit for their involvement. Given that participants were not required to complete the follow up, a total of 209 participants completed the follow-up portion of the study online, 6 weeks later. Individuals who participated at time 1 differed in age and gender breakdown compared to those who participated at time 2. Although a greater percentage of males from time 1 participated at time 2, in comparison to females, there were still no significant differences between males and females at time 2 on the variables of interest. As such, both genders were kept in subsequent analyses. Furthermore, since age did not correlate with any of the variables used in subsequent analyses, it was not treated as a covariate.

Measures

Beck Depression Inventory, Second Edition (BDI-II; Beck, Steer, & Brown, 1996). The BDI-II is a 21-item questionnaire that assesses the presence and severity of unipolar depressive symptomatology. Each item is rated on a 4-point scale from 0 (*low severity*) to 3 (*high severity*) with total scores ranging from 0 to 63. Considerable psychometric evidence supports the concurrent and discriminant validity of this questionnaire as a measure of depressive severity in both clinical and undergraduate samples (Beck et al., 1996; Dozois, Dobson, &

Ahnberg, 1998). Cronbach's alpha for the current sample was .88 at time 1 (95% confidence interval [CI] = .86-.90) and .91 at time 2 (95% CI = .89-.92).

Depressive Interpersonal Relationships Inventory-Reassurance Seeking Subscale (DIRI-RS; Joiner et al., 1992). The DIRI-RS is a 4-item self-report questionnaire designed to measure an individual's tendency to engage in reassurance seeking about relationship security (e.g., "Do you find yourself often asking the people you feel close to how they truly feel about you?"), and his or her partner's reactions to such reassurance seeking (e.g., "Do the people you feel close to sometimes get fed up with you seeking reassurance from them about whether they really care about you?"). Participants answer the questions based on their current relationships on a 7-point scale from 1 (*not at all*) to 7 (*very much*); for the purpose of the current study an average score was calculated with scores ranging from 1 to 7. Joiner and Metalsky (2001) demonstrated that the DIRI-RS has adequate construct and criterion validity and may be used as a cohesive and replicable measure of reassurance-seeking distinct from general dependency, doubt in others' sincerity, and dependence on close others. The DIRI-RS demonstrates good scale score reliability (Joiner et al., 1992). Cronbach's alpha in the present sample was .83 (95% CI = .80-.86).

Experiences in Close Relationships-Revised (ECR-R; Fraley, Waller, & Brennan, 2000). The ECR-R is a revised version of Brennan, Clark, and Shaver's (1998) Experiences in Close Relationships (ECR) questionnaire. This 36-item questionnaire is designed to assess individual differences in attachment-anxiety (the extent to which people are insecure about their partner's availability and responsiveness) and attachment-related avoidance (the extent to which individuals are uncomfortable being close to others). Participants rate each item on a 7-point scale from 1 (*disagree strongly*) to 7 (*agree strongly*) based on how they generally experience

their close relationships (friends, parents, partner), not just on what is happening in their current relationships; for the current study an average score was calculated for both anxious and avoidant attachment with scores ranging from 1 to 7. The scale score reliability of the ECR-R is excellent (e.g., $\alpha \geq .90$). Coefficient alpha for the current sample was .92 for both anxious (95% CI = .90-.93) and avoidant attachment (95% CI = .91-.94).

Young Schema Questionnaire-Short Form (YSQ-SF; Young and Brown, 2003). The YSQ-SF is a 75-item self-report questionnaire that assesses 15 early maladaptive cognitive schemas (or accurately termed core beliefs; Dozois & Beck, 2008): emotional inhibition, emotional deprivation, mistrust/abuse, social isolation/alienation, defectiveness/shame, abandonment/instability, failure, dependence/incompetence, vulnerability to harm or illness, enmeshment/undeveloped self, subjugation, entitlement/grandiosity, insufficient self-control/self-discipline, self-sacrifice and unrelenting standards/hypercriticalness. The YSQ-SF is rated on a 6-point scale from 1 (*completely untrue of me*) to 6 (*describes me perfectly*); for this study an average score for each EMS was calculated with scores ranging from 1 to 6. The psychometric properties of this instrument are strong with good demonstrated reliability and validity (e.g., Welburn, Coristine, Dagg, Pontefract, & Jordan, 2002). The average coefficient alpha across schemas for the present sample was .81 (average 95% CI = .78-.80).

