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# Attachment orientations and dispositional gratitude: The mediating roles of perceived social support and self-esteem



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## ABSTRACT

The present study seeks to examine the effect of attachment orientations on dispositional gratitude and whether it would be mediated by self-esteem and perceived social support. Nine-hundred-and-twenty-eight Chinese college students completed the Self-esteem Scale (SES), the Multidimensional Perceived Social Support Scale (MPSSS), the Experiences in Close Relationships Inventory (ECR), and the Gratitude Resentment and Appreciation Test (GRAT). It was revealed that both attachment avoidance and attachment anxiety were negatively associated with dispositional gratitude. Mediation analyses showed that attachment avoidance was indirectly related to dispositional gratitude through perceived social support and self-esteem, whereas attachment anxiety exerted effect on dispositional gratitude both directly and indirectly through self-esteem. These findings highlight the importance of attachment security for cultivating virtues such as dispositional gratitude and contribute to a more complete understanding of self- and other-representations.

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## 1. Introduction

Dispositional gratitude refers to 'a generalized tendency to recognize and respond with grateful emotions to the roles of other people's benevolence in the positive experiences and outcomes that one obtains' (McCullough, Emmons, & Tsang, 2002, p. 112; Watkins, Woodward, Stone, & Kolts, 2003). Gratitude, as an important relational virtue, is essential to one's relationship satisfaction (Lambert, Clark, Durtzsch, Fincham, & Graham, 2010), well-being (Snyder & McCullough, 2000; Wood, Froh, & Geraghty, 2010), and prosocial behaviors (Algoe, Gable, & Maisel, 2010). Despite the far-reaching consequences of gratitude on socioemotional functioning, it remains uncovered whether and how dispositional gratitude could be cultivated. Attachment theory postulates that attachment security, as a prevailing inner resource, constitutes positive cognitive representations for self, others and life events. It provides the foundation for personal growth and the development of personal virtues (Bowlby, 1982; Mikulincer & Shaver, 2007b). Extending the broaden and build cycle of attachment security (Mikulincer & Shaver, 2009) to dispositional gratitude, little empirical research has yet examined whether attachment security could cultivate dispositional gratitude by fostering cognitive factors such as positive representations of self and others. To fill this void, the current study has investigated whether insecure attachment orientations would be associated with dispositional gratitude and how such linkage would

be mediated by self-esteem and perceived social support in a large sample of Chinese college students.

### 1.1. Attachment orientations and dispositional gratitude

As an inborn regulatory system, attachment behavioral system is biologically presumed to drive individuals to maintain proximity to attachment figures under threatening situations and to attain a relatively stable sense of security (Mikulincer & Shaver, 2007a). However, when a sense of security could not be attained, individuals develop a set of secondary attachment strategies that disrupts normal proximity seeking (Mikulincer, Shaver, & Pereg, 2003). Attachment strategies could be conceptualized into two dimensions, namely attachment anxiety and attachment avoidance. Attachment avoidance is characterized by negative beliefs toward others and pursuit of independence and emotional distance, whereas attachment anxiety is defined by negative beliefs about self and worry about the unavailability and responsiveness of others in times of need (Brennan, Clark, & Shaver, 1998).

Mikulincer and Shaver (2007b) further elaborate that attachment security could facilitate the broaden and build cycle involving a cascade of psychosocial processes that eventually lead to personal growth and the actualization of self-potential. Whereas, insecure attachment (high in attachment anxiety or avoidance) may preoccupy mental resources that otherwise are devoted to other behavioral systems, thereby hindering the development of core personality (Mikulincer & Shaver, 2007b). Likely, empirical studies have shown that attachment (in) securities

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and personality are closely linked in adolescence and adulthood (Davila, Burge, & Hammen, 1997).

Extending the broad-and-build cycle to gratitude, it should go hand in hand with feeling valued, protected and accepted during positive interactions (Frei & Shaver, 2002). There has been preliminary evidence establishing the link from attachment orientations to gratitude. For instance, an early study showed that attachment avoidance and anxiety negatively predicted dispositional gratitude (Dwiwardani et al., 2014; Mikulincer, Shaver, & Slav, 2006). However, it still deserves more discussion particularly when we extend this to a new group who lives in a different culture.

