



# Adaptive and Maladaptive Love Attitudes

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## Abstract

Multiple studies throughout recent years have investigated the theory of love that identified six love attitudes: Eros, Ludus, Storge, Mania, Pragma, and Agape. Research found that these love attitudes are associated with many aspects of romantic relationships, individual emotional characteristics, and personalities. However, there are few comprehensive reviews of those findings. This article reports meta-analysis and two empirical studies that explored emotional profiles of people with different love attitudes. Meta-analysis of multiple studies has demonstrated the prevalence of positive emotionality among individuals with Eros love attitudes and negative emotionality among individuals with Ludus and Mania love attitudes. Results of empirical studies showed that individuals with Ludus and Mania tend to experience more negative emotions, while those with Eros – more positive emotions. Pragma, Storge, and Agape love attitudes are characterized by infrequent and less intense positive and negative emotions. The love of individuals with Ludus and Mania types can be interpreted as defensive attitudes related to their experience of negative emotions. Generally, studies showed that Eros love attitude tends to promote an adaptive emotional experience. Individuals with Eros love have a better chance to be happy in their romantic relationships. On the other hand, Ludus and Mania are rather maladaptive love attitudes. Individuals with Ludus and Mania tend to be unhappy in relationship. Pragma, Storge, and Agape are neutral or moderately adaptive love attitudes without intense positive and negative emotions. Due to this, they do not show any salient defensive psychological mechanisms in their relationships.

## Keywords

love attitudes, attachment avoidance, attachment anxiety, positive emotions, negative emotions, adaptive love attitudes, maladaptive love attitudes, defense styles

The studies of love experience throughout recent decades have been widely focused on love attitudes. The Lee's theory of love styles (Lee, 1973, 1976, 1977, 1988) and the



following theory of love attitudes (Hendrick & Hendrick, 1986, 1989, 1992, Hendrick, Hendrick, & Dicke, 1998) have become extensively embraced by researchers and brought an abundance of knowledge (see for review Karandashev, 2019, 2022).

Lee proposed six love styles, or approaches to love, which are divided into three primary (Eros, Ludus, Storge) and three secondary (Mania, Pragma, Agape) styles. Although Lee described love as having primary, secondary, and even tertiary mixes, most of the research based on Lee's approach has concentrated on six relatively independent love styles.

Hendrick and Hendrick (1986, 1989) advanced the Lee's theory and transformed it into the theory of love attitudes. Authors also developed the Love Attitude Scale as a quantitative measurement of the six types of love attitudes. The short form of the LAS was developed (Hendrick, Hendrick, & Dicke, 1998). It worthwhile to note that authors treated the six love constructs as the variables of love attitudes, rather than love styles. The concept of love style was transformed into love attitude. According to this approach, each person obtains six scores on the LAS that are interpreted as love attitudes and correlated with other constructs.

Based on multiple studies (e.g., Davis & Latty-Mann, 1987; Hendrick & Hendrick, 1986, 1989, 1992; see for review, Karandashev, 2019, 2022), these love attitudes can be described as follows: *Eros* is an emotionally intense and passionate love attitude. The lover with eros love attitudes has a specific idea about the type of personality and physical attributes she or he desires in a partner. The lover with eros love attitudes wants to achieve a close and intimate relationship, sometimes quickly, and is both confident and willing to become committed. *Ludus* is the game-playing love attitude, with love being thought of as a sophisticated game. The lover of Ludus type enjoys engaging in several love relationships at the same time while avoiding emotional intensity and commitment. This love attitude generally lacks passion. *Storge* is a friendship-based love attitude, with a more slowly developed love. A person with Storge love attitude wants a steady, secure, and comfortable relationship with a love partner who has shared interests and similar attitudes. Trust and acceptance are central to this love style, which is acquired over time. A person wants their partner to be their friend. *Pragma*, the shopping-list love attitude, is characterized by suitability and similarity. A lover with pragma love attitudes wants a partner who is fitting to her or his place in the community. Individuals with Pragma love are looking for a good life partner, someone who has a background and interests comparable to one's own. *Mania* is an emotionally involved, insecure love attitude. A lover with *mania* love attitudes is obsessive, dependent, and concerned of rejection and/or loss of the partner. On the more positive side, manic lovers are supportive, loving, and devoted exclusively to the partner. *Agape* is a selfless, altruistic love attitude. The lover with agape love attitudes is willing to make sacrifices for the partner and is concerned about her or his welfare and needs. Those with the agape love attitude often seek spiritual and

emotional identification. Factor analysis of the empirical data obtained with the Love Attitude Scale (LAS) supported these theoretical characteristics.