Procedure

Data from participants were collected using a longitudinal design over the course of 6 weeks. Participants were self-selected for the study through the university's web-based research participation pool. At time 1, students came into the lab and were run in groups of up to ten. Packages of paper questionnaires were given to each student in order to assess their attachment styles, EMSs, ERS, and symptoms of depression. Participants who provided the researcher with

their contact information were contacted approximately 6 weeks ($M = 46.57$ days, $SD = 5.09$ days) following their initial participation, and were asked to complete an online measure of their symptoms of depression. Participants were compensated with course credit for their participation in time 1, and were entered into a draw for a chance to win an iPod nano for their participation in time 2.

Results

The Contribution of Early Core beliefs and Depression to ERS

To reduce the number of analyses and retain their theoretical parsimony, two hierarchical multiple regressions were conducted to determine the best set of predictors of ERS (as measured by the DIRI-RS) among a number of attachment styles and EMSs; similar regression analyses have been utilized in previous ERS research (e.g., Davila, 2001). The first hierarchical multiple regression analysis assessed whether attachment styles predicted ERS, above and beyond the effects of time 1 depression. For the first step, individuals who reported higher levels of depression also reported engaging in higher levels of ERS, $R^2 = .09$, $F(1, 299) = 30.08$, $p < .001$. Anxious and avoidant attachment styles were entered into the second step and accounted for a significant proportion of ERS variance after controlling for the effects of time 1 depression, R^2 change = .16, $F(2, 297) = 31.93$, $p < .001$. Individuals with an anxious attachment style reported higher levels of ERS ($p < .001$), whereas individuals with an avoidant attachment style reported lower levels of ERS ($p < .001$).

A second hierarchical multiple regression analysis was used to determine the incremental validity of EMSs in predicting ERS, after controlling for the influence of depression scores. Depression was entered in the first step. The 15 early maladaptive schemas, which were entered in the second step of the regression equation, accounted for a significant proportion of ERS

variance after controlling for the effects of time 1 depression, R^2 change = .20, $F(15, 283) = 5.21$, $p < .001$. Even after applying a Bonferroni correction (p of $.05/15 = .003$), individuals who endorsed an abandonment/instability schema reported higher levels of ERS ($p < .001$).

A hierarchical multiple regression analysis was also conducted to evaluate which of the early core beliefs, that emerged as significant predictors in the previous analyses, added most to the prediction of ERS beyond the effects of depression (see Table 1). For step 1, the results of this analysis indicated that time 1 depression accounted for a significant amount of ERS variability, $R^2 = .09$, $F(1, 297) = 29.58$, $p < .001$. The predictor variables included in the second step were anxious attachment, avoidant attachment, and the abandonment/instability schema. This set of predictors accounted for a significant portion of ERS variance beyond the effects of time 1 depression, R^2 change = .22, $F(3, 294) = 31.05$, $p < .001$. After controlling for the effects of all other predictors in the model, time 1 depression no longer predicted ERS. For the remainder of the analyses, anxious attachment, avoidant attachment, and the abandonment/instability schema were used as predictors of ERS. Descriptive statistics for the variables of interest are summarized in Table 2¹. As can be seen, there were no statistically significant differences between men and women. Correlations among variables are displayed in Table 3.

Early Core beliefs as Moderating Variable between ERS and Depression

Three hierarchical multiple regression analyses were conducted to assess the extent to which anxious attachment, avoidant attachment, or an abandonment/instability schema moderated the relationship between ERS and depression over time.

¹ Variables of interest were tested for normality by evaluating both skewness and kurtosis. Although some variables were not normally distributed, reanalysis of the data after creating square-root transformations had no impact on the overall findings, as such, only the non-transformed data are reported.

