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Abstract

Depression and interpersonal dysfunction are inextricably linked. Interpersonal behaviors in individuals with depression, specifically excessive reassurance seeking (ERS) and negative feedback seeking (NFS), have recently emerged as possible risk factors for interpersonal rejection and future depression. However, existing models integrating ERS and NFS in individuals with depression lack empirical support and fail to provide an adequate explanation for the negative social and psychological consequences that concurrent ERS and NFS create. The proposed model, based on the bias and accuracy literature in close relationships, suggests that individuals with depression desire and elicit global enhancement (through ERS) and specific verification (through NFS) from close others. This model has strong theoretical and empirical foundations and suggests that depression chronicity and interpersonal distress stem from the influence that early core-beliefs about relationships and self-views have on the seemingly adaptive combination of global enhancement and specific verification.

Keywords: depression; dysphoria; excessive reassurance seeking; negative feedback seeking; social relationships

An Integrative Model of Excessive Reassurance Seeking and Negative Feedback Seeking in the Development and Maintenance of Depression

Interpersonal factors are among the strongest predictors of the course and duration of an episode of depression (Brown & Moran, 1994; Hooley & Teasdale, 1989; Lara, Leader, & Klein, 1997). Satisfying and supportive relationships often protect individuals from the detrimental impact of psychosocial stress. Relationships that lack satisfaction and support, however, may themselves represent sources of disappointment and frustration that can exacerbate risk for depression. For example, researchers have documented a strong and reliable association between depression and distressed intimate relationships across a variety of populations (clinical versus community) and measurement instruments (see Whisman, 2001). Close relationships of individuals with depression are often characterized by rejection, dissatisfaction, decreased involvement and low intimacy (e.g., Gotlib & Lee, 1989). Furthermore, individuals with depression are significantly more distressed by interpersonal problems than are normative samples (Barrett & Barber, 2007). The divorce rate among individuals who have been treated for depression is also 9 times higher than the expected rate for the population, and 84% of individuals treated for depression show a negative course of marital change over a 4 year period (Gotlib & Whiffen, 1989; Merikangas, 1984). Depression and interpersonal dysfunction appear inextricably linked: the empirical evidence suggests that interpersonal difficulties both precede and follow depressive episodes (for a review, see Davila, Stroud, & Starr, 2009).

Interpersonal behaviors in individuals with depression – specifically, inappropriate solicitation of interpersonal feedback through excessive reassurance seeking (ERS) and negative feedback seeking (NFS) – have recently emerged as possible risk factors for interpersonal rejection and subsequent increases in symptomatology (Davila et al., 2009). However, the

relationships among ERS, NFS, subsequent interpersonal rejection and depression have not been delineated clearly and an integrative theory of these behaviors is needed.

The objective of this article is to advance a self-propagating interpersonal model of depression by focusing on the origins and processes of ERS and NFS. This model also focuses on how individuals with depression can simultaneously exhibit motives to self-enhance (through ERS) and self-verify (through NFS) within the same relationship, and how these motives impact the development and maintenance of depression.

ERS in Depression

ERS is 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). ERS is typically measured using the Depressive Interpersonal Relationships Inventory-Reassurance Seeking Subscale (DIRI-RS; Joiner, Alfano, & Metalsky, 1992) which measures an individual's tendency to engage in reassurance seeking (e.g., "Do you find yourself often asking the people you feel close to how they truly feel about you?") and his or her close other'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?"). 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 behavior, close others become frustrated and reject the individual with depression (Joiner, Alfano, & Metalsky, 1992). The subsequent deterioration

of close relationships leads to an exacerbation of symptoms and creates an environment of social isolation in which the individual with depression cannot receive the necessary support to overcome his or her disorder (Joiner & Metalsky, 2001).

ERS and depression. A recent meta-analysis that examined the relationships between ERS and depression (Starr & Davila, 2008), revealed a significant, medium effect size of .32 across 38 studies (N = 6, 973) each of which had a cross-sectional correlation coefficient between ERS and depression; higher levels of ERS were associated with more depressive symptoms. Several prospective studies that have supported a positive relationship between baseline ERS and future symptoms of depression also exist (Davila, 2001; Evraire & Dozois, under review; Haeffel, Voelz, & Joiner, 2007; Joiner & Metalsky, 2001; Joiner & Schmidt, 1998; Katz, Beach, & Joiner, 1998; Potthoff, 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 weak but significant effect size of .14 across 16 studies (N = 2, 596), with higher ERS predicting more rejection. Rejection was conceptualized as an unwillingness to interact, a negative appraisal of worth or relationship dissatisfaction. Furthermore, measures of rejection were either reported by close others or were based on the target's perception (how rejection was assessed did not influence the effect size for ERS and interpersonal rejection). Although weak, the relationship between ERS and interpersonal rejection is revealing - individuals who suffer from depression, who also engage in ERS, tend to be at particularly high risk for negative evaluation by close others (Pettit & Joiner, 2006). In contrast, individuals with symptoms of depression but low levels of ERS, or anxious individuals with high levels of ERS, do not tend to be evaluated negatively (Joiner & Metalsky,

1995; Pettit & Joiner, 2006). When signaled to others via ERS, symptoms of depression, including hopelessness and a sense of desperation (rather than symptoms of anxiety), appear to yield negative interpersonal consequences. Thus, ERS may play a unique role in the interpersonal expression of the aversive qualities of depression.

Recent developments in the stress generation literature are also particularly relevant to Coyne's (1976) interpersonal theory of depression. Hammen (1991) used the term *stress generation* to describe individuals with depression who behave in ways that generate stress in their interpersonal environments and, subsequently, exacerbate their own symptoms of depression. Hammen demonstrated a stress generation effect such that women with a diagnosis of unipolar depression experienced higher levels of stressful life events, particularly interpersonal stressors that they themselves had contributed too, compared to women with bipolar disorder, chronic medical illness or healthy controls. This stress generation effect has been replicated in a number of studies (e.g., Davila, Bradbury, Cohan, & Tochluk, 1997; Hammen, 2006; Hammen & Brennan, 2001, 2002; Hammen & Shih, 2008; Potthoff, Holahan, & Joiner, 1995). Although depression is a robust predictor of stress generation, it is not the only contributing factor. Hammen found, for instance, that even individuals with a history of depression, who are not currently experiencing an episode of depression, contribute to the generation of stressors. As such, behaviors and personal characteristics of individuals with depression, and/or a history of the disorder, may play an important role in elevating rates of stress generation. Along these lines, greater reassurance seeking behavior is associated with a greater occurrence of dependent interpersonal stress (Eberhart & Hammen, 2009; Potthoff et al., 1995; Shih & Auerbach, 2010). Reassurance seeking is likely conceptually related to stress

generation since an individual's excessive efforts to check on the relationship may frustrate close others, leading to both rejection and increased conflict.

Deterioration of the interpersonal relationships of individuals who engage in ERS leaves them without a social support network 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 behavior, 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 depressive symptoms (Joiner & Metalsky, 1995; Joiner & Schmidt, 1998). That is, the additive combination of high ERS and stress increased the likelihood of developing symptoms of depression. 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. Potthoff et al.'s (1995) findings suggest that ERS creates problems in an individual's social network, which eventually predict increases in symptoms of depression. Future research is needed in order to determine whether an additive or meditational model best explains the association between ERS, stress, and depression.

