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Distress Severity Following a Romantic Breakup is Associated with Positive Relationship
Memories among Emerging Adults

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Abstract

Romantic relationship loss is associated with significant psychological distress for emerging adults. Intrusive memories of stressful events are typically associated with symptom severity; however, whether spontaneous positive memories of a relationship breakup may also be related to psychological symptoms has received little attention. We examined links between breakup-specific distress, depressive symptoms, and relationship memories of different valence. Ninety-one emerging adults ($M_{\text{age}} = 20.13$) who had experienced a recent romantic breakup recorded the frequency of positive and negative spontaneous relationship memories in a four-day online memory diary. Control memories were also recorded. Positive memories were specifically related to breakup distress, whereas negative memories were related to both breakup distress and depression. No such associations were found for the control memories. The results suggest that experiences of positive memories are critical for understanding the degree of distress a young person may experience following a breakup. Possible explanations for these findings and similarities with the grief and bereavement literature are discussed.

Keywords: emerging adults, involuntary memories, depression, relationship breakup, autobiographical memory, breakup distress

Acquiring competence in the romantic domain is considered a key developmental task entering adulthood (Arnett, 2000; 2004; Collins, 2003; Connolly & Johnson, 1996; Furman & Schaffer, 2003), one that requires significant gains in interpersonal skills for emotional and sexual intimacy, emotion regulation and communication (Carver, Joyner, & Udry, 2003; Davila, Stroud, Miller & Steinberg, 2007). Because this is also the developmental period for consolidation of autonomy and identity, young people's romantic relationships encounter the added stress of balancing self-focused needs alongside intimacy needs, possibly creating strain in the romantic context (Connolly & McIsaac, 2009; Tolman, 2002).

Rates of involvement in romantic relationships increase steadily over adolescence into emerging adulthood (Collins, Welsh & Furman, 2009). Data from Canadian youth indicate that 40%-50% are currently in a relationship; 15-18 year olds report histories of 1-2 (23%), 3-5 (44%), and 6+ (37%) partners (Connolly & McIsaac, 2009). Because most (85%) report a romantic relationship by late adolescence (Carver et al., 2003; Wood, Avellar, & Goesling, 2008), and duration is typically less than a year (Connolly & McIsaac, 2009), most young people have experienced a recent relationship dissolution (a "breakup"). Dissolution of a romantic relationship comprised 50% of concerns presented in university counseling centres (Benton et al., 2003; blind). The lack of research attention to these experiences likely reflects long-standing biases that minimize or dismiss the stresses that young people experience, and the meaning and depth of their intimate partnerships despite many adults recalling a breakup as by far the "worst event" of those years (Tashiro & Frazier, 2003). In particular, little is known about the negative and, for some, positive outcomes that may affect future psychosocial and physiological health and well-being.

One factor that might be closely linked to adjustment following a breakup is the nature, or

valence, of relationship memories. Memories of personal events are experienced on a daily basis (Rasmussen, Ramsgaard, & Berntsen, 2015) and may have an impact on psychological functioning in both the short term (e.g., transient mood change) and the longer-term (e.g., persistent psychiatric symptoms) (Blind; Newby & Moulds, 2011). Experiencing memories of important events and the response to them are particularly relevant for understanding an individual's psychological wellbeing (Blind; Johannessen & Berntsen, 2010). For instance, frequent and distressing intrusive memories (i.e., unwanted negative memories) are related to depressive and posttraumatic stress symptoms following both traumatic and non-traumatic negative life events (Brewin, Gregory, Lipton, & Burgess, 2010; Meiser-Stedman, Dalgleish, Yule, & Smith, 2012; Michael, Ehlers, Halligan, & Clark, 2005). Previous research indicates that adolescents and young adults often consider romantic breakups as a highly stressful and/or central for their identity (Boals 2014; Gold, Marx, Soler-Baillo, Sloan, 2005; Monroe, Rohde, Seeley, & Lewinsohn, 1999). Therefore, as with other stressful life events, investigating the extent emerging adults experience memories of a lost relationship and the nature of these memories is important for understanding their psychological adjustment following a breakup.