## Relations of Love Attitudes With Emotional Characteristics and Experiences

The six love attitudes are associated with certain personal emotional traits and experiences in relationships (see for review [Karandashev, 2019, 2022](#)). For example, studies have shown that the love attitude Ludus is characterized by low levels of commitment, intimacy, affection, passion, viability, care, and higher loneliness compared to other love attitudes. On the other hand, individuals with an Eros or Agape love attitudes are more committed, intimate, affectionate, passionate, viable, caring, better able to cope, have higher relationship satisfaction, health, and well-being (e.g., [Aron & Westbay, 1996](#); [Davis, 1999](#); [Davis & Latty-Mann, 1987](#); [Hendrick & Hendrick, 1989](#); [Kanemasa, Taniguchi, & Daibo, 2004](#); [Neto & Pinto, 2003](#); [Rotenberg & Korol, 1995](#); [Vedes et al., 2016](#)). Thus, the love attitudes are considered as typological differences in the ways how people approach their love.

### Love Attitudes and Emotional Experience

Research indicates that some love attitudes are accompanied by predominantly positive or negative emotions and better or worse relationship satisfaction. For example, studies on attachment styles and love attitudes have found the relationship between secure attachment and high scores on the variables of Eros and Agape and between insecure attachment and high scores on the variables of Ludus, Pragma, Storge, and Mania (e.g., [Bugay & Tezer, 2008](#); [Collins & Read, 1990](#); [Heaven, Da Silva, Carey, & Holen, 2004](#); [Hendrick & Hendrick, 1989](#); [Honari, & Saremi, 2015](#); [Zamora, Winterowd, Koch, & Roring, 2013](#)). Relationship satisfaction was positively associated with Eros and Agape love attitudes and negatively associated with Ludus (e.g., [Davis & Latty-Mann, 1987](#); [Fricker & Moore, 2002](#); [Hendrick & Hendrick, 1989](#); [Hendrick, Hendrick, & Adler, 1988](#); [Levy & Davis, 1988](#); [Raffagnino & Puddu, 2018](#)).

### Adaptiveness of Love Attitudes

Attitudes have adaptive functions in human mental processes and behavior ([Erwin, 2014](#); [Fazio & Olson, 2003](#); [Prentice & Carlsmith, 2000](#)), so do the love attitudes ([Gilbert, 1998](#); [Hendrick & Hendrick, 1991](#)). And emotional experience is a part of this adaptation.

Love can trigger positive, negative, or ambivalent emotions depending on appraisal of situation and context. People hope to experience positive emotions (elation, surprise, joy, happiness), however, they often experience negative emotions (disappointment, frustration, sadness, anger) – sometimes, they experience a mixture of both. Love attitudes

as the components of appraisal can predispose men and women to expect and experience certain kind of emotions.

Based on the earlier studies summarized above, we hypothesized that Eros love attitudes being associated with many positive relationship characteristics (i.e., passion, security, commitment, affection, and intimacy) should entail largely positive emotions.

On the other hand, Ludus and Mania love attitudes being associated with many negative relationship characteristics (i.e. insecurity, narcissism, hostility, jealousy, uncertainty, and distrust) should cause the experience of many negative emotions or their mixture with positive ones.

Defense mechanisms evolve to help men and women cope with their emotional experiences. The results of other studies (e.g., Karandashev et al., 2012; Karandashev & Fata, 2014) provided indirect evidence for these hypotheses. In particular, young men and women frequently have strong Eros love attitude in their relations with their first partner, while in relations with second partner many of them turn to Ludus love attitude. Once they experienced negative emotions in first case, then such transformation could be interpreted as a defense reaction to the problems which they experienced in the first relationship. Maladaptive and unhappy emotional experiences give justification for individuals to use the Ludus and Mania love attitudes as defensive mechanisms. Those studies also showed that Ludus and especially Mania love attitudes are quite strong among many young men and women. However, when they become older, their Ludus and Mania love attitudes lessen, thus manifesting gradual successful adaptation to relationship. In accord with this tendency, early studies showed (Segal, Coolidge, & Mizuno, 2007) that younger adults are higher than older adults on the scores of maladaptive defense mechanism. There is also evidence (see references above) that such personal values as high priority of Power and Hedonism and lack of Benevolence play their roles in determining presumably maladaptive love attitudes.

