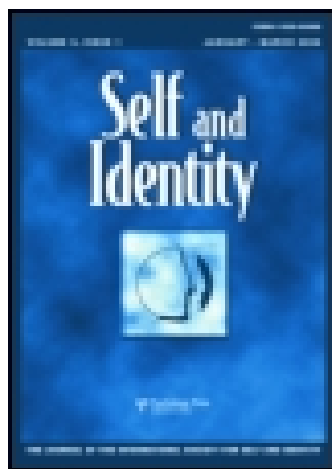


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# How Will I Love You? Self-Esteem Instability Moderates the Association Between Self-Esteem Level and Romantic Love Styles

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The purpose of the present study was to examine whether fragile self-esteem was associated with romantic love styles. This was accomplished by examining the associations that each romantic love style had with self-esteem level and self-esteem instability among 385 undergraduates. The results of the present study show that self-esteem instability moderated the associations that self-esteem level had with Eros (love style dominated by passion) and Storge (love style characterized by companionship and trust) such that individuals with stable high self-esteem reported the highest levels of these romantic love styles. Men with stable low self-esteem reported higher levels of Pragma (love style focused on practicality and suitability) than other men. Women with stable self-esteem reported relatively low levels of Ludus (love style focused on game-playing). The pattern of these results suggests that individuals with stable high self-esteem are more likely to engage in romantic love styles that are conducive to establishing and deepening emotional connections with romantic partners, whereas individuals who are uncertain about their feelings of self-worth are more likely to employ romantic love styles concerned with self-protection.

**Keywords:** Self-esteem; Instability; Fragile; Love styles; Romantic; Relationships.

A considerable body of research has examined the connection between how individuals feel about themselves and how they behave in romantic relationships. Consistent with the idea that “people need to love themselves before they will be capable of loving someone else”, there is research demonstrating that individuals with high levels of self-esteem report more positive evaluations of their romantic relationships than individuals with low levels of self-esteem (see Murray, 2006, for a review). Thus, there is at least some support for the notion that individuals who have positive attitudes toward themselves may have happier relationships than those who lack these positive views of themselves. The purpose of the present study was to extend previous research in this area by examining whether this basic pattern emerges for everyone with high self-esteem or only for individuals who are relatively secure in their positive feelings of self-worth. This was accomplished by examining whether self-esteem instability moderated the associations that self-esteem level had with the love styles that individuals adopted in their romantic relationships.

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One reason that self-esteem is important for understanding behavior in romantic relationships is that feelings of self-worth influence how individuals respond to events that are potentially threatening (Murray, Holmes, & Griffin, 2000). This is an important issue because close relationships create a dilemma for individuals. In order to experience the emotional benefits that accompany intimate relationships, individuals are forced to leave themselves vulnerable to the pain that accompanies the possibility of rejection (e.g., Braiker & Kelley, 1979; Leary & Baumeister, 2000; Murray, Holmes, & Collins, 2006). Self-esteem has been found to play an important role in the willingness of individuals to leave themselves open to this sort of potential hurt during the initiation of relationships as well as how they respond to problems that occur in established relationships (see Murray, 2008 or Murray & Holmes, 2009, for a review). For example, individuals with high levels of self-esteem often seek to enhance their connections with their relationship partners following negative events (e.g., failure, rejection) because they expect their partners to be accepting and responsive to their needs (e.g., Baldwin & Sinclair, 1996). In contrast, individuals with low levels of self-esteem are often unwilling to assume the risks associated with seeking deeper connections to their partners following negative events due to their fear of rejection (e.g., Murray, Rose, Bellavia, Holmes, & Kusche, 2002). In essence, high levels of self-esteem seem to provide individuals with adequate feelings of security, which allow them to leave themselves open to potential hurt as they attempt to form or deepen their connections with close relationship partners. This may explain, at least in part, why individuals with high levels of self-esteem generally report more positive experiences with their relationship partners than do those with low levels of self-esteem (e.g., Murray, Holmes, & Griffin, 1996a, 1996b; Murray, Holmes, Griffin, Bellavia, & Rose, 2001; Murray, Holmes, MacDonald, & Ellsworth, 1998).

### Self-Esteem Instability

Previous research examining the connections between self-esteem and romantic relationship outcomes has focused almost exclusively on self-esteem level (i.e., whether self-esteem is high or low). This is potentially problematic because this relatively narrow focus on self-esteem level may have prevented researchers from gaining a more nuanced understanding of the connections that self-esteem has with the behaviors that individuals adopt in their romantic relationships. This shift away from focusing exclusively on self-esteem level is important because there is more to self-esteem than simply whether it is high or low (e.g., Kernis, 2003). For example, a rapidly accumulating body of literature shows that high self-esteem is a heterogeneous construct consisting of both a secure form and a fragile form (see Jordan & Zeigler-Hill, 2013, for a review).

Secure high self-esteem reflects positive attitudes toward the self that are realistic, well-anchored, and resistant to threat. Individuals who possess secure high self-esteem have a relatively solid foundation for their feelings of self-worth that does not require constant validation from the social environment. In essence, individuals with secure high self-esteem are believed to be more accepting of who they are rather than feeling the need to solicit approval from others or create positive illusions about themselves. In contrast, fragile high self-esteem refers to feelings of self-worth that are vulnerable to challenge (e.g., failure, rejection), require constant validation from the social environment, and rely upon some degree of self-deception. Individuals who possess fragile high self-esteem appear as though they are preoccupied with protecting and enhancing their vulnerable feelings of self-worth. This distinction between secure and fragile forms of high self-esteem would seem to be very important for how individuals regulate risk in their close relationships. Given that high levels of self-esteem are thought to provide individuals with

the sense of security that allows them to seek greater closeness in their relationships and refrain from self-protective strategies, we anticipate that individuals who possess the secure form of high self-esteem will be more willing to risk potential rejection by seeking greater closeness than will individuals with fragile high self-esteem or low self-esteem.

