



Being Grateful: Does it Bring Us Closer? Gratitude, Attachment and Intimacy in Romantic Relationships

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To date, little is known about the function of gratitude in romantic relationships. Being grateful has been demonstrated to provide a number of positive benefits for individuals; however, few studies have explored how grateful experiences may be beneficial in enhancing romantic relationships. This study explored the extent to which adult attachment moderates the relationship between dispositional gratitude and the experience of intimacy within romantic relationships. A greater disposition toward gratitude was expected to result in more frequent experiences of gratitude. It was also anticipated that experiences of gratitude would be associated with feelings of closeness. Participants ($n = 156$) were required to be currently in a relationship of at least six months duration and completed a series of questionnaires assessing dispositional gratitude, attachment and emotional intimacy. Moderation analysis revealed that although a positive, weak correlation existed between dispositional gratitude and intimacy, attachment did not moderate this association. It was concluded that further investigation of the experience of gratitude is necessary to understand the function of gratitude in romantic relationships. Methods focusing on specific experiences of gratitude in romantic relationships, and the associated feelings of closeness experienced by each partner, may yield more conclusive findings and may provide support for therapeutic approaches focused on enhancing closeness between couples by increasing experiences of gratitude.

■ **Keywords:** romantic relationships, intimacy, gratitude, attachment

The concept of gratitude has received recent research attention (e.g., Lambert, Graham, & Fincham, 2009; McCullough & Tsang, 2004; Mikulincer & Shaver, 2010; Mikulincer, Shaver, & Slav, 2006). However, despite Emmons and Crumpler's (2000, p. 57) assertion that 'gratitude is profoundly interpersonal', the role of gratitude in romantic relationships has, to date, received little research attention (Emmons, 2004; Hlava, 2009). Although few studies have explored gratitude in romantic relationships, Mikulincer et al. (2006) have identified an association in romantic couples between gratitude and some aspects of attachment and found that individuals who were higher in gratitude and more secure in some aspects of attachment were more likely to engage in prosocial behaviour.

In contrast, many studies have described the importance of intimacy in romantic relationships and its

positive association with relationship satisfaction (e.g., Hassebrauck & Fehr, 2002; Kirby, Baucom, & Peterman, 2005; Tolstedt & Stokes, 1983). Further, a number of studies (Bartholomew, 1990; Grabill & Kerns, 2000; Mitchell et al., 2008) describe the effects of relationship attachment on intimacy, suggesting that more securely attached individuals experience higher levels of intimacy. However, to date there is no empirical evidence for an association between gratitude and intimacy. This study, therefore, sought to explore whether those who experience greater gratitude also experience

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greater feelings of closeness or emotional intimacy. More specifically, it sought to investigate the relationship between dispositional gratitude and intimacy and the way in which attachment anxiety and avoidance moderate that relationship. Attachment anxiety and avoidance provide an indication of individuals' degrees of discomfort associated with close relationships (Brennan, Clark, & Shaver, 1998) and this will therefore impact on the degree to which experience of gratitude will be associated with experiences of intimacy.

Gratitude in Romantic Relationships

Emmons and Crumpler (2000) describe gratitude as a multifaceted relational concept encompassing emotion, attitude, virtue, behaviour and motivation. Focusing on emotion, Lazarus and Lazarus (1994) describe feelings of gratitude as the result of 'appreciating an altruistic gift' (p. 118, emphasis in original) and highlight its relational context. Thus, feelings of gratitude arise from a perception that another person's actions are the reason for some benefit to oneself, and an appreciation of those actions and of the one responsible for them.

In a study of the effects of reflecting on experiences of gratitude, Emmons and McCullough (2003) reported increases in positive affect and life satisfaction and that these changes were also observed by participants' spouses or significant others. In a study exploring gratitude in marital relationships, Mikulincer et al. (2006, p. 209) concluded that gratitude contributes 'strength and longevity to romantic and marital relationships'. These findings suggest not only that the personal benefits of being grateful toward one's romantic partner are apparent to one's romantic partner but that being grateful also benefits one's romantic relationship.