The first hierarchical multiple regression analysis was conducted to assess whether anxious attachment moderated the relationship between ERS and depression over time. For the first step, time 1 depression accounted for a significant portion of variance in depression scores at time 2, $R^2 = .44$, $F(1, 206) = 164.57$, $p < .001$, indicating that individuals who reported higher time 1 depression scores also reported higher depression scores at time 2. For the second step, the main effects of anxious attachment and ERS did not account for a significant portion of variance in depression scores at time 2 after controlling for time 1 depression, R^2 change = .01, $F(2, 204) = 1.47$, *ns*. For the third step the interaction between anxious attachment and ERS did not add significantly to the prediction of depression at time 2 after controlling for the main effects and time 1 depression, R^2 change = .00, $F(1, 203) = 0.17$, *ns*.

A second hierarchical multiple regression analysis was conducted to determine whether avoidant attachment moderated the relationship between ERS and depression over time. Depression was entered in the first step. For the second step, the main effects of avoidant attachment and ERS did not account for a significant portion of variance in depression scores at time 2 after controlling for time 1 depression, R^2 change = .01, $F(2, 203) = 1.71$, *ns*. For the third step, the interaction between avoidant attachment and ERS added significantly to the prediction of depression at time 2 controlling for the main effects and time 1 depression, R^2 change = .01, $F(1, 202) = 5.01$, $p < .05$. To examine the significant interaction, regression slopes were computed for changes in depression scores at time 2 as a function of ERS. The slope of changes in depression scores regressed on ERS was positive and significant when avoidant attachment was one standard deviation below the mean ($\beta = .20$, $p < .01$) but not when it was one standard deviation above the mean ($\beta = -.02$, $p = ns$). That is, the lower an individual's level of avoidant attachment, the stronger the positive association between level of ERS and changes in depression

scores (see Figure 1). The regression coefficients and their associated tests of significance are found in Table 4.

A final hierarchical multiple regression analysis was conducted to determine whether an abandonment/instability schema moderated the relationship between ERS and depression over time. Depression was entered in the first step. For the second step the main effects of the abandonment/instability schema and ERS did not account for a significant portion of variance in depression scores at time 2 after controlling for time 1 depression, R^2 change = .01, $F(2, 203) = 1.33$, *ns*. The interaction between the abandonment/instability schema and ERS, however, added significantly to the prediction of depression at time 2 controlling for the main effects and time 1 depression, R^2 change = .02, $F(1, 202) = 8.20$, $p < .01$. The slope of changes in depression scores regressed on ERS was positive and significant when abandonment/instability was one standard deviation above the mean ($\beta = .20$, $p < .01$) but not when it was one standard deviation below the mean ($\beta = -.08$, $p = ns$). That is, the higher an individual's level of abandonment/instability, the stronger the positive association between level of ERS and changes in depression scores (see Figure 2). The regression coefficients and their associated tests of significance are found in Table 4.

Discussion

This study addressed several specific hypotheses and research questions while exploring and further delineating the cognitive variables associated with ERS in depression. As discussed below, anxious attachment, avoidant attachment, and an abandonment/instability schema added to the prediction of ERS beyond the effects of depression. These results are consistent with the idea that individuals are more likely to seek reassurance about relationship security when they possess early core beliefs

reflecting insecurity in relationships rather than symptoms of depression per se. Furthermore, an abandonment/instability schema and avoidant attachment style moderated the association between ERS and depression, suggesting that a combination of specific early core beliefs and ERS is associated with increased depression over time.

The first hypothesis was that individuals high in attachment anxiety would report higher levels of ERS. The results strongly supported this hypothesis and replicate previous findings in the literature. Shaver et al. (2005) found that the higher a woman's attachment anxiety, the higher her daily tendency to seek reassurance from her romantic partner. Similarly, Davila (2001) and Katz et al. (2009) found that undergraduates with a preoccupied or anxious attachment style reported greater levels of ERS. Given that individuals with an anxious attachment style tend to have low self-esteem and a fear of abandonment, they may rely on feedback or reassurance from others to determine their self-worth and security in their relationships (Brennan & Carnelley, 1999). However, despite their solicitation of, and openness to feedback, individuals with an anxious attachment style may doubt the sincerity of the reassurance they receive from close others, since they perceive others to be unresponsive/ untrustworthy, and so continue to engage in ERS (Crittenden, 1997).