The most common strategy for distinguishing between the different forms of self-esteem is to examine self-esteem level in conjunction with *self-esteem instability* (i.e., fluctuations in moment-to-moment feelings of self-worth; see Holden, Noser, Southard, & Zeigler-Hill, 2014, for a review). The type of self-esteem instability that will be the focus of the present study is often referred to as “barometric” instability because it concerns short-term fluctuations in feelings of self-worth (e.g., those that occur over the course of a week) rather than “baseline” instability, which deals with long-term changes in self-esteem (e.g., those that take place over a period of years; Rosenberg, 1986). The present research will extend earlier work in this area by considering the possibility that self-esteem instability moderates the associations that self-esteem level has with romantic love styles. This is important because self-esteem instability has been found to moderate the associations that self-esteem level has with a variety of other outcomes including psychological adjustment (Zeigler-Hill & Wallace, 2012), anger and hostility (Kernis, Grannemann, & Barclay, 1989), cardiovascular reactivity (Seery, Blascovich, Weisbuch, & Vick, 2004), aggression (Webster, Kirkpatrick, Nezlek, Smith, & Paddock, 2007; Zeigler-Hill, Enjaian, Holden, & Southard, 2014), interpersonal style (Zeigler-Hill, Clark, & Beckman, 2011), humor style (Vaughan, Zeigler-Hill, & Arnau, 2014), academic engagement (Zeigler-Hill et al., 2013), and relationship satisfaction (Zeigler-Hill, Fulton, & McLemore, 2011). Studies that have included self-esteem instability have often revealed that self-esteem has more complex associations with a range of outcomes than is generally assumed (see Jordan & Zeigler-Hill, 2013 for a review). For example, Seery et al. (2004) found that individuals with unstable high self-esteem had cardiovascular responses to failure feedback that were indicative of *threat*, whereas those with stable high self-esteem had cardiovascular responses indicating a *challenge* response. Similar patterns have emerged in other studies with the overall pattern suggesting that individuals with stable high self-esteem are relatively secure in their feelings of self-worth, whereas those with unstable high self-esteem possess feelings of self-worth that are fragile and easily threatened.

Individuals with stable and unstable forms of self-esteem may behave differently in their romantic relationships because they may strive toward different goals (e.g., seeking closeness with relationship partner vs. engaging in self-protective strategies). Previous research has consistently shown that individuals with high levels of self-esteem are more willing to engage in behaviors that are consistent with the goal of seeking closeness with romantic partners despite the risks that are inherent in these behaviors (e.g., rejection, hurt feelings). Our goal for the present study was to examine whether individuals with stable high self-esteem may be more likely than individuals with unstable high self-esteem or low self-esteem to adopt behavioral patterns in their relationships that are consistent with gaining intimacy with their partners. The rationale for this prediction is that individuals with unstable high self-esteem and low self-esteem may be less willing than those with stable high self-esteem to seek closeness with a partner because of the risks that accompany this approach (e.g., loss of self-esteem following rejection). Individuals with unstable high self-esteem may engage in relationship patterns that appear “conflicted” because their fragile feelings of self-worth may function in a manner that is similar to a self-esteem threat. That is, the “threat” resulting from their unstable self-esteem may motivate those with high self-esteem to desperately want connections with others at the same time that they are worried about being hurt if they try to make those connections.

## Romantic Love Styles

One approach for understanding behavior in romantic relationships was developed by Lee (1977) who focused on six distinct “love styles” that were partially derived from the Greek words for *love*. The first love style is *Eros* which is dominated by passion. Individuals demonstrating this love style show a desire for rapidly escalating romantic involvement. The second love style is *Ludus* which is a “game-playing” style that is characterized by an aversion to commitment, a willingness to deceive, and a tendency to pay attention to others outside the relationship. The third love style is *Storge* which emphasizes companionship and trust. This form of love is typical of individuals with a slow-developing relationship that is based on friendship and trust. The fourth love style is *Mania* which often involves an obsession with the partner accompanied by intense and alternating experiences of joy and sorrow. The fifth style of love is *Pragma*. This pragmatic type of love is typical of individuals who favor practicality and suitability of a partner over emotional connection. The sixth love style is *Agape* which refers to selfless regard for the needs and desires of their partner. These romantic love styles have been studied extensively in previous studies and have been found to be associated with individual differences (e.g., self-esteem, personality features) as well as relationship outcomes (e.g., relationship satisfaction, relationship longevity; see Kimberly & Hans, 2012, for a review).

Previous research has found that self-esteem level is positively associated with *Eros* and negatively associated with *Mania* (Campbell, Foster, & Finkel, 2002; Mallandain & Davies, 1994; Neto, 1993). This pattern suggests a link between high levels of self-esteem and passionate, emotionally intense forms of love that do not reflect jealousy, dependency, and obsession. Self-esteem level has been found to have weak and inconsistent associations with the other romantic love styles (e.g., Campbell et al., 2002). This pattern of results is consistent with the risk regulation model proposed by Murray et al. (2006) such that individuals with high levels of self-esteem tend to adopt romantic love styles that are consistent with developing intimate and trusting romantic relationships.