### 1.2. Self-esteem and perceived social support as potential mechanisms

From an attachment perspective, repeated interactions with available and supportive others, along with a sense of attachment security, constitute a major source of cognitive representation of self and others, which in turn serve as a reservoir of cognitive appraisals for diverse life events and eventually foster the development of positive personality (Mikulincer & Shaver, 2005, 2007b). Positive sense of self-worth is a basic element of self-representation which is accompanied by self-efficacy (Griffin & Bartholomew, 1994), self-confidence and self-esteem (Arbona & Power, 2003; Hart, Shaver, & Goldenberg, 2005; Kenny & Sirin, 2006); the central characteristics of other-representation is indicated by the belief that how others are generally supportive and available (Griffin & Bartholomew, 1994). It is also tightly associated with interpersonal trust and perceived social support (Collins & Feeney, 2004; Simmons, Gooty, Nelson, & Little, 2009). To our knowledge, underlying mechanism between attachment orientations and dispositional gratitude through self-esteem and perceived social support has not been explored.

Self-esteem refers to one's general sense of his or her value or worth (Rosenberg, 1965) which has long been argued as an excellent indicator of self-representation (Doyle, Brendgen, Markiewicz, & Kamkar, 2003; Kamkar, Doyle, & Markiewicz, 2012). Prior research have confirmed that individuals with lower self-esteem tend to build a negative rather than a positive model of self (Cozzarelli, Sumer, & Major, 1998; Roberts, Gotlib, & Kassel, 1996; Wei & Ku, 2007), doubt about being lovable, competent and others' goodwill (Feeney & Noller, 1990; Mikulincer & Shaver, 2010), and be overly contingent on others' approval and erect distorting defenses to counter feelings of worthlessness and hopelessness (Mikulincer & Shaver, 2007a; Mikulincer et al., 2006). Basing self-esteem on having power over others may lead to bullying, whereas basing self-esteem on virtue should lead to more prosocial behavior (Crocker & Wolfe, 2001). Individuals with high self-esteem in general have better relationships (Baumeister, Campbell, Krueger, & Vohs, 2003), invest additional effort toward benefiting others to enhance their self-concepts (Grant & Wrzesniewski, 2010; Murray & Hazelwood, 2011), and strengthen their perceptions of reciprocity and their confidence that their efforts will be repaid (McCullough, Kilpatrick, Emmons, & Larson, 2001).

Perceived social support has been identified by attachment researchers as important indicator for other-representation, in which attachment security is primarily attained when attachment others are responsive in times of need (Bretherton & Munholland, 1999; Waters & Rodrigues-Doolabh, 2001). Echoing this analysis, a study on gratitude show that grateful persons could appreciate simple pleasures, because they feel secure and notice others' support easily (Fredrickson, 2004; Watkins et al., 2003). The cognitive-emotion theory of gratitude illuminate that the perceived intentionality of others' kindness is the strongest predictor for the feeling of gratitude after receiving the benefit (Heider, 1958). However, insecurely attached individuals, whether anxious or avoidant or both, exist biased perceptions of social support. They are less likely to perceive and remember the available support (Mikulincer & Shaver, 2007b) and are less satisfied with the support they received (Blain, Thompson, & Whiffen, 1993; Collins & Feeney,

2004; Davis, Morris, & Kraus, 1998; Volling, Notaro, & Larsen, 1998), then fail to react to a partner's behavior with gratitude (Weiner, 1985).

### 1.3. The present study

As reviewed, there has been preliminary work for the broad-and-build cycle of attachment security for the development of virtues; yet, further work is still needed. First, gratitude is universal and important across different cultures (Cao, 2012; McCullough et al., 2001), but studies on attachment orientations and dispositional gratitude are entirely conducted in Western societies. Consequently, the current study provides a unique window to understand gratitude and its development by exploring whether attachment security may contribute to dispositional gratitude among Chinese. Second, existing literatures mainly focus on the psychosocial implications of gratitude, but little efforts have been devoted to explore whether and how such a virtue could be developed. To investigate this question, the present study tested the mediation effect of self-esteem and perceived social support on the relationship between attachment orientations and dispositional gratitude among Chinese college students. Taken as a whole, we proposed the following hypotheses: (1) Attachment anxiety and avoidance would be associated with lower dispositional gratitude. (2) Self-esteem and perceived social support would mediate the link between attachment orientations and dispositional gratitude.

## 2. Method

### 2.1. Participants

We recruited 928 undergraduate students (701 males and 227 females, aged 17–24 years,  $M_{age} = 20.19$ ,  $SD = 1.29$ ) from three universities in Xi'an, China. Of them, 45.2% were the only child in their family. Nearly half of the participants (45.0%) had been involved in or been experienced the romantic relationship for an average of 6.49 months. Participants were given gifts for participation.