Therefore, based on those previous studies we hypothesized that Ludus and Mania love attitudes, as the consequences of insecure attachment and negative emotional experience, play their defensive role in love relationships. On the other hand, the Eros love attitude, as the consequence of secure attachment and positive emotional experience, is conducive to adaptive approach to relationships.

### **Adaptiveness of Defense Mechanisms**

Two psychological theories explain the relations between emotions and defense mechanisms. According to the Plutchik's (1995) theory of emotions, defense reactions are derivatives of emotions. According to the Dahl's (1995) theory of information feedback, defense reactions characterize the ways in which individuals deal with their emotions. These theories provided as a basis for this study.

Psychological defense mechanisms are mental processes that protect an individual from emotional conflicts and unpleasant emotions, such as anxiety, fear, and frustration.

Such defense mechanisms mediate negative emotional reactions of the individual to external and internal stressors (American Psychiatric Association, 2013; Bond & Wesley, 1996; Dahl, 1995; Plutchik, 1995). Individuals are frequently unaware of these psychological processes.

Individual defense mechanisms in their typology characterize defense or coping styles, which can be more or less adaptive – from optimal to maladaptive (Andrews, Singh, & Bond, 1993; Bond, 2004; Bond & Wesley, 1996). The *adaptive mechanisms* keep an optimal balance between conflicting motives boosting emotional gratification. They promote adequate appraisal of sensations, situations, contexts, actions, and their consequences. They often allow awareness of emotions. The *less adaptive and maladaptive defense mechanisms* tend to keep unpleasant and unacceptable emotional experiences, potentially threatening situations, and motives out of awareness. The mental processes associated with these *maladaptive defense mechanisms* are frequently characterized by denial, withdrawal, distortion, and misattribution. Their cognitive schemas distort the images of self, others, situation, and context. They misrepresent and misattribute the causes of actions, reactions, and events.

Defense styles are characterized by specific sets of defense mechanisms. The *maladaptive-action style* includes passive-aggression, projection, regression, inhibition, projective identification, acting out, somatization, withdrawal, fantasy, help rejecting, complaining, and undoing. The *image distorting style* includes omnipotence, omnipotence/devaluation, denial, splitting, primitive idealization, projection, and isolation. The *self-sacrificing style* includes pseudo-altruism, reaction formation, and denial. The *adaptive style* includes suppression, sublimation, humor, anticipation, and affiliation.

## The Aims and Hypotheses of the Current Studies

Based on the studies cited above and other findings (e.g., Jonason, Lowder, & Zeigler-Hill, 2020; Raffagnino & Puddu, 2018, see for review, Karandashev, 2019), I hypothesized that certain love attitudes are associated with positive or negative emotions and adaptations in a relationship, thus demonstrating their adaptive or maladaptive role. The present studies aimed to:

1. Assess emotional experience of individuals with different love attitudes. The hypothesis was that Ludus and Mania love attitudes are accompanied by prevalent negative emotions, while Eros – by positive ones.
2. Assess attachment experience of individuals with different love attitudes. The hypothesis was that Ludus and Mania love attitudes are associated with insecure attachment, while Eros – with secure attachment.
3. Demonstrate that the prevalent experience of negative emotions and insecure attachment (as manifestations of maladaptive experience according to Plutchik's,

1995, and Dahl's, 1995, theories), can predispose individuals to maladaptive defense styles.

4. Identify the defense styles associated with these love attitudes. I hypothesized that people possessing high Ludus and Mania love attitudes employ maladaptive defense style, while those with Eros possess an adaptive style.

Meta-analysis of multiple publications reporting emotional correlates of love attitudes intended to support the Hypotheses 1 and 2. The empirical Studies 1 and 2 intended to ensure the additional convergent validity in support of these two hypotheses. These two studies also aimed to corroborate the validity of theory that certain qualities of emotional experience (positive versus negative) and different love attitudes are closely related to adaptive or maladaptive defense styles. These two empirical studies investigated these hypotheses (3 and 4) demonstrating adaptive and maladaptive functions of certain love attitudes.