## Overview and Predictions

The present study examined whether self-esteem level and self-esteem instability were associated with romantic love styles and whether the associations that self-esteem level had with romantic love styles were moderated by self-esteem instability. At the most basic level, we expected our results to replicate previous findings suggesting that self-esteem level would be positively associated with *Eros* and negatively associated with *Mania*. We expected self-esteem instability to be positively associated with *Mania* such that individuals with unstable self-esteem would report higher levels of *Mania* as a result of their uncertainty about their feelings of self-worth, which may lead them to be somewhat desperate in their romantic relationships (e.g., being highly sensitive to cues from their romantic partners concerning rejection or acceptance).

Our most important predictions concerned the interaction of self-esteem level and self-esteem instability, which we expected to emerge for at least two of the romantic love styles. That is, we expected that individuals with stable high self-esteem would report the highest levels of *Eros* and the lowest levels of *Mania*. The rationale for this prediction was that individuals with stable high self-esteem would possess more secure feelings of self-worth that would allow them to pursue deep emotional connections with others without becoming obsessed or overly dependent on these relationships. This sort of nuanced connection between self-esteem and romantic love styles would not have emerged in previous studies that did not account for the heterogeneous nature of high self-esteem.

We also expected sex to play an important role in the associations between self-esteem and romantic love styles. The primary reason for this expectation was that sex differences have frequently emerged in previous research concerning romantic love styles such that men generally report higher levels of Eros and Ludus than women, whereas women report higher levels of Mania and Pragma than men (e.g., Hendrick & Hendrick, 1995). That is, men tend to report romantic beliefs and attitudes that are consistent with romanticism and game-playing, whereas women are more likely to be pragmatic about love as well as somewhat more desperate in their attempts to build and maintain relationships. These expected patterns are generally consistent with the sex differences that have observed in romantic contexts. For example, men tend to be more willing than women to consider engaging in short-term sexual encounters (e.g., Clark & Hatfield, 1989) and women tend to be somewhat more selective than men when considering partners for many types of romantic relationships (e.g., Ellis, 1992). It has been argued that these sex differences either reflect the social structures that impact male and female sexual behavior (e.g., Eagly & Wood, 1999) or demonstrate the evolved sexual psychology of men and women (Naftolin, 1981) that is thought to be the result of differences in physical reproductive mechanisms and differential parental investment (Trivers, 1972). Another reason to consider the role of sex in the present study is that previous studies have found that sex moderates the associations that self-esteem level and self-esteem instability have with interpersonal style (Zeigler-Hill, Clark, & Beckman, 2011) and relationship evaluations (e.g., Zeigler-Hill, Fulton, & McLemore, 2011). For example, men with unstable high self-esteem have been found to report more positive views of their relationships than other individuals. It may be the case that these men were motivated to appraise their relationships positively in an effort to maintain and enhance their own tenuous feelings of self-worth.

## Methods

### *Participants and Procedure*

Data were collected from 577 undergraduate participants at a university in the southern region of the United States. Participants were enrolled in psychology courses and completed the study in return for partial fulfillment of course requirements. Participants completed measures of self-esteem and romantic love styles—along with other instruments that are not relevant to the present study (e.g., a measure of the Big Five personality dimensions)—via a secure website. These instruments were completed in a randomized order. After completing these questionnaires, participants were offered additional research credit for completing a measure of state self-esteem via the Internet at approximately 10 pm for 7 consecutive days. In order to assess self-esteem instability, it was essential that participants complete multiple measures of state self-esteem. As a result, some minimum number of completed state self-esteem measures had to be established. We decided to only include participants in the final analyses who contributed data for 3 or more days because this is the minimum number of data points that are required to calculate a statistically sound and valid estimate of variability (see Zeigler-Hill & Showers, 2007, for a similar strategy). The mean age of participants was 21.3 years ( $SD = 3.52$ ) with a racial/ethnic composition of 60% White, 33% Black, and 7% other. Of the 577 initial participants, 385 participants (115 men and 270 women) completed the daily measures for 3 or more days (a completion rate of 67%). Although this may initially seem somewhat low, it is important to remember that completion of the daily measures of state self-esteem was optional for participants rather than being a required element of their participation

(i.e., it was simply a way for them to earn additional research credits).<sup>1</sup> The final participants contributed 2457 daily reports (i.e., an average of 6.38 reports for each participant), and they did not differ from those who did not complete the daily measures in terms of self-esteem level ( $t[575] = 0.71, p = .48$ ), Eros ( $t[575] = 0.04, p = .97$ ), Storge ( $t[575] = 0.41, p = .68$ ), Pragma ( $t[575] = 1.59, p = .11$ ), or Agape ( $t[575] = 0.01, p = .99$ ). However, the participants who completed the daily measures reported lower levels of Ludus ( $t[575] = 3.39, p < .001$ ) and Mania ( $t[575] = 2.00, p = .05$ ) than those who did not complete the daily measures.

## Measures

### *Self-esteem level*

To assess self-esteem level, participants completed the Rosenberg Self-Esteem Scale (Rosenberg, 1965). This instrument provides a global evaluation of self-esteem (e.g., “On the whole, I am satisfied with myself”, “I feel that I have a number of good qualities”). Participants were instructed to complete the measure according to how they generally feel about themselves. Responses were made on scales ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The internal consistency of this measure for the present study was  $\alpha = .89$ .