In support of the second hypothesis, an abandonment/instability schema was associated with higher self-reported ERS. This finding augments the literature, by offering additional support regarding the relationship between early core beliefs reflecting a high level of concern surrounding relationships (in particular a fear of rejection and abandonment), and ERS. Furthermore, the abandonment/instability schema

added to the prediction of ERS beyond anxious attachment, indicating that this schema is not simply a manifestation of anxious attachment.

A finding that was not predicted was that avoidant attachment added to the prediction of ERS, with higher levels of avoidant attachment being associated with lower ERS. It is important to note, however, that avoidant attachment and ERS, while having a negative relationship with one another, were not significantly correlated. The association between avoidant attachment and ERS in the literature is mixed. For example, Shaver et al. (2005) found that avoidant attachment was not correlated with ERS and did not contribute significantly to the prediction of daily reassurance seeking. On the other hand, although Davila (2001) found a significant, negative correlation between avoidant attachment and ERS, avoidant attachment did not add to the prediction of ERS. In the current study, anxious attachment was included in regression analyses in conjunction with avoidant attachment. Furthermore the two attachment styles were positively intercorrelated. Given the positive association between the two attachment styles, and the fact that although, not correlated with ERS, avoidant attachment added to its prediction, it would seem as though anxious attachment acted as a suppressor variable on avoidant attachment. That is, anxious attachment enhanced the influence of avoidant attachment on ERS by virtue of suppressing variance in avoidant attachment that was irrelevant to the prediction of ERS. Conceptually, it makes sense that individuals with an avoidant attachment style, who tend to minimize the expression of negative emotions and use deactivating strategies to deal with distress, would engage in lower levels of ERS. Although previous research has examined anxious and avoidance attachment simultaneously (Davila, 2001; Shaver et al., 2005), the fact that the variance accounting

for the association between these two constructs has been removed must be taken into account when interpreting analyses.

An interesting set of findings that adds to the current literature involved the moderating effects of an abandonment/instability schema and avoidant attachment style on the longitudinal relationship between ERS and depression. For individuals with an abandonment/instability schema, ERS was associated with higher levels of depressive symptomatology over a 6 week period. For individuals high in avoidant attachment, there was no association between ERS and symptoms of depression 6 weeks later. These findings suggest that it may not be the behaviour of ERS per se, but rather characteristics of the individual in combination with ERS that are associated with increase in depression over time. It would seem that there are both secure and insecure forms of ERS, perhaps only one of which is excessive in the sense that it leads to increases in depression or is damaging in some other way (e.g., social rejection or the generation of interpersonal stress). In line with this idea, Shaver et al. (2005) found that for women high on attachment anxiety, reassurance seeking on a given day was associated with more negative mood the next day; however, for women low on attachment anxiety, reassurance seeking on a given day led to positive mood the next day. The findings of the current study suggest that individuals with an abandonment/instability schema, in response to their fear of abandonment and perception of close others as unreliable, may seek reassurance in a way that is likely aversive to others and detrimental to their psychological well being. For individuals high in avoidant attachment who typically distance themselves from the support of close others, ERS did not significantly affect levels of depression.

Although the current study contributes to the ERS literature in important ways, a number of limitations should be noted. One limitation pertains to the use of self-report measures of depression and ERS. The meta-analysis conducted by Starr and Davila (2008) found that self-report measures of depression potentially inflate the relationship between ERS and depression. However, there is still a significant association between depression and ERS when interview measures of depression are used (Starr & Davila, 2008). Furthermore, 92% of studies examining the association between ERS and depression rely solely on self-report data, suggesting that the literature on ERS may be biased by an overreliance on self-report assessments of depression. More specifically, the DIRI-RS itself assesses a narrow focus of ERS asking questions about reassurance around relationship security. Interviews about ERS behaviour, such as the one created by Parrish and Radomsky (2010), measure reassurance seeking across a variety of topics serving a number of different functions. A second limitation included the use of an online questionnaire for the follow up. Given that participants completed the questionnaire on their own computer and so a lack of control with regards to the effort and attention they gave to the measures was unknown. A third limitation was the fact that the sample consisted of undergraduate students. Starr and Davila (2008) found that studies with patients yielded a marginally weaker association between depression and ERS than those with community samples. This finding suggests that the dynamics of Coyne's ERS model may change as individuals become more depressed. While ERS may initially lead to the deterioration of an individual's social environment and escalate symptoms of depression, when symptoms enter into the range of major depression, it may be that reassurance seekers have habituated to rejection, become more socially isolated, and given up on