Although Emmons and McCullough (2003) and Mikulincer et al. (2006) describe the positive impact of the experience of gratitude on romantic relationships, few studies, if any, describe its specific impact on intimacy in romantic relationships. However, in the context of friendships, Algoe, Haidt and Gable (2008) surveyed 18- to 22-year-old female university students involved in a week-long sorority activity of anonymous gift giving. Students who had been new sorority members the previous year gave gifts to new sorority members. Algoe et al. (2008) demonstrated that recipients' perceptions of givers' intentions and degree of benefit experienced by recipients were predictors of gratitude. Where givers were perceived as more thoughtful and considerate of recipients' needs, recipients felt greater gratitude; where recipients regarded gifts as being of greater benefit, they reported greater gratitude. In addition, Algoe et al. (2008) found that the cost of the gift predicted the degree of gratitude, with the degree of gratitude experienced increasing as the (financial) cost of giving increased. Algoe et al. (2008) also reported that recipi-

ents felt closer to the giver when they received their gift, even though they did not know the giver's identity. At the end of the week's activities, the identity of the giver was revealed and follow-up surveys one month after the activity revealed that where more gratitude had been felt and expressed, the friendship between the giver and receiver scored more highly on relationship quality and more time had been invested in the friendship. Although Algoe et al. (2008) suggest that these findings reveal gratitude as having a relationship-promoting function, they did not draw a link between gratitude and intimacy.

Dispositional Gratitude and Experiences of Gratitude

In addition to the immediate, short-term experience of gratitude resulting from a specific interaction, McCullough, Emmons, & Tsang (2002) suggest that gratitude is an enduring trait. Rosenberg (1998) describes this dispositional, enduring aspect of emotions as resulting in a lowered threshold for the experience of that emotion. Therefore, McCullough et al. (2002) argue that having a grateful disposition makes the experience of gratitude in everyday events more likely. Thus individuals who have greater dispositional gratitude are more likely to notice the costliness and beneficial intent of others' positive actions and experience feelings of gratitude.

Mikulincer et al. (2006) assessed grateful disposition, experiences of gratitude and the behaviours precipitating those experiences of gratitude in relation to 55 newlywed couples. Mikulincer et al. (2006) also investigated the degree to which attachment influenced participants' feelings of gratitude toward their partners. Attachment was found to influence both dispositional gratitude and experiences of gratitude in similar ways, suggesting that dispositional gratitude and experiences of gratitude are positively associated. This supports McCullough et al.'s (2002) claim that individuals with higher levels of dispositional gratitude are more likely to perceive their partner's behaviours as intentionally beneficial and to appreciate the costliness of such behaviours. It follows that individuals with a greater disposition toward gratitude are also more likely to experience gratitude toward their partner.

Intimate Experiences in Romantic Relationships

In describing intimate experiences, Reis and Shaver (1988) identified disclosure and responsiveness as key elements in predicting experiences of intimacy. Using results from diary records of intimate interactions, Laurenceau, Barrett and Pietromonaco (1998) demonstrated that responses perceived as more validating,

understanding and caring influenced the degree of intimacy experienced. In a similar but more recent study, Castellani (2006) found that greater intimacy was experienced by both partners where there was greater disclosure and a more supportive, caring and understanding response.

Studies investigating gratitude have suggested that actions resulting in feelings of gratitude, by their very nature, reveal thoughtfulness, cost and beneficial intent (e.g., Algoe et al., 2008; Tesser, Gatewood, & Driver, 1968). Hence, such revelations disclose something about the *giver*, namely his or her awareness of the receiver's needs, desire to benefit the receiver and willingness to do so at his or her own cost, potentially putting the receiver's needs above his or hers. In other words, the giver's actions that precipitate gratitude, can be seen as a disclosure of self, which is an important component of intimacy. In order to experience gratitude, the *receiver* must perceive the giver's actions as thoughtful, costly and intentionally beneficial (Tesser et al., 1968); thus the receiver's expression of gratitude validates the giver's actions by understanding and valuing the giver and his or her actions.