## Meta-Analysis of Previous Studies

Meta-analysis of findings intended to compile the constellations of emotional characteristics typical for individuals with six distinctive love attitudes. Results from multiple sources (Aron & Westbay, 1996; Bailey, Hendrick, & Hendrick, 1987; Campbell, Foster, & Finkel, 2002; Collins & Read, 1990; Davis, 1999; Davis & Latty-Mann, 1987; Erwin, 2007; Hendrick & Hendrick, 1989, 2003; Hendrick, Hendrick, & Adler, 1988; Kanemasa, Taniguchi, & Daibo, 2004; Karandashev & Gilson, 2009; Knee, Canevello, Bush, & Cook, 2008; Leak & Gardner, 1990; Neto & Pinto, 2003; Rotenberg & Korol, 1995) have provided a comprehensive picture of their emotional profiles. Emotional correlates of love attitudes are compiled from the studies reported in those publications and presented in a systematic way in Table 1. The resulting narrative summaries of these findings describing adaptive and maladaptive characteristics of individuals with different love attitudes (styles) are reported below.

1. Eros is a positive, secure love attitude. Individuals with this attitude are committed, responsible, affectionate, intimate, viable, caring, kind, confident, and relaxed. They are lively and satisfied with their romantic relationships and usually do not experience ambivalence and loneliness. Individuals with this love attitude have secure attachment and usually do not display avoidance behaviors. They are highly passionate and trustful.
2. Ludus is a negative, insecure love attitude. Individuals with this attitude are not committed, affectionate, intimate, viable, and caring. They are often not satisfied with their relationships and have low social interest. Narcissism, hostility, ambivalence (in females), and loneliness are traits that characterize these lovers. Their self-esteem is not contingent on the state of the relationship. They generally

- have an avoidant attachment and low feeling of security. Ludus is neither passionate nor trustful.
3. Storge is a positive, yet insecure love attitude. Individuals with this attitude are committed (in males), responsible (in females), intimate, viable, caring, kind, confident (in females), and relaxed (in females). These lovers are lively, with social interest, but shy. They have insecure attachment, low passion and trust.
  4. Pragma is also a negative, insecure love attitude. Individuals with this attitude have low affection, intimacy, and viability. They are not satisfied in their relationships and may be uncertain and lonely. Despite this, men are polite and confident. Avoidant attachment style dominates this love attitude which implies insecurity. These individuals are moderately passionate, but not emotional, and they possess moderate faith.
  5. Mania is an insecure love attitude characterized by both positive and negative emotional characteristics. Individuals with this attitude are committed, responsible (in males), lively, affectionate, intimate, and caring. They are generally satisfied with their relationships, but shy, jealous, envious, and uncertain (in females) about their partner and/or relationship. They have low self-esteem which is often contingent on the state of the relationship. These individuals are anxiously attached, indicating insecurity. They are highly passionate, but not trustful.
  6. Agape is a relatively positive, secure love attitude, except of a few traits. Individuals with this attitude are committed, responsible, affectionate, viable, caring, kind, and lively. They are confident and satisfied in their relationship. Despite all these positive characteristics, these individuals can be jealous and uncertain (in females), and envious (in males). Their self-esteem is dependent on the relationship. These individuals with an agape love attitude feel secure in their relationship and do not display avoidant behaviors. They are passionate and moderately trustful in terms of faith, but not predictable or dependable.

**Table 1**

*Summary of Meta-Analysis of Emotional Correlates of Love Attitudes*

Emotional Characteristics	Love Attitudes					
	Eros	Ludus	Storge	Pragma	Mania	Agape
Commitment	.58	-.32	.14(M)		.22	.38
	.46(M)	-.41			.20(M)	.54
	.49(F)	-.40(M)				.54(F)
		-.34(F)				.49(F)
Responsibility	.19(M)		.19(F)		.20(M)	.21(M)
	.25(F)					.24(F)
Predictability	.305					