seeking support. Another limitation involves the follow-up interval of 6 weeks, which although consistent with previous research, may not have been appropriate to test the dynamics of the ERS model. For example, there was a considerably small degree of variability in symptoms of depression across the 6 week period. As a result, the R^2 change values for the interaction terms were relatively small, likely due to the lack of variance in depression scores over time. As noted previously, examining changes in depression over a longer period of time has provided enough variability in symptoms of depression that early core-beliefs and ERS predicted changes in depression (Davila, 2001). Given these limitations, it is clear that there is a need to replicate the association between ERS and depression over a longer period of time, in a sample of individuals with clinical depression, using clinical interviews, to examine whether the ERS model is associated with major depression, subthreshold dysphoria, or both.

The findings of the current study have a number of theoretical implications. Interpersonal schemas reflecting insecurity in relationships, particularly a fear of abandonment and rejection, showed incremental predictive power for ERS about relationship security over and above the influence of depression. Coyne's (1976) interpersonal theory of depression suggests that individuals with depression seek reassurance excessively as a result of feelings of guilt and low self-worth. However, the current findings suggest that individuals may not engage in ERS because of depression, but rather as a function of early core beliefs that reflect high levels of concern surrounding relationships. As such, the details of Coyne's model may need to be refined in order to incorporate these findings. The ERS model may also need to be re-conceptualized to account for the notion that there may be both secure and insecure forms

of reassurance seeking, with the insecure form being excessive in that it has negative psychological and even social consequences. The results of this study suggest that it is not the behaviour of ERS per se that is associated with depression; rather, it is the combination of a core-belief system reflecting instability in relationships particularly a concern about being left behind or unwanted, and ERS, that has negative psychological consequences. Seeking reassurance may actually have beneficial psychological consequences for secure individuals or those high in avoidant attachment. Furthermore, the literature does not include normative data on reassurance seeking. Without such norms, it is not clear when ERS becomes excessive or what “excessive” really means (e.g., negative psychological or social consequences or degree and frequency). In previous research, and in the current study, mean ERS levels were actually quite low (ranging from 2.40 to 3.04 out of 7) suggesting that reassurance seeking seems to have negative psychological consequences, or is “excessive”, regardless of actual frequency, when individuals with a particular set of early core beliefs engage in this behaviour. Diary studies could track reassurance seeking daily in order to establish ranges of normal and ERS behaviour, while at the same time examining the characteristics of individuals who engage in ERS. With this information, the details of Coyne's ERS model as applied to depression would become clearer.

Conclusion

Social relationships play a significant role in individual health outcomes, often protecting individuals from the detrimental effects associated with psychosocial stress. However, when individuals are unable to maintain healthy relationships, such relationships may add to rather than attenuate emotional distress. The findings of the