Cognitive-interpersonal link in depression vulnerability. Notwithstanding empirical support for an association among ERS, 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 emerge 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, some researchers point to early attachment experiences and adult attachment styles to

explain the variation in social relationships that may increase vulnerability to depression, and the failure to use support from others during a depressive episode (e.g., 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 their interrelationships. IWMs 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). Positive models of self (as worthy of love and nurturance) and others (as responsive and trustworthy) reflect attachment security, whereas negative models of self (as unworthy of love and nurturance) and/or others (as unresponsive and untrustworthy) reflect insecurity (Ainsworth, Blehar, Waters, & Wall, 1978; Main, Kaplan, & Cassidy, 1985). 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). EMSs also include a set of core-beliefs that originate from repetitious, aversive experiences in childhood (e.g., insecure attachments that result in unmet core emotional needs). These beliefs are defined as broad, pervasive themes or patterns comprised of memories, emotions, cognitions, and bodily sensations regarding the self and one's relationships with others (Young, Klosko, & Weishaar, 2003). EMSs act as *a priori* truths and influence how an individual processes later experiences, thinks, acts, feels, and relates to others throughout life. The EMSs include: 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 (Hoffart et al., 2005; Young et al., 2003).

Origins of ERS. As described previously, an individual's history of being cared for and responded to by close others in early childhood tends to carry over into future relationships. Given that individuals have unique childhood experiences, they also differ with regard to the meaning, sense of importance and perceived helpfulness they attribute to relationships (Marris, 1996).

Attachment. Attachment theory has demonstrated that, when children have a secure attachment with their caregiver, they learn to self-reassure (Bowlby, 1980). However, when caregivers have an insecure attachment with their children, and are inconsistent in responding to their needs, the children learn to seek assurances externally rather than internally (Bowlby). In other words, an individual's propensity to engage in ERS may originate from early experiences with inconsistent attachment figures.

Attachment research in adults has established that individuals with an avoidant attachment style minimize the expression of negative emotions and use deactivating strategies (e.g., avoidance of proximity) to deal with distress, whereas individuals with an anxious attachment style 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 styles, a significant link has been established between anxious attachment and higher levels of overall and daily ERS (Davila, 2001; Shaver et al., 2005). Furthermore, when anxious attachment is broken down into its dimensions (comfort with closeness and anxiety about abandonment), the anxiety about abandonment component is most strongly associated with ERS (Davila, 2001). Similarly,

Young's (1999) abandonment/instability schema is also associated with higher self-reported ERS (Evraire & Dozois, under review). An anxious attachment style in adulthood is characterized by low self-worth, a fear of abandonment, a dependent style of relating, openness to partner feedback, and an excessive desire to gain approval from others (Bartholomew, 1990). Given that individuals with an anxious attachment style have a positive internal working model of others, along with low self-esteem and a fear of abandonment, they rely on feedback or reassurance from others to determine their self-worth and security in their relationships (Brennan & Carnelley, 1999). Consistent with this idea, individuals whose self-esteem is dependent on the quality of their friendships (friendship contingent self-esteem) also engage in higher levels of ERS (Cambron & Acitelli, 2010). However, because individuals with an anxious attachment style had unpredictable and inconsistent caregivers in childhood, they may have learned to distrust cognitive information when trying to predict an attachment figure's behavior (Crittenden, 1997).

Trust. Trust, which is an important component of a secure IWM, can be defined on the basis of dependability, or the confidence that an individual's partner will be concerned about and responsive to his or her needs, desires, and goals, along with faith in the future of the relationship (Mikulincer, 1998). Individuals differ with respect to their level of "felt trust" along with the meaning they attach to trust, the emotions they experience in trust-related scenarios, and their cognitive and behavioral reactions to these situations. Individuals with an anxious attachment style hold a negative sense of trust, experience high levels of negative trust-related affect, attach high importance to negative trust related events, and cope with such events by engaging in ruminative worry. Furthermore, a central component of their sense of trust is concern about security along with security seeking behaviors such as ERS (Mikulincer, 1998). To deal with

their insecurity, individuals with an anxious attachment style obsessively search for signs of security in their relationship (Shaver & Hazan, 1993). These individuals monitor their relationship and the behaviors of their partner vigilantly, paying direct attention to distress and mentally ruminating about its causes and meanings (Shaver & Hazan, 1993). However, despite their solicitation of and openness to feedback, individuals with an anxious attachment style often do not believe the reassurance they receive from close others and thus continue to engage in ERS (Crittenden, 1997).

Sociotropy/dependency. Individuals high in dependency, also known as sociotropy, are also concerned with what others think of them and, as a result, are vulnerable to negative interpersonal events such as rejection or abandonment by close others (Brennan & Carnelley, 1999). Given the relationship between an anxious attachment style and sociotropy (Zuroff & Fitzpatrick, 1995), it is not surprising that a sociotropic personality style is also positively associated with ERS (Beck, Robbins, Taylor, & Baker, 2001; Birgenheir, Pepper, & Johns, 2010; Davila, 2001). Furthermore, ERS is a full mediator of the relationship between sociotropy and negative interpersonal life events; individuals who reported high levels of sociotropy, in an attempt to ease their relationship insecurities, engaged in increased levels of ERS and subsequently experienced more negative interpersonal life events over a 6 week period (Birgenheir et al., 2010). Although sociotropy reflects a personality construct, anxious attachment a type of interpersonal schema, and ERS a behavioral strategy, the core of each involves a high level of relationship insecurity along with a compelling need to be loved and cared for by others. As such, individuals with an anxious attachment style or a sociotropic personality style likely engage in ERS behavior with the hopes of alleviating their relationship insecurities.

Along these lines, Joiner, Katz, and Lew (1999) demonstrated that individuals engaged in ERS as a coping strategy, the function of which was to assuage any doubts about their lovability, worthiness (i.e., self-esteem) and future prospects and safety (i.e., anxiety). These authors found that stressful negative life events predicted higher anxiety and lower self-esteem which, together, mediated the relationship between negative events and changes in reassurance seeking; individuals who experienced decreased self-esteem and increased anxiety in response to negative events engaged in greater reassurance seeking behavior (Joiner et al., 1999). Similarly, Evraire (2010) found that attachment anxiety was associated with higher levels of ERS following an interpersonal partner prime[1]. The interpersonal partner prime which centered on the theme of rejection, likely activated relationship and personal insecurities. The activation of these insecurities subsequently led to higher reports of ERS, since individuals with an anxious attachment style typically use hyperactivating strategies to deal with their distress.

