



# Love and Relationship Satisfaction as a Function of Romantic Relationship Stages

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## Abstract

The strong influence of the components of love in the relationship satisfaction is very described in the scientific literature. The current cross-sectional study evaluated the associations between participants' love and relationship satisfaction across different phases of a relationship. For this propose, we recruited a sample of 1102 Brazilian participants, including 756 (68.6%) women and 346 (31.4%) men (mean age = 25.52 years,  $SD = 7.98$ ), from 12 Brazilian states and the Federal District. Participants' relationship was coded in order of bond levels: 0 - unrequited relationship, 1 - non-established relationship, 2 - dating, 3 - living together or engaged, and 4 - married. A linear regression analysis indicated that the influence of passion on relationship satisfaction is higher, and the influence of commitment is lower, in more advanced phases of one's relationship. Multilevel regression showed the role of bond, interacting with the dimensions of love on the prediction of relationship satisfaction. The associations between types of love and relationship satisfaction differ across relationship stages. While the influence of passion and intimacy on relationship satisfaction grows across the relationships' stages, the influence of commitment decreases. This study also suggests that type of relationship can be understood as an ordinal variable, instead of categorical.

**Keywords** Love · Relationship satisfaction · Triangular Love Scale · Multilevel modeling

Across the body of literature on romantic relationships, broad consensus exists around the importance of both love and relationship satisfaction to relationship strength and

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**Highlights of the submitted contribution** This manuscript presents the influence of love on relationship satisfaction considering relationship stages. This manuscript also presents an innovative way to consider the variable type of relationship, understanding it as an ordinal variable. This method allowed to verify how the influence of the components of love was developed across the relationships stages and can be applied to future researches.

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longevity (Cusack et al., 2012; de Munck & Kronenfeld, 2016; Lemieux & Hale, 2000; Sorokowski et al., 2017). For example, greater relationship dissatisfaction (or conversely, lower satisfaction) has been associated with increased propensity for extra-marital affairs (Norgren et al., 2004), and ultimately, with relationship dissolution (Le et al., 2010). In dating relationships, lesser satisfaction over time has been predictive of dissolution, while continued satisfaction often resulted in increased commitment and marriage (Sprecher, 1999; Sprecher & Felmlee, 1992). Similarly, romantic love has been linked to relationship satisfaction, particularly in long-term committed relationships (Acevedo & Aron, 2009; Graham, 2011). In cohabiting couples, stronger feelings of love towards one's partner predict intent to marry that partner (Wiik et al., 2010).

Relationship satisfaction has been broadly defined as a subjective assessment of the “goodness” or “badness” of a relationship (Gable & Poore, 2008), compared to other's relations and experiences (Wachelke et al., 2004). The construct is frequently used to study different types of romantic relationships (e.g., committed, long-term relationships and uncommitted, short-term relationships) (Hendrick, 1988; Le et al., 2010), and many such investigations centered around relations between love for a relationship partner and satisfaction within the relationship (Graham, 2011; Masuda, 2003). Love styles, self-enhancement, personality, interaction patterns, emotional intelligence, partner support, depression, and economic factors are some determinants of relationship satisfaction (Farooqi, 2014), which can be classified in behavioral, cognitive, and emotional factors (Fincham & Beach, 2006).

Relationship status is important to relationship satisfaction. Married couples tend to be more satisfied with their relationship than unmarried cohabiters or re-partnered couples. More specifically, transitions into marriage are special periods that enhance relationship satisfaction (Lorber et al., 2015). Dating couples who report more relationship satisfaction are more likely to enter marriage (Keizer, 2014).

Love has been difficult to define operationally (Graham, 2011). A common approach to defining love is to perceive it as an attraction to another person (Langeslag et al., 2013), comprised of several central elements that varies across the different theories (Fehr & Russell, 1991). Sternberg (1986, 1988) triangular theory of love, for example, defines love as the conjunction of the components: intimacy, passion, and commitment. Sternberg (1986, 1988) original conceptualization has been credited as representing a good taxonomy of components comprising an overarching construct of romantic love (Aron & Westbay, 1996; Cassepp-Borges & Pasquali, 2012; Sorokowski et al., 2020). In his depiction of romantic love, *Intimacy* has been characterized by feelings of closeness and connection in the relationship. *Passion* reflected physical and sexual attraction, romance, the desire to be together, and excitement towards a partner. Finally, *Commitment* referred to the certainty of loving and being loved and the desire to maintain the relationship for the long-term.