Emotional Characteristics	Love Attitudes					
	Eros	Ludus	Storge	Pragma	Mania	Agape
Dependability	.368					
Faith	.463			.206		.222
Trust	.427					
Secure Attachment	.20	-.33	-.24	-.35		.20
		-.16				.13
Anxious attachment					.52	
Avoidant attachment	-.20	.25		.13		-.16
Passion	.27	-.38	-.34		.36	.53
	.64	-.28			.44	.43
	.56	-.38			.47	.56
	.53	-.26(F)			.35(F)	.31(F)
	.42(F)	-.27(M)			.25(M)	.23(M)
	.46(M)				.355	.271
	.429					
Cognitive Love	.426			.238	.399	.274
Emotional Love	.411				.341	.250
Behavioral Love	.324			.216	.357	.386
Affection	.38(M)	-.18(M)		-.16(F)	.56(M)	.47(M)
	.62(F)	-.29(F)			.73(F)	.56(F)
Intimacy	.53	-.38	.39	-.14	.17	.54
	.42	-.45	.20		.13	.40
	.22(F)	-.32	.10			.27(F)
	.29(M)					.40(M)
Jealousy					.34(M)	.23(F)
					.43(F)	.34(F)
Narcissism		.28				
Envy					.25	.31(M)
						.33(F)
Hostility		.17(M)		.26(M)		
		.21(F)		.17(F)		
Ambivalence	-.24(M)	.27(F)				
Uncertainty				.23(M)	.24(F)	.24(F)
Viability	.37	-.39	.10	-.14		.43
	.22(F)	-.30(F)				.27(F)
						.31(M)
Caring	.46	-.40	.16		.18	.56



Emotional Characteristics	Love Attitudes					
	Eros	Ludus	Storge	Pragma	Mania	Agape
	.25(F)	-.32(M)				.33(F)
	.34(M)					.16(M)
Kindness	.21(M)		.16(M)			.19(M)
	.35(F)		.17(F)			.36(F)
Politeness				.28(M)		
Social Interest		-.50	.39			
Satisfaction	.56	-.31		-.12	.15	.44
	.49(M)	-.60(M)				.28(F)
	.51(F)	-.42(F)				.32(F)
	.31(F)	-.22(F)				.21(M)
	.43(M)	-.28(M)				
Self-esteem					-.28(M)	
					-.27(F)	
Relationship contingent Self-esteem (RCSE)	.08	-.10			.48	.27
Confidence	.27(M)		.21(F)	.19(M)		.17(F)
	.36(F)					
Shyness			.27		.21	
Relaxation	.34(M)		.17(M)			
	.46(F)					
Liveliness	.23(M)		.18(F)		.24(M)	.17(M)
	.49(F)				.38(F)	.33(F)
Loneliness	-.19	.19(M)		.19(F)		
	-.44	.25				

Thus, the review of emotional characteristics associated with six love attitudes have shown their typical combinations. Specifically, Ludus and Mania love attitudes may be considered maladaptive because they are associated with many negative emotional characteristics (i.e. insecurity, narcissism, hostility and jealousy, uncertainty, and distrust, respectively). However, the Eros love attitude may be considered adaptive because it is associated with many positive emotional characteristics, including security, commitment, affection, and intimacy.

For further support of this assumption drawn from the literature, we conducted two empirical studies. The aims and hypotheses of these studies were as follow:

Study 1 investigated the relations between attachment-related avoidance and anxiety and the six love attitudes. The aim was to demonstrate empirically—with dimensional

measurement of attachment-related emotions, that some love attitudes—due to negative emotional experience—predispose individuals to maladaptive defense style. According to previous sources, it was expected that high avoidance and anxiety are typical for Ludus love attitude, high anxiety, but low avoidance—for Mania, high avoidance but low anxiety for Pragma, and low avoidance and anxiety of individuals with Eros, Storge, and Agape love attitudes.

Study 2 assessed the typical emotions of people with six love attitudes. It was expected that Ludus and Mania love attitudes are accompanied by prevalent negative emotions and emotionality characteristics, while Eros—by positive. No prevalence of positive or negative emotions was expected for Storge, Pragma, and Agape, because according to their theoretical definitions they should be calm and balanced without expression of extreme emotions.

In addition, Study 2 explored connections between prevalent negative emotions and maladaptive defense styles as manifestations of maladaptive experience. It was hypothesized that prevalence of negative emotional experience predicts formation of maladaptive defense mechanisms that can be exhibited in relationship.

The last task of the Study 2 was to discover which defense styles are associated with the six love attitudes. It was hypothesized that individuals with Ludus and Mania love attitudes—with prevalence of negative emotions—tend to employ maladaptive defense style, while those with Eros—with prevalence of positive emotions—have an adaptive style. Since individuals with Storge, Pragma, and Agape love attitudes are emotionally balanced, they do not use maladaptive defense styles.

## Study 1. Love Attitudes and Attachment-Related Avoidance and Anxiety

Earlier studies revealed (see references above) that secure or insecure attachment is associated with love attitudes, however, the results were incomplete. They investigated the types of attachment and did not explore dimensionality. Therefore, the Study 1 intended to replicate and rectify the findings according to our goals. We focused on anxiety and avoidance as attachment dimensions using the Relationship Structures (RS) scale, which was specifically constructed for measurement of these variables.