Intolerance of uncertainty. Research has demonstrated a positive relationship between intolerance of uncertainty (IU) and levels of ERS, and has found that IU partially mediated the cross-sectional relationship between ERS and depression (Lowe, 2010). IU is defined broadly as a predisposition to negative emotional, behavioral, or cognitive reactions to uncertain or ambiguous events, regardless of their probability of occurrence (Dugas & Robichaud, 2007; Ladouceur, Dugas, & Freeston, 2004; Ladouceur, Gosselin, & Dugas, 2000). In an attempt to cope with their uncertainty, individuals high in IU engage in a number of cognitively vigilant coping strategies such as selectively attending to threatening information and circumstances in their environment (Dugas & Robichaud, 2007; Krohne, Hock, & Kohlmann, 1992). Although not

[1] The interpersonal partner prime asked participants to read a paragraph describing a scenario in which an individual was being rejected by an intimate partner. Participants were then asked to spend 30 seconds imagining that they were experiencing the situation they had just read.

yet tested (but congruent with Joiner and colleagues, 1999), individuals high in IU may experience increases in anxiety along with threats to their self-esteem as a result of their hypervigilance towards threat. In turn, these individuals likely engage in ERS in order to reduce their uncertainty, distress, accompanying anxiety and lowered self-esteem. Along with individuals high in IU who seem to lack the ability to withstand negative affect, individuals who have a tendency to act quickly and without planning in response to negative affect also engage in high levels of ERS (Anestis, Selby, & Joiner, 2007). Individuals with this sense of urgency, when faced with negative affect, may be desperate to immediately reduce threatening affect. As such, these individuals engage in maladaptive behaviors such as ERS, which often contribute to their future psychopathology (Anestis et al., 2007). Rumination, or engaging in behaviors and thoughts that focus attention on symptoms of distress along with the causes and consequences of these symptoms, is also associated with higher levels of ERS (Weinstock & Whisman, 2007). As a result of attending to their distress, individuals who ruminate likely experience increases in anxiety and decreases in self-esteem, causing them to engage in ERS as a means of reducing distress (cf. Joiner et al., 1999).

Parrish and Radomsky (2010) took a unique approach to studying the origins of ERS by interviewing individuals with depression and inquiring about the content, triggers, function and termination criteria involved in their reassurance seeking behavior. The most common focus of reassurance seeking reported by individuals with major depressive disorder (MDD) pertained to social threats (e.g., asking their fiancés if they love them). 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 types of situations that trigger their

reassurance-seeking, individuals with MDD identified the most frequent triggers as perceived social threats (e.g., the 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). Individuals with MDD indicated that the function of their reassurance-seeking was to increase self-esteem, receive affection, decrease anxiety and prevent social harm (also see Joiner et al., 1999). 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. Of direct relevance to the research of Parrish and Radomsky (2010) is the question of whether or not individuals have insight into their ERS behavior. Along these lines, research examining the ability of individuals to accurately report on their own ERS behavior has demonstrated a moderate, positive correlation between ERS as reported by the individual, and ERS as reported by a close other (Evraire, 2010; Joiner & Metalsky, 2001; Shaver et al., 2005). These studies indicate that ERS is real and observable by both close others and the individual seeking reassurance (details of the ERS studies are presented in Table 1).

Insert Table 1 about here

Is ERS really excessive? Given the theoretical focus of the literature on the relationship between ERS and depression, some researchers question why the correlation between the two is not higher; reported effect sizes between ERS and depression are, for instance, generally modest

at best (Starr & Davila, 2008). One possible explanation for the modest correlation between ERS and depression is that ERS may be a contributory rather than a necessary or sufficient cause of depression (Joiner et al., 1999). Another possibility is that individual difference variables may moderate the association between depression and ERS; that is, it may not be the behavior of ERS per se, but rather characteristics of the individual in combination with ERS that are associated with depression. Shaver et al. (2005), for example, found that reassurance seeking on a given day was associated with more negative mood the next day for highly anxious women. In contrast reassurance seeking led to positive mood the next day for non-anxious women. Similarly, Evraire and Dozois (under review) found that ERS was associated with higher levels of depressive symptomatology over a 6 week period among individuals with an abandonment/instability schema. There was no prospective association between ERS and symptoms of depression among individuals high in avoidant attachment. These findings suggest that individuals with an anxious attachment style or an abandonment/instability schema, in response to their perception that close others are unreliable along with their fear of abandonment, seek reassurance in a way that is likely aversive to others and detrimental to their psychological well-being. However, for avoidant individuals, who typically distance themselves from the support of close others, ERS does not significantly impact their levels of depression. These results seem to suggest 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). Furthermore, the literature does not include any normative data on reassurance seeking. Without such norms, it remains unclear when ERS becomes excessive or what “excessive” really means (e.g., negative psychological or social consequences or degree and frequency). In previous research, mean ERS

levels are actually quite low (ranging from 2.40 to 3.04 out of 7) suggesting that reassurance seeking seems to be interpreted by close others as excessive, regardless of actual frequency, when individuals with a particular set of early core-beliefs engage in this behavior. In turn this "excessive" reassurance seeking then leads to negative social and psychological consequences.

Summary. As a result of early childhood experiences, individuals develop a set of core-beliefs or schemas that influence the way they relate to others in adulthood, along with their attributions, perceptions, and emotional understandings of close relationships. Early core-beliefs reflecting a high level of concern surrounding relationships (in particular a fear of rejection and abandonment) are associated with higher levels of ERS. Individuals with this particular theme of early core-beliefs have a low sense of self-worth along with a number of relationship insecurities; as such, they depend on feedback from others in order to determine their self-worth and security in relationships. When these individuals are presented with a negative interpersonal event, their early core-beliefs become salient leading to a number of negative emotional, cognitive, and behavioral reactions. Individuals who fixate on their symptoms of distress, and the causes and consequences of these symptoms, tend to experience a decrease in self-esteem (lovable and worthiness), along with an increase in anxiety about rejection and abandonment. Individuals engage in ERS in response to a sense of urgency to attenuate their negative affect and feelings of uncertainty. By engaging in ERS, these individuals generate stress in their interpersonal relationships which subsequently leads to rejection by close others. This deterioration of close relationships, in turn, leads to development of symptoms of depression and creates an environment of social isolation in which an individual cannot receive the necessary support to overcome his or her depressive symptomatology. In turn, the individual's symptoms of depression confirm his or her insecurities about relationships and increase reassurance seeking

behaviors. Thus, early core-beliefs reflecting insecurity in relationships play an important role in ERS, and subsequently the development and maintenance of depression.

NFS in Depression

Individuals with depression are often of two minds when it comes to receiving social feedback. Aside from a strong need for reassurance, individuals with depression also desire self-confirmatory or negative feedback. NFS is typically measured using the Feedback Seeking Questionnaire (FSQ; Swann, Wenzlaff, Krull, & Pelham, 1992) which assesses an individual's interest in positive or negative feedback from others within five self-relevant domains: intellectual, social, musical/artistic, athletic abilities, and physical attractiveness. Self-verification theory proposes that individuals strive to confirm their self-conceptions, even if they are negative, because they give individuals a powerful sense of coherence along with the ability to predict and control their worlds (Swann, 1983; Swann, Stein-Seroussie, & Giesler, 1992). Corroborative feedback from close others increases an individual's confidence in the accuracy of his or her self-views. Self-confirming evaluations from close others also indicate that they have realistic expectations of the individual they are evaluating, which creates a sense of interpersonal coherence (Pettit & Joiner, 2001a). In line with this theory, when individuals with negative self-concepts were asked to explain their reasons for choosing a partner who appraised them unfavorably, they stated that they wanted to interact with a partner whose appraisal of them confirmed their self-view (epistemic concerns; Swann, Stein-Seroussi, & Giesler, 1992; Swann, Wenzlaff, & Tafarodi, 1992). It was not the case that individuals with depression chose negative interaction partners to try and make the evaluator view them more favorably, or for self-improvement (Swann, Wenzlaff, & Tafarodi, 1992). By choosing a self-verifying partner, individuals were assured that they really knew themselves since the evaluators' appraisals

confirmed their self-conceptions, thereby increasing their sense of prediction and control (Swann, Stein-Seroussi, & Giesler, 1992).