Taken together, these findings may suggest that the experience of gratitude, and the expression of that gratitude, lead to a more intimate relationship for both the giver and receiver. As described above, the experience of gratitude is a response to another's disclosure of thoughtfulness and generosity. Findings by Reis and Shaver (1988), Laurenceau et al. (1998) and Castellani (2006) indicate that a gratitude response, precipitated by a disclosure of self should result in an experience of greater intimacy.

However, gratitude and intimacy are both interpersonal and dependent on interpersonal perceptions (e.g., Emmons & Crumpler, 2000; Laurenceau et al., 1998; Lazarus & Lazarus, 1994; Prager, 1995). Individuals who experience discomfort associated with intimacy, or with situations likely to increase feelings of intimacy, are therefore less likely to experience gratitude in response to their partner's disclosure of thoughtfulness and generosity, as this would result in greater feelings of intimacy and hence greater discomfort. Therefore, the interaction between gratitude and intimacy is likely to be moderated by individual differences in the degree of discomfort associated with intimacy.

Attachment in Romantic Relationships

Brennan, Clark and Shaver (1998) have identified two dimensions that capture individual differences in response to intimate relationships: attachment-related *avoidance* and attachment-related *anxiety*. Individuals who score high on the avoidance dimension are less likely to disclose intimate information or rely on their partner (Brennan et al., 1998). High scores on the

anxiety dimension are considered indicative of an individual's concern about the availability, responsiveness and attentiveness of their partner. However, rather than this behaviour resulting from perceptions of their partner, anxious individuals were more likely to describe feelings of inferiority (Brennan et al., 1998); thus, their anxiety regarding their relationship arises from fears of rejection or abandonment. Conversely, individuals lower in both avoidance and anxiety were more likely to be secure, expecting their partner to be responsive, available and reliable (Brennan et al., 1998).

Gratitude and Attachment

Mikulincer et al. (2006) explored links between dispositional gratitude, gratitude experiences and attachment using a number of self-report scales designed to evaluate attachment, dispositional gratitude, experiences of gratitude, self-esteem and interpersonal trust. The first part, a study of Israeli undergraduates, suggested that higher scores for avoidance were associated with lower scores for dispositional gratitude. On the other hand, scores for anxiety were not significantly associated with dispositional gratitude. Rather, individuals higher in anxiety were more likely to be concerned with feelings of inferiority and obligation in response to situations where gratitude might be expected. The second part of Mikulincer et al.'s (2006) study focused on newlywed couples who had lived together for between 1 and 5 years. As with the initial study, individuals higher in avoidance were generally less likely to feel gratitude toward their partner. These studies therefore suggest that individuals higher in avoidance are less likely to experience gratitude on a day-to-day basis, and have overall a lower disposition toward gratitude. On the other hand, individuals higher in anxiety were more likely to respond ambivalently to such behaviours. For those individuals experiencing relationship anxiety, the expression of gratitude was complicated by concerns that they were undeserving or might not be able to repay the gift or service provided.

Attachment and Intimacy

Using intimacy-related measures such as self-disclosure, responsiveness and feelings of being understood and cared for, Grabill and Kerns (2000) found links between attachment and intimacy. Secure individuals were more likely to score significantly higher than insecure individuals in their experience of intimacy. These findings reiterate Brennan et al.'s (1998) findings that individuals who demonstrate higher levels of relationship avoidance are less likely to disclose information. Brennan et al. (1998) explain their findings by suggesting that individuals high in avoidance are not likely to respond in a validating, supportive and caring way, as this would increase the expectation of closeness, which is precisely what they seek to avoid.