### 2.2. Measures

#### 2.2.1. Attachment orientations

Adult attachment orientations were measured by the Experiences in Close Relationships Inventory (ECR) (Brennan et al., 1998). The Chinese version of the ECR has been demonstrated to be a reliable and valid measurement in assessing attachment orientations of Chinese (Li & Kato, 2006). The ECR consisted of 36 items scored on a 7-point scale (1 = *disagree strongly*, 7 = *agree strongly*). Attachment anxiety subscale contained 18 items assessing the degree to which individuals worried about losing a relationship. Attachment avoidance subscale contained 18 items, which measured the extent to which individuals attempted to maintain independence from a partner. In this study, reliabilities of two subscales were high ( $\alpha = 0.84$  for the attachment anxiety scale, and  $\alpha = 0.80$  for the attachment avoidance scale). The construct validity of measure was acceptable ( $\chi^2(555) = 2319.19$ ,  $p < 0.001$ ;  $RMSEA = 0.068$ ;  $SRMR = 0.048$ ;  $CFI = 0.92$ ; and  $TLI = 0.90$ ).

#### 2.2.2. Gratitude

The dispositional gratitude was assessed by the Chinese version of Gratitude Resentment and Appreciation Test (GRAT). The original version of GRAT included 44 items measuring the predisposition to experience the sense of abundance (e.g., "Life has been good to me."), simple pleasures (e.g., "Often I am just amazed at how beautiful the sunsets are"), and the contribution of others (e.g., "I am really thankful to friends and family.") to their lives (Watkins et al., 2003). After revising items that obviously were not applicable to Chinese cultural background and deleting those with low factor loading ( $< 0.40$ ) in exploratory factor analysis, the final version consisted of 34 items with satisfactory internal reliability and structural validity (Sun, Wang, & Han, 2010).

Participants responded on a 1 (*strongly disagree*) to 5 (*strongly agree*) Likert-scale, with a higher score indicating a higher tendency of dispositional gratitude. In this study, the model fit indices were acceptable ( $\chi^2(483) = 1843.21, p < 0.001$ ;  $RMSEA = 0.055$ ;  $SRMR = 0.054$ ;  $CFI = 0.91$ ; and  $TLI = 0.90$ ), and internal reliability was very high ( $\alpha = 0.93$ ).

### 2.2.3. Self-esteem

Self-esteem was measured by the Self-Esteem Scale (SES) (Rosenberg, 1965). It consisted of 10 items regarding individuals' feeling about themselves (e.g., "On the whole, I am satisfied with myself"). Participants indicated their agreement on each statement on a 4-point Likert scale, with a higher score representing higher self-esteem. The Chinese version of the SES has been certified to be a reliable and valid measurement in Chinese sample (Wang, Wang, & Ma, 1999). In this study, the model fit indices were acceptable, with  $\chi^2(32) = 157.25, p < 0.001$ ;  $RMSEA = 0.067$ ;  $SRMR = 0.044$ ;  $CFI = 0.94$ ; and  $TLI = 0.92$ , and the internal reliability was high ( $\alpha = 0.82$ ).

### 2.2.4. Perceived social support

Perceived social support was measured by the 12-item Multidimensional Perceived Social Support Scale (MPSS) (Zimet, Dahlem, Zimet, & Farley, 1988). The MPSS measured the support from three sources including, family, friends, and significant others. A sample item was "My family really tries to help me". Participants rated on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*), with a higher score reflecting the adequacy of perceived social support. The scale has been proved to exhibit excellent psychometric properties in Chinese population (Wang et al., 1999). In the present study, the construct validity of measure was acceptable ( $\chi^2(49) = 232.87, p < 0.001$ ;  $RMSEA = 0.076$ ;  $SRMR = 0.031$ ;  $CFI = 0.96$ ; and  $TLI = 0.94$ ), and the internal reliability was very high ( $\alpha = 0.92$ ).

## 2.3. Procedure and analytical strategies

According to the two-step procedure outlined by Anderson and Gerbing (1988), confirmatory factor analysis (CFA) was used to test whether each of the five latent variables was represented by its indicators. If the measurement model was accepted, the structural model was conducted in Mplus 7.0 using maximum likelihood estimation (Muthén & Muthén, 1998–2010). To control for the potentially inflated measurement errors caused by multiple items and to improve the psychometric properties of the variables (Landis, Beal, & Tesluk, 2000), three items were formed parcels for self-esteem, attachment anxiety, attachment avoidance, perceived social support, and four parcels for dispositional gratitude, to serve as indicators of factors using an item-to-construct balance approach (Kishton & Widaman, 1994; Landis et al., 2000).

