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Love's Paradox: Unraveling the Dynamics of Love and Psychological Intimate Partner Violence Against Women

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Abstract

This study investigates the connection between psychological intimate partner violence (IPV) and love components in relationships, surveying 1,061 women. Using Sternberg's Triangular Love Scale, participants assessed Intimacy, Commitment, and Passion, revealing four clusters ("Moderate Love", "No Love", "Low Passion" and "Mostly Passion"). ANCOVA analysis, with age as covariate, highlighted significant differences in Intimacy, Commitment, and Passion among clusters, validating the classification. Surprisingly, the "Mostly Passion" cluster exhibited higher severe psychological aggression and specific controlling behaviors than the "Low Passion" group. These findings emphasize the intricate relationship between love components and psychological IPV, suggesting tailored interventions for healthier relationships and victim support.

Keywords: violence against women