RESEARCH

Self-love and love in a romantic relationship are partly related

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Abstract

Objective Whereas in the public discourse, a relation between self-love and love in a romantic relationship is assumed, the empirical evaluation of this claim needs to be included. Theoretical overlapping mechanisms between both concepts are provided. So, the study's main goal was to investigate this relation empirically.

Method Four hundred sixty participants (125 men and 335 women) were included in the analysis. They completed a demographic questionnaire, self-assessment of self-compassion, self-love, the triangular theory of love measurement, and satisfaction with the relationship scale.

Results The results indicated that love in a romantic relationship is closely tied to self-love. However, only self-care and self-acceptance are significant predictors of passion, intimacy, and commitment. The third component of self-love, self-contact, was not a significant predictor. In an exploratory manner, satisfaction with relationships was investigated, revealing that, in addition to the components of love in a romantic relationship, self-compassion, but not self-love, predicts satisfaction.

Discussion The study confirms, on the one hand, the public view that self-love is related to love in a romantic relationship; on the other hand, the results emphasize that this view must be differentiated. According to the results, it would be promising to investigate whether self-love training can improve love in a romantic relationship.

Keywords Self-care, Self-acceptance, Self-contact, Intimacy, Passion, Commitment

1 Self-love and love in a romantic relationship: are they related?

Love is one of the most exciting topics for most people. However, there is no single definition of love. There are many aspects of love beyond love in a romantic relationship, such as love for God, friendship love, self-love, and more. Fromm [13] differentiates between self-love, motherly love, brotherly love, erotic love, and love of God. Different aspects of love can be seen topographically [33]. There are numerous claims in the media about the relationship between love in a romantic relationship and self-love; moreover, self-love appears to be a prerequisite for loving a partner. Sentences like "the importance of self-love when choosing a romantic partner" are often mentioned. Nevertheless, to the best of our knowledge, there is no scientific evidence to support this relationship.

1.1 Self-love

The concept of self-love itself is a controversial construct [17]. On the one hand, it is a desirable construct because it is related to well-being and life satisfaction and is also a crucial resilience factor in preventing mental illness [36]. On the other hand, it is often confused with narcissism [17]. However, more than 80 years ago, Fromm differentiated between self-love and narcissism [12]; narcissism is a psychological construct that typically manifests itself in overestimation of the self. However, despite the growing presence of self-love in the mainstream, scientific research remains scarce, and a clear definition is still lacking. Henschke and Sedlmeier [18] conducted an inductive thematic analysis, revealing that the constructs of self-contact, self-acceptance, and self-care are essential to the concept of self-love.

In their model, self-acceptance encompasses accepting one's limitations, admitting to being judgmental, and welcoming all emotions [18]. Self-contact consists of perceiving the self, which includes the process of attention, encountering oneself (seeing the different aspects of the self), and knowing oneself and one's limitations and strengths. Self-care means treating oneself, shaping relationships in a way that fosters wholeness, doing what brings happiness, and taking care of oneself when one is suffering.

Self-love must be distinguished from self-compassion [30], which integrates the positive aspects of self-kindness, common humanity, and mindfulness, and the three negative counterparts, self-judgment instead of self-kindness, isolation instead of common humanity, and over-identification instead of mindfulness. Although the two concepts are distinguishable, they are strongly correlated. In developing the self-love scale, Henschke and Sedlmeier [17] found a correlation of $r = 0.68$ between the total self-compassion score and self-love, with correlations for the individual self-love subscales ranging from $r = 0.42$ to $r = 0.72$. Self-compassion is one aspect of compassion, one of the four Brahma-Viharas [14]. Self-love is one effect of love or loving-kindness, another aspect of the Brahma-Viharas [14]. The Brahma Viharas—loving-kindness, compassion, sympathetic joy, and equanimity—are four noble qualities in Buddhist practice that nurture an open heart and a balanced mind toward all beings. Furthermore, self-love is distinct from self-esteem, which involves evaluating oneself.

1.2 Love in a romantic relationship

According to Sternberg's Triangular theory of love [38], there are three essential aspects of love in a romantic relationship: intimacy, passion, and commitment. Intimacy encompasses the feelings of closeness and connectedness, particularly the component of warmth. Passion comprises the elements of excitement, desire, and attraction. It is related to the components of physical arousal. The third component can be viewed as a more cognitive concept, in that one believes the relationship will last for a long time. This component relates to decision-making processes. The three aspects vary according to the relationship status and the length of the relationship [39]. In his original work, Sternberg [38] asserts that romantic love does not necessarily involve commitment, as romantic love typically emerges at the beginning of a relationship [2].

In contrast, commitment often develops over time as the relationship progresses [38]. Other kinds of love than romantic love in a relationship are infatuate, companionate, or consummate love [38]. According to Sternberg's taxonomy [38], infatuated love includes only passion, whereas romantic love adds intimacy to passion. Companionate

love combines intimacy and commitment, while consummate love encompasses all three components: passion, intimacy, and commitment [38]. In this study, we examine love in romantic relationships through the three components of intimacy, passion, and commitment.