## The Evolution of Love

Sternberg (1986) hypothesized that components of love, as measured by the Sternberg (1997) Triangular Love Scale (STLS), have different courses in the evolution of relationships, with certain trajectories predicting relationship success. That is,

intimacy is expected to increase throughout the relationship, with the potential to rise and fall for short periods of time. In contrast, passion often characterizes early phases of relationship development, and may dissipate over time or produce opposite feelings—like hate. Commitment is a dimension that takes longer to emerge in the relationship but tends to remain stable once it emerges. These descriptions were corroborated by Wojciszke (2002). However, Sternberg (1986) did not present empirical evidence to substantiate his theoretical expectations.

Across several cross-sectional analyses, Sternberg (1986) predictions have found relative support. For example, Acker and Davis (1992) found that while commitment was indeed higher for married couples, a decline in passion over time was only observed in female participants. In another analysis, all three STLS components were found to start at low levels in the beginning of relationships, and then increase over time, with intimacy and commitment attaining high levels even in short-term relationships (Yela, 1997). Furthermore, Yela (1997) found that, contrary to Sternberg (1986) expectations, passion developed slowly, not reaching the same levels as the other dimensions of love. Similarly, several studies have confirmed that higher early relationship commitment levels result in higher long-term commitment for participants who remain in their relationships, while initially low commitment levels are associated with relationship instability and dissolution (Dailey et al., 2013; Duemmler & Kobak, 2001).

## **The Interplay of Love and Relationship Satisfaction**

As expected, several studies point to a strong relation between love (and the constructs of which it is comprised) and relationship satisfaction (Cassepp-Borges & Teodoro, 2009; Hendrick & Hendrick, 1989; Keizer, 2014; Lemieux & Hale, 2000; Masuda, 2003). For instance, Lemieux and Hale's work (Lemieux & Hale, 2000) demonstrated that the STLS components (i.e., passion, intimacy, and commitment) are predictive of relationship satisfaction. In men, STLS components explained 73% of the total variance in relationship satisfaction scores, where commitment was the best predictor, followed in order by passion and intimacy. In contrast, 87% of the variability in women's relationship satisfaction scores were predicted by the STLS—though the order of the constructs' explanatory power was reversed, ranking intimacy, passion, and commitment. Across a meta-analysis with 81 studies, Graham et al. (2011) similarly found a strong, positive association between love and relationship satisfaction. Using STLS components to predict relationship satisfaction in dating undergraduates, Madey and Rodgers (2009) reported that commitment and intimacy mediated the relation between secure attachment and relationship satisfaction, while passion was directly predictive of relationship satisfaction.

## **Relationship Stages**

Relationship status has been used in multiple studies. Unfortunately, many of these studies use their own categorization of relationship status. For example, the social network Facebook allows the users to choose between 11 options,

including “single,” “in a relationship,” “engaged,” or “married”, a system that has been used in studies (Orosz et al., 2015). Natividade et al. (2022) used the categories self, filial, parental, romantic, and friends for love, but a cluster analysis suggested that just three groups (self, romantic/friends, filial/parental) can summarize the love relationships. Many studies treat relationship status as binary, merging the various categories into two: “have a romantic partner” and “singles” (Adamczyk, 2017; Burchell & Ward, 2011). Treating relationship status as a categorical variable loses the important feature of describing the various phases in the growth of relationships.

Few studies have used relationship status considering the various stages, although some exceptions exist. For example, Guerrero and Andersen (1994) used six relationship stages: (1) not dating, (2) on a first date, (3) dating casually, (4) dating seriously, (5) marriage-bound, or (6) married. The proposal of Wojciszke (2002) was to create six stages, based on the levels of intimacy, passion, and commitment: (1) falling in love, (2) romantic beginning, (3) complete love, (4) companionate love, (5) empty love, and (6) dissolution. Other studies (Lemieux & Hale, 2002; Yela, 1997) have explored change in love and relationship satisfaction across relationship stages. Furthermore, despite the association between love and satisfaction, and the research evidence of phase-specific changes (or trajectories) in both constructs (Karney & Bradbury, 1997), phase-specific relations between love and relationship satisfaction have rarely been explored.