The valence of the memories may explain (or be explained by) the presence of depressive symptoms. For example, Bywaters, Andrade, and Turpin (2004) found that dysphoric individuals recalled significantly more unpleasant spontaneous memories than pleasant spontaneous memories, whereas the opposite was true among the non-dysphoric group, who reported having had more pleasant than unpleasant spontaneous memories in the preceding two weeks. These findings may be explained by the mood-congruent effect (Matt, Vasquez, & Campbell, 1992; Watkins, Martin, & Stern, 2000), in which the negative valence of the information retrieved (e.g., memories) matches the low mood of the individual, or by the exposure of individuals with

depressive symptoms to more stressful events (e.g., Monroe & Reid, 2009). However, a question arises when a single stressful event may be associated with both positive and negative spontaneous memories and other forms of involuntary thoughts. Unlike other stressful events (e.g., life threatening accident), where the memories are primarily negative, relationship loss may bring about both positive and negative memories. Therefore, the loss of a key relationship is an exemplary case.

After the death of spouse (Boelen & Huntjens, 2008; Boelen, Huntjens, van Deursem, & van den Hout, 2010), divorce (Gahler, 2006), and non-marital relationship breakup (Rhoades, Kamp Dush, Atkins, Stanley, & Markman, 2011; Studley & Chung, 2015), individuals experience an array of symptoms such as depression, anxiety, grief, and other grief-like symptoms. Are higher levels of symptoms after the loss of a romantic relationship related to retrieving more positive memories of a lost relationship? A few studies have investigated the frequency of both positive and negative thoughts in general, and memories in particular, in the context of relationship loss including divorce, non-marital relationship breakup, and bereavement (Bermann, 1988; Boelen & Huntjens, 2008; Brenner & Vogel, 2015), but to date, these studies primarily have used adult samples.

Boelen and Huntjens (2008) found in a study with bereaved adults ($M_{\text{age}} = 58.7$ years) that more frequent self-reported positive involuntary memories of the lost person had a specific relationship to higher levels of grief symptoms, whereas they were not related to depressive and anxiety symptoms. Other forms of involuntary cognitions, such as more frequent negative imagery of the future, were related to greater grief, depressive, and anxiety symptoms. Of note, these results remained significant after controlling for gender and time since loss. In an experimental study with divorced women, Bermann (1988) found that after experimentally

eliciting a memory of a positive interaction with the ex-spouse, participants (ages 26-53 years) reported greater feelings of loss and more distressing intrusive thoughts than after eliciting memories of conflict with the ex-spouse or positive memories with a friend (i.e., not related to the loss). They also found that the duration of the marriage negatively moderated the relationship between retrieving the positive memory and higher distress such that shorter relationships resulted in greater distress upon retrieval of positive memories. In contrast, desire for divorce did not moderate the relationship between positive memory retrieval and distress. Finally, in a recent correlational study (Brenner & Vogel, 2015), higher self-reported frequencies of both positive and negative thoughts (i.e., memories and other types of cognitions) of an ex-partner were related to greater breakup distress (i.e., an analogous of grief symptoms), depressive symptoms, and loss of self after a non-marital breakup. Positive thoughts had a negative correlation with measures of positive post-breakup adjustment, such as lower intensity of positive emotions, such as happiness and relief. These findings remained significant after controlling for gender, time since breakup, initiator status, and current relationship status.

Although scarce in number, the emerging picture across these studies is that both positive and negative memories of a lost relationship are related to greater symptoms of distress, anxiety, and depression. However, positive and negative memories may have differential patterns of association with various group symptoms. Specifically, positive memories appear to correlate more strongly with grief and grief-like symptoms, in the case of divorce and non-marital breakup, whereas negative memories may correlate more strongly with depressive and anxiety symptoms.