A study by Lemieux and Hale [25] supported the assumption of the Triangular Theory of Love. Besides this, several other partnership or romantic love theories exist, such as the differentiation between Agape, Eros, Ludus, Mania, Pragma, and Storge [23]. The attraction to romantic love partners can be explained by self-verification and self-enhancement theory [21]. Self-verification theory suggests that we seek partners who perceive us as we truly are, while self-enhancement theory implies that we look for partners who view us in the best possible light.

A study of female Indonesian participants has shown that the longer the marriage, the higher the three aspects of the triangular theory of love [28]. In a Dutch sample, the three components were investigated in adolescents (12–17 years), young adults (18–30 years), middle-aged adults (30–50 years), and older adults (older than 50 years) [40]. The results showed that adolescents reported lower levels of all three aspects than young and middle-aged adults. Furthermore, older adults demonstrated lower levels of passion and intimacy than younger and middle-aged adults. However, the levels of commitment were comparable. This age difference pattern was not visible for the participants who were never involved. Gender differences were observed, with a moderate effect size. There were no gender differences in the aspect of commitment. Men reported higher levels of passion than women in all age groups and lower levels of intimacy in some age groups. However, the within-group variability was higher than the differences between groups. Furthermore, a study with 439 Spanish participants between 15 and 89 years concluded that, besides age, life satisfaction has been predictive of the three aspects of love type [5].

Neuroimaging studies have found that similar brain regions are activated when people listen to audio stories about romantic love and parental love.

Still, the activations differed for love for strangers, pets, or nature [33].

1.3 The relationship between self-love and love in a romantic relationship

While different forms of love engage common neural substrates, including activation within the subcortical reward system and brainstem, the spatial extent of this activation varies according to relational context. Rinne et al. [33] reported that activation was significantly more widespread for interpersonal relationships than for interactions with strangers.

Although the relationship between self-love and love in a romantic relationship has not been empirically validated on a behavioral or neuroscientific level, assumptions about overlapping mechanisms have been provided: Quintard et al. [32] argued, that the overlap may not be limited to a conceptual and abstract level, but also extend to a bodily level, which can be explained, for example, by embodied theories of self-other interactions. Their integrative view of the causes and consequences of bodily-based self-other overlap in love in a romantic relationship relies on the assumption that sharing the partner's bodily state facilitates interaction and strengthens the affective bond between the individual and the partner. Their view contributes to the action-perception models that explain social abilities, such as imitation [3].

The relation between self-love and love in a romantic relationship can also be seen from a language approach [10]: The language concept of "love" including love in a romantic relationship and self-love has an internal prototype structure with fuzzy borders. Additionally, according to the prototype theory, the concepts of love and commitment largely overlap but are also partly independent [9]. Evolutionary approaches suggest that romantic love may be the psychological expression of bonds [1], suggesting that all types of love are similar. Furthermore, love in a romantic relationship may be causally related to self-love through positive illusions [27]. Positive illusions are one form of biased thinking that can enhance self-enhancement [27]. Because individuals' pictures of their romantic partners can be considered a mirror image of their self-image [29], the self-enhancement can be attributed to the romantic partner.

Although there are no direct studies investigating this relationship, research has found that similar concepts to self-love, such as self-esteem or self-concept, are related to love in romantic relationships. Soyer and Gizir [37] showed that self-esteem significantly predicted triangular love. Tamini et al. [41] found a positive association between self-concept, especially self-acceptance, and commitment.

In this study, we aim to explore the relationship between self-love and love in romantic relationships from a humanistic perspective. It has already been demonstrated that self-compassion, with its three positive aspects of self-kindness, common humanity, and mindfulness, is a strong positive predictor of positive relationship behavior and is more important than self-esteem and attachment style [31]. However, self-compassion and compassion for others sometimes seem unrelated [26], which is astonishing because a self-other overlap has been recognized in research (see Quintard et al. [32]).

1.4 Main goal of the study

This study examines the relationship between self-love and love in romantic relationships, as well as whether these factors predict satisfaction with a romantic relationship. For this purpose, we examined the following hypotheses:

1. Due to the assumption of an overlapping mechanism between self-love and love in a romantic relationship, it is inferred that self-love and love in a romantic relationship are related. Because self-acceptance and self-contact include more cognitive aspects than self-care, we assume that the first two aspects, compared to self-care, show a stronger relationship to commitment, which also includes cognitive elements. On the other hand, we expect a stronger association between self-care and intimacy than between self-acceptance and self-contact and intimacy. Because self-love is highly correlated with self-compassion, and self-compassion is a strong predictor of positive relationship behavior, we included a measure of self-compassion in this study. We assume a positive relationship between self-compassion (measured on a positive scale) and love in romantic relationships, and a negative correlation between self-compassion (measured on a negative scale) and love in romantic relationships.

2. In an exploratory manner, it was investigated which components of (a) self-love (self-care, self-acceptance, and self-contact), of (b) self-compassion (positive and negative scale), and of (c) love in a romantic relationship (passion, intimacy, and commitment), besides demographic variables like age, gender, and length of the relationship, are related to satisfaction with the relationship.