## The Current Study

In this paper, we are interested in how intimate, committed, and passionate love differentially predict relationship satisfaction as a function of relationship type. Bond order is meant to function as a behavioral indication of increasing commitment to a romantic partner, starting off as low commitment relationships (e.g., casual relationships and dating) and transitioning into more committed relationships (e.g., cohabitation, engagement, and marriage) as partners’ mutual commitment to each other increases. However, the order of relationship progression is not a static rule. In some contexts, increased commitment in dating could result in transitioning to engagement, to cohabitation, or, in some cases, even directly into marriage.

The current research addresses these gaps and offers new insights into the developmental nature of romantic relationships. Along with shifts in the levels of love, the study presents an attempt to capture associations between differential compositions of love and relationship satisfaction across relationship stages. This study will address the issue of how to categorize (or order) the types of relationships. Previous studies showed how the types of love are associated with relationship satisfaction, but researches doing this analysis considering relationship stages are unknown.

## Hypothesis

This study raised the following hypothesis:

1.5.1 Bond, intimacy, passion, and commitment will have a positive influence in the relationship satisfaction.

1.5.2 The components of love will have different levels of association with relationship satisfaction across relationship stages. Considering that we found no prior study evaluating the trajectories of regression coefficients instead of means, the directions of these changes are exploratory.

## Method

### Participants

Participants in this study included 1102 individuals from 12 Brazilian states and the Federal District (mean age = 25.52 years,  $SD = 7.98$ ). Data collection was performed in at least one-third of the units of the Federation of each of the five geographic regions of Brazil. They were recruited by convenience in their colleges, workplaces, or neighborhoods, and did not receive any financial support to participate. The sample included 756 (68.6%) women and 346 (31.4%) men. Participants reported their sexual orientation (heterosexual:  $n = 1,028$ , 96.2%), relationship status (single:  $n = 775$ , 70.7%; married:  $n = 221$ , 20.2%), and whether they had children (no children:  $n = 867$ , 79.1%). The sample size was big to obtain sufficient participants in diverse subgroups.

### Measures

We used the following measures. The descriptive statistics and the reliability analysis of the scales are available in Table 1.

**Table 1** Descriptives and reliabilities analysis for RAS and STLS

	<i>M</i>	<i>SD</i>	Range	$\alpha$	Item-total correlation mean (range)
RAS	5.26	1.16	1–7	.91	.73 (.63–.85)
STLS-R – Intimacy	7.15	1.72	1–9	.87	.66 (.52–.80)
STLS-R – Passion	7.41	1.51	1–9	.85	.58 (.45–.68)
STLS-R – Commitment	6.43	2.04	1–9	.87	.66 (.42–.79)
STLS-R – Love	6.98	1.54	1–9	.95	.68 (.48–.83)

*M* Mean, *SD* standard deviation,  $\alpha$  Cronbach's alpha

## Demographic Questionnaire

The first instrument was a demographic questionnaire containing questions as sex, sexual orientation, date of birth, relationship length, relationship status, and having children. To answer the question about type of relationship, participants were requested to choose a person who they love(d) to answer the questions and the following scales thinking on him(her). The variable bond was extracted from the variable type of relationship.

## Relationship Assessment Scale (RAS)

Participants completed an adapted version of the RAS (Hendrick, 1988), modified for Brazilian participants (Cassepp-Borges & Pasquali, 2011). The scale has 7 items (e.g., How good is your relationship compared to most?) measured in a Likert scale ranging from 1 to 7.

## Sternberg's Triangular Love Scale, Reduced (STLS-R)

Participants completed a reduced version (Cassepp-Borges & Pasquali, 2014) of the STLS (Sternberg, 1997), adapted for Brazilian participants from the complete, original version (Cassepp-Borges & Pasquali, 2012; Cassepp-Borges & Teodoro, 2007). The reduced version is composed of 20 items, extracted from 45 items of the complete STLS, evaluating intimacy (e.g., I communicate well with \_\_\_\_\_, 7 items), passion (e.g., I especially like physical contact with \_\_\_\_\_, 6 items), and commitment (e.g., I cannot imagine ending my relationship with \_\_\_\_\_, 7 items). All the items have a blank space, that should be filled with the name of the beloved person of the respondent. Participants answered using a Likert scale with nine points, varying from 1 ("not at all") to 9 ("Extremely").