Self-verification theory asserts that self-views are the motivating force behind feedback seeking. Given that negative self-views are a defining feature of depression (see Dozois & Beck, 2008), self-verification theory would suggest that individuals with depression should prefer and seek negative feedback from close others to gain a sense of prediction and control; several cross-sectional studies have confirmed this to be the case. In relation to nondepressed individuals, those suffering from depression show greater interest in negative feedback (Casbon, Burns, Bradbury, & Joiner, 2005; Giesler, Josephs, & Swann, 1996; Joiner, Katz, & Lew, 1997; Weinstock & Whisman, 2004), preferentially solicit negative feedback from close others (Swann, Wenzlaff, Krull, & Pelham, 1992), prefer interaction partners who view them unfavorably (Swann, Wenzlaff, Krull, & Pelham, 1992; Swann, Wenzlaff, & Tafarodi, 1992), and prefer that their friends and dating partners view them negatively (Swann, Wenzlaff, Krull, & Pelham, 1992). Moreover, individuals with depression fail to exploit situations in which they have the opportunity to seek favorable evaluations that are also self-verifying (Giesler et al., 1996).

Knowing that individuals with positive self-concepts seek positive feedback because it is congruent with the way they view themselves, and that individuals with negative self-concepts seek negative feedback for the same reason, a disruption in an individual's self-concept should have consequences for an individual's feedback seeking behaviors. Along these lines, Pettit and Joiner (2001b) demonstrated that individuals who experienced a decrease in their self-esteem following a negative life event, were more likely to engage in NFS behavior; in contrast, an increase in NFS behavior did not lead to subsequent decreases in self-esteem. These findings

suggest that self-esteem is, in fact, a precursor to feedback seeking and that individuals with low self-esteem or depression tend to behave in ways that generate the very conditions from which they suffer.

Several theorists (e.g., Alloy & Lipman, 1992; Nisbett & Ross, 1980) have argued that information processing models can account for the negative feedback preference of individuals with depression just as well as the motivational model of self-verification theory. For example, individuals with depression have a depressive core-belief system, or schema, which includes attitudes and beliefs about self, the environment and the future (Dozois & Beck, 2008). This depressive schema influences how an individual processes later experiences, thinks, acts, feels, and relates to others throughout life (Dozois & Beck, 2008; Young, 1999). In the case of individuals with depression, the depressive schema is hyperactive and leads to the selective extraction and transformation of stimuli to fit the schema. An information processing model may account for the idea that individuals with depression seek negative feedback from close others without necessarily suggesting a motivational component. However, the literature on self-verification has supported the notion that individuals with depression want, and have a motivation to obtain negative feedback in order to confirm their self-conceptions. For example, confronting individuals who have dysphoric symptoms with favorable (self-discrepant) evaluations causes them to seek feedback about their limitations in order to re-affirm their negative self-views (Swann, Wenzlaff, & Tafarodi, 1992). Similarly, individuals with low self-worth, who believed that they were interacting with a partner who had a favorable opinion of them, tended to elicit more negative reactions than individuals with low self-worth who believed that their interaction partner had a negative opinion of them (Swann & Read, 1981). These

findings support the idea that individuals with depression are motivated by self-verification strivings to seek and obtain negative feedback from close others.

NFS and depression. Despite their motivation to obtain self-confirming negative feedback, individuals with depression are just as likely as individuals with positive self-views to experience negative affect upon receiving unfavorable feedback (Swann, Griffin, Predmore, & Gaines, 1987; Swann, Wenzlaff, Krull, & Pelham, 1992). That is, although individuals with depression prefer unfavorable feedback to establish a sense of control and predictability, the experience is nonetheless negative. Two prospective studies have supported the idea that NFS is associated longitudinally with symptoms of depression in adults (after controlling for self-esteem) when combined with experiences that provide negative feedback (e.g., interpersonal rejection, Joiner, 1995; poor academic performance, Pettit & Joiner, 2001a). Borelli and Prinstein (2006) demonstrated that adolescent girls who reported higher levels of NFS were more likely to report depression 11 months later, controlling for both social anxiety and low self-esteem. Joiner (1995) proposed that for individuals who seek out and receive negative feedback as a means of self-verification, negative emotional reactions to the feedback are likely amplified by the consistency of the feedback with the individuals' self-concepts. As a result, the negative mood these individuals experience upon receiving negative feedback is likely to endure and predict prospective increases in depression.

NFS and rejection. Knowing that self-verification strivings of individuals with depression play an important role in creating the very social conditions that make them miserable, NFS is likely an important variable when it comes to understanding why individuals with depression are frequently rejected by close others. Swann, Wenzlaff, Krull, and Pelham (1992) examined the longitudinal relationship between NFS and interpersonal rejection. These

researchers found that the more individuals sought negative feedback (self-reported) during the middle of the semester the more likely their roommates were to have rejection attitudes, a desire to terminate the relationship and a plan to secure a new roommate at the end of the semester. Similarly, Borelli and Prinstein (2006) found that adolescents who engaged in higher levels of NFS tended to have worse social outcomes over time than did individuals who did not engage in NFS; for females, NFS was longitudinally associated with greater levels of perceived criticism from best friends, whereas for males NFS was associated with lower levels of peer-reported social preference (Borelli & Prinstein, 2006). In a sample of youth psychiatric inpatients, an interest in negative feedback was also predictive of greater peer rejection, but only in longer-term peer relationships (Joiner, Katz, & Lew, 1997). The authors concluded that it takes time for NFS to affect close others and so self-verification is the most consequential for relatively stable relationships (Joiner et al., 1997; Swann, De La Ronde, & Hixon, 1994). Together, these findings suggest that individuals with depression externalize their negative self-views by causing close others to share in their appraisal and ultimately reject them (details of the NFS studies are provided in Table 2).

Insert Table 2 about here

Summary. Individuals with a negative core-belief system are motivated to engage in NFS to help verify their negative self-views and increase their sense of prediction and control. However, negative feedback remains displeasing to these individuals. Furthermore, the resulting negative mood in response to NFS is amplified in individuals with depression by the consistency of the feedback with their self-concept. As a result, negative mood endures and predicts

prospective increases in symptoms of depression. Individuals with depression also externalize their negative self-views and cause close others to share in their appraisal and ultimately reject them. Subsequent decreases in self-esteem and increased symptoms of depression lead to further increases in NFS.

ERS and NFS in Depression

Researchers have demonstrated that individuals with depression strive to satisfy their motive to assuage personal and relationship insecurities through ERS, and strive to obtain a sense of prediction and control by verifying their self-concepts via NFS. What remains less clear, however, is how individuals with depression simultaneously fulfill their desire for both positive and negative feedback. Combining Swann's work on self-verification with Coyne's (1976) interpersonal theory of depression, Joiner, Alfano, and Metalsky (1993) have proposed a cognitive-affective crossfire model as a means of accounting for how individuals with depression can simultaneously exhibit the desire to self enhance (through ERS) and to self-verify (through NFS) within the same relationship.

Cognitive and affective reactions to self-relevant feedback are not always congruent with one another, particularly when individuals hold negative self-views (Shrauger, 1975; Swann, Griffin, Predmore, & Gaines, 1987). For individuals with a negative self-view, positive feedback produces incongruence – although the feedback is affectively pleasing, it is cognitively disconfirming. Conversely, negative feedback leads to incongruence because it is both affectively aversive and cognitively confirming. By integrating Swann's self-verification theory with Coyne's (1976) interpersonal theory of depression, the cognitive-affective crossfire model describes the conflict between obtaining affectively satisfying, self-enhancing positive feedback and cognitively confirming, self-consistent negative feedback in individuals with depression.