2 Method

2.1 Participants

In this study, 713 participants (198 men, 485 women, and four divers) between 18 and 70 years ($M = 27.29$, $SD = 8.97$) participated. Following pre-registration, we analysed the data from participants in a relationship, resulting in 462 participants (125 men, 335 women, two divers) between 18 and 68 years ($M = 27.69$, $SD = 9.08$). The mean duration of the relationship, dependent on gender, was the following: 5.18 years ($SD = 3.35$) for men, 5.24 years ($SD = 6.87$) for women, and 3.50 years ($SD = 2.12$) for the two diverse participants. 44.6% of the participants held the highest high school degree, 29.7% had a bachelor's degree, and 17.6% had a master's or Ph.D. For 8.1% of the participants, the degree was lower than that of a high school student. Furthermore, 51.3% of participants earned less than € 1000 per month, 22.6% earned less than € 2000, 16.7% earned less than € 3000, 5.9% earned less than € 4000, and 2.6% earned more than € 4000. For further analysis in which gender was a factor, the data of the two diverse individuals were excluded.

For hypothesis 1, we assumed small effect sizes for the correlations ($r = 0.2$) between the three aspects of self-love (self-contact, self-care, and self-acceptance) and the three aspects of love in a romantic relationship (intimacy, passion, and commitment). Because we analyzed nine correlations, the α value was Bonferroni-corrected and set to 0.0056. The power analysis (power of 1-ß = 0.95) revealed that $N = 314$ participants were required [8]. With a small effect size of $f^2 = 0.075$, an alpha-level of $α = 0.05$, a power of 1–ß = 0.95, and eight possible predictors (three aspects of self-love, two scales of self-compassion, age, gender, length of relationship) for the three dependent variables of love in a romantic relationship, a power analysis for the linear regression resulted in $N = 173$ [8]. For the exploratory analysis regarding partnership satisfaction, a regression (small effect size of $f^2 = 0.075$, an alpha-level of $α = 0.05$, a power of 1–ß = 0.95) with the 11 predictors (three aspects of self-love, three aspects of love in a romantic relationship, two aspects of self-compassion, age, gender, and length of relationship) was conducted, and results in $N = 335$. Since the sample size calculation pertains to participants living in a relationship, we aimed to collect data from more than 500 participants.

2.2 Material

This study employed a demographic questionnaire and questionnaires assessing self-love, self-compassion, love in romantic relationships, and relationship satisfaction.

2.2.1 Demographic questions

First, a demographic questionnaire was used, which included the following variables: gender (male, female, or diverse), age, income, and educational status.

2.2.2 Self-compassion scale [30]

The self-compassion scale, in this case the German version [19], measures the ability to treat oneself as one would treat a best friend, especially in difficult times. It consists of the three positive scales of self-kindness ("When I am going through a very hard time, I give myself the caring and tenderness I need"), common humanity ("I try to see my failings as part of the human condition"), and mindfulness ("When something upsets me, I try to keep my emotions in balance"). Besides this, there are the three negative scales of

self-judgment ("When times are really difficult, I tend to be tough on myself"), isolation ("When I fail at something that's important to me, I tend to feel alone in my failure"), and over-identification ("When I fail at something important to me I become consumed by feelings of inadequacy"). Participants had to rate each item on a 5-point response scale, ranging from 1 = *almost never* to 5 = *almost always*. The German version was validated in two samples, comprising 396 and 165 participants. However, the one-factor structure of the total score did not warrant a German scale, but the positive and negative scales showed a reasonable fit [6]. Cronbach's alpha in the present study for the positive scale was α = 0.89, and for the negative scale, α = 0.90. Mean scores were calculated for the positive (M = 3.22, SD = 0.65) and the negative scale of self-compassion (M = 2.95, SD = 0.78).

2.2.3 Self-love (Henschke and Sedlmeier [17])

Self-love was assessed using the German Self-love questionnaire, which consisted of 27 items and was answered on a 5-point scale, ranging from 1 (*not true at all)* to 5 (*entirely true)*. The items could be summarized within the three subscales: self-contact ("I am in contact with my feelings"), self-acceptance ("I am okay like I am"), and self-care ("I take time for myself"). Cronbach's alpha in the present study was α = 0.89 for the total scale, α = 0.84 for self-contact, α = 0.88 for self-acceptance, and α = 0.86 for self-care.

2.2.4 Love in a romantic relationship [22]

The German version of the Short Form of the Triangular Love Scale was used to measure love in romantic relationships. This scale was validated for 37 languages and includes five items for each of the three single aspects of passion ("My relationship with my partner is very romantic"), commitment ("I am certain of my love for my partner"), and intimacy ("I have a warm relationship with my partner"). All Items were answered on a five-point scale, ranging from 1 (*not at all)* to 5 (*extremely)*. Cronbach's alpha in the present study for the scale passion was α = 0.86, for commitment, α = 0.82, and for intimacy, it was α = 0.90. Mean scores were calculated for passion (M = 3.91, SD = 0.84), commitment (M = 4.37, SD = 0.67), and intimacy (M = 4.31, SD = 0.74).

2.2.5 Satisfaction with the relationship [15]

The German version of the Relationship Assessment Scale was used to measure the degree of satisfaction with the partnership relationship (RAS; Hendrick et al. [16]; German version, Hassebrauck [15]. This scale comprises seven items, measured using a 5-point response scale (e.g., "On the whole, how satisfied are you with your relationship?"). Cronbach's alpha in the present study for the scale satisfaction was α = 0.90. A mean score was calculated (M = 4.19, SD = 0.70).