present study helped to elucidate some of the cognitive variables associated with the interpersonally aversive behaviour of ERS in the context of depression. Individuals with early core beliefs reflecting high levels of concern in relationships, such as a fear of instability, and rejection or abandonment, reported engaging in higher levels of ERS. In addition, the combination of high ERS and a fear of abandonment/instability was associated with an exacerbation of depressive symptoms across a 6 week period. Although not examined in the present study, it is likely that individuals high in ERS create an environment of social isolation in which they often cannot receive the necessary support to deal with stressors or to overcome their symptoms of depression. Ideally, this study's findings will help prevent individuals from contributing to their own downward spiral into depression and subsequent social isolation, by helping them to maintain healthy and supportive relationships. In improving their social networks, individuals suffering from depression will have the necessary encouragement and support from significant others to overcome life's challenges and their disorder.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple Regression: Testing and Interpreting Interactions*. Newbury Park, CA: Sage Publications.
- Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Beck Depression Inventory manual* (2nd Ed.). San Antonio, TX: The Psychological Corporation.
- Birgenheir, D. G., Pepper, C. M., & Johns, M. (2010). Excessive reassurance seeking as a mediator of sociotropy and negative interpersonal life events. *Cognitive Therapy and Research, 34*, 188-195.
- Bowlby, J. (1982). *Attachment and loss: Vol. 1. Attachment* (2nd ed.). New York: Basic Books. (1st ed., 1969).
- Brennan, K. A., & Carnelley, K. B. (1999). Using meaning to mend holes in the nomological net of excessive reassurance-seeking and depression. *Psychological Inquiry, 10*, 282-285.
- Brennan, K. A., Clark, C. L., & Shaver, P. (1998). Self-report measures of adult romantic attachment. In J.A. Simpson & W.S. Rholes (Eds.), *Attachment Theory and Close Relationships*. pp. 46-76. New York: Guilford Press.
- Cobb, R. J., & Davila, J. (2009). Internal working models and change. In J. H. Obegi, & E. Berant (Eds.), *Attachment theory and research in clinical work with adults* (pp. 209-233). New York: The Guilford Press.
- Coyne, J. C. (1976). Toward an interactional description of depression. *Psychiatry, 39*, 28-40.
- Crittenden, P. M. (1997). The effect of early relationship experiences on relationships in adulthood. In S. Duck (Ed.), *Handbook of personal relationships: Theory, research and interventions* (2nd ed., pp. 99-119). Chichester, England: Wiley.

- Davila, J. (2001). Refining the association between excessive reassurance seeking and depressive symptoms: The role of related interpersonal constructs. *Journal of Social and Clinical Psychology, 20*, 538-559.
- Dozois, D. J. A., & Beck, A. T. (2008). Cognitive schemas, beliefs and assumptions. In K. S. Dobson, & D. J. A. Dozois (Eds.), *Risk Factors in Depression* (pp. 121-144). Oxford: Elsevier.
- Dozois, D. J. A., Dobson, K. S., & Ahnberg, J. L. (1998). A psychometric evaluation of the Beck Depression Inventory—II. *Psychological Assessment: A Journal of Consulting and Clinical Psychology, 10*, 83-89.
- Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item-response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology, 78*, 350-365.
- Haefel, G. J., Voelz, Z. R., & Joiner, T. E., Jr. (2007). Vulnerability to depressive symptoms: Clarifying the role of excessive reassurance seeking and perceived social support in an interpersonal model of depression. *Cognition & Emotion, 21*, 681–688.
- Joiner, T. E., Jr., Alfano, M. S., & Metalsky, G. I. (1992). When depression breeds contempt: Reassurance seeking, self-esteem, and rejection of depressed college students by their roommates. *Journal of Abnormal Psychology, 101*, 165-173.
- Joiner, T. E., Jr., & Metalsky, G. I. (1995). A prospective test of an integrative interpersonal theory of depression: A naturalistic study of college roommates. *Journal of Personality and Social Psychology, 69*, 778-788.