## Data Analysis

### Relationship Stages

Participants were asked to mark the option that represented their relationship type (see Table 2). Participants who answered the questionnaire based on other types of relationships (e.g., the beloved was a parent or sibling,  $n = 447$ ) were excluded from further analyses, as these relationships were not the focus of this study.

The variable relationship type considered the following categories: (a) unrequited love, with low (or even null) romantic bond with the beloved, (b) non-established relationships (e.g., new or yet-to-be defined relationship), (c) dating, (d) cohabitation (unmarried romantic), (e) engagement, and (f) marriage. However, it is reasonable to group the categories cohabitation and engagement together, as representing a similar level of bond. Merging these two groups, we created an ordinal variable "bond," growing from unrequited love to marriage. The inclusion of a group with unrequited love can be questioned, as this relationship stage does not necessarily indicate the beginning of a relationship. Unrequited relationship is a kind of love with the minimum

**Table 2** Participants' reference person to answer the study

Type of relation	<i>N</i>	Within group %	Total %
Platonic love (unrequited relationship)	118	10.7	10.7
He/she knows about my feelings	49	41.5	4.4
I suspect he/she knows about my feelings	43	36.4	3.9
He/she do not know about my feelings	21	17.8	1.9
Non-stable relationship	155	14.1	14.1
Eventual relationship (hook up)	73	47.1	6.6
Still I do not know if I'm dating	26	16.8	2.4
No commitment relationship	56	36.1	5.1
Combined between the couple	29	51.8	2.6
No combined between the couple	19	33.9	1.7
Stable relationship	829	75.2	75.2
Dating	473	57.1	42.9
Living together	86	10.4	7.4
Fiancé	55	6.6	3.6
Married	215	25.9	19.5
Civil	88	40.9	8.0
Religious	5	2.3	0.5
Both	111	51.6	10.1
Total	1102		100.0

Not all people that specify the first level specify the second or the third level, reason why the sum of the lower level is lower than the higher levels

possible level of bond. It is important to keep this group on the sample as a starting point. Love does not need a relationship to exist or even to be strong. The same argument is plausible to all categories (i.e., dating does not mean a beginning of an engagement, for example). Considering all types of relationships, we argued that an ordinal variable seems reasonable to capture the growth in bond. While this order does not necessarily represent the participants' perceptions of their relationship bond, nor account for differences in relationship development which may be experienced by some participants, this is a useful approach to analyze the various groups, and has been previously used in past research (e.g., Cassepp-Borges & Teodoro, 2009). We also decided to use relationships' stages instead of relationship length because of the weak correlations between relationship length with love ( $r = .103, p < 0,001, R^2 = .01$ ) or relationship satisfaction ( $r = .176, p < 0,001, R^2 = .03$ ).

## Linear Regression

First, we performed one multiple linear regression for each of the five bond level groups, with relationship satisfaction as the dependent variable and love components as the independent variables in IBM SPSS Statistics 25®, considering the types of relationships. Second, we used a multilevel regression. Here, we also considered relationship satisfaction as the dependent variable but participants were now

grouped by type of relationship. Intimacy, passion, commitment, sex, and bond level were the independent variables. Multilevel regression was conducted using the package lme4 (Bates et al., 2015) in R Studio.

## Procedure

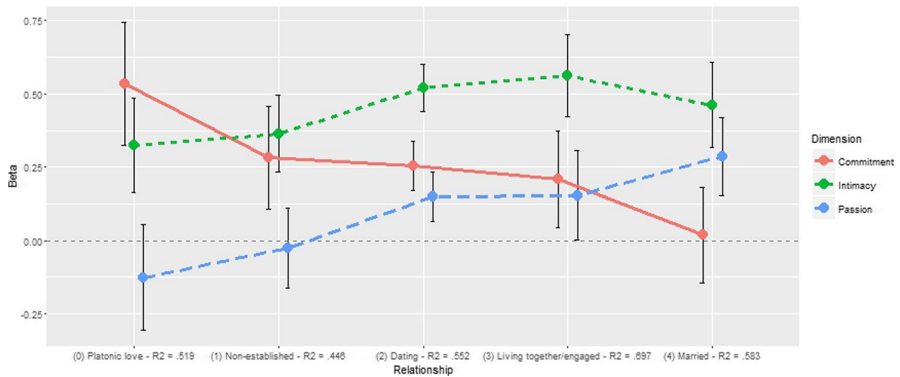
This research was approved by the ethics committee of the Universidade de Brasília, Brazil, under the title “Amor: da adaptação de testes existentes à criação de um novo instrumento de mensuração.” After completing a brief demographic questionnaire, participants were instructed to select one person they love(d) and answer all the survey questions thinking about that person. The questionnaires were administered using pen and paper. The type of loved person was used to group participants into relationship categories. This resulted in the cross-sectional categorization of participants’ ratings of love and relationship satisfaction for relationship types that should represent increasing levels of relationship establishment, investment, and commitment. Participant choices of beloved person (by type) are detailed in Table 2.