2.3 Procedure

The survey was implemented in the SoSci Survey [24]. Due to the registration of specific variables like "Time_RSI" we were able to identify potential bots. For example, there were no problems with filling in too quickly. Participants were invited via social media (e.g., "Instagram") and the experimental platform "survey circle" on the one hand. On the other hand, students from two German universities were informed of this study in a newsletter. Initially, participants reported their demographic information after

giving informed consent to participate in the study. They then completed questionnaires assessing self-love, self-compassion, love in romantic relationships, and relationship satisfaction. Finally, they stated their relationship status and, if applicable, the duration of their relationship. Participants from the two universities involved received course credit; all others participated in a lottery where they could win 20 vouchers valued at 20 Euros.

The study was preregistered at OSF (https://osf.io/z4ryx).

2.4 Statistical analysis

The hypotheses were investigated through correlations and regressions (using the enter method) and structural equation modeling (SEM). This SEM model comprises the following nine endogenous latent variables: the three components of self-love (contact, acceptance, and care), the positive and negative aspects of self-compassion, relationship satisfaction, and the three components of love in a romantic relationship (intimacy, passion, and commitment). The model contains the exogenous observed variables age, gender, and duration. Correlations were allowed between the components of self-love, self-compassion, and love in a romantic relationship, respectively. They were also allowed, among other variables, not connected via regressions, namely between age, gender, and relationship duration, between the aspects of self-compassion and self-love, and between relationship satisfaction and love in a romantic relationship. Analyses were performed in R using the lavaan package [35], and missing data were accounted for using full-information maximum likelihood estimation.

3 Results

Model fit indices for the CFI are mixed with χ^2 (2862) = 6613.45, $p < 0.001$, and CFI = 0.818, but RMSEA = 0.053 and SRMR = 0.059. The Comparative Fit Index (CFI < 0.09) suggested that the model fit is not good (CFI < 0.09). In contrast, the Root Mean Square Error of Approximation (RMSEA < 0.06) and the Standardized Root Mean Square Residual (SMR < 0.08) are good.

3.1 Correlation between self-love and romantic love

Table 1 shows that all three scales of self-love were significantly correlated with the three aspects of love in a romantic relationship. All correlations were positive and small to moderate.

3.2 Prediction of love in a romantic relationship

Table 2 presents the hierarchical regressions for the three aspects of love in a romantic relationship, along with the predictors: self-compassion positive scale, self-compassion negative scale, self-love contact, self-love care, self-love acceptance, age, gender, and partnership duration. The results showed that 23.1% ($R = 0.480$, adj. $R^2 = 0.217$) of the variance in passion is explained by all predictors. However, only self-love acceptance,

Table 1 Correlations between the aspects of self-love and love in a romantic relationship

	N	MS	SD	TLS passion	TLS commitment	TLS intimacy
SL contact	462	3.96	0.59	0.242** [0.154, 0.327]	0.224** [0.135, 0.309]	227** [0.138, 0.312]
SL accept	462	3.47	0.80	0.212** [0.123, 0.298]	276** [0.189, 0.358]	0.252** [0.164, 0.336]
SL care	462	3.88	0.63	0.323** [0.239, 0.403]	0.302** [0.217, 0.383]	0.297** [0.211, 0.378]

TLS Triangular Love Scale, *SL* Self-love

95% CIs are displayed in brackets, **$p < 0.001$

Table 2 Hierarchical regression analyses of the different possible predictors on the TLS criteria