According to self-verification theory, individuals with depression who possess negative self-views seek negative information from close others in order to confirm their self-view and gain a sense of prediction and control. However, according to the mechanism work on ERS, these same individuals have early core-beliefs that reflect high levels of concern in relationships, such as a fear of instability, rejection or abandonment. It is possible that core-beliefs become activated following the receipt of negative feedback, leaving individuals affectively uncomfortable, insecure, and in need of reassurance. Thus an individual with depression, upon receiving a certain threshold of negative feedback, will shift to seeking reassurance from close others in the hopes of increasing positive affect and alleviating his or her insecurity. However, after seeking reassurance from close others, individuals with depression may question the validity and sincerity of such positive feedback since it is discrepant with their own negative self-views. As such, needs for self-consistent information become apparent, and the individual with depression engages in NFS.

An important implication of the cognitive-affective crossfire model is that individuals with depression may elicit rejection from close others as a result of the inconsistent, contradictory, and persistent nature of their information-seeking behaviors (Joiner et al., 1993). Along these lines, the combination of high reassurance-seeking, NFS, and depression places both men and women at increased risk for negative evaluation and rejection by close others (e.g., roommates and relationship partners); in contrast, non-depressed individuals who engage in both high levels of reassurance-seeking and NFS, are not negatively evaluated by close others (Joiner, Alfano, & Metalsky, 1992; Joiner, Alfano, & Metalsky, 1993; Joiner & Metalsky, 1995; Katz & Beach, 1997). That is, rather than the inconsistent or contradictory nature of feedback contributing to interpersonal rejection, it seems that depression toxifies information-seeking

behaviors by adding a quality of distress that close others find particularly aversive. When individuals with depression engage in ERS and NFS they may appear more maladjusted, unstable, and/or needy (Katz & Beach, 1997). It may also be the case that the close others of individuals with depression feel a sense of burden with the task of providing helpful support and feedback. For example, individuals with depression tend to question or disregard the authenticity of the feedback they have received, and so close others may become frustrated with their inability to assuage the individual's symptoms of depression. In contrast, individuals without depression who request both reassurance and negative feedback may do so in a less desperate fashion, seem open to change, and will consequently be less likely to elicit negative evaluations from close others.

Similar to the cognitive-affective crossfire model, Swann and colleagues (Swann, 1990; Swann, Hixon, Stein-Seroussi, & Gilbert, 1990; Swann & Schroeder, 1995) have proposed that enhancement and verification strivings operate at different levels of cognitive processing. While enhancement is relatively "reflex like" and requires one step (determining whether or not the evaluation is favorable or unfavorable), self-verification requires the additional steps of accessing self-views and comparing the evaluation to one's self-views (Swann et al., 1990). As such, the cognitive processes underlying self-verification are more complex than are those underlying self-enhancement. In line with this theory, individuals with negative self-views, when deprived of cognitive resources (e.g., completing a task while trying to remember an 8-digit code), preferred a favorable to an unfavorable evaluator; in contrast, individuals with negative self-views and available cognitive resources preferred the unfavorable evaluator in line with self-verification theory (Swann et al., 1990). Under minimal levels of processing individuals prefer self-enhancement as it only requires the simple step of determining whether the evaluation is

favorable or not. In contrast, when cognitive resources are available, individuals compare feedback to their self-view engaging in a deeper level of processing. In line with the cognitive-affective crossfire model, affective responses are characterized by enhancement motives whereas cognitive responses lead to verification motives (Swann, 1990).

Both the cognitive-affective crossfire model and level of cognitive processing approach seem to account for the conflicting self-evaluation motives (self-enhancement and self-verification) of individuals with depression. However, these theories were developed to explain individuals' reactions to hypothetical feedback and have yet to be tested empirically with individuals suffering from depression in ongoing relationships. For example, it remains unclear under what conditions individuals in long-term relationships engage in deliberate, affect-free processing of feedback versus more automatic processing. Moreover, based on the review of the origins of ERS described earlier, it is clear that there is an important cognitive component in ERS that cannot be accounted for by either of these models. Furthermore, these theories do not provide an adequate explanation for the influence that concurrent ERS and NFS have with respect to the deterioration of an individual with depression's social environment and the subsequent development of symptoms of depression. Although both enhancement (ERS) and verification (NFS) motives guide the exchange of interpersonal feedback in close relationships, current integrative models fail to provide a clear explanation as to how both of these processes operate concurrently in the relationships of individuals with depression and influence the development and maintenance of their disorder.

Global Enhancement and Specific Verification

Neff and Karney (2002b) have recently suggested that considering the nature and structure of individuals' self-concepts may provide an explanation as to how individuals may be

simultaneously enhanced and verified. Self-views vary in their level of abstraction, or in their breadth, generality, or globality (Neff & Karney, 2002b). While broad or global views are described by a large number of distinct behaviors (e.g., kindness can be expressed to different people in different ways), concrete or more specific views refer to a limited range of behaviors (e.g., athletic suggests a more specific set of behaviors; John, Hampson, & Goldberg, 1991). Categorizing self-views along a global/specific dimension suggests that they may be organized into a hierarchy such that global views integrate related specific beliefs into an associated network that summarizes attitudes about the self (Hampson, John, & Goldberg, 1986; John et al., 1991). Knowing that global views summarize a number of specific views, it is clear that these two types of self-views are interrelated. For example, people with high global self-esteem possess far more positive than negative specific attributes in comparison to those with low global self esteem (Swann, Pelham, & Krull, 1989). Although global and specific views are related to one another, they are conceptually and empirically distinct (Rosenberg, 1979); specific self-views account for only half of the variance in global self-esteem (Marsh, 1986). Self-esteem is not just a summary of an individual's specific attributes but rather arises from a more complex process of weighing highly important attributes as contributing more to self-esteem than attributes that are less important (Pelham & Swann, 1989).

Conceptualizing self-views along a global/specific continuum suggests that an individual's self-evaluation motives may vary across this continuum in a number of ways. To begin, some self-views may be better suited for enhancement than others. Global views are defined by a number of distinct behaviors and are relatively more abstract in nature. As a result, fewer objective standards exist for evaluating global attributes, in comparison to specific attributes, and positive biases are more likely to occur at the global rather than the specific level

(Dunning, Meyerowitz, & Holzberg, 1989). Thus, enhancement processes are more likely to operate at higher levels of abstraction. In addition, as self-views become more global, they incorporate a number of specific attributes and so become more evaluative in nature and are more influential for well-being (Holmes & Murray, 1995; John et al., 1991). For example, while the specific attribute of "athletic" is relatively descriptive of an individual's behavior, the global attribute "kind" evaluates how positive or desirable an individual is. Furthermore, maintaining the belief that one's partner is kind should be more important to personal and relationship well-being than maintaining the belief that one's partner is athletic. On the other hand, viewing one's partner negatively on a specific attribute narrows the range of behaviors that are inconsistent with the overall liking of the target, and should have little impact on the individual receiving feedback. As a result, individuals should be more motivated to maintain positive global beliefs and specific verification about themselves and their partner. Evidence suggests that individuals who describe their partners as great people overall still hold both positive and negative perceptions about their partners' specific abilities (Showers & Kevlyn, 1999). Also, when asked to describe behaviors that they dislike about their partners, individuals tend to describe specific attributes found at lower levels of the hierarchy (John et al., 1991). Overall, it seems that enhancement processes should operate at the global level of self-views, whereas verification processes should operate at the level of specific views.