## Results

We examined the association of intimacy, passion, and commitment with relationship satisfaction using linear regression, separately for each group. To evaluate for potential differences in the relation between love subscales and relationship satisfaction as a function of bond, we carried out the analyses as a function of the bond-magnitude in the relationship. We used correlations to examine if the regression coefficients of the various components of love predicting relationship satisfaction have similar trajectories. The coefficient for intimacy was highly related to relationship satisfaction during the entire relationship cycle, with a tendency to increase across the stages. Passion had the smallest relation with relationship satisfaction, but the trajectory of the coefficient for intimacy is similar ( $r = .772$ ,  $p = .126$ ,  $R^2 = .596$ ) to passion coefficient. On the other hand, the regression coefficient for commitment decreases across the stages, whereas the coefficients for passion and intimacy increase. The correlations of commitment regression coefficients with passion ( $r = -.938$ ,  $p = .126$ ,  $R^2 = .880$ ) and intimacy ( $r = -.610$ ,  $p = .275$ ,  $R^2 = .372$ ) coefficients were negative. The correlations of bond order and the coefficients for passion ( $r = .975$ ,  $p = .005$ ,  $R^2 = .951$ ) and commitment ( $r = -.945$ ,  $p = .015$ ,  $R^2 = .893$ ) were strong and significant, but in opposite ways. Bond order had a positive non-significant correlation with the coefficient for intimacy ( $r = .743$ ,  $p = .151$ ,  $R^2 = .552$ ). These effects are strong, suggesting a clear tendency across the stages. Surprisingly, besides the small number of groups (five), some correlations are significant (Fig. 1).

Recognizing that the association between love and relationship satisfaction can vary between different groups, we performed a multilevel model. Because of the listwise exclusion method, this analysis had 1093 participants nested in six groups. The intra-class correlation (ICC) was .34, estimating that approximately 34% of the variability in relationship satisfaction was related to the variation between groups.





**Fig. 1** Cross-sectional evolution of the contribution of the 3 components of love in the explanation of relationship satisfaction. Note: The values in Fig. 1 should not be interpreted as means. They represent standardized beta values of independent variables for each group in the regression in which relationship satisfaction is the dependent variable. Error bars represents 95% confidence interval

This value justifies the need of the multilevel modeling, as regular linear regression does not consider these group effects.

Table 3 presents the results from the multilevel regression. All the variables were centered based on their respective means. For level 2 (group) variables, bond represents the level of bond attributed to the type of relationship (unrequited relationship = 0, non-established relationship = 1, dating = 2, living together or engaged = 3, married = 4). This variable is the same as type of relationship, except for merging the groups living together and engaged. Intimacy, passion, commitment, and sex values were measured at the individual level.

The results of this model indicate that the effects of the group variables are high, whereas the random effects are small. Considering the three dimensions of love (Sternberg, 1986) on average, the biggest change in the outcome variable is commitment, followed by intimacy. Passion had a negative and non-significant relation with relationship satisfaction. This unexpected effect is probably a suppression, considering the multicollinearity between the predictors and the inclusion of unrequited love participants. The effect for sex was significant. According to our results, women had an average of .11 points below the intercept in relationship satisfaction, whereas men had an average of .11 points above the intercept. The interaction of passion and bond, however, had a positive and significant effect. The interaction between bond and commitment was also significant, but with a negative sign. Finally, the variable bond had a significant effect that increased relationship satisfaction.