	b	SE	Beta	t	*p*	95% CI
1			Passion			
Intercept	4.593	0.170		26.975	<0.001	[4.258, 4.927]
Gender	0.053	0.084	0.028	0.629	0.530	[−0.113, 0.219]
Age	−0.025	0.006	−0.269	−4.034	<0.001	[−0.037, −0.013]
Duration rel	−0.001	0.001	−0.082	−1.234	0.218	[−0.003, 0.001]
2						
Intercept	1.553	0.484		3.208	0.001	[0.601, 2.504]
Gender	0.079	0.084	0.042	0.944	0.346	[−0.085, 0.243]
Age	−0.018	0.006	−0.192	−2.987	0.003	[−0.030, −0.006]
Duration rel	−0.001	0.001	−0.122	−1.926	0.055	[−0.003, 0.000]
SL contact	0.123	0.078	0.085	1.573	0.116	[−0.031, 0.276]
SL accept	0.176	0.066	0.166	2.647	0.008	[0.045, 0.307]
SL care	0.298	0.077	0.224	3.882	<0.001	[0.147, 0.449]
SC positive	0.009	0.071	0.007	0.124	0.902	[−0.130, 0.148]
SC negative	0.188	0.061	0.173	3.069	0.002	[0.068, 0.308]
1			Commitment			
Intercept	4.582	0.143		32.043	<0.001	[4.301, 4.863]
Gender	−0.016	0.071	−0.011	−0.225	0.822	[−0.155, 0.123]
Age	−0.011	0.005	−0.144	−2.048	0.041	[−0.021, 0.000]
Duration rel	0.002	0.001	0.171	2.425	0.016	[0.000, 0.003]
2						
Intercept	2.620	0.410		6.389	<0.001	[1.814, 3.425]
Gender	−0.033	0.071	−0.022	−0.471	0.638	[−0.173, 0.106]
Age	−0.006	0.005	−0.078	−1.147	0.252	[−0.016, 0.004]
Duration rel	0.001	0.001	0.134	1.990	0.047	[0.000, 0.003]
SL contact	0.039	0.066	0.034	0.593	0.553	[−0.091, 0.169]
SL accept	0.201	0.056	0.239	3.572	<0.001	[0.090, 0.312]
SL care	0.232	0.065	0.218	3.557	<0.001	[0.104, 0.360]
SC positive	−0.057	0.060	−0.055	−0.947	0.344	[−0.174, 0.061]
SC negative	0.102	0.052	0.118	1.968	0.050	[0.000, 0.204]
1			Intimacy			
Intercept	4.782	0.155		30.902	<0.001	[4.478, 5.086]
Gender	−0.040	0.077	−0.024	−0.522	0.602	[−0.191, 0.111]
Age	−0.014	0.006	−0.177	−2.556	0.011	[−0.025, −0.003]
Duration rel	0.000	0.001	−0.028	−0.400	0.689	[−0.002, 0.001]
2						
Intercept	2.701	0.444		6.090	<0.001	[1.830, 3.573]
Gender	−0.051	0.077	−0.031	−0.670	0.503	[−0.202, 0.099]
Age	−0.009	0.005	−0.117	−1.732	0.084	[−0.020, 0.001]
Duration rel	−0.001	0.001	−0.059	−0.884	0.377	[−0.002, 0.001]
SL contact	0.076	0.071	0.060	1.062	0.289	[−0.064, 0.216]
SL accept	0.228	0.061	0.247	3.742	<0.001	[0.108, 0.348]
SL care	0.232	0.070	0.199	3.299	0.001	[0.094, 0.371]
SC positive	−0.101	0.065	−0.089	−1.563	0.119	[−0.229, 0.026]
SC negative	0.105	0.056	0.111	1.870	0.062	[−0.005, 0.215]

SL Self-love, *SC* Self-compassion, *Duration rel* Duration of the relationship, Gender: 1 = women, 2 = men

Passion: First model: $F_{(3, 456)} = 19.337$, $p < 0.001$, $R = 0.336$, $R^2 = 0.113$, adj. $R^2 = 0.107$; Second model: $F_{(8, 451)} = 16.917$, $p < 0.001$, $R = 0.480$, $R^2 = 0.231$, adj. $R^2 = 0.217$, change in $R^2 = 0.118$

Commitment: First model: $F_{(3, 456)} = 2.114$, $p = 0.098$, $R = 0.117$, $R^2 = 0.014$, adj. $R^2 = 0.007$; Second model: $F_{(8, 451)} = 8.419$, $p < 0.001$, $R = 0.360$, $R^2 = 0.130$, adj. $R^2 = 0.115$, change in $R^2 = 0.116$

Intimacy: First model: $F_{(3, 456)} = 6.378$, $p < 0.001$, $R = 0.201$, $R^2 = 0.040$, adj. $R^2 = 0.034$; Second model: $F_{(8, 451)} = 4.801$, $p < 0.001$, $R = 0.392$, $R^2 = 0.154$, adj. $R^2 = 0.139$, change in $R^2 = 0.113$

Table 3 Hierarchical regression analysis with the criterion of satisfaction with the relationship

	b	SE	Beta	t	*p*	95% CI
1						
Intercept	4.583	0.148		30.878	< 0.001	[4.291, 4.874]
Gender	− 0.078	0.074	− 0.049	− 1.054	0.293	[− 0.222, 0.067]
Duration rel	0.000	0.001	− 0.012	− 0.177	0.860	[− 0.002, 0.001]
Age	− 0.010	0.005	− 0.134	− 1.915	0.056	[− 0.021, 0.000]
2						
Intercept	0.952	0.234		4.076	< 0.001	[0.493, 1.411]
Gender	− 0.110	0.038	− 0.070	− 2.856	0.004	[− 0.185, − 0.034]
Duration rel	0.000	0.000	− 0.034	− 0.950	0.343	[− 0.001, 0.000]
Age	0.002	0.003	0.025	0.709	0.478	[− 0.003, 0.007]
SL contact	− 0.053	0.036	− 0.045	− 1.496	0.135	[− 0.124, 0.017]
SL accept	0.040	0.031	0.045	1.292	0.197	[− 0.021, 0.101]
SL care	− 0.017	0.036	− 0.016	− 0.488	0.626	[− 0.088, 0.053]
TLS intimacy	0.407	0.037	0.428	11.019	< 0.001	[0.334, 0.479]
TLS passion	0.180	0.031	0.217	5.757	< 0.001	[0.119, 0.242]
TLS commitment	0.343	0.037	0.329	9.340	< 0.001	[0.271, 0.416]
SC positive	− 0.066	0.032	− 0.061	− 2.031	0.043	[− 0.130, − 0.002]
SC negative	− 0.089	0.028	− 0.099	− 3.141	0.002	[− 0.145, − 0.033]