In order to test the model of global enhancement and specific verification, Neff and Karney (2002a; 2005) collected data from newlywed couples who reported being very happy with their relationships. For each study, couples were asked to rate themselves along with their spouses on a measure of specific attributes (Self-Attributes Questionnaire or SAQ; Swann, De La Ronde, & Hixon, 1994) and a measure of global worth (Rosenberg Self-Esteem

Questionnaire or RSEQ; Rosenberg, 1965). Whereas newlywed couples enhanced their partners at the level of their global perceptions, they verified their partners at the level of specific attributes (Neff & Karney, 2002a; 2005). Furthermore, global adoration grounded in specific accuracy enhanced adaptive processes in marriage by increasing the effectiveness of marital communication and feelings of control, leading to greater marital satisfaction and resilience to problems over time (Neff & Karney, 2005). Important to note, however, is the fact that Neff and Karney (2002a; 2005) tested their model in a homogeneous sample of newlywed couples who were extremely satisfied with their relationships. As a result, the authors were unable to examine the effects of (in)accuracy combined with low global partner perceptions on marital outcomes. Furthermore, they focused on how people felt when they perceived their partners in an accurate or inaccurate manner, rather than how people respond to being perceived more or less accurately.

Lackenbauer, Campbell, Rubin, Fletcher, and Troister (2010) were the first to experimentally assess responses to feedback from one's partner that varied in terms of both accuracy and positive bias. Participants who were led to believe that their partners had inflated perceptions of them, or a positive bias, reported feeling more satisfied and intimate in their relationship compared with those who received nonbiased feedback. Similarly, participants who were led to believe that their partners evaluated them in a way that was consistent with their self-evaluations, or high accuracy, reported feeling more satisfied and intimate in their relationship in comparison to those who received less accurate feedback from their partners. Participants responded equally positive to enhancing or verifying feedback. However, participants responded most favorably to feedback from their partners that was both high in accuracy and high in bias. These effects remained even when controlling for partners' self-perceived relationship quality, global self-esteem, and whether or not they believed the experimental feedback was honest.

Biased and accurate feedback also provided unique benefits to the relationship. For example, individuals who believed their partners perceived them in a positively biased manner predicted that their relationships would last longer than those in the no-bias condition. Participants in the high-accuracy condition felt more understood by their partners than did those in the low-accuracy condition. Thus, while accurate partner appraisals communicate understanding, positively biased feedback communicates a sense of unconditional positive regard which can serve to alleviate relationship insecurities. Although Lackenbauer et al. (2010) did not directly examine preferences for global versus specific feedback, their results, coupled with Neff and Karney's (2002b) model, may be applied to the feedback seeking behavior of individuals with depression.

An integrative Model of ERS and NFS

Research examining bias and accuracy in close relationships has examined how individuals feel when they perceive their partners in an accurate and/or biased manner, along with how individuals respond to being perceived this way. However, the literature on bias and accuracy, more specifically global enhancement and specific verification, has never been examined in the context of whether or not individuals prefer to elicit this combination of feedback from close others. The impact of eliciting both biased and enhancing feedback also remains unknown. Empirical research on the feedback-seeking behaviors of individuals with depression suggests that these individuals desire and seek out global enhancement and specific verification from close others. Studies assessing ERS in individuals with depression measure ERS behavior using the DIRI-RS (Joiner, Alfano, & Metalsky, 1992) which focuses on general or global perceptions of an individual's worth (e.g., In general, do you find yourself often asking the people you feel close to how they truly feel about you?). ERS helps individuals to gather

information with respect to whether or not close others are accepting or rejecting of them. This information consists of global attributes (acceptance or rejection) and so is extremely evaluative in nature and influential for well-being. In contrast, studies examining NFS in individuals with depression measure NFS behavior using the FSQ (Swann, Wenzlaff, Krull, & Pelham, 1992) which focuses on perceptions of particular abilities (e.g., intellectual ability, athletic ability, musical talents etc.). Unlike the cognitive-affective crossfire model and level of cognitive processing model, the global enhancement and specific verification theory is reflected in empirical work examining the feedback seeking behaviors of individuals with depression in ongoing relationships (Joiner, Alfano, & Metalsky, 1993; Joiner & Metalsky, 1995; Katz & Beach, 1997). These studies demonstrate that individuals with depression prefer to receive negative, self-verifying feedback concerning their specific qualities, while also engaging in high levels of reassurance seeking behavior around their global self-views of acceptance or rejection (see Figure 1 for a description of the proposed integrative model of ERS and NFS).

Insert Figure 1 about here

Being perceived by and perceiving close others accurately and/or in a positively biased manner has been associated with positive relational consequences, including greater satisfaction and intimacy in relationships (Lackenbauer et al., 2010; Neff and Karney 2002a; 2005). However, individuals with depression who engage in both ERS (global enhancement) and NFS (specific verification) are at an increased risk for negative evaluation and rejection by close others in comparison to individuals without depression who engage in both ERS and NFS (Joiner, Alfano, & Metalsky, 1992; Joiner, Alfano, & Metalsky, 1993; Joiner & Metalsky, 1995;

Katz & Beach, 1997). Therefore, it appears as though there must be something about the disorder of depression that transforms this seemingly adaptive combination of feedback (global enhancement and specific verification) into an interpersonally aversive one. Previous integrative models of ERS and NFS, such as the cognitive-affective crossfire model and level of cognitive processing approach, fail to provide a potential explanation for this finding. The influence of early core-beliefs on the feedback seeking behaviors of individuals with depression may provide an explanation as to why these individuals fail to benefit from global enhancement and specific verification. As discussed previously, the ERS literature suggests that it is not the behavior of ERS, per se, that is associated with rejection and depression; rather it is the combination of a core-belief system reflecting concern surrounding relationships, and ERS, that has negative psychosocial consequences.

Typically, enhancing feedback or reassurance satisfies the esteem needs of individuals, allowing them to feel accepted, secure, and positive about the future of their relationship. In turn, this feeling of security leads to the development of relationship satisfaction and stability (Murray, Holmes, MacDonald, & Ellsworth, 1998). Individuals with early core-beliefs reflecting insecurity in relationships, in response to their fear of abandonment and intolerance of uncertainty, question their partners' reassurance and consequently do not receive the adaptive benefits associated with enhancing feedback. Furthermore individuals with early core-beliefs reflecting insecurity in relationships, particularly a fear of abandonment or rejection, seek reassurance about global self-views in a way that is aversive to others. Individuals with this theme of core-beliefs often persistently seek reassurance since they discount the positive feedback that they obtain from close others. Close others subsequently begin to feel frustrated and burdened since they are unable to minimize the insecurities of the individual with

depression. As a result, the satisfaction of close others with the relationship will likely decrease, causing relationship stress and subsequent rejection (Swann & Bosson, 1999). Following rejection, an individual will be vulnerable to developing symptoms of depression and subsequently an exacerbation of ERS; further increases in ERS will lead to the maintenance of depression.