We hypothesized that Eros, Storge, and Agape would be secure-attachment love styles with low avoidance and anxiety dimensions. On the other hand, Ludus and Mania would be characterized by high attachment-related avoidance and anxiety. We hypothesized that Mania might be low in avoidance due to the strong tendency to be possessive. Pragma should be low in anxiety, but high in avoidance resulting in keeping distance from the partner.

## Method

The study utilized two samples recruited from general population of Mid-West of the USA using snowball sampling. In Sample 1, *participants* were 743 adult individuals (463 women and 277 men, 3 did not indicate their gender) ranging in age from 16 through 79 ( $M = 41$ ,  $SD = 17.5$ , 94% Caucasians). In Sample 2, *participants* were 209 (125 women and 81 men, 3 did not indicate their gender) ranging in age from 16 through 73 ( $M = 37$ ,  $SD = 16.7$ , 91% Caucasians). They completed the same scales for measurement.

## Scales

1. A short form of the Love Attitude Scale (Hendrick, Hendrick, & Dicke, 1998) was employed to measure the six love attitudes. It consisted of 24 statements that reflected different attitudes about love and corresponding love styles: Eros, Ludus, Storge, Pragma, Mania, Agape (4 items per love attitude). Participants were asked to state how much they agreed or disagreed with each statement on a 5-point Likert scale, with 1 as *strongly disagree* and 5 as *strongly agree*. The mean score of each love attitude was calculated and treated as a variable ranging from 1 to 5.
2. The Relationships Structures questionnaire (Fraley, n.d.; Fraley et al., 2006; Fraley, Waller, & Brennan, 2000) was used to assess two attachment dimensions with respect to a romantic partner: avoidance (6 items) and anxiety (4 items). For each item, participants rated the extent to which they agreed or disagreed with the item using the scale from 1 (strongly disagree) through 7 (strongly agree). Two scores, one for attachment-related avoidance and the other for attachment-related anxiety, were computed for the romantic partner averaging the rating according to the scoring key.

## Results

Correlations in Table 2 show that participants with Eros, Storge, and Agape love attitudes tend to have significantly lower attachment-related avoidance and anxiety. Inversely, participants with Ludus love attitude have significantly higher avoidance and anxiety. According to these data, attachment-related emotional experience of participants with Eros, Storge, and Agape love attitudes seems adaptive, while of those with Ludus – maladaptive. As for Mania, it is maladaptive in terms of high anxiety. However, the Mania love attitude does not show the tendency towards avoidance and such people want to be close with the partner. Participants with the Pragma love attitude have moderately high avoidance, but very low anxiety. Thus, data from both samples, presented in the Table 2, show high consistency and reliability of the obtained results.

**Table 2***Correlation of Love Attitudes With Romantic Attachment-Related Avoidance and Anxiety*

Variable	Love Attitude					
	Eros	Ludus	Storge	Pragma	Mania	Agape
<b>Sample 1</b>						
Avoidance	-.40**	.17**	-.25**	-.07*	.05	-.25**
Anxiety	-.30**	.23**	-.21**	-.02	.24**	-.23*
<b>Sample 2</b>						
Avoidance	-.40**	.14*	-.27**	-.19**	-.09	-.25**
Anxiety	-.28**	.17*	-.21**	-.12	.19**	-.16*

\* $p < .05$ . \*\* $p < .01$ .

## Study 2. Emotionality of Individuals With Different Love Attitudes and Their Defensive Manifestations

Two theories on emotions and defense mechanisms have been supported by empirical research and served as a basis for the Study 2. According to the theory of emotions proposed by Plutchik (1995), defenses are derivatives of emotions. The theory of information feedback by Dahl (1995) suggested that defenses are related to the ways how individual deals with emotions.

Previous research presented above in meta-analysis revealed that people with Ludus and Mania love attitudes possess many emotionally negative relationship characteristics and are characterized by prevalence of negative emotions. Therefore, the Study 2 expected that these love attitudes are associated with frequent negative emotions, which are related to the formation of maladaptive defense styles. Different from this, the Eros love attitude is associated with prevalent positive emotions and adaptive defense styles. Since no prevalence of positive or negative emotions among participants with Storge, Pragma, and Agape love attitudes were expected, then the studies did not anticipate any prevalence of defense styles among those participants.