SL Self-love, *SC* Self-compassion, *Duration rel* Duration of the relationship, *Gender* 1 = women, 2 = men

First model: $F(3, 456) = 3.624$, $p = 0.013$, $R = 0.153$, $R^2 = 0.023$, adj. $R^2 = 0.017$

Second model: $F(11, 448) = 135.778$, $p < 0.001$, $R = 0.877$, $R^2 = 0.769$, adj. $R^2 = 0.763$, change in $R^2 = 0.745$

care, age, and the negative self-compassion scale significantly explained unique variance, $F(8, 451) = 16.916$, $p < 0.001$. For the aspect of intimacy, 15.4% ($R = 0.392$, adj. $R^2 = 0.139$) is explained by all predictors, whereas self-love acceptance and self-love care significantly explained the variance, $F(8, 451) = 10.242$, $p < 0.001$. For the aspect of commitment, 13% ($R = 0.360$, adj. $R^2 = 0.115$) is explained by all predictors. In contrast, self-love acceptance, self-love care, relationship duration, and the negative self-compassion scale were significant predictors, $F(8, 451) = 8.419$, $p < 0.001$. For all regressions, there was no multicollinearity (VIF < 0.3).

3.3 Prediction of satisfaction with the relationship

The results showed that for satisfaction with the relationship, all three predictors of love in a romantic relationship (passion, commitment, intimacy), both self-compassion scales, and gender, explain 76.9% ($R = .877$, adj. $R^2 = .763$), $F(11, 448) = 135.344$, $p < .001$, see Table 3.

4 Discussion

The main results demonstrated that all aspects of self-love are related to the three components of love in a romantic relationship. However, self-love acceptance and care were significant predictors of passion, intimacy, and commitment, whereas self-love contact had no significant predictive role. All three aspects of love in a romantic relationship —both elements of self-compassion and gender —predicted satisfaction in romantic relationships.

4.1 The relationship between self-love and love in a romantic relationship

The notion that self-love is a prerequisite for love in a romantic relationship is widely recognized. Nevertheless, this must be seen in a differentiated way. The two aspects of

self-love—acceptance and care—are particularly relevant, but not the aspect of self-love that involves contact. For this, our first hypothesis must be partly rejected. This result can be interpreted in light of the prototype theory of "love" [10]. Self-love and love in a romantic relationship share common aspects but also differ in some ways.

One reason self-contact may not play a significant role in predicting the different aspects of love in a romantic relationship is that self-contact encompasses the perception, encounter, and knowledge of oneself [18], all of which are cognitive processes. In expert validation, attention to the person and the perception of the person's body and emotions are considered fundamental, non-judgmental aspects of self-contact. Those non-judgmental cognitive processes are often associated with thinking of love in a romantic relationship. This finding is also in line with the positive illusion theory [29], suggesting that positive illusions and idealization, and not the partner's self-reported attributes, are important for love in a romantic relationship.

Another reason might be that self-acceptance and self-care have a judgmental component: "I accept myself as I am, and I care for myself." Thus, self-acceptance and self-care are more than just the perception of one's person, which is one of the relevant aspects of self-awareness. This judgmental component might also be applicable in measuring love in a romantic relationship. According to Sternberg [38], intimacy encompasses, among other things, promoting the well-being of others and expressing empathy for others; passion comprises, e.g., touching and kissing; and commitment can be described, among others, by fidelity and staying in a relationship through difficult times This means that the three aspects of love in a romantic relationship might include a judgment on emotional (intimacy, bodily (passion), and cognitive (commitment) levels. The study's results suggest a possible hierarchy in the model of self-love where self-contact differs from self-acceptance and self-care and is distinct from love in a romantic relationship. Until now, self-contact, self-acceptance, and self-care have been considered three equivalent components of self-love; however, self-contact might be the basis for the other two.

Only for the aspect of commitment in love in a romantic relationship, there was a significant positive predictor of duration length. This aligns with Sternberg's assumption that commitment often develops over time as the relationship progresses. The participants of our study were all in a relationship, with a mean value of more than five years. The mean values for commitment and intimacy in this sample were higher than those for passion, which highlights the importance of commitment in longer-lasting relationships.

In our sample, there was only a relationship between age and the aspects of love in a romantic relationship for passion. This is partly in line with the study of Sumter et al. [40], which demonstrated that older adults had lower values in passion and intimacy compared to middle-aged and younger adults. For intimacy, this effect failed to reach significance in our sample. The decline of passion during adulthood aligns with Falconi and Mallot [7]. However, our study sample was relatively young and including more middle-aged and older participants in further studies would be beneficial.

4.2 Satisfaction with the relationship

Passion, intimacy, commitment, self-compassion, and gender were all significant predictors of relationship satisfaction. The connection between the triangular theory of love and relationship satisfaction is understandable, as the three components express emotional, physical, and cognitive connectedness with the partner. However, the three

aspects are only some of the relevant factors. Former studies have shown that personality factors, emotional intelligence [20], and economic factors are important for relationship satisfaction [11].