### *Self-esteem instability*

The procedure for assessing self-esteem instability was adapted from Kernis (2003) and Kernis et al. (1989). Participants completed a modified version of the Rosenberg Self-Esteem Scale via the Internet at the end of each day for 7 consecutive days. This instrument was modified to capture state self-esteem by instructing participants to respond according to how they felt about themselves at the moment, as opposed to how they generally felt about themselves. Responses were made on scales ranging from 1 (*strongly disagree*) to 10 (*strongly agree*). Self-esteem instability is calculated using the within-subject standard deviation. Therefore, larger standard deviations suggest a greater amount of self-esteem instability.

### *Romantic love styles*

Romantic love styles were assessed using the Love Attitudes Scale (Hendrick & Hendrick, 1986), which is a 42-item measure that provides an assessment of six basic love styles: *Eros*, which is passionate love (seven items; e.g., “My lover and I became emotionally involved rather quickly”, “My partner and I have the right physical chemistry between us” [ $\alpha = .57$ ]); *Ludus*, which is game playing love (seven items; e.g., “I have sometimes had to keep two of my lovers from finding out about each other”, “I try to keep my partner a little uncertain about my commitment to him/her” [ $\alpha = .52$ ]); *Storge*, which is friendship love (seven items; e.g., “The best kind of love grows out of a long friendship”, “I expect to always be friends with my partner” [ $\alpha = .62$ ]), *Pragma*, which is logical love (seven items; e.g., “Before getting very involved with anyone, I try to figure out how compatible his/her hereditary background is with mine in case we ever have children”, “A main consideration in choosing my partner was how he/she would reflect on my family” [ $\alpha = .64$ ]); *Mania*, which is possessive love (seven items; e.g., “If my lover ignores me for a while, I sometimes do stupid things to get his/her attention”, “When my partner does not pay attention to me, I feel sick all over” [ $\alpha = .62$ ]); and *Agape*, which is selfless love



(seven items; e.g., “I would endure all things for the sake of my lover”, “I cannot be happy unless I place my partner’s happiness before my own” [ $\alpha = .63$ ]). Responses were provided on scales ranging from 1 (*strongly agree*) to 5 (*strongly disagree*). Previous studies have found the Love Attitudes Scale to possess adequate psychometric properties (e.g., Hendrick & Hendrick, 1986).

## Results

The means, standard deviations, and intercorrelations are provided in Table 1. Inspection of the correlation matrix revealed that self-esteem level and self-esteem instability were negatively correlated, which is consistent with the results of previous studies (e.g., Zeigler-Hill & Showers, 2007). Self-esteem level was positively associated with Eros and Storge, but it was negatively associated with Mania. Self-esteem instability had a positive association with Mania.

Moderational analyses were conducted to determine whether self-esteem instability qualified the associations that self-esteem level had with the various romantic love styles. This was accomplished using SEM because of the correlations among the romantic love styles. That is, we used a single SEM model with multiple outcomes (i.e., the six love styles), which allowed us to control for the correlations among these outcomes (see Figure 1). Each love style was simultaneously regressed onto self-esteem level, self-esteem instability, sex ( $-1 = \textit{female}$ ,  $1 = \textit{male}$ ), and their interactions. Our continuous predictor variables were centered. This analysis was followed by the simple slopes procedure suggested by Aiken and West (1991) to further describe the interactions of our predictor variables. Simple slopes were conducted using values one standard deviation above and below the mean to represent those with stable and unstable forms of self-esteem (Table 2).

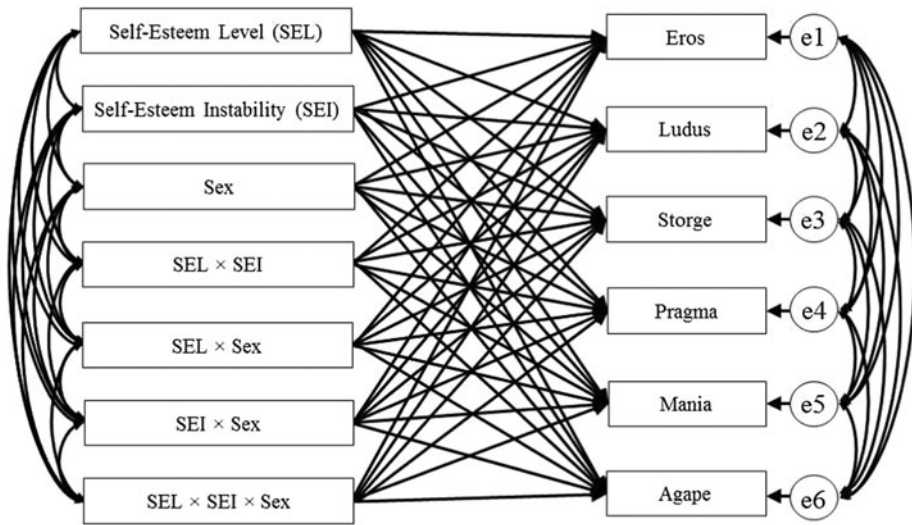
### Eros

The results of the analysis concerning Eros found a main effect for self-esteem level ( $\beta = 0.17$ ,  $t = 3.40$ ,  $p = .001$ ). However, this main effect for self-esteem level was qualified by its interaction with self-esteem instability ( $\beta = -0.12$ ,  $t = -2.27$ ,  $p = .02$ ). The predicted values for this interaction are displayed in Figure 2. Simple slopes tests found that the line representing the association between self-esteem level and Eros was