We did not find any published studies on the valence of spontaneous memories following a non-marital relationship breakup among emerging adults. Albeit a common occurrence among young people in North America (Rhoades et al., 2011), non-marital relationship breakups are

described as one of the most stressful, and occasionally even traumatic, events among young adults (Cameron, Palm & Follette, 2010; Gold, Marx, Soler-Baillo, & Sloan, 2005; Monroe, et al., 1999). Relationship breakup is related to a wide range of symptoms and the leading cause of onset of depressive episodes among emerging adults (Monroe et al., 1991; Studley & Chung, 2015). As the family structure in North America shifts and individuals postpone age of first marriage (World Bank Cross Country Data, 2015), they will spend much of their second and third decades of life in a series of non-marital relationships. The psychological impact of non-marital relationship breakups may be more relevant now to the research and clinical worlds than ever before.

In short, although it is well documented that negative memories of stressful events are associated with depressive and posttraumatic stress symptoms (e.g., Brewin et al., 2010), whether or how positive memories of a lost relationship may relate to psychological symptoms for a young person has not been sufficiently investigated. In the current study, we sought to answer whether spontaneous positive memories of a dissolved non-marital relationship for emerging adults were related to either breakup-specific distress symptoms, depressive symptoms, or both. We were particularly interested in the pattern of associations of positive and negative memories and the severity of these two groups of symptoms. These insights will help us to understand better whether/how the suffering following a breakup maybe related to the valence of the relationship memories experienced.

Breakup distress was conceptualized as a group of symptoms including disbelief over the breakup, and feeling lonely and empty since that loss (Field, Diego, Pelaez, Deeds, & Delgado, 2009). Breakup distress was operationalized as the total score of the Breakup Distress Scale (BDS, Field et al., 2009), which in turn is based on a grief measure (Inventory of Complicated

Grief [ICG], Prigerson et al., 1995). We expected a similar relationship pattern between positive spontaneous memories and breakup distress symptoms to those obtained in relation to grief symptoms (Boelen & Huntjens, 2008). Specifically, we hypothesized that a higher frequency of positive memories would be related to greater breakup distress, but not to depressive symptoms (Boelen & Huntjens, 2008). In contrast, we expected that the frequency of negative memories would be associated with both breakup distress and depressive symptoms (Bermann, 1988; Boelen & Huntjens, 2008; Brenner & Vogel, 2015). To that end, emerging adults who experienced a recent romantic breakup kept an online memory log over four days in which they reported the frequency of positive and negative memories of their relationship. Multilevel models were employed to predict memory frequency with distress and depressive symptoms as main predictors. These predictions were examined after taking into account a number of breakup-related variables including desire for breakup, time since the breakup, relationship duration, initiator status, and current relationship status as these variables have been found to be related to psychological adjustment following a breakup (Locker, McIntosh, Hackney, Wilson, & Wiegand, 2010; Rhoades et al., 2011; Sprecher, Felmlee, Metts, Fehr, & Vanni, 1998).

Method

Participants

Participants of the current study were 91 emerging adults ($M_{\text{age}} = 20.13$ years; $SD = 3.47$) recruited from a larger project on breakups (blind). All participants had experienced a breakup in the prior four months. Participants completed at least one day of a four-day online memory diary in which the frequency of memories was reported. The memory-diary completers did not differ from the remaining participants of the larger project who did not complete the diary with regard to demographics, relationship variables, and symptom measures. Seventy-six (83.5.3%)

participants were women. The average duration of the relationships was 17.80 months ($SD = 14.19$). The average time since breakup was 7.35 weeks ($SD = 4.20$). Fifty-four participants described themselves as the initiators or having had a mutual breakup (59.3%). Thirty-six reported that the breakup was initiated by the ex-partner (39.6%). Fourteen participants had started a new relationship (15.4%) since the breakup took place.

Procedure

Canadian university students were initially recruited for a study on reactions to recent breakup experiences. Participants were eligible if they had experienced a romantic relationship breakup in the preceding four months. Participants were told that the study was a three-stage investigation of how young adults deal with a relationship breakup. During Stage 1 (in-lab session), participants completed the computerized versions of the Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996), the BDS, and other questionnaires not relevant for the present study. For Stage 2, participants completed the memory diary that is the focus of the current paper. All participants received the diary instructions in person during their first visit to the lab. Participants received an e-mail containing a link to access the online memory diary for the four days following their visit to the lab. Electronic consent for the memory diary was obtained on Day 1. Participants were compensated with either course credit or by participating in a gift certificate draw. (For full findings of stages one and three, completed seven months after stage 1, see blind).