### Method

*Participants* were 125 women and 81men (3 did not indicate their gender) recruited from general population of the Mid-West of the USA using snowball sampling. Their age ranged from 16 through 73 ( $M = 37$ ,  $SD = 16.7$ , 91% Caucasians).

## Scales

1. The same short form of the Love Attitude Scale (Hendrick, Hendrick, & Dicke, 1998), as described above, was employed to measure the six love attitudes.
2. Differential Emotion Scale (DES) assessed discrete emotions and prevalence of positive or negative emotions (Izard, Libero, Putnam, & Haynes, 1993). The DES asked participants to rate how frequently in their daily life they felt the particular emotion: from 1 (rare or never) to 5 (very often). The DES consisted of 36 items (3 items per emotion) measuring 12 discrete emotions: Interest, Joy, Surprise, Sadness, Anger, Shyness, Disgust, Contempt, Hostility (to yourself), Fear, Shame, Guilt, and overall indexes of positive (first three) and negative (the remaining nine items) emotions.
3. Defense Styles Questionnaire (DSQ), a self-report measure with demonstrated criterion validity and internal consistency, intended to measure 4 styles of defensive functioning: (Andrews, Singh, & Bond, 1993; Bond, 2004; Bond & Wesley, 1996): maladaptive (33 items), image distorting (15 items), self-sacrificing (8 items), adaptive (7 items). Specific defense mechanisms within each style are described in previous sections. Participants were asked to rate the 88 statements of the DSQ on the 9-point Likert scale from 1 (strongly disagree) to 9 (strongly agree). Scoring was according to key. The means of each defense style were the variables ranging from 1 to 9.

## Results

### Emotional Experience of Participants With Different Love Attitudes

Correlations of love attitude variables with prevalent emotional experience, presented in Table 3, show that various negative emotions accompany Ludus and Mania love attitudes, while positive emotions accompany the Eros love attitude. Strong love attitudes of Storge, Pragma, Agape is not related to prevalence of neither positive nor negative emotions in everyday life. These results support our hypothesis that Eros is an adaptive love attitude, while Ludus and Mania are maladaptive.

**Table 3**

*Correlations of Love Attitudes With Emotional Experience*

Emotion	Love Attitude					
	Eros	Ludus	Storge	Pragma	Mania	Agape
Interest					-.14*	
Joy	.26**			.14**		
Surprise		.26**				
Sadness	-.21**				.22**	
Anger	-.21**	.14**			.20**	
Shyness	-.20**				.20**	

Emotion	Love Attitude					
	Eros	Ludus	Storge	Pragma	Mania	Agape
Disgust	-.16*				.25**	.14*
Contempt	-.20**	.24**			.20**	
Hostility	-.18**	.18**			.20**	
Fear		.16**			.30**	
Shame		.20**			.23**	
Guilt	-.22**				.22**	
Positive	.17*					
Negative	-.22**	.21**			.31**	

\* $p < .05$ . \*\* $p < .01$ .

### Negative and Positive Emotions Associated With Defense Styles

The research supported the assumption that prevalence of negative emotions and lack of positive emotions are the symptoms of maladaptive defense styles. They might be a cause of why individuals use maladaptive defense mechanisms or the consequences of using maladaptive mechanisms. The maladaptive defense style is accompanied by the lack of Positive emotions ( $r = -.22^{**}$ ) and especially Joy ( $r = -.43^{**}$ ), as well as the prevalence of Negative emotions ( $r = .63^{**}$ ): Sadness ( $r = .49^{**}$ ), Anger ( $r = .48^{**}$ ), Shyness ( $r = .52^{**}$ ), Disgust ( $r = .40^{**}$ ), Contempt ( $r = .32^{**}$ ), Hostility ( $r = .55^{**}$ ), Fear ( $r = .42^{**}$ ), Shame ( $r = .54^{**}$ ), Guilt ( $r = .40^{**}$ ).

The same emotional profile goes with Image Distorting defense style: lack of Joy ( $r = -.20^{**}$ ), and prevalence of Negative emotions ( $r = .29^{**}$ ), less strong than Maladaptive style: Sadness ( $r = .14^{**}$ ), Anger ( $r = .32^{**}$ ), Disgust ( $r = .22^{**}$ ), Contempt ( $r = .45^{**}$ ), Hostility ( $r = .22^{**}$ ), Fear ( $r = .16^{**}$ ), Shame ( $r = .25^{**}$ ). Comparing with Maladaptive, Image Distorting style is less pronounced in its degree of negative emotions and characterized by absence of Shyness and Guilt, as well as presence of Surprise ( $r = .16^{**}$ ).