## Discussion

As hypothesized, we found correlations between the love factors. Several studies support the hypothesis that the STLS factors correlate with each other and with satisfaction relationship (Cassepp-Borges & Teodoro, 2007, 2009; Hendrick &

**Table 3** Fixed and random effects for dimensions of love and bond explaining Relationship satisfaction in a multilevel regression model

Fixed effects	Estimate	SE	<i>t</i> -value	<i>p</i> -value		
(Intercept)	4.94	.09	53.17	<.001		
Intimacy	.23	.04	5.66	.004		
Passion	-.06	.04	-1.78	.103		
Commitment	.26	.03	8.27	<.001		
Bond	.17	.03	4.98	.003		
Sex (female)	-.11	.04	-2.56	.010		
Intimacy * Bond	.03	.02	1.87	.109		
Passion * Bond	.06	.02	4.09	<.001		
Commitment * Bond	-.06	.01	-4.30	<.001		
Random effects	Variance	SD.	Correlation with intercept	Correlation with intimacy	Correlation with passion	
(Intercept)	.008	.09				
Intimacy	.001	.04	.85			
Passion	<.001	.02	.93	.99		
Commitment	<.001	.01	.95	.65	.77	
Residual	.453	.67				

*SE* standard error, *SD* standard deviation

Hendrick, 1989; Lemieux & Hale, 2000; Masuda, 2003). The correlation between love and relationship satisfaction found in this paper is also an evidence of convergent validity of both scales (Urbina, 2004).

Love is a good predictor of relationship satisfaction. Our results showed high values of predicted variance, indicating the strength of this association. For example, love predicted more than 50% of the variance in relationship satisfaction in established relationships, and more than 30% in any other sample, like unrequited relationships or hookups.

Lemieux and Hale (2000) also sought to explain the association between relationship satisfaction (measured by RAS) and the three dimensions of love, but with a sample of participants with an average of 15.1 years of marriage. The dimensions appeared in the order commitment, passion, and intimacy for men, and intimacy, passion, and commitment for women. The study also reported higher levels of variance explained (73% for men and 87% for women), compared with the present study. In our study, the role of passion was suppressed by the presence of participants in unrequited relationships. However, we reinforced the strong role of love in the explanation of relationship satisfaction.

The results from multilevel modeling are consistent with the regression coefficients levels across relationship type points (Fig. 1). The positive interaction between bond and passion, the negative interaction of bond and commitment, and the non-significant effect of the interaction of bond and intimacy fit with the apparently linear trajectory of these three dimensions. All the three dimensions of love are important and have their particular contribution to relationship satisfaction.

However, we should consider that passion interacts with bond, so the association of passion and relationship satisfaction depends on bond. Higher levels of passion in a non-stable relationship can lead to dissatisfaction. It is also important to note that the higher levels of satisfaction for males, relative to females, is congruent with a meta-analytic study (Jackson et al., 2014).

Furthermore, similar to what was found by Cassepp-Borges and Teodoro (2009), passion was negatively related to relationship satisfaction when considering the entire sample and subsamples of non-established relationship or forms of love that do not involve a reciprocal relation with a romantic partner. However, the association was positive when considering individuals involved in a romantic relationship (dating or higher level of bond). The negative sign of the passion coefficients in different groups is likely a suppression effect, caused by multicollinearity (Abbad & Torres, 2002). The probability of finding a suppression effect is higher when the correlation among the predictor increase (Friedman & Wall, 2005). This effect likely happened because the three dimensions of love were highly correlated. However, it is important to keep the three components of love in the model, in order to understand the relation of triangular theory of love (Sternberg, 1986) and relationship satisfaction. Moreover, the three components had positive regression coefficients when considering established relationships. Passion can lead to dissatisfaction in non-established relationships. One clue to explain the importance of passion can be found in the work of Madey and Rodgers (2009). In a sample of students involved in a romantic relationship, while intimacy and the commitment mediated the relation between attachment and relationship satisfaction, passion and secure attachment had direct paths to relationship satisfaction.

In spite of the relation between bond and commitment, the difference of these two variables is that bond is an observed behavior, while commitment is a perception of the relationship. Bond depends on the decision of the two partners, whereas commitment is associated just with the participants' thoughts. Understanding the difference between both variables is crucial to understand why the commitment regression coefficients (a relation between cognitive commitment and relationship satisfaction) decrease while bond levels (a behavior) increase. The decrease in the association between commitment and relationship satisfaction as a function of the increase in the commitment in the relationship is intriguing. A plausible explanation for this is that, if the commitment is present in a verbal contract (in the case of dating), in an alliance (in the case of engagement), or in a document (in the case of the marriage), the importance of the commitment in the feelings of the partners decreases. Of course, we are not affirming that commitment is not important (the correlation between commitment and relationship satisfaction is still higher than .6 for all groups in an established relationship). Our argument is that, when the commitment in the relationship is established, or reached a ceiling, adding passion can increase relationship satisfaction. The importance of commitment is shared with passion. On the other hand, in the beginning of the relationship, when the commitment is lower, thinking about this would increase satisfaction.