Measures

Relationship and Breakup Characteristics. A brief list of questions containing single-items was developed to collect information regarding demographics, relationship, and breakup characteristics including gender, duration of the relationship (*How long did your relationship last?*

[months]), time elapsed since the breakup (*How long has it been since the breakup?* [weeks], initiator status (*Who initiated the breakup?*[me, my ex-partner, mutual], desire for breakup (*How strongly did you want the breakup to happen regardless of who initiated the breakup?*[0 = I did not want the breakup at all and 10 = I absolutely wanted the breakup to happen]), and current relationship status (*Are you currently in a new relationship?* [1 = in a new relationship and 0 = no new relationship]).

Breakup Distress. The Breakup Distress Scale (BDS; Field et al., 2009) is a 16-item questionnaire adapted from the Inventory of Complicated Grief (ICG; Prigerson et al., 1995) to assess distress experienced after romantic relationship dissolution. Items measure a range of reactions such as feeling bitter and empty since the breakup. Examples of the items include “*I feel disbelief over what happened,*” and “*I feel lonely a great deal of the time since the breakup.*” Responses are given on a Likert scale ranging from 1 (*not at all*) to 4 (*very much so*). The internal consistency of the BDS was $\alpha = .93$.

Depressive Symptoms. The Beck Depression Inventory-II (BDI-II; Beck, et al., 1996) assessed self-reported behaviours, attitudes, and feelings that characterize depression. It consists of 21 symptom items with four corresponding response statements in which each item reflects increasing symptom frequency or severity on a scale from 0 to 3. It has a strong correlation ($r = .83$) with the number of depressive symptoms, as assessed by the Structured Clinical Interview for *DSM-IV* Axis I Disorders (SCID-I), and a high test-retest reliability ($r = .89$) for a two-week interval (Huprich & Roberts, 2012). Internal consistency of the instrument in the present study was $\alpha = .95$.

Spontaneous Memories Online Diary. A four-day online spontaneous memory log was developed for this study to collect data on the frequency of relationship/breakup memories.

Memories related to academic performance (i.e., control memory) were also collected to assess the specificity that the theme of the memory would have in relation to distress and depressive symptoms. Participants accessed the memory diary online via a reminder email sent daily.

Participants indicated the frequency of spontaneous memories broken down by valence (positive versus negative) and theme (relationship versus school). The frequency scale was as follows: 0 = *never*, 1 = *occasionally (one or two memories today)*, 2 = *often (three to five memories today)*, 3 = *a great deal (six to eight memories today)*, and 4 = *almost continuously (several times per hour)*. Including examples of memories was optional.

Participants received instructions for completing the online memory diary in person from the first author when they visited the lab for the larger online study (i.e., Stage 1). The instructions were also available online when the participants accessed the memory diary. The instructions and definitions employed for the memory diary were partly based on Berntsen's (1998, 2001) work. However, the method was also adjusted based on Kahneman, Krueger, Schkade, Schwarz, and Stone's (2004) day reconstruction method, in which the data are entered once towards the end of each day. This method minimizes disruption in individuals' day-to-day activities while maximizing the efficacy of a prospective diary method. Spontaneous memories were defined in the instructions as follows: "Spontaneous memories refer to memories that pop into your mind by themselves. That is, they are brought to your consciousness with no preceding attempts at remembering the memory. Sometimes these memories are cued by your surroundings or by other thoughts you are having. The memories may deal with either pleasant or unpleasant, and recent or remote events in your life. We are interested in knowing the frequency of spontaneous memories and how you feel when they happen." The diary required approximately four minutes to complete per day. A reminder e-mail was sent daily for four days unless the

participants requested not to be reminded.