Given that a negative self-view is characteristic of depression (Beck, 1967), specific verification will likely lead to a higher frequency of negative and affectively distressing feedback for individuals with depression relative to individuals without depression. Furthermore, individuals with depression fail to capitalize on situations in which favorable self-verifying feedback is available (Giesler et al., 1996). The resulting negative emotional reactions to the feedback will be amplified by the consistency of the feedback with the individual's self-concept and will likely endure and predict future increases in symptoms of depression (Joiner, 1995). The negative self-views of individuals with depression will also be externalized causing close others to share in their appraisal and ultimately reject them leading to future increases in symptoms of depression and NFS.

The proposed model provides an explanation for the development, maintenance and even relapse of depression by examining the influence that early core-beliefs about relationships and the self have on the global enhancement and specific verification process. Although the literatures on ERS and NFS offer empirical support for the global enhancement and specific verification model in individuals with depression, future research is needed to refine its details and rule out alternative hypotheses.[2] For example, measures that assess ERS only capture the

[2] A related (although not incompatible) explanation, for example, is that NFS and ERS represent a meta-communicative strategy such that the individual with depression ensures (via NFS) that others in his or her social environment understand the degree of pain and suffering experienced (which helps to absolve him or her of responsibilities, obtain support, etc.) while simultaneously ensuring (via ERS) that the relationship is not in

degree to which individuals seek reassurance about global self-views whereas measures of NFS only look at this behavior with respect to specific attributes. Studies examining ERS and NFS across both global and specific self-views would further delineate the details of the proposed model. Furthermore, a number of core-beliefs and personality characteristics remain to be explored in relation to ERS and NFS and further empirical research is needed to test and refine the details of the proposed model.

Another important question that remains in the depression literature is how the interpersonal causes and consequences of depression change as symptoms become more severe. For example, it is likely the case that, as individuals experience greater depressive symptomatology, they give up on seeking support, habituate to rejection, or become more socially withdrawn. As a result they may not engage in feedback seeking behaviors such as ERS and NFS because they lack the opportunity to do so. Along these lines, a recent meta-analysis by Starr and Davila (2008) found that studies including patient samples yielded marginally weaker effect sizes between ERS and concurrent depression than did studies with community samples (however, both showed significant associations). Future research on ERS and NFS needs to be conducted with clinically depressed samples in order to determine whether ERS and NFS are associated with severe depression or simply sub threshold or mild depression. Furthermore, conducting daily diary studies with couples will help further delineate the dynamics of ERS and

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jeopardy or that rejection is not imminent. According to the social risk hypothesis (Allen & Badcock, 2003), individuals are highly sensitive to how they are valued and perceived by close others as a direct result of an evolved human drive for social belonging (Baumeister & Leary, 1995). In addition to the core need to belong is another evolutionary hypothesis about depression; according to the social navigation hypothesis (Watson & Andrews, 2002), depression serves as a "cry-for-help" which is used to motivate "fitter", close others to take an interest in the individual with depression and make concessions in the relationship.

NFS. These studies will ideally lead to firmer conclusions regarding the effects of ERS and NFS on an individual's social relationships and subsequent symptoms of depression.

Conclusion

Individuals with depression engage in both ERS and NFS. The combination of these two self-evaluative processes, along with depression, is particularly aversive to close others. Existing models integrating ERS and NFS (the cognitive-affective crossfire model and the level of cognitive processing approach) lack empirical support and fail to provide an adequate explanation for the influence that concurrent ERS and NFS have with respect to the breakdown of an individual with depression's close relationships and the subsequent development of symptoms of depression. The proposed model, based on the global enhancement and specific verification model proposed by Neff and Karney (2002b), along with the work on responses to accurate and biased feedback conducted by Lackenbauer et al. (2010), provides a framework for understanding the competing self-evaluation motives in individuals with depression. Furthermore, this model has both strong theoretical and empirical foundations and has been tested in the relationships of individuals with depression; the ERS and NFS literatures provide evidence that individuals with depression may desire global enhancement and specific verification from close others. The proposed model also suggests that depression chronicity and interpersonal distress stem at least, in part, from the influence that early core-beliefs and self-views have on the seemingly adaptive combination of global enhancement and specific verification. Clinical interventions, such as cognitive-behavioral therapy and interpersonal psychotherapy, should focus on early core-beliefs reflecting insecurity in relationships along with increasing an individual's self-views or self-esteem in order to reduce ERS and NFS

behavior. In turn, individuals with depression will begin to recruit adaptive social feedback without overburdening others.

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Table 1

Representative Studies Illustrating ERS in Depression

Study	Sample	Depression Measure	ERS Measure
Anestis et al., 2007	70 undergraduate psychology students	BDI-II	DIRI-RS
Cambron & Acitelli, 2010	405 undergraduate psychology students	BDI-II	DIRI-RS
Davila, 2001 Study1:	220 undergraduate psychology students	BDI	DIRI-RS
Study 2:	94 undergraduate psychology students	Diagnostic Interview SCID; BDI	DIRI-RS
Eberhart & Hammen, 2009	104 undergraduate psychology students	Diagnostic Interview SCID; BDI-II	DIRI-RS
Evraire & Dozois, (under review)	303 undergraduate psychology students	BDI-II	DIRI-RS
Joiner et al., 1992	353 undergraduate psychology students	BDI	DIRI-RS
Joiner et al., 1999	177 undergraduate psychology students	BDI	DIRI-RS

Joiner & Metalsky, 1995	182 undergraduate psychology students and their roommate	BDI	DIRI-RS
Joiner & Metalsky, 2001	Undergraduate psychology students (Studies 1-6)	Diagnostic Interview Schedule (Study 3); BDI (Study 4-6); BDI and MAACL (Study 6)	DIRI-RS
Joiner & Schmidt, 1998	1,005 Air force cadets	BDI	DIRI-RS
Lowe, 2010	200 Undergraduate Psychology students	BDI-II	DIRI-RS
Parrish & Radomsky, 2010	15 individuals from the community with Major Depressive Disorder; 15 individuals from the community with Obsessive-Compulsive Disorder; 20 healthy controls-undergraduate psychology students	BDI-II; ADIS-IV	ICCRS
Potthoff et al., 1995	267 undergraduate psychology students	BDI	DIRI-RS
Shaver et al., 2005 Study 1:	72 undergraduate romantic couples	CES-D	DIRI-RS

	Study 2:	61 undergraduate romantic couples	CES-D; daily mood item	DIRI-RS; daily ERS item
Shih & Auerbach, 2010		206 undergraduate psychology students	Items from the profile of mood states (POMS) were completed daily	DIRI-RS
Weinstock & Whisman, 2007		244 undergraduate psychology students	BDI-II	DIRI-RS

Note: BDI = Beck Depression Inventory; CES-D = Center for Epidemiologic Studies Depression Scale; DIRI-RS = Depressive Interpersonal Relationships Inventory-Reassurance Seeking Subscale; ERS = Excessive reassurance seeking; ICCRS = Semi-structured Interview for Compulsive Checking and Reassurance Seeking Behavior; MAACL = Multiple Affect Adjective Checklist; SCID = Structured Clinical Interview for DSM disorders; ADIS-IV = Anxiety Disorders Interview Schedule.