- Joiner, T. E., Jr., & Metalsky, G. I. (2001). Excessive reassurance seeking: Delineating a risk factor involved in the development of depressive symptoms. *Psychological Science, 12*, 371-378.
- Joiner, T. E., Jr., Metalsky, G. I., Katz, J., & Beach, S. R. H. (1999). Depression and excessive reassurance seeking. *Psychological Inquiry, 10*, 269-278.
- Joiner, T. E., Jr., & Schmidt, N. B. (1998). Excessive reassurance-seeking predicts depressive but not anxious reactions to acute stress. *Journal of Abnormal Psychology, 107*, 533-537.
- Katz, J., Beach, S. R. H., & Joiner, T. E., Jr. (1998). When does partner devaluation predict emotional distress? Prospective moderating effects of reassurance-seeking and self-esteem. *Personal Relationships, 5*, 409-421.
- Katz, J., Petracca, M., & Rabinowitz, J. (2009). A retrospective study of daughters' emotional role reversal with parents, attachment anxiety, excessive reassurance-seeking and depressive symptoms. *The American Journal of Family Therapy, 37*, 185-195.
- Moran, G., Bailey, H. N., & DeOliveira, C. A. (2008). In K. S. Dobson & D. J. A. Dozois (Eds.), *Risk factors in depression* (pp. 121-143). Oxford, England: Elsevier/Academic Press.
- Parrish, C. L., & Radomsky, A. S. (2010). Why do people seek reassurance and check repeatedly? An investigation of factors involved in compulsive behaviour in OCD and depression. *Journal of Anxiety Disorders, 24*, 211-222.
- Pettit, J. W., & Joiner, T. E., Jr. (2006). Excessive reassurance-seeking. In *Chronic depression: Interpersonal sources, therapeutic solutions* (pp 55-72). Washington: American Psychological Association.

- Potthoff, J. G., Holahan, C. J., & Joiner, T. E. (1995). Reassurance seeking, stress generation, and depressive symptoms: An integrative model. *Journal of Personality and Social Psychology, 68*, 664-670.
- Shaver, P. R., Schachner, D. A., & Mikulincer, M. (2005). Attachment style, excessive reassurance seeking, relationship processes, and depression. *Personality and Social Psychology Bulletin, 31*, 343-359.
- Starr, L. R., & Davila, J. (2008). Excessive reassurance seeking, depression, and interpersonal rejection: A meta-analytic review. *Journal of Abnormal Psychology, 117*, 762-775.
- Timmons, K. A., & Joiner, T. E., Jr. (2008). Reassurance seeking and negative feedback seeking. In K. S. Dobson & D. J. A. Dozois (Eds.), *Risk factors in depression* (pp. 121-143). Oxford, England: Elsevier/Academic Press.
- Welburn, K., Coristine, M., Dagg, P., Pontefract, A., & Jordan, S. (2002). The schema questionnaire-short form: Factor analysis and relationship between schemas and symptoms. *Cognitive Therapy and Research, 26*, 519-530.
- Young, J. E. (1999). *Cognitive therapy for personality disorders: A schema-focused approach* (rev. ed.). Sarasota, FL: Professional Resources Press.
- Young, J. E., & Brown, G. (2003). *Young schema questionnaire: Short form*. Available at <http://www.schemathearpy.com/id54.htm>.
- Young, J. E., Klosko, J. S., & Weishaar, M. E. (2003). Schema therapy: Conceptual model. In, *Schema therapy: A practitioner's guide* (p. 7). New York: Guilford Press.

Author Note

This research was supported by a Joseph-Armand Bombardier, Canada Graduate Scholarship from the Social Science and Humanities Research Council of Canada (SSHRC) awarded to the first author and from a SSHRC Research Grant awarded to the second author. This research funding is gratefully acknowledged.

Table 1

Standardized Coefficients of Predictors for ERS

Predictors	β	p
Step 1		
Time 1 Depression	.30	<.001
Step 2		
Time 1 Depression	.09	.12
Anxious Attachment	.27	<.001
Avoidant Attachment	-.20	<.001
Abandonment/Instability	.31	<.001

Note: ERS = Excessive reassurance seeking

Table 2

Mean and Standard Deviations for Key Variables Reported Separately for Each Gender

	Male <i>M (SD)</i>	Female <i>M (SD)</i>	<i>t</i>
ERS	2.68 (1.38)	2.51 (1.21)	.98
Time 1 Depression	8.91(8.57)	10.17 (7.07)	-1.17
Time 2 Depression	10.40 (9.48)	10.93 (7.81)	-.34
Anxious Attachment	3.25 (1.08)	3.18 (1.05)	.48
Avoidant Attachment	3.32 (1.04)	3.34 (1.05)	-.10
Abandonment/Instability	1.91 (1.02)	2.04 (1.01)	-.93