Results

Descriptive Statistics

Means, standard deviations, and correlations among key variables are presented in Table 1. The BDI-II mean score of the current sample fell within the mild range of symptom severity (Beck et al., 1996), and thus was higher than general student populations (Beck et al., 1996; Whisman, Judd, Whiteford, & Gelhorn, 2013). The BDS mean was comparable to that of other studies of university students who experienced a recent breakup (Field et al., 2009).

Frequency of spontaneous memories. To present an overall picture of the frequency of the relationship and school-performance memories, an average frequency for each type of memory was obtained by summing the frequency of the memories recorded each day and divided by the number of days that each participant completed the online diary (Table 1).

Associations between symptoms and breakup variables. The pattern of simple correlations of most relationship variables with breakup distress and depressive symptoms was remarkably similar. Individuals who reported less desire for breaking up experienced both higher depressive and breakup distress symptoms. Neither time elapsed since the breakup nor the duration of the relationship were correlated to the symptom measures.

The pattern of correlations with the frequency of spontaneous relationship memories was also the same for depressive and breakup distress symptoms. More frequent positive and negative memories of the relationship were both related to higher depressive and distress symptoms. An example of a positive memory was "Going snowmobiling and drinking with friends at his house," and an example of a negative memory was "Hearing the words in my head of him breaking up with me." In contrast, only the frequency of negative school-related memories was related to

more depressive symptoms. Therefore, the content of memories (i.e., relationship/breakup) was an important factor in relation to depressive and distress symptoms among these participants (see Table 1).

Prediction of the Frequency of Spontaneous Memories

Data Analysis Strategy. The main hypotheses for predicting the frequency of positive and negative relationship memories (i.e., dependent variables) were examined employing multilevel linear modeling (MLM) (also referred to as hierarchical linear modeling, HLM). The models held 277 observations nested within 91 participants. The data were hierarchically arranged in two levels. Level 1 consisted of time-varying variables (i.e., frequency of memories) nested within individuals. Thus, the repeated measures for each day comprised the within-person level. The autoregressive model (AR1) was selected as the covariance structure for the repeated measures (Fields, 2009).

Level 2 contained between-person variables and consisted of both relationship/breakup variables (e.g., duration of the relationship, initiator status), and the symptom measures (BDI-II and BDS). The relationship variables were employed as control variables, whereas the BDS and the BDI-II were the main predictor variables related to hypotheses. The continuous Level-2 variables were grand-mean centered. Random parameters did not improve the models' fit or did not converge. Therefore, all models had a fixed intercept and fixed slopes. The analyses were conducted with SPSS version 22.

The models presented in Table 2 are arranged from simpler (Model 1: Unconditional) to more complex (Models 3a and 3b: Control variables and main predictor). More complex models improved the fit relative to the simpler models as evaluated by a significant decrease in $-2LL$ statistics unless otherwise noted. Thus, Models 3 are interpreted below. For these models r -to-

*t*transformations were calculated to estimate the effect sizes of the variables that were significant predictors.

Positive relationship memories. As shown in Model 3a (Table 2, left column), a shorter time since the breakup ($r = -.20$) and a lower desire for breaking up ($r = -.33$) were related to more frequent positive relationship memories. Consistent with our hypotheses, individuals who reported greater breakup distress ($r = .21$) also reported a higher frequency of positive relationship memories. The magnitude of the relationship between distress symptoms and positive memories was small. Model 3b (Table 2, left column), employing depressive symptoms as the main predictor variable, did not improve the model's fit relative to Model 2. Moreover, depressive symptoms did not predict the frequency of positive relationship memories.

Negative relationship memories. As shown in Model 3a in Table 2 (right column), women ($r = .26$) reported more frequent negative relationship memories. Further, individuals experiencing greater breakup distress ($r = .41$) also reported more negative relationship memories. In an alternative model, Model 3b (right column), women ($r = .25$) and non-initiators ($r = .21$) of the breakup reported more frequent negative memories. In addition, individuals with higher depressive symptoms ($r = .44$) reported more frequent negative memories. Both Models 3a and 3b had a better fit relative to Model 2. Therefore, consistent with our hypotheses, both greater breakup distress and greater depressive symptoms were associated with more frequent negative relationship memories. The magnitude of the effect of these relationships was moderate as suggested by the size of their r coefficients.