Individuals who demonstrate higher levels of relationship anxiety are also concerned with the responsiveness and attentiveness of their partner (Brennan et al., 1998). In contrast to individuals higher in avoidance, however, individuals higher in anxiety are less likely to withdraw from intimacy (Kulley, 1994). Nevertheless, they are also less likely to report feeling understood and cared for (Grabill & Kerns, 2000). These findings suggest that although individuals higher in anxiety desire intimacy, they are less likely, perhaps due to self-perceptions of inferiority, to perceive their partner's response as validating and will therefore experience less intimacy.

Gratitude, Attachment and Intimacy

Attachment has an important influence on both gratitude (e.g., Mikulincer et al., 2006) and intimacy (e.g., Grabill & Kerns, 2000) and it is likely that it will influence the association between them. Compared to more secure individuals, those higher in avoidance are less likely to experience intimacy (Brennan et al., 1998). Not only are they less likely to experience gratitude (Mikulincer et al., 2006), but what gratitude they do experience is less likely to lead to feelings of closeness. Individuals higher in anxiety are also less likely to experience intimacy (Kulley, 1994). However, depending on how the experience of gratitude interacts with feelings of obligation (Mikulincer et al., 2006), such experiences are more or less likely to lead to feelings of closeness. Therefore, it is suggested that although gratitude may be associated with feelings of closeness, this association is moderated by attachment.

Aims and Hypotheses

In exploring the association between gratitude and intimacy, and the way in which this association is moderated by attachment, this study offers new insights into gratitude in romantic relationships, a model that has not been empirically tested in previous studies. Therefore, this study expands current understandings of gratitude and intimacy.

This study proposed that grateful individuals were more likely to experience intimacy. Models of gratitude and intimacy described in this study emphasised the relational context in which both gratitude (Lazarus & Lazarus, 1994) and intimacy (Prager, 1995) occur. Individual differences in response to relationships are thus likely to significantly impact upon the experience of both gratitude and intimacy. Thus, attachment, which describes such differences, will influence both gratitude and intimacy (Grabill & Kerns, 2000; Mikulincer et al., 2006). Therefore, this study hypothesised that there will be a significant positive correlation between gratitude and intimacy; and this association between gratitude and intimacy will be moderated by attachment anxiety and attachment avoidance.

Method

Participants

This study involved 156 individuals who were in romantic relationships of at least six months duration. Participants were at least 18 years of age, ranging from 18 to 70 years ($M = 34$, $SD = 11.66$); a larger proportion ($n = 122$) were female compared to male ($n = 34$). Most participants identified themselves as other-sex attracted ($n = 126$) with smaller proportions identifying as same-sex attracted ($n = 24$) or both-sex attracted ($n = 5$). One participant did not indicate their sexual attraction. Almost three-quarters of the sample were married or involved in a de facto partnership ($n = 113$), with an average length of relationship of nine years ($SD = 9.97$). Slightly more than half of the participants had been in their current relationship for five years or fewer ($n = 87$).

Measures

Demographic information. In addition to the information described above, participants were also asked to indicate their employment status, their highest level of education and the length of time they had known their current partner.

Gratitude. Participants' levels of dispositional gratitude were assessed using the Gratitude Questionnaire (GQ-6; McCullough, Emmons, & Tsang, 2001). The GQ-6 is a six-item self-report tool and uses a seven-point Likert-type scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Possible total scores range from 6 to 42 with higher scores indicating greater levels of dispositional gratitude. Item-scale analyses revealed reasonably strong reliability with a Cronbach's alpha of .76.

Attachment. Attachment was assessed using the Experiences in Close Relationships scale (ECR; Brennan et al., 1998), a 36-item self-report questionnaire that uses a seven-point Likert-type scale ranging from 1 (*disagree strongly*) to 7 (*agree strongly*). Two subscales, anxiety and avoidance, are calculated, with possible ranges from 1 to 7. Higher scores on each of the subscales indicate higher levels of anxiety or avoidance. Cronbach's alphas were calculated at .92 for anxiety and .90 for avoidance, indicating very strong scale reliabilities.