Note: ERS = Excessive reassurance seeking

Table 3

Correlation Coefficients between ERS, Depression, and Early Core beliefs

	1	2	3	4	5	6
1. ERS	-					
2. Time 1 Depression	.30**	-				
3. Time 2 Depression	.25**	.67**	-			
4. Anxious Attachment	.46**	.52**	.33**	-		
5. Avoidant Attachment	-.07	.32**	.21**	.28**	-	
6. Abandonment/instability	.50**	.43**	.35**	.59**	.08	-

** Correlation is significant at the .01 level (2-tailed)

*Correlation is significant at the .05 level (2-tailed)

Note: ERS = Excessive reassurance seeking

Table 4

Early Core Beliefs as Moderators of the Relationship between ERS and Time 2 Depression

Predictors	β	p
Step 1		
Time 1 Depression	.67	<.001
Step 2		
Time 1 Depression	.63	<.001
ERS	.10	.07
Avoidant Attachment	.04	.45
Step 3		
Time 1 Depression	.63	<.001
ERS	.09	.10
Avoidant Attachment	.03	.65
Avoidant Attachment * ERS	-.12	.03
Step 1		
Time 1 Depression	.66	<.001
Step 2		
Time 1 Depression	.63	<.001
ERS	.08	.19
Abandonment/instability	.02	.78
Step 3		
Time 1 Depression	.66	<.001
ERS	.06	.32
Abandonment/instability	-.04	.52
Abandonment/instability * ERS	.16	<.01

Note: ERS = Excessive reassurance seeking

Figure Captions

Figure 1. Moderating effects of avoidant attachment on the relationship between ERS and depression over time.

Figure 2. Moderating effects of an abandonment/instability schema on the relationship between ERS and depression over time.

Figure 1

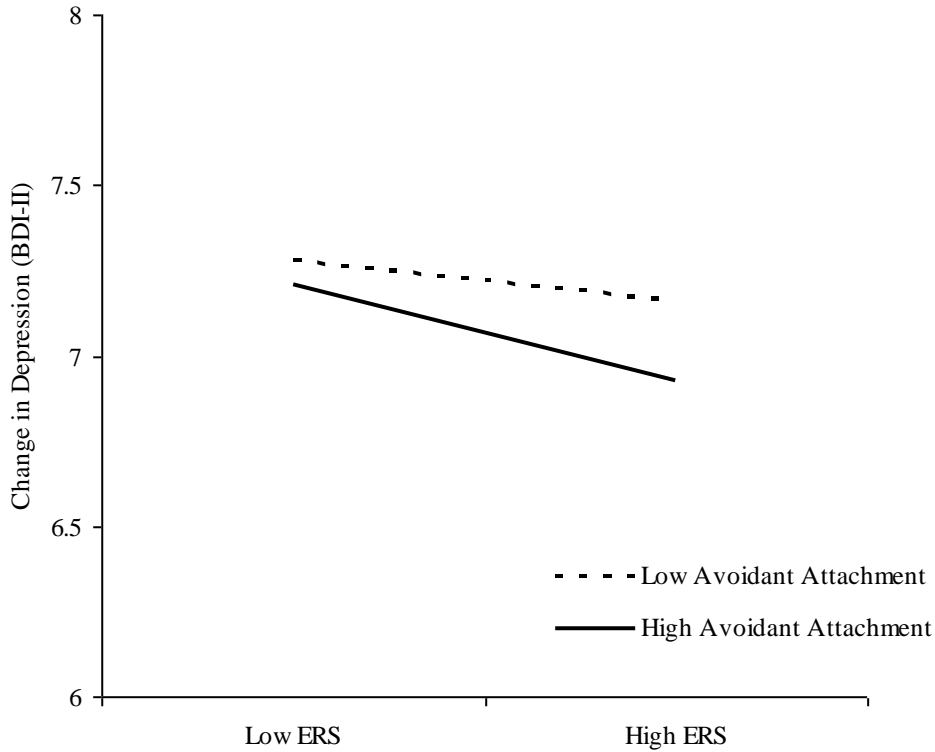


Figure 2