## 3. Results

### 3.1. Measurement model

Table 1 summarized the descriptive statistics and correlations of all variables. The measurement model involved five latent constructs

**Table 1**  
Zero-order correlations between five latent variables ( $N = 928$ ).

Variables	<i>M</i>	<i>SD</i>	Range	Avoidance	Anxiety	SES	MPSS	GRAT
Avoidance	3.55	0.69	1–7	1.00				
Anxiety	3.82	0.84	1–7	0.23***	1.00			
SES	3.06	0.43	1–4	-0.27***	-0.26***	1.00		
MPSS	5.30	1.01	1–7	-0.43***	-0.16***	0.38***	1.00	
GRAT	3.83	0.55	1–5	-0.38***	-0.36***	0.49***	0.56***	1.00

Note: SES: Self-esteem Scale; MPSS: Multidimensional Perceived Social Support Scale; GRAT: Gratitude Resentment and Appreciation Test.

\*\*\*  $p < 0.001$ .

(attachment anxiety, attachment avoidance, SES, MPSS and GRAT) and 16 observed variables. A test for measurement model generated a good fit to the data:  $\chi^2(94, 928) = 377.72, p < 0.001$ ;  $RMSEA = 0.057, [0.051, 0.064]$ ;  $SRMR = 0.042$ ; and  $CFI = 0.96$ . All factor loadings for the indicators on latent variables were significant ( $p < 0.001$ ), indicating that all the latent constructs were well represented by their indicators.

### 3.2. Structural model

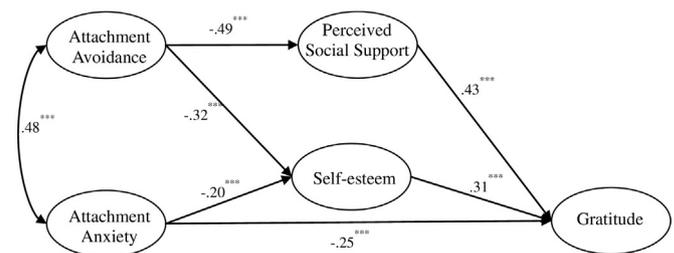
To examine the goodness-of-fit of the data with the hypothesized model, we first split the database into odd-numbered group and even-numbered group according to the parity of serial numbers of participants. Following that, we tested and modified the hypothesized model in the odd-numbered group, and then validated the modified model in the even-numbered group. The test of hypothesized model in odd-numbered group demonstrated a satisfactory fit to the data,  $\chi^2(95, 464) = 264.45, p < 0.001$ ;  $RMSEA = 0.062, [0.053, 0.071]$ ;  $SRMR = 0.056$ ;  $CFI = 0.96$ . Examination of specific pathways indicated that the pathway from attachment avoidance to dispositional gratitude ( $\beta = -0.068$ ) and that from attachment anxiety to perceived social support ( $\beta = -0.095$ ) were non-significant. Thus, we trimmed the model by removing these two pathways from the hypothesized model. The trimmed model displayed an excellent fit to the data:  $\chi^2(97, 464) = 269.63, p < 0.001$ ;  $RMSEA = 0.062, [0.053, 0.071]$ ;  $SRMR = 0.058$ ;  $CFI = 0.96$ . A test of the trimmed model in the even-numbered group revealed that the model was well validated,  $\chi^2(97, 464) = 292.08, p < 0.001$ ;  $RMSEA = 0.066, [0.057, 0.075]$ ;  $SRMR = 0.075$ ;  $CFI = 0.95$ . Finally, we tested the trimmed model with the whole database:  $\chi^2(97, 928) = 456.78, p < 0.001$ ;  $RMSEA = 0.064, [0.058, 0.069]$ ;  $SRMR = 0.065$ ;  $CFI = 0.95$ , suggesting that the model fitted the data well (Fig. 1).

### 3.3. Assessment of mediation

A Bias-corrected bootstrapping procedure was employed to test the significance of the mediating effect of self-esteem and perceived support, and 5000 bootstrap samples were generated according to random sampling from the data set ( $N = 928$ ). Results showed that, attachment anxiety exerted a significant indirect effect on dispositional gratitude through self-esteem, and attachment avoidance displayed indirect effects on dispositional gratitude via self-esteem and perceived social support (Table 2).

## 4. Discussion

As predicted, the current study examined attachment anxiety and attachment avoidance were negatively associated with dispositional gratitude among Chinese college students. In addition, we found that attachment anxiety was associated with dispositional gratitude both directly and indirectly via self-esteem; attachment avoidance was indirectly associated with dispositional gratitude through the mediation



Note. Factor loadings are standardized.

**Fig. 1.** The structural model.  $N = 928$ .

**Table 2**  
Mediation effects of perceived social support and self-esteem.

	Mediators	Standardized indirect effect	95% BC bootstrap CI	
			Lower	Upper
Avoidance →	Self-esteem	−0.10	−0.13	−0.06
Avoidance →	Perceived social support	−0.21	−0.26	−0.16
Total (avoidance)		−0.31	−0.37	−0.26
Anxiety →	Self-esteem	−0.06	−0.10	−0.03
Direct (anxiety)		−0.25	−0.32	−0.19
Total (anxiety)		−0.31	−0.38	−0.25

Note: CI = confidence interval.

of self-esteem and perceived social support, which partially supported the proposed mediation model.

Prior research has shown that attachment anxiety and avoidance predicted dispositional gratitude among North Americans (Dwiwardani et al., 2014). Consistent with this finding, we found that attachment anxiety was negatively related to dispositional gratitude with a more comprehensive questionnaire among Chinese college students. For the attachment avoidant individuals, they do not experience gratitude because they have negative representation of others, and they do not believe that others are intended to support them (Mikulincer & Shaver, 2003). This also supported the argument that gratitude was an interpersonal phenomenon, but not merely psychological feelings (McCullough et al., 2001). These results highlighted the significance of perceived positive support exchange when dispositional gratitude was developed from positive social interactions and attachment security.

We also indicated that the relationship between attachment anxiety and dispositional gratitude was partially mediated by self-esteem. These findings supported the significance of attachment internal working models (Bowlby, 1973; Shaver & Mikulincer, 2002). That is, anxiously attached individuals were less likely to enjoy gratitude because they have negative views of self (Bowlby, 1973; Mikulincer et al., 2006) and they worry that they do not deserve others' kindness (Mikulincer et al., 2006; Murray & Hazelwood, 2011). Moreover, we found that attachment avoidance was also indirectly related to dispositional gratitude via the mediation of self-esteem. Attachment avoidant individuals hold negative representations of others, which may bring them more setbacks in interpersonal domains and disrupt their self-esteem. The low self-esteem may make them appraise benefactors' action in the same manner as attachment anxious individuals (e.g., they do not deserve others' support), and thus reduce the experience of gratitude. In addition, individuals with high attachment avoidance do not wish to depend on others (Brennan et al., 1998), and thus they may appraise benefactors' proactive kindness as threats to their self-esteem or personal competence or as a barrier to achieve their goal to strive for independence, and thus directly suppress the potential gratitude (Mikulincer & Shaver, 2003).

It is noteworthy that inconsistent with hypothesis 2, perceived social support failed to mediate the relationship between attachment anxiety and dispositional gratitude. This may be because anxiously attached individuals just worry about partners' availability and responsiveness, but not fully give up support seeking or inhibit proximity (Grossmann, Grossmann, & Waters, 2005). As indicated by prior research, even when they fail to receive actual support in times of need, they are likely to express their negative feeling to ask for attention (Mikulincer & Orbach, 1995) or to take action to affirm that others still support them (Mikulincer et al., 2006). However, given that attachment figures were sometimes responsive but other times not, it constitutes an unanswerable question for attachment anxious individuals whether others could sincerely provide support. However, attachment avoidance that does not express feelings and needs is considered as a strong motivation to keep independent of the partner (Ditzen et al., 2008; Mikulincer & Florian, 1998). Individuals with high attachment avoidance are less likely to perceive the availability of social support when needed due to the

negative internal working model of others (Zhu, Wang, & Chong, 2016). Therefore, the decreasing subjective perception of the social support hinder them from feeling loved, valued, and unconditionally accepted and making a sense of belonging from friendly relationship (Ryan & Deci, 2002).

## 5. Limitations and conclusions

We acknowledge several limitations of the study. First, our participants were college students only, which may limit the generalization of the findings to other populations. Previous studies have consistently found that self-esteem and perceived social support may change with age (Chu, Saucier, & Hafner, 2010; Wagner, Lüdtke, Jonkmann, & Trautwein, 2013). Accordingly, the mediating effect of self-esteem and perceived social support might be different across different age groups. It would be of great significance to test the current mediational model in other age groups. Secondly, cross-sectional design was adopted in the present study, which prevented the study from inferring causal relationships among variables. Future studies can use longitudinal design with experience-sampling to further examine relations among attachment, gratitude, self-esteem, and perceived social support.

Despite the limitations, our findings suggest that it is plausible to cultivate dispositional gratitude with attachment security, self-esteem and positive social interactions. Clinical psychologists have recently found that the gratitude intervention could successfully improve clients' mental health, happiness and physical health (McCullough et al., 2001; Young & Hutchinson, 2012).

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