Table 2

Representative Studies Illustrating NFS in Depression

Study (design)		Sample	Measure of Self-Worth or Depression	NFS Measure
Borelli & Prinstein, 2006		478 adolescents	CDI	FSQ
Casbon et al., 2005	Study 1:	95 pairs of same sex undergraduate psychology roommates	BDI	FSQ
	Study 2:	60 newlywed community Couples	BDI	Negative Feedback Seeking Rating Scales
Giesler et al., 1996		74 participants-mixture of psychology undergraduate students and a community sample	BDI; SCID; SEQ	Choice to read a positive or negative assessment of themselves created by a graduate student
Joiner, 1995		100 undergraduate Psychology students	BDI	FSQ; Willingness to Interact Scale
Joiner et al., 1997		72 youth psychiatric inpatients	CDI	FSQ
Pettit & Joiner, 2001a		78 undergraduate psychology students	BDI	FSQ

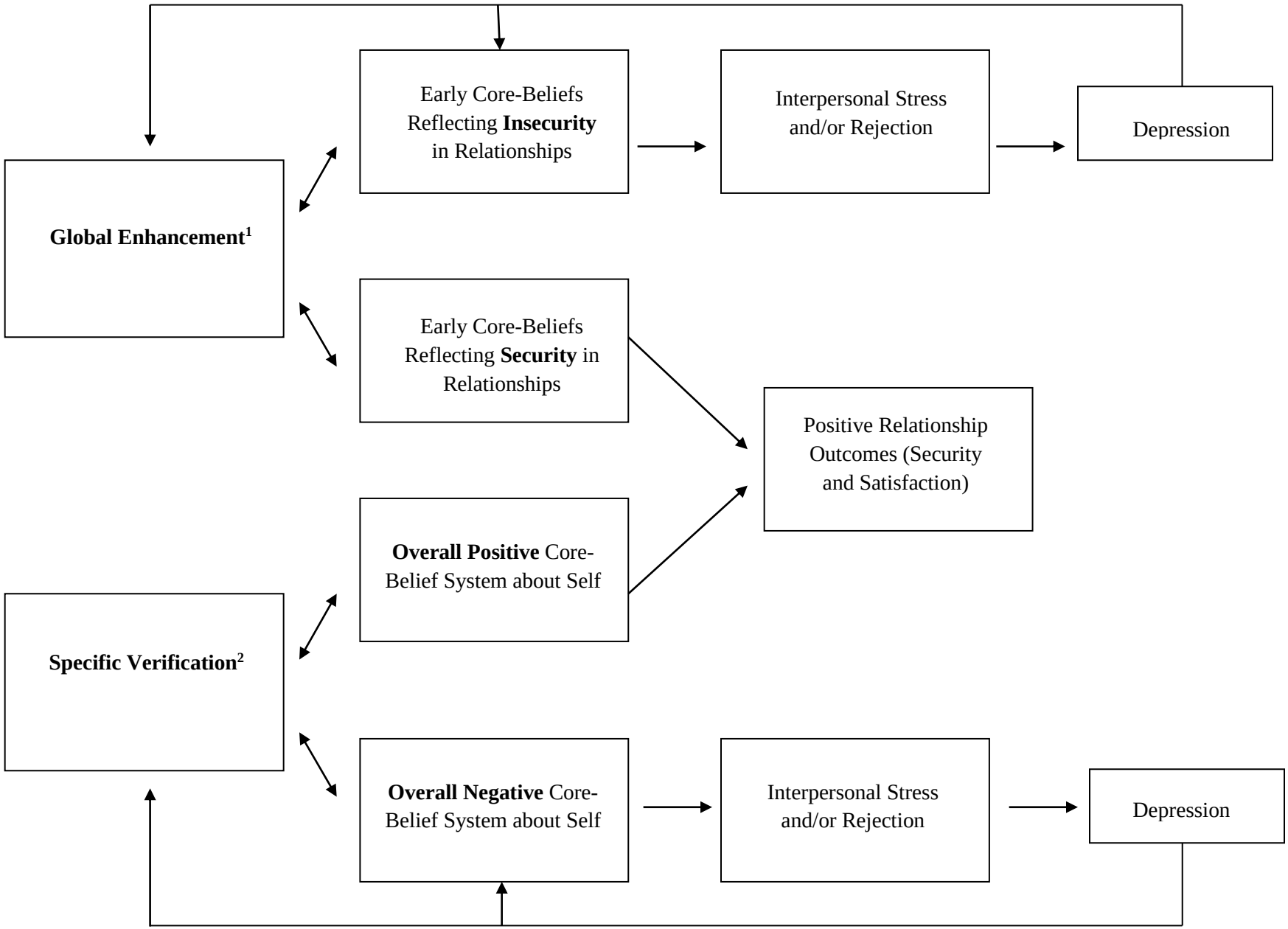
Pettit & Hoiner, 2001b		101 undergraduate psychology students	SEQ	FSQ
Swann et al., 1987		106 undergraduate psychology students	TSBI	Measured affective response to negative feedback using the MAACL
Swann et al., 1994		90 married couples and 95 dating couples from the community	-	Measure of negative evaluation from one's partner using self and partner SAQ ratings
Swann & Read, 1981	Study 1:	64 undergraduate psychology students	Self-perceived likeability scale	Amount of time spent looking at favorable and unfavorable appraisals from confederate partner
	Study 2:	97 male and 97 female undergraduate psychology students	Self-perceived likeability scale	Behavioral elicitation tactics used by participants to influence their partner's perceptions of them
	Study 3:	58 undergraduate psychology students	Self-perceived likeability scale	Asked to recall both positive and negative appraisals said to them by their confederate partner and assessed for a memory bias
Swann, Stein-Seroussi & Giesler, 1992	Study 1:	84 undergraduate psychology students	TSBI	Chose an interaction partner from a favorable and unfavorable evaluator and rated their desire to interact with each partner

	Study 2:	26 male undergraduate psychology students	TSBI	Chose an interaction partner from a favorable and unfavorable evaluator and rated their desire to interact with each partner
Swann, Wenzlaff, Krull & Pelham, 1992	Study 1:	84 undergraduate psychology students	BDI	Desire to interact with favorable and unfavorable evaluators
	Study 2:	488 undergraduate psychology students	BDI	Indication of how they wanted a friend or dating partner to rate them on the SAQ
	Study 3:	48 pairs of same sex undergraduate psychology roommates	BDI	FSQ
	Study 4:	87 undergraduate psychology students	TSBI	Variant of the FSQ; MAACL
Swann, Wenzlaff, & Tafarodi, 1992	Study 1:	20 dysphoric and 30 non-dysphoric undergraduate psychology students	BDI	Choice of interacting or not with an evaluator who viewed them favorably or unfavorably

Study 2:	26 dysphoric and 47 non-dysphoic undergraduate psychology students	BDI	Rank ordered interest in receiving feedback on their athletic strengths, artistic strengths, athletic limitations or artistic limitations
Weinstock & Whisman, 2004	68 heterosexual dating couples recruited on campus	BDI-II; SEQ	FSQ

Note: BDI = Beck Depression Inventory; CDI = Child Depression Inventory; FSQ = Feedback Seeking Questionnaire; MAACL = Multiple Affect Adjective Checklist; NFS = Negative feedback seeking; SAQ = Specific Attributes Questionnaire; SCID = Structured Clinical Interview for DSM disorders; SEQ = Self-esteem Questionnaire; TSBI = Texas Social Behavior Inventory

Figure 1. An integrative model of ERS and NSF in depression



Notes. [1] Global enhancement is often expressed as ERS in individuals vulnerable to depression or experiencing a depressive episode; [2] Specific verification is often expressed as NFS in individuals vulnerable to depression or experiencing a depressive episode.