Intimacy. Emotional intimacy was assessed using the Emotional Intimacy Scale (EIS; Sinclair & Dowdy, 2005). This scale was chosen because of its specific focus on emotional intimacy and the alignment of scale items with Reis and Shaver's (1988) description of validating responses. The EIS contains five items and is scored on a five-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Possible scores range from 1 to 5 and higher scores indicate greater perceptions of emotional intimacy. Inter-item reliability was calculated at $\alpha = .84$ indicating strong scale reliability.

Procedure

This study included both an Australian university student sample and a community sample. Participants were recruited via advertisements placed on university noticeboards and through snowballing techniques using the researchers' networks of colleagues and acquaintances. Data collection was conducted online; following standard informed consent ethics procedures, participants completed the questionnaire online in their own time. A proportion of the university students were eligible for course credit as a result of their participation.

Results

This study investigated the link between gratitude and intimacy, and hypothesised that attachment avoidance and anxiety moderate that link. In comparison to the possible ranges of scores, participants reported generally high scores for gratitude ($M = 36.54$, $SD = 4.75$), and intimacy ($M = 4.44$, $SD = 0.63$), and positive experiences of relationship attachment, that is, low scores for avoidance ($M = 2.12$, $SD = 0.90$), and anxiety ($M = 3.28$, $SD = 1.19$). A comparison of means between our findings and those from Brennan et al.'s (1998) study ($M_{\text{avoidance}} = 3.08$, $M_{\text{anxiety}} = 3.53$) indicated that means for attachment were significantly lower for the present sample; for avoidance, $t(155) = -13.27$, $p < .01$, 95% CI [-1.10, -0.82], and for anxiety, $t(155) = -2.61$, $p = .01$, 95% CI [-0.44, -0.06]. It is also worthy of note that the mean reported here for gratitude is comparable with a number of other studies reporting GQ-6 scores (McCullough, n.d.) and is not significantly different from a grand, weighted mean derived from those relevant other studies ($M = 36.31$), $t(155) = 0.62$, $p > .5$, 95% CI [-0.52, 0.99]. The distribution of scores for intimacy was particularly leptokurtic ($z = 5.21$), indicating limited variance. The mean reported here for intimacy is slightly, but significantly lower than the findings from the validation study of the EIS (Sinclair & Dowdy, 2005; $M = 4.55$), $t(155) = -2.21$, $p < .05$, 95% CI [-0.21, -0.01].

Respondents generally scored highly on the gratitude and intimacy measures, and as a result, these data were highly negatively skewed. In addition, scores for avoidance were generally low, resulting in positively skewed data. To preserve normality, transformations were applied. These transformed data resulted in similar degrees of significance compared to untransformed data. Therefore, untransformed data are reported in these analyses to assist interpretation.

Table 1 indicates that correlations between gratitude and avoidance, and between gratitude and anxiety, were negative, moderately strong and highly significant. In addition, correlations between anxiety and intimacy, and between avoidance and intimacy, were also negative, moderately strong and highly significant. The

TABLE 1

Correlations Between Gratitude, Intimacy, Relationship Attachment and Age

	Gratitude	Avoidance	Anxiety	Intimacy
Avoidance	-.36***			
Anxiety	-.29***	.34***		
Intimacy	.20**	-.35***	-.31***	
Age	.23**	-.14	-.18*	-.04

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

correlation between gratitude and intimacy was positive and significant but limited in strength.

Moderation

The current study employed a moderation design, which was tested using multiple regression. The main effects of gratitude and attachment dimension were entered in Step 1; centred interaction terms were calculated for anxiety (Gratitude \times Anxiety) and avoidance (Gratitude \times Avoidance) and were entered in Step 2. All analyses were conducted twice, first with avoidance as moderator and then with anxiety as moderator.