Interaction Effects. Past studies have found that duration of the relationship, desire for breakup, and initiator status moderated the relationship between memory frequency and psychological symptoms (e.g., Bermann, 1988). Therefore, supplementary analyses were

conducted to investigate whether symptom severity interacted with any of these variables in the prediction of memory frequency. All the interactions were non-significant. Thus, we did not find evidence for interacting effects of relationship duration, initiator status, or desire for breakup in the prediction of memory frequency.

School-related memories. Finally, supplementary models predicting the frequency of school-related memories were also conducted as a means of comparing the role that either breakup distress symptoms or depressive symptoms would have in predicting memories of a different content. Four reduced models employing the frequency of school memories as dependent variable were examined (i.e., without the control-variable model as it was non-significant): BDS predicting positive memories, BDS predicting negative memories, and the same but employing the BDI-II as predictor. In these models the BDS and BDI-II were non-significant ($ps < .08$), suggesting that the findings reported in Table 2 were not a product of memory frequency more generally, but relationship memories in particular as we would expect for this sample of emerging adulthood dealing with a recent breakup.

Discussion

Romantic relationships are common among emerging adults and, because of their shortened duration, breakups also are common. We investigated how positive and negative spontaneous relationship memories following a relationship breakup may be related to breakup distress and depressive symptoms among emerging adults. The findings contribute to insights regarding how emerging adults weather the often traumatic or highly stressful experience of a breakup at a time critical to the development of intimacy and autonomy skills.

In line with our hypotheses, our main finding was that a higher frequency of positive memories was predicted by higher levels of breakup distress symptoms following a non-marital

relationship breakup, but were not related to depressive symptoms. These results suggest that frequent positive memories are specifically related to breakup distress symptoms, such as loneliness, disbelief over the breakup, and feelings of emptiness. Although scarce, past studies have found similar patterns of results in other relationship-loss contexts. For instance, Boelen and Huntjens (2008) found that frequent positive memories of a deceased loved one were correlated with higher grief symptoms, but not with depression. Similarly, Bermann (1988) found that eliciting positive memories of an ex-husband predicted higher distress among divorced women. Together, current and previous findings suggest that experiencing positive relationship memories is related to grief or grief-like symptoms (breakup distress) following relationship loss.

In contrast, a higher frequency of negative relationship memories was associated with both breakup distress symptoms and higher depressive symptoms. In other words, both group of symptoms, breakup distress and depression, were related to experiencing more negative memories. Therefore, the frequency of negative relationship memories may be indicative of psychological distress more broadly as opposed to breakup distress specifically. At the same time, the frequency of other negative memories (e.g., academic performance) was not related to either depressive or breakup distress symptoms, thus suggesting that memory content (i.e., the relationship) was relevant for predicting the psychological adjustment of the current sample of emerging adults dealing with a recent relationship breakup.

We cannot explain directly why higher breakup distress was associated with a higher frequency of positive memories, however, we offer a speculative explanation for such a relationship. In working with recently divorced adults, Bermann (1988) suggested that positive memories elicit, or are indicative of, a continued attachment bond. Acknowledging the fact of the relationship loss while experiencing feelings of attachment amplifies distress. This explanation is

in accord with studies of intact relationships in which eliciting positive memories of the relationship was related to increased feelings of warmth and closeness (Alea & Bluck, 2007) and relationship satisfaction (Bazzini, Stack, Martincin, & Davis, 2007). Therefore, feelings of yearning, loss, and emptiness (i.e., breakup distress) may be related to internal reminders (memories) of positive moments with an ex-partner.