The finding that self-compassion predicts relationship satisfaction adds to a study by Neff and Beretvas [31], which showed that individuals with self-compassionate partners were more likely to report satisfaction with their relationship. According to this, the level of self-compassion and that of the partner contribute to the satisfaction with the relationship. Additionally, there is no explanation for the lack of a relationship between self-love and relationship satisfaction. In the study by Henschke and Sedlmeier [17], self-compassion and self-love are highly correlated ($r = 0.68$). Self-love is also highly correlated with life satisfaction ($r = 0.60$) (Henschke and Sedlmeier [17]); therefore, one might have expected it also to predict partnership satisfaction.

4.3 Limitation

The first limitation is the use of self-assessment tools in a cross-sectional, correlational design, which does not warrant causal conclusions. Furthermore, the triangular theory of love is only one theory among others, and there are several forms of love besides love in a romantic relationship [34]. A third limiting factor is that the length of the relationship was measured. Because every person lives their relationship in their way and at their own pace, measuring the relationship's stage rather than its length seems a reasonable and insightful approach to understanding relationships [4]. Another limiting factor is the sample, which was relatively young, well-educated, and of lower income. Thus, this is a manageable sample.

4.4 Applications and future directions

From a theoretical perspective, the study contributes to the assumption that self-love and love in a romantic relationship share common aspects but also depend on the various aspects of self-love and love in a romantic relationship. Furthermore, only the aspect of self-compassion, but not self-love, among passion, intimacy, and commitment, predicted satisfaction with the relationship, clearly indicating that self-love is relevant for love in a romantic relationship but less relevant for the satisfaction of a relationship. This adds to the conceptual differentiation between self-compassion and self-love.

According to the initial results presented here, it would be promising to investigate whether self-love training can enhance love in a romantic relationship. Such training should include self-acceptance and self-care. It might be a fruitful method to add to partnership-based consulting. However, when it comes to achieving satisfaction in a romantic relationship, training in self-compassion should be included.

5 Conclusion

As Henschke and Sedlmeier [17] mentioned, self-love received much attention in public discourse rather than research. With the development of the German self-love questionnaire, the possibility was created to investigate the relationship between self-love and other psychological constructs, such as love in romantic relationships. In this study, we confirmed the public understanding that self-love is related to love in a romantic relationship, and we were able to differentiate between them. The components of self-care

and self-acceptance are particularly relevant to the various aspects of love in a romantic relationship, which are explored within the framework of the triangular theory of love.

Declarations

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References

1. Bode A. Romantic love evolved by co-opting mother-infant bonding. Front Psychol. 2023. https://doi.org/10.3389/fpsyg.2023.1176067.
2. Bode A, Kushnick G. Proximate and ultimate perspectives on romantic love. Front Psychol. 2021;12:573123.
3. Brass M, Heyes C. Imitation: is cognitive neuroscience solving the correspondence problem? Trends Cogn Sci. 2005;9(10):489–95. 10.1016/j. tics.2005.08.007.
4. Cassepp-Borges V. Should I stay or should I go? Relationship satisfaction, love, love styles and religion compatibility predicting the fate of relationships. Sex Cult. 2021;25:871–83. https://doi.org/10.1007/s12119-020-09798-2.
5. Clemente M, Candoy-Crego M, Bugallo-Carrera C, Reig-Botella A, Gomez-Cantorna C. Type of love as a function of satisfaction and age. PsyCH J. 2020;9:402–13. https://doi.org/10.1002/pchj.338.
6. Coroiu A, Kwakkenbos L, Moran C, Thombs B, Albani C, Bourkas S, Zenger M, Brähler E, Körner A. Structural validation of the self-compassion scale with a German general population sample. PLoS ONE. 2018;13(2):e0190771. https://doi.org/10.1371/journal.pone.0190771.
7. Falconi A, Mullet E. Cognitive algebra of love through the adult life. Int J Aging Hum Dev. 2003;57:277–92. https://doi.org/10.2190/NPQH-MDLX-F48U-AA35.
8. Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*power3 A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. Behav Res Methods. 2007;39(2):175–191. https://doi.org/10.3758/BF03193146.
9. Fehr B. Prototype analysis of the concepts of love and commitment. J Personal Social Psychol. 1988;55(4):557–79.
10. Fehr B, Russell J. The concept of love viewed from a prototype perspective. J Personal Social Psychol. 1991;60(3):425–38.
11. Fincham FD, Beach SRH. Relationship satisfaction. In: Vangelisti AL, Perlman D, editors. The Cambridge handbook of personal relationships. 1st ed. Cambridge University Press; 2006. pp. 579–94.
12. Fromm E. Selfishness and self-love. Psychiatry. 1939;2(4):507–23. https://doi.org/10.1080/00332747.1939.11022262.
13. Fromm E. The art of loving. Open road integrated media; 2013. (Original work published 1956). https://openroadmedia.com/ebook/the-art-of-loving/9781480402003
14. Goldstein J, Kornfield J. Seeking the heart of wisdom: the path of insight meditation. Shambala; 1987.
15. Hassebrauck M. ZIP – Ein instrumentarium Zur erfassung der zufriedenheit in paarbeziehungen. Z für Sozialpsychologie. 1991;22(4):256–9.
16. Hendrick SS. A generic measure of relationship satisfaction. J Marriage Fam. 1988;50:93–8.
17. Henschke E, Sedlmeier P. Selbstliebe-Fragebogen (SLQ). Under review; 2025.
18. Henschke E, Sedlmeier P. What is self-love? Redefinition of a controversial construct. Humanistic Psychol. 2023. https://doi.org/10.1037/hum0000266.
19. Hupfeld J, Ruffieux N. Validierung einer Deutschen version der Self-Compassion scale (SCS-D) [Validation of a German version of the self-compassion scale (SCS-D)]. Z Für Klinische Psychologie Und Psychother. 2011;40(2):115–23. https://doi.org/10.1026/1616-3443/a000088.
20. Jardine BB, Vannier S, Voyer D. Emotional intelligence and romantic relationship satisfaction: A systematic review and meta-analysis. Pers Indiv Differ. 2022;196:111713. https://doi.org/10.1016/j.paid.2022.111713.
21. Katz J, Beach SRH. Looking for love? Self-verification and self-enhancement effects on initial romantic attraction. Pers Soc Psychol Bull. 2000;26(12):1526–39. https://doi.org/10.1177/01461672002612007.
22. Kowal M, Sorokowski P, Dinic BM, Pisanski K, Gjoneska B, et al. Validation of the short version (TLS-15) of the triangular love scale (TLS-45) across 37 languages. Arch Sex Behav. 2023. https://doi.org/10.1007/s10508-023-02702-7.
23. Lee JA. A typology of styles of loving. Pers Soc Psychol Bull. 1977;3(2):173–82. https://doi.org/10.1177/014616727700300204.
24. Leiner, D. J. (2019). SoSci Survey (Version 3.1.06) [Computer software]. Available at https://www.soscisurvey.de.
25. Lemieux R, Hale JL. Intimacy, passion, and commitment among married individuals: further testing of the triangular theory of love. Psychol Rep. 2000;87(3):941–8. https://doi.org/10.2466/pr0.2000.87.3.941.
26. López A, Sanderman R, Ranchor AV, et al. Compassion for others and self-compassion: Levels, correlates, and relationship with psychological well-being. Mindfulness. 2018;9:325–31. https://doi.org/10.1007/s12671-017-0777-z.
27. Martz JM, Verette J, Arriaga XB, Slovik LF, Cox CL, Rusbult CE. Positive illusion in close relationships. Personal Relationships. 1998;5(2):159–81. https://doi.org/10.1111/j.1475-6811.1998.tb00165.x.