Avoidance. An overall model predicting scores for intimacy from scores for gratitude, moderated by avoidance, was significant, $F(3,152) = 7.64$, $p < .001$. This model accounted for 11.4% of the variance in intimacy. However, the interaction between avoidance and gratitude only accounted for 0.3% of the variance in intimacy and was not significant, $F(1,152) = 0.52$, $p = .47$. Table 2 shows the main effects of gratitude and avoidance, and interaction effect of gratitude and avoidance in predicting intimacy. Squared semipartial correlations (s^2) indicate that for this model, avoidance uniquely predicted 9% of the variance in intimacy, with gratitude and the interaction effect of gratitude and avoidance predicting 1% or less. Subsequent analyses indicated that the sample size did not provide sufficient power (.38) to determine whether the lack of significance was a true indicator of the absence of a moderation effect, or whether the non-significant finding was due to sample size.

Anxiety. An overall model predicting scores for intimacy from scores for gratitude, moderated by anxiety, was also significant, $F(3,152) = 7.19$, $p < .001$. This model accounted for 10.7% of the variance in intimacy. As with avoidance, the interaction of gratitude and anxiety only accounted for a very small portion (1%) of the variance in intimacy and was not significant, $F(1,152) = 2.46$, $p = .12$. Table 3 shows b -weights, β -weights, confidence intervals and semi-partial correlations (s^2) for this model.

In terms of explaining the variance in intimacy in this model, the main effect of anxiety uniquely predicts only 7%, with the main effect of gratitude and the

TABLE 2

Gratitude and Avoidance — Contributions to the Predictive Model for Intimacy

	<i>b</i>	β	<i>p</i>	Confidence intervals		<i>sr</i> ²
				Lower	Upper	
Step 1						
Gratitude	0.01	0.10	.25	-.01	.04	.008
Avoidance	-0.23	-0.33	.00	-.35	-.12	.093
Step 2						
Gratitude × Avoidance	-0.01	-0.06	.47	-.03	.01	.003

TABLE 3

Gratitude and Anxiety — Contributions to the Predictive Model for Intimacy

	<i>b</i>	β	<i>p</i>	Confidence intervals		<i>sr</i> ²
				Lower	Upper	
Step 1						
Gratitude	0.01	0.07	.40	-.01	.03	.004
Anxiety	-0.15	-0.28	.00	-.23	-.06	.074
Step 2						
Gratitude × Anxiety	0.01	0.13	.12	< -.01	.03	.014

interaction effect of gratitude and anxiety each predicting only 1% or less. A power analysis of the sample size for this model indicated sufficient power (.98), thus for this model calculations of significance are reliable.

Discussion

Gratitude and Intimacy

This study investigated the association between gratitude and intimacy in romantic relationships, and the moderating effect of attachment avoidance and anxiety on that association. The first hypothesis predicted a significant, positive association between gratitude and intimacy, and this hypothesis was supported; individuals who experienced more gratitude were also likely to experience more intimacy. However, the association was much weaker than expected. It may well be that the data represent the true nature of the relationship between gratitude and intimacy, although it is also possible that measurement-related issues influenced these results. As noted earlier, scores for gratitude and intimacy were highly negatively skewed resulting from largely positive responses. These results may indicate that participants in this sample genuinely had a grateful outlook on life and experienced high levels of intimacy in their romantic relationships. However, it is also possible that such results indicate a restriction of range imposed by a ceiling effect. It is significant that, as identified earlier, findings of other studies using the same measures (e.g., McCullough, n.d.; Sinclair & Dowdy, 2005) also indicate generally positive responses. In particular, the validation study for the EIS (Sinclair

& Dowdy, 2005) had a significantly higher mean compared to the present study. Rather than suggesting that the sample for this study is unique, this comparison of findings may suggest that the measures of dispositional gratitude and emotional intimacy used in this study do not identify sufficient difference between participants scoring at the high end of the scale. This is particularly evident in the small variance in intimacy scores.

It is also possible that generally high scores in this and other studies have resulted from a social desirability bias. Although participants were informed that responses would not be individually identified and would be anonymous, they may still have been motivated to represent themselves in socially desirable ways (see research undertaken by Dirk & Geert, 2007, examining responses to online surveys). In addition, the general characteristics of measures for dispositional gratitude may increase their response bias vulnerability. In responding to the GQ-6, for example, participants may not be prompted to identify particular events in which they have felt gratitude because the statements ask them to consider their feelings of gratitude in general ways (e.g., 'I have so much in life to be thankful for'). By not anchoring responses to specific events, participants may be more likely to respond in ways that describe who they would like to be, rather than who they are.