A second explanation that could apply to the relationship between both positive and negative memories and elevated symptoms, is that the emotional and non-emotional aspects of relationship memories, whether positive or negative, are not distinguished from one another (Boals & Klein, 2005). Non-emotional memories refer to factual or relatively neutral moments of a relationship (e.g., watching TV, having a meal together), whereas emotional memories are typically more intense and have a more distinct valence (positive vs. negative), such as being affectionate or arguing with the ex-partner. Boals and Klein (2005) found among individuals who experienced a recent breakup, those who rated non-emotional cues (e.g., having a meal) similarly to emotional cues (e.g., arguing) across intensity and valence also reported higher stress over the breakup and less recovery. Thus, lesser distinctiveness between non-emotional and emotional aspects of relationship memories may be related to greater distress. This finding suggests that the processes of socio-emotional development from adolescence through emerging adulthood involved in developing skills in intimacy and managing rejection (Barber, 2006; Tashiro & Frazier, 2003) are central for understanding the aftermath of a relationship. Those with higher distress and depressive symptoms may experience memories of the relationship with greater emotional intensity, and with a more distinct emotional valence (i.e., positive or negative). These two potential explanations are not exclusive of each other.

An important implication of the current results relate to the differences between breakup

distress and depressive symptoms. The differential pattern of association between spontaneous positive and negative memories and the two group symptoms examined suggest that, although breakup and depressive symptoms were highly correlated for youth, there were differences in how spontaneous relationship memories, and potentially other cognitions, were processed. This finding is similar to what has been observed with bereaved individuals experiencing grief and depressive symptoms (e.g., Boelen & Huntjens, 2008; Boelen et al., 2010). These results underscore the importance of investigating memory valence following different forms of relationship dissolution, and of understanding the emotional impact that memories may have for psychological well-being (Blind).

There are a number of limitations of the current study. The sample consisted of a relatively small and homogeneous group of well-educated emerging adults, and more female than male participants, thus the findings may not generalize to other or more diverse groups of young people. Although the memory diary likely reduced recall bias, it still comprises a self-report measure and thus was subject to the biases inherent in such tools. Memory frequency was only reported across four consecutive days; a different time interval or length could be more representative of young people's experiences following a breakup. Relatedly, other time-varying measures could be assessed in addition to memory frequency, including daily mood. Similarly, future studies may benefit from employing other methodologies, such as experiencing sampling to measure memory frequency more accurately.

Finally, a cautionary note must be made regarding the directionality of the relationship between memory frequency and symptoms. We assessed both depressive and distress symptoms one day prior the commencement of the diary. However, these symptoms tend to be stable within a few days (Huprich&Roberts, 2012). This fact together with the lack of a second assessment of

symptoms, prevents us from making conclusions about the potential causality of the associations found. Most likely both memory frequency and symptoms affect one another.

We consider the current study to be a first step examining the role of positive memories following relationship breakup. Future research should examine other event and memory characteristics that could advance the understanding between cognitive processing and adjustment post-breakup beyond memory frequency. For instance, past research has found that how central a stressful event is for an individual's identity (Boals, 2014), and how individuals respond to memories of such events (blind), are related to greater symptoms. Examining the distinctiveness between emotional and non-emotional components of the memories may be crucial for understanding the relationship between memory frequency and breakup distress symptoms (Boals & Klein, 2005). It also may be interesting to examine effects longitudinally to develop insights into the onset, peak, and resolution of breakup distress, over time, and corresponding shifts in the nature, content, and valence, of memories relating to past relationships and across relationships as individuals enter adulthood.

Despite some limitations, the current study adds to the limited evidence on memory valence after stressful life events in general and in particular provides insights into a much-neglected area of development--experiences of romantic breakups during emerging adulthood. The findings suggest new avenues for understanding cognitive and emotional factors involved in the aftermath of relationship breakup, including their overlap and the importance of distinguishing the two realms. Traditionally, research investigating autobiographical memory after stressful life events has focused on intrusive memories which are by definition negative. However, our findings suggest that at least in the context of relationship dissolution during emerging adulthood, investigating the experience of positive spontaneous memories is also

relevant for understanding how individuals are adjusting in the aftermath of a romantic breakup. Greater insights into these memories may help practitioners to better conceptualize the suffering of young people experiencing a distressing relationship breakup and to inform potential interventions.