**TABLE 1** Intercorrelations and Descriptive Statistics for Self-Esteem Level, Self-Esteem Instability, and Love Styles

	1	2	3	4	5	6	7	8
1. Self-esteem level	–							
2. Self-esteem instability	-.17***	–						
3. Eros	.17**	-.05	–					
4. Ludus	-.02	.08	-.19***	–				
5. Storge	.12*	-.09	.53***	-.02	–			
6.Pragma	.06	.00	.25***	.25***	.44***	–		
7. Mania	-.28***	.19***	.23***	.23***	.14**	.26***	–	
8. Agape	-.01	.00	.69***	-.10	.51***	.22***	.35***	–
<i>M</i>	4.17	0.49	3.64	2.28	3.29	2.87	2.66	3.47
<i>SD</i>	0.69	0.39	0.86	0.83	0.83	0.92	0.80	0.85

Note: \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .



**FIGURE 1** SEM model used in the present study.

significant for those with stable self-esteem ( $\beta = 0.32$ ,  $t = 4.17$ ,  $p < .001$ ) but not for those with unstable self-esteem ( $\beta = 0.07$ ,  $t = 0.86$ ,  $p = .39$ ). Also, the difference between those with stable and unstable forms of high self-esteem was significant ( $\beta = -0.16$ ,  $t = -2.25$ ,  $p = .03$ ), whereas the difference between those with stable and unstable forms of low self-esteem was not significant ( $\beta = 0.11$ ,  $t = 1.08$ ,  $p = .28$ ). Taken together, these results show that individuals with stable high self-esteem reported the highest levels of Eros.

### *Ludus*

The interaction of self-esteem instability  $\times$  sex ( $\beta = -0.14$ ,  $t = -1.99$ ,  $p = .05$ ) emerged for Ludus. The predicted values for this interaction are displayed in Figure 3. Simple slopes tests found that the line representing the association between self-esteem instability and Ludus was significant for women ( $\beta = 0.13$ ,  $t = 2.17$ ,  $p = .03$ ) but not for men ( $\beta = -0.05$ ,  $t = -0.40$ ,  $p = .69$ ). Neither the difference between men and women with stable self-esteem was significant ( $\beta = 0.13$ ,  $t = 1.71$ ,  $p = .09$ ) nor was the difference between men and women with unstable self-esteem ( $\beta = -0.13$ ,  $t = 1.23$ ,  $p = .19$ ). Taken together, these results show that women engage in more game-playing in their romantic relationships when their feelings of self-worth are less stable, whereas men engage in moderate levels of game-playing regardless of the stability of their self-esteem.

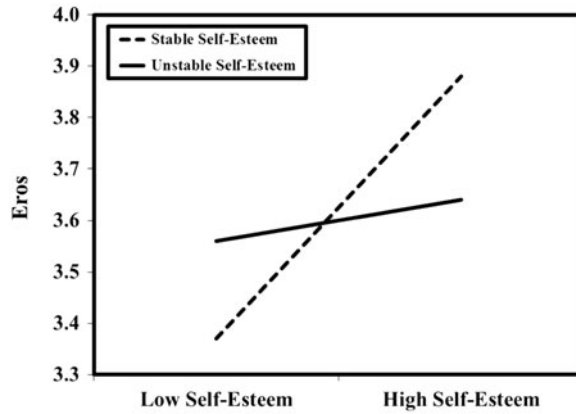
### *Storge*

A main effect for self-esteem level emerged from the analysis concerning Storge ( $\beta = 0.11$ ,  $t = 2.19$ ,  $p = .03$ ). This main effect was qualified by its interaction with self-esteem instability ( $\beta = -0.12$ ,  $t = -2.22$ ,  $p = .03$ ). The predicted values for this interaction can be found in Figure 4. Simple slopes tests found that the line representing the association between self-esteem level and Storge was significant for those with stable self-esteem ( $\beta = 0.24$ ,  $t = 3.04$ ,  $p = .002$ ) but not for those with unstable self-esteem ( $\beta = -0.01$ ,  $t = -0.17$ ,  $p = .87$ ). The difference between those with stable and unstable forms of high self-esteem was significant ( $\beta = -0.18$ ,  $t = -2.49$ ,  $p = .01$ ), whereas the

TABLE 2 SEM Model of the Associations Between Love Styles and Self-Esteem Level, Self-Esteem Instability, and Sex

	Eros		Ludus		Storge		Pragma		Mania		Agape	
	$\beta$	<i>t</i>	$\beta$	<i>t</i>	$\beta$	<i>t</i>	$\beta$	<i>t</i>	$\beta$	<i>t</i>	$\beta$	<i>t</i>
Main effects												
Self-esteem level (SEL)	0.17	3.40***	-0.01	-0.21	0.11	2.19*	0.06	1.22	-0.25	-5.02***	-0.01	-0.28
Self-esteem instability (SEI)	-0.03	-0.64	0.09	1.70	-0.08	-1.57	-0.01	-0.16	0.13	2.67***	0.01	0.09
Sex	-0.07	-1.31	0.05	0.98	-0.09	-1.73	-0.13	-2.63**	-0.11	-2.33*	0.09	1.67
Two-way interactions												
SEL $\times$ SEI	-0.12	-2.27*	0.07	1.24	-0.12	-2.22*	0.01	0.17	0.03	0.61	-0.08	-1.51
SEL $\times$ sex	0.06	1.05	0.04	0.70	0.00	0.08	-0.03	-0.48	0.05	0.87	0.05	0.80
SEI $\times$ sex	-0.01	-0.15	-0.14	-1.99*	-0.05	-0.70	-0.09	-1.29	-0.12	-1.78	-0.10	-1.38
Three-way interaction												
SEL $\times$ SEI $\times$ sex	0.05	0.51	-0.09	-0.94	0.07	0.77	0.23	2.44*	0.13	1.47	0.04	0.48