A measure of dispositional gratitude was used to determine the likely frequency of participants' experiences of gratitude. Although Mikulincer et al. (2006) found that couples higher in dispositional gratitude were also more likely to experience gratitude toward

their partner, the GQ-6 does not specifically ask participants to report gratitude experienced because of their partner's actions. Similarly, the EIS does not specifically link reports of intimacy to specific experiences. Other study designs (e.g., Emmons & McCullough, 2003) have used diary report protocols to measure experiences of gratitude. In these studies, participants recorded positive and negative interactions with their partner as well as the degree of gratitude experienced. However, such investigations were beyond the scope of the current study. In future studies, reports of the degree of intimacy resulting from experiences of gratitude may provide richer data to explore the association between gratitude and intimacy.

Gratitude and Attachment

Another interesting finding from the initial correlational analyses were the significant, negative, moderate associations between scores for gratitude and avoidance, and gratitude and anxiety. The moderate, negative association between gratitude and avoidance found in this study is strongly aligned with findings by Mikulincer et al. (2006; $r = -.38, p < .01$). However, the significant, negative association between gratitude and anxiety found in this study does not align with findings from the same study, which reports a nonsignificant association ($r = .07, p > .05$). Mikulincer et al.'s (2006) explanation for this lack of significant association between gratitude and anxiety was that anxious individuals, in contexts where gratitude might be experienced, may have feelings of gratitude mixed with feelings of inferiority and obligation. Mikulincer et al. (2006) suggest that this interaction may confound their responses, resulting in greater ambivalence toward situations that might predict gratitude: at times they will feel gratitude, but at other times they will be overwhelmed by different feelings. It is also possible that the association between gratitude and anxiety found in this study is due to the restriction of range. If this is the case, the data do not reflect the true range of gratitude scores, and as a result, the correlation between gratitude and anxiety presented in Table 1 may not be an accurate representation of their true association. For similar reasons, the correlation between gratitude and avoidance described in Table 1 may not be accurate either, even though it is compatible with previous findings. Caution is therefore required in interpreting these data.

Gratitude, Attachment and Intimacy

The second hypothesis predicted that the association between gratitude and intimacy would be moderated by relationship attachment. This hypothesis was not supported either for attachment-related avoidance or for attachment-related anxiety. Gratitude did not have a significant main effect in predicting intimacy, nor was the interaction of gratitude and attachment a significant

predictor of intimacy. Nevertheless, there were main effects for attachment in predicting intimacy. Moreover, the results suggest that intimacy was more strongly predicted by avoidance itself than by gratitude or the interaction effect of gratitude and avoidance. The significant, negative b -weight for avoidance supports earlier findings (Brennan et al., 1998; Wei et al., 2005) that individuals higher in avoidance are more likely to avoid intimacy. Even so, the size of the b -weight for avoidance indicates that for a decrease of one scale point in avoidance, approximately one-fifth of a scale point in intimacy was predicted. Given that the scale used to measure avoidance has seven points, extremes of this scale would only predict a 1- to 2-point difference in intimacy. Such a small effect is not in keeping with previous findings and may, in part, be due to the lack of variance in intimacy scores for this sample.

Similar patterns of predictive influence were found for anxiety as for avoidance. Intimacy was more strongly predicted by anxiety than by gratitude, or by the interaction effect of gratitude and anxiety. The magnitude of the predicted influence of anxiety on intimacy was less than for avoidance and the b -weight for anxiety suggests that almost a seven-point decrease in avoidance would be necessary to predict a one-point increase in intimacy. Findings from other studies (Grabill & Kerns, 2000; Kulley, 1994) suggest that the limited influence of anxiety on intimacy may be due to anxious individuals' mixed responses to measures of intimacy; on the one hand desiring closeness but on the other reporting that their needs for intimacy are not met.