Self-sacrificing defense style is characterized by a slight degree of manifestation of Shyness ( $r = .17^{**}$ ) and Shame ( $r = .19^{**}$ ). Otherwise, there are no relations with positive or negative emotions.

People with Adaptive style have more chance to have Interest ( $r = .14^{**}$ ), but less Disgust ( $r = -.16^{**}$ ).

The results provide evidence that prevalence of negative emotions and lack of positive emotions have strong accompanying symptoms of maladaptive defense style, in a smaller degree – of Image Distorting style.

### Adaptive and Maladaptive Defensive Functions of Love Attitudes

Relations of love attitudes and defense styles presented in Table 4 give another evidence of defensive functioning of love attitudes. Ludus attitude is intertwined with maladaptive, image-distorting defense styles, and to a certain degree with self-sacrificing. Mania

attitudes are maladaptive, whereas individuals with Eros love attitude do not exhibit maladaptive reactions. Other love attitudes also do not show their maladaptive functioning.

**Table 4**

*Correlations of Love Attitudes With Defense Styles*

Defense Style	Love Attitude					
	Eros	Ludus	Storge	Pragma	Mania	Agape
Maladaptive	-.19**	.19**			.24**	
Image Distorting		.37**				
Self-Sacrificing		.14**				
Adaptive						

\* $p < .05$ . \*\* $p < .01$ .

## General Conclusions and Limitations

### Summary of Emotional Experience and Adaptive/Maladaptive Functions of Love Attitudes

The article considers defense styles in terms of their adaptive functioning on a continuum from maladaptive, image distorting and self-sacrificing to adaptive. The degree of these maladaptive and adaptive reactions appears in response to negative emotional experience. Some love attitudes can be maladaptive reactions, while others prevent maladaptive reactions. The results of meta-analysis and two empirical studies have supported the hypotheses.

According to the results of two studies, *Ludus* is largely maladaptive love attitude. It is accompanied by high anxiety and avoidance in romantic relationship, prevalent negative emotional experience, lack of positive emotions, and the functioning of maladaptive and image distorting defense styles. *Mania* is generally also maladaptive love attitude. Individuals with this attitude want to be with the partner (low avoidance), but anxious in their relationship with the partner. They are passionate but likely to experience prevalent negative and lack of positive emotions. They tend to use a maladaptive defense style. *Pragma* is a relatively neutral and adaptive love attitude in terms of the balance in positive and negative emotional experiences. Individuals with *Pragma* love prefer to be distant from partner (high avoidance), but they are not anxious. They have no prevalence of neither positive nor negative emotional experiences. They are balanced, thus lacking engagement in any defense style. Staying distant from their partner is the only defensive action. Individuals with *Storge* and *Agape* love attitudes are characterized by relatively adaptive emotional experience: low avoidance and anxiety, no evidence of prevalent positive or negative emotions, and no need for defense reactions. Individuals with *Eros* love

attitudes demonstrate adaptive experience and secure feelings in relationships, without avoidance and anxiety. This protects a person from negative emotions. However, it does not guarantee positive emotions and adaptive experience. There are many other factors affecting the adaptive positive tone of emotionality. Thus, results provide evidence that Ludus and Mania love attitudes are maladaptive, Storge, Pragma, and Agape are relatively neutral, and Eros love attitude is associated with relatively adaptive experience in romantic relationships. Individuals with Eros attitudes have more chances to be happy in their romantic relationships, while those with Ludus and Mania ones tend to be unhappy.

## Limitations of the Results

The results of the studies reported in this article are based largely on correlational analyses and, therefore, have a predictive and prognostic value. They demonstrate how positive and negative emotional experiences intertwine with adaptive and maladaptive defense mechanisms among individuals with different love attitudes. These relations can be bi-, or even three-directional. Negative and positive emotions precipitate formation of psychological defense mechanisms and, consequently, defensive love attitudes. On the other hand, the developed strong love attitudes can contribute to the appraisal of situations, thus, triggering corresponding emotions.

The results of these studies, however, do not show these causal relations. Experimental, practice-based, and longitudinal studies could be useful to investigate these relations, however, they may be ethically not appropriate in this emotionally sensitive theme.

The results of the studies can be useful for family counseling and therapy providing better understanding of maladaptive functioning of individuals and couples in relationships.

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