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Table 1

Mean, SDs, and Correlations between Symptoms, Relationship Variables, and Frequency of Memories

	2	3	4	5	6	7	8	9	<i>M</i>	<i>SD</i>
1 BDI-II	.74**	-.03	.05	-.28*	.24**	.48**	-.02	.21*	15.40	11.47
2 BDS		-.01	.12	-.36**	.29**	.49**	.10	.19	32.49	10.93
3 Time since breakup (weeks)			-.01	-.07	-.15	.02	.01	-.08	7.08	4.22
4 Duration relationship (months)				-.06	.04	.05	-.08	-.10	17.29	13.44
5 Desire for breakup (0 to 10)					-.40**	-.16	-.26*	-.09	5.19	3.16
6 Freq.Pos. Relationship						.38**	.49**	.34**	1.32	0.91
7 Freq. Neg. Relationship							.27**	.35**	1.33	0.91
8 Freq. Pos. Academic								.38**	1.12	0.84
9 Freq. Neg. Academic								--	0.99	0.76

Note. *N* = 91. BDI-II = Beck Depression Inventory –II; BDS = Breakups Distress Scale; Freq. Pos. = Frequency of Positive Memories; Freq. Neg. = Frequency of Negative Memories. **p* < .05. ***p* < .01.

Table 2

Multilinear models predicting the frequency of positive and negative relationship memories.

	Positive Memories				Negative Memories			
	<i>b</i>	<i>df</i>	<i>t</i>	<i>p</i>	<i>B</i>	<i>df</i>	<i>t</i>	<i>p</i>
<i>Model 1 (Unconditional)</i>								
Intercept	1.32	95.18	14.78	<.001	1.37	96.82	16.30	<.001
<i>Model 2 (Control variables)</i>								
Intercept	1.18	92.11	5.84	<.001	1.21	95.05	6.09	<.001
Sex	0.16	96.35	0.81	.422	0.54	99.56	2.74	.007
Initiator Status	0.05	90.12	0.23	.815	-0.44	93.91	-2.33	.022
New Relationship	-0.14	100.14	-0.64	.526	-0.10	106.27	-0.46	.649
Duration of relationship	-0.01	93.85	-0.93	.355	0.01	100.85	0.98	.330
Time since breakup	-0.04	93.46	-1.97	.052	-0.01	97.79	-0.41	.680
Wanting the breakup	-0.12	92.06	-3.83	<.001	0.02	95.24	0.79	.434
<i>Model 3a (Breakup Distress)</i>								
Intercept	1.16	91.12	5.94	<.001	1.18	97.21	6.53	<.001
Sex	0.14	95.70	0.72	.471	0.49	102.24	2.72	.008
Initiator Status	0.10	89.55	0.54	.593	-0.32	96.27	-1.85	.067
New Relationship	-0.15	99.26	-0.69	.492	-0.09	109.40	-0.45	.656
Duration of relationship	-0.01	93.20	-1.24	.220	0.00	104.58	0.43	.668
Time since breakup	-0.04	92.47	-2.01	.047	-0.01	100.21	-0.41	.681
Wanting the breakup	-0.10	91.64	-3.32	.001	0.05	98.30	1.94	.055
BDS	0.02	95.11	2.11	.037	0.03	103.48	4.60	<.001
<i>Model 3b (Depressive Symptoms)</i>								
Intercept	1.19	91.90	5.98	<.001	1.24	99.84	6.91	<.001
Sex	0.14	96.36	0.72	.476	0.48	104.71	2.66	.009
Initiator Status	0.07	89.81	0.38	.708	-0.37	98.37	-2.13	.036
New Relationship	-0.21	101.38	-0.94	.349	-0.28	112.37	-1.34	.183
Duration of relationship	-0.01	93.53	-1.01	.313	0.00	106.71	0.85	.394
Time since breakup	-0.04	93.00	-1.93	.057	0.00	102.58	-0.21	.837
Wanting the breakup	-0.11	91.91	-3.51	.001	0.05	100.30	1.80	.075
BDI-II	0.01	93.21	1.60	.114	0.03	104.41	4.98	<.001

Note. *N* = 91, 277 observations. BDI-II = Beck Depression Inventory-II; BDS = Breakup Distress Scale.