In summary, attachment was not found to moderate the association between gratitude and intimacy. Although significant main effects were found for avoidance and anxiety in predicting intimacy, these effects were too small to be of benefit in explaining the variance in intimacy. Thus, increasing the sample size to overcome power issues in predicting intimacy from gratitude and avoidance would be of little value. However, these findings need to be interpreted with caution in relation to both hypotheses, in view of the small variance found for intimacy. Mean and standard deviation calculations suggest that 95 per cent of respondents had a mean score for intimacy of between 3 and 5 (possible scores range from 1 to 5). These largely neutral or positive responses to statements of emotional intimacy make it difficult to determine what factors are likely to predict lower scores for intimacy, since there were few participants who responded negatively to the measure of intimacy used in this study. Thus the study's findings are inconclusive regarding the association between gratitude and intimacy, and the moderation of that association by relationship attachment.

In terms of future research, modifications to the EIS and GQ-6 may increase the variability of scores

obtained using these scales. Thomas and Watkins (2003), for example, identified similar difficulties with the Gratitude, Resentment and Appreciation Test (GRAT). In developing a revised version (GRAT-R), they refined scale items and increased the original 5-point grading scale to a 9-point scale to address issues of skew. A similar approach may be of benefit for the EIS and GQ-6.

Dispositional Gratitude, Experiences of Gratitude and Experiences of Intimacy

This study argued that individuals with a greater disposition toward gratitude are more likely to experience gratitude. McCullough and colleagues (Emmons & McCullough, 2003; McCullough et al., 2002; McCullough, Kilpatrick, Emmons & Larson, 2001) found similar positive outcomes for dispositional gratitude and for experiences of gratitude; Mikulincer et al. (2006) also measured dispositional gratitude (using the GQ-6) and experiences of gratitude (using diary reports). However, no direct analysis of the association between dispositional gratitude and experiences of gratitude has been reported. Further, no research has explored the relationship between experiences of gratitude and disposition toward gratitude and how these influence one another. Thus, in terms of future research, a greater understanding of how dispositional gratitude predicts experiences of gratitude, or how experiences in turn develop dispositional gratitude, is important for developing a more comprehensive understanding of gratitude.

In addition, a focus on specific experiences of gratitude and related experiences of intimacy may provide greater clarity as to the effect of gratitude on intimacy. Survey data used in this study did not provide the opportunity to identify causal relationships in terms of the potential intimacy-enhancing function of gratitude in romantic relationships. However, other methods, such as analysis of diary reports, may provide opportunities to observe this function. Emmons and McCullough (2003) found that asking individuals to recall experiences of gratitude resulted in a greater overall feeling of gratitude. Therefore, recollections focused on experiences of gratitude resulting from one's partner's actions may potentially increase feelings of intimacy toward one's partner.

Conclusion

This study aimed to develop a greater understanding of the function of gratitude in romantic relationships. It proposed that experiences of gratitude expressed between partners would lead to experiences of intimacy. Intimacy has also been identified as important in sustaining and developing satisfying relationships (Tolstedt & Stokes, 1983). This study predicted a positive association

between gratitude and intimacy and, although weak, this association was demonstrated. In addition, this study predicted that attachment would moderate the association between gratitude and intimacy. Although this effect was not evident in the findings of this study, a careful analysis of the data suggest the presence of ceiling effects and therefore these should be regarded as inconclusive, rather than negative findings.

In addition, this study identifies a number of gaps in current understandings of gratitude and intimacy, highlighting the need for further research into the function of gratitude in romantic relationships. In particular, it recommends, in the context of romantic relationships, the investigation of specific experiences of gratitude and intimacy, for both partners, resulting from specific behaviours toward each other. Such future investigations have the potential not only to develop more comprehensive understandings of the function of gratitude in romantic relationships but may also provide a foundation for developing gratitude-focused therapeutic interventions for couples wishing to experience greater intimacy in their relationships.

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