28.   Muloko E, Limbu R, Anakaka D. The difference of the triangular theory of love in married women judging from the length of marriage. J Health Behav Sci. 2020;2(4):264–76. https://doi.org/10.35508/jhbs.v2i4.2808.

29.   Murray SL, Holmes JG, Griffin DW. The benefits of positive illusions: idealization and the construction of satisfaction in close relationships. J Personal Soc Psychol. 1996;70(1):79–98. https://doi.org/10.1037/0022-3514.70.1.79.

30.   Neff KD. Self-compassion: an alternative conceptualization of a healthy attitude toward oneself. Self Identity. 2003;2(2):85–101. https://doi.org/10.1080/15298860309032.

31.   Neff KD, Beretvas SN. The role of self-compassion in romantic relationships. Self Identity. 2012;12(1):78–98. https://doi.org/10.1080/15298868.2011.639548.

32.   Quintard V, Jouffe S, Hommel B, Bouquet CA. Embodied self-other overlap in romantic love: a review and integrative perspective. Psychol Res. 2020;85:889–914. https://doi.org/10.1007/s00426-020-01301-8.

33.   Rinne P, Lahnakoski JM, Saarimäki H, Tavast M, Sams M, Henriksson L. Six types of loves differentially recruit reward and social cognition brain areas. Cereb Cortex. 2024. https://doi.org/10.1093/cercor/bhae331.

34.   Rinne P, Tavast M, Glerean E, Sams M. Body maps of loves. Philosophical Psychol. 2025;38(4):1453–75. https://doi.org/10.1080/09515089.2023.2252464.

35.   Rosseel, Y. lavaan: An R package for structural equation modeling. J Stat Softw. 2012;48(1):1–36.

36.   Solimar V. The nature and experience of self-love (Publication No. 8625588); 1987. [Doctoral dissertation, California Institute of Integral Studies]. Bell & Howell Information Company.

37.   Soyer M, Gizir CA. Triangular love among young adults: the predictive role of basic personality traits and self-esteem. Int J Eurasian Educ Cult. 2022;7(16):474–86. https://doi.org/10.35826/ijoecc.556.

38.   Sternberg RJ. A triangular theory of love. Psychol Rev. 1986;93(2):119–35. https://doi.org/10.1037/0033-295x.93.2.119.

39.   Sternberg RJ. Construct validation of a triangular love scale. Eur J Soc Psychol. 1997; 27:313–335.

40.   Sumter SR, Valkenburg PM, Peter J. Perceptions of love across the lifespan: differences in passion, intimacy and commitment. Int J Behav Dev. 2013;37(5):417–27. https://doi.org/10.1177/0165025413492486.

41.   Tamini BK, Bojhd F, Yazdani S. Love types, psychological well-being and self-concept. J Indian Acad Appl Psychol. 2011;37(1):169–78.

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