The importance of intimacy over the other two dimensions had been constantly replicated in previous studies (Dela Coleta, 1991; Hassebrauck & Fehr, 2002; Madey & Rodgers, 2009). For example, Gottman and Silver (1994) created a theory

in which he previews the success or the failure of a marriage with accuracy based on criticism, contempt, defensiveness, and stonewalling. All of these, called four horsemen of the apocalypse, are features related to intimacy. This dimension deserves special consideration in all phases of relationship development. The causes for success in the relationship of the sample, however, may be strongly related to the three dimensions of love (Sternberg, 1986, 1988).

As expected based on the literature (Cassepp-Borges & Teodoro, 2009; Willi, 1997), the levels of love were higher when bond was higher. On the other hand, it is important to note the cross-sectional nature of our data: dissatisfied couples will finish their relationship in prior stages, decreasing the means of satisfaction in the initial cohorts (Berscheid, 2010). This effect was expected for the means, but we also examined changes in the regression coefficients across relationship phases. Our methodology is limited to address this question considering the regression coefficients. Other possible limitation of the cross-sectional design includes not being able to examine whether the scales kept the same properties in different groups. The RAS, for example, may be more reliable for well-established relationships (Graham et al., 2011). Our sample is relatively young, and the results cannot assess long-term marriages or marriages with children (Kowal et al., 2021). The sample is predominantly comprised of college students, with a significant proportion being females. These demographic aspects should be taken into consideration when extrapolating the findings to a broader population. The convenience procedure for sample recruiting and the use of sectional data instead of longitudinal data are limitations of these findings.

## Implications and Applications

In this study, we attempted to separate relationship types when studying the association between love and relationship satisfaction. Despite being treated in the literature as a categorical variable, we conceptualized relationship type as an ordinal variable representing the degree of bonding and commitment they tend to involve. Although seemingly reasonable, this solution has the limitations of converting a categorical variable into an ordinal one, which is impossible (Pasquali, 2004). To be more precise, however, in this study we did not convert a categorical variable into an ordinal, but rather we recognized that we can extract more information from the variable type of relationship if we perceive an ordinal property. This was important to draw conclusions about a potential sequence underlying the different phases of one's relationship. These categories are broader but similar to those used ("dating," "living with," and "married") by Davies and Shackelford (2015). Obviously, our cross-sectional design is more limited than a longitudinal design. However, conducting a longitudinal study with the variable type of relationship is hard because of the nature of the variable, and there are not many studies doing so, although some do exist, such as Sprecher and Felmler (1992) or Long et al. (1999).

This study helped to understand the importance of components of love on relationship satisfaction. In sum, our results indicate that relationship satisfaction depends on the stage of relationship. Some studies considered just groups of people involved in a relationship (Gable & Poore, 2008; Wachelke et al., 2007),

or just a specific group like marriage (Contreras et al., 1996; Lemieux & Hale, 2000; Neff & Karney, 2005; Norgren et al., 2004; Willi, 1997). Other studies divided the sample into groups of different types of relationship (Cassepp-Borges & Teodoro, 2009; Hassebrauck & Fehr, 2002; Lemieux & Hale, 2002). We considered that it is important to research aspects of love and relationship satisfaction in prior stages than dating. Then, love can be examined in every stage. The Triangular Theory of Love (Sternberg, 1986, 1988) should fit to all kinds of love (Sternberg, 1997). As each person live their relationship in their own way and their own time, measuring the stage of the relationship instead of the length of the relationship seems a reasonable and insightful approach to understand relationships. We encourage future researches to consider the potential ordinal property of relationship stages.

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**Data Availability** The database is available under request to the first author.

**Code Availability** The code is available under request to the first author.

## Declarations

**Consent to Participate** Informed consent was obtained from all individual participants included in the study.

**Conflict of Interest** The authors declare no competing interests.

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