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

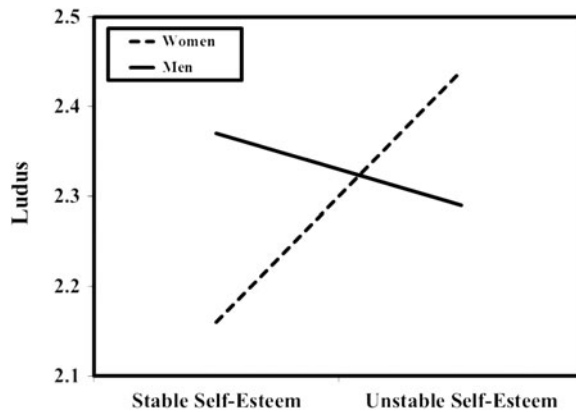


**FIGURE 2** Predicted values for Eros illustrating the interaction between self-esteem level and self-esteem instability at values that are one standard deviation above and below their respective means.

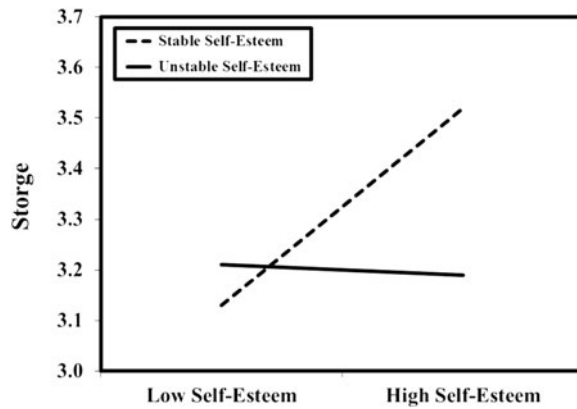
difference between those with stable and unstable forms of low self-esteem was not significant ( $\beta = 0.07$ ,  $t = 0.65$ ,  $p = .52$ ). This pattern shows that individuals who have stable high self-esteem reported the highest scores for Storge.

#### *Pragma*

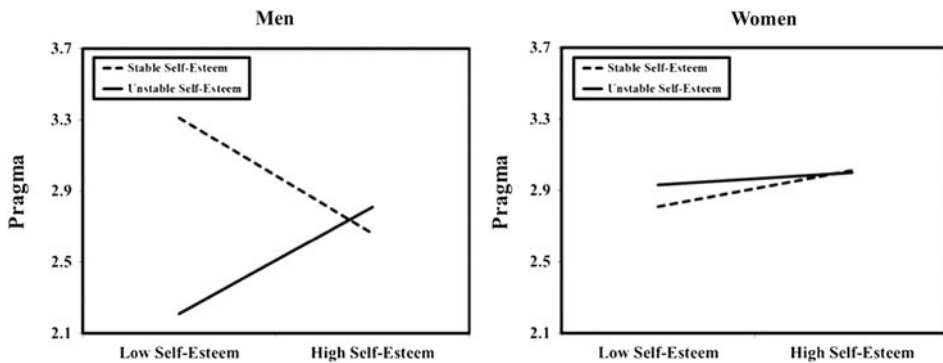
The results for the analysis concerning Pragma found a main effect for sex ( $\beta = -0.13$ ,  $t = -2.63$ ,  $p = .01$ ) such that women reported being more pragmatic in their relationship behavior. This main effect was qualified by its three-way interaction with self-esteem level and self-esteem instability ( $\beta = 0.23$ ,  $t = 2.44$ ,  $p = .02$ ). The predicted values for this interaction can be found in Figure 5. As suggested by Cohen, Cohen, West, and Aiken (2003), this interaction was probed by first examining whether the two-way interaction of self-esteem level and self-esteem instability was significant for men and women separately. This interaction emerged for men ( $\beta = 0.26$ ,  $t = 2.14$ ,  $p = .03$ ) but not for



**FIGURE 3** Predicted values for Ludus illustrating the interaction between self-esteem instability and self-esteem instability at values that are one standard deviation above and below their respective means.



**FIGURE 4** Predicted values for Storge illustrating the interaction between self-esteem level and self-esteem instability at values that are one standard deviation above and below their respective means.



**FIGURE 5** Predicted values for Pragma illustrating the interaction between self-esteem level and self-esteem instability for men (Left panel) and women (Right panel) at values that are one standard deviation above and below their respective means.

women ( $\beta = -0.04$ ,  $t = -0.60$ ,  $p = .55$ ). In the simple slopes analyses for men, it was found that the line representing the association between self-esteem level and Pragma was positive for those with unstable self-esteem ( $\beta = 0.47$ ,  $t = 2.03$ ,  $p = .04$ ) and negative for those with stable self-esteem ( $\beta = -0.56$ ,  $t = -2.34$ ,  $p = .02$ ). The difference between men with stable and unstable forms of low self-esteem was significant ( $\beta = -0.67$ ,  $t = -2.35$ ,  $p = .02$ ), whereas the difference between those with stable and unstable forms of high self-esteem was not significant ( $\beta = 0.08$ ,  $t = 0.72$ ,  $p = .47$ ). This pattern reveals that men with stable low self-esteem reported the highest levels of Pragma, whereas men with unstable low self-esteem reported the lowest levels of this love style.

### Mania

In the analysis concerning Mania, main effects emerged for self-esteem level ( $\beta = -0.25$ ,  $t = -5.02$ ,  $p < .001$ ), self-esteem instability ( $\beta = 0.13$ ,  $t = 2.67$ ,  $p = .01$ ), and sex ( $\beta = -0.11$ ,  $t = -2.33$ ,  $p = .02$ ) such that higher levels of Mania were associated with low levels of self-esteem, unstable self-esteem, and being female. No significant interactions emerged for Mania.

### Agape

No significant main effects or interactions emerged for Agape.

## Discussion

We sought to determine whether self-esteem level and self-esteem instability were associated with romantic love styles and examine whether self-esteem instability moderated the associations that self-esteem level had with these love styles. Consistent with the results of previous studies (e.g., Campbell et al., 2002), we found that self-esteem level had a positive association with Eros and a negative association with Mania. In addition, self-esteem level was found to have a positive association with Storge, which has emerged in some previous studies (e.g., Campbell et al., 2002) but not others (e.g., Mallandain & Davies, 1994). These results suggest that individuals who report more positive feelings of self-worth employ romantic love styles that allow them to develop deeper, more intimate connections with their partners than other individuals. This pattern is consistent with the idea that individuals with higher levels of self-esteem will be more willing than those with low self-esteem to risk being vulnerable to potential rejection as they develop these intimate connections (Lee, 1976; Murray et al., 2006).

The only main effect that emerged for self-esteem instability was a positive association with Mania, which was consistent with our predictions. Individuals who employ a Manic love style tend to be somewhat lonely, unhappy with their lives, and desperate to find a romantic partner (Mallandain & Davies, 1994). The fact that Mania had a positive association with self-esteem instability—as well as a negative association with self-esteem level—may be due to these individuals being overly dependent and jealous because of their uncertainty surrounding their own feelings of self-worth. It is possible that these individuals may become so heavily invested in their romantic partners in order to stabilize and enhance their own self-esteem. That is, these individuals may place so much importance on their romantic relationships because they use them as a means for regulating their self-esteem. This possibility is consistent with past research concerning the connections that self-esteem instability has with borderline personality features (Zeigler-Hill & Abraham, 2006) and attachment anxiety (Foster, Kernis, & Goldman, 2007). This is important because borderline personality features and attachment anxiety have both been linked with behaviors (e.g., jealousy) that are consistent with Mania (e.g., Dutton, Van Ginkel, & Landolt, 1996; Feeney & Noller, 1990). The connections between self-esteem instability and behaviors conveying a sense of romantic desperation should be examined more fully in future research.

Consistent with our expectations for the present study, self-esteem instability moderated the association that self-esteem level had with three of the romantic love styles (i.e., Eros, Storge, and Pragma). These results found that individuals with stable high self-esteem reported higher levels of Eros and Storge than other individuals. This suggests that individuals who are secure in their positive feelings of self-worth tend to use love styles in their romantic relationships that are characterized by intimacy, passion, friendship, and trust. The results for Eros were consistent with our prediction and suggest that self-esteem instability plays an important role in the connection between feelings of self-worth and romantic love. The results for Storge were quite similar to those that emerged for Eros (i.e., the highest levels of these romantic love styles were reported by those with stable high self-esteem). These findings suggest that individuals who have stable high self-esteem seek out and engage in stable and healthy approaches to love that are based on emotional connectedness. These results are consistent with the interpersonal risk regulation model proposed by Murray and her colleagues (e.g., Cavallo, Murray, &

Holmes, 2013; Gomillion & Murray, 2014; Murray et al., 2006), which suggests that an individual's self-esteem—in conjunction with perceptions concerning the regard of one's partner—will impact the dependence regulation behaviors enacted by the individual. Previous studies concerning this model have focused almost exclusively on self-esteem level. The present results suggest that it may be helpful for future studies concerning interpersonal risk regulation to account for self-esteem instability because individuals with stable high self-esteem were more likely than those with unstable high self-esteem to employ the Eros and Storge love styles, which may facilitate deeper romantic connections. Individuals with stable high self-esteem may be more likely to employ the Eros and Storge love styles because they feel secure enough to risk the potential rejection that accompanies relationship promoting behaviors rather than avoiding risk by focusing on self-protection.

Self-esteem instability was connected with the Ludus and Pragma love styles, but these associations were moderated by sex. For Ludus, women were more likely to engage in this game-playing love style when their feelings of self-worth were less stable. This pattern suggests the intriguing possibility that women with unstable self-esteem may use their romantic relationships in the service of regulating their self-esteem. The game-playing approach to romantic relationships may be a beneficial strategy for women who are uncertain about their feelings of self-worth because it allows them to derive some of the concomitant benefits from being involved in a relationship (e.g., attention, status) while having the freedom to attract attention from other potential partners and possibly initiate other relationships if a more desirable partner comes along. Future research may want to consider whether women with unstable self-esteem who are currently involved in romantic relationships are more attentive to alternative dating partners and more likely to engage in flirtation in order to attract attention from other potential partners. This game-playing style would have similar benefits for men (e.g., the ability to consider “trading-up” by dissolving one's current relationship and beginning a relationship with a more desirable partner), but it may be especially useful for women who are uncertain about their own “mate value” because this information is often critical when making decisions about potential mates (e.g., Brase & Guy, 2004).

For Pragma, men with stable low self-esteem reported the highest levels of this practical type of love, whereas men with unstable low self-esteem reported the lowest levels of this love style. We did not anticipate this particular pattern, but it is certainly interesting that men with stable low self-esteem—which is sometimes referred to as *true* low self-esteem—adopted a love style that is characterized by convenience and practicality. It appears that the essential aspects of love and romance may be somewhat missing for these individuals given that Pragma is sometimes referred to as the “shopping list” form of love because it involves looking for a partner who has suitable qualities and is compatible rather than looking for a deep emotional connection. One potential explanation for this pattern is that men who are certain about their low self-esteem may adopt a self-protective orientation in their romantic relationships such that they focus on convenience and practicality because these relationships seem less threatening than those based on emotional connections. That is, pragmatic romantic relationships may be appealing to men with stable low self-esteem because they may be viewed as involving less risk for rejection than relationships stemming from deeper emotional connections with a partner. The low levels of Pragma reported by men with unstable low self-esteem may reflect the fact that these men are very interested in trying to find a partner with whom they could develop an intimate bond rather than someone who simply possesses compatible qualities. It is possible that their uncertainty concerning their low self-esteem may be what allows these men the optimism and hope to look for deeper connections than those that are likely to develop through a purely pragmatic approach.

It is important to gain a better understanding of the connection between self-esteem and romantic love styles for a number of reasons. One reason is that it has the potential to enrich our understanding of both constructs. This is especially true given that we were able to capture a more nuanced view of self-esteem by including self-esteem instability as well as self-esteem level. Previous research has consistently shown that individuals with high levels of self-esteem have healthier and happier romantic relationships than those with low levels of self-esteem (e.g., Fincham & Bradbury, 1993; Hendrick, Hendrick, & Adler, 1988; Murray, Holmes, & Griffin, 1996a, 1996b). The results of the present study suggest that the connections between high levels of self-esteem and relationship outcomes may actually depend on whether feelings of self-worth are stable or unstable. A large body of previous research has shown that accounting for individual differences can improve our understanding of behavior in romantic relationships (e.g., Dion & Dion, 1985). This is important because “love” does not appear to be a simple unitary experience. Rather, it appears that individuals experience love differently depending on factors such as whether they are secure in their feelings of self-worth.

Although the present study has a number of strengths (e.g., consideration of self-esteem level and self-esteem instability), it is also important to acknowledge some of its potential limitations. First, the correlational nature of the study prevents us from understanding causal relationships between self-esteem and romantic love styles. Our underlying process model for the present study was that the self-esteem of individuals leads them to adopt particular romantic love styles, but this cannot be established using the present data. For example, it is unclear whether the high levels of Eros reported by individuals with stable high self-esteem were due to their feelings of self-worth or if the direction of causation was reversed such that their romantic love style may have led to the development of stable high self-esteem. That is, it is possible that romantic love styles may serve as a means for regulating self-esteem, which should be explored in future research (e.g., individuals may engage in pragmatic love styles in order to protect themselves from the potential loss of self-esteem that may accompany the dissolution of a romantic relationship involving a deep emotional connection). It is also possible that a more complex reciprocal relationship may exist between these constructs or that a third variable—such as extraversion—may have influenced the development of both stable high self-esteem and romantic love styles. Further research is clearly needed to gain a better understanding of the causal link between self-esteem and the adoption of particular romantic love styles.

Second, the present study relied on self-report measures, which leaves open the possibility that the observed effects reflect self-perceptions concerning romantic love styles rather than how these individuals actually behave in their romantic relationships. Future research should examine how individuals with different forms of self-esteem interact with their romantic partners in controlled situations without relying on self-reports. Third, the present study relied on undergraduate students, which may limit the generalizability of the findings. It is possible that the associations between self-esteem and romantic love styles vary across developmental periods and degrees of relational commitment. As a result of this uncertainty, it may be beneficial for future researchers to include individuals who are older than the typical undergraduate student as well as individuals in more deeply committed romantic relationships (e.g., married individuals). Fourth, the internal consistencies for the romantic love styles were low (i.e., ranged from .52 to .64). These low internal consistency estimates are similar to those observed in other recent studies (e.g., Katz & Schneider, 2013) and may have been due to the somewhat outdated wording for some of the items (e.g., “I enjoy playing the game of love with my partner and a number of other partners”).



## Conclusion

The findings of the present study suggest that self-esteem instability moderates the associations that self-esteem level has with particular romantic love styles. That is, different forms of self-esteem are associated with particular ways of relating to romantic partners. For example, individuals with stable high self-esteem reported the highest levels of Eros and Storge, whereas men with stable low self-esteem reported the highest levels of Pragma. These results extend our understanding of the connection that self-esteem has with romantic love styles and provide additional support for the need to consider self-esteem instability when exploring the connections that self-esteem level has with behaviors in romantic relationships.

## Note

1. We replicated our analyses using more stringent cutoff criteria for the number of daily measures completed by participants (i.e., 4 and 5 days). The results of these analyses were extremely similar to those for the larger group of participants who completed three or more daily measures. As a result, we only report the analyses using the 3-day cutoff because these analyses include the largest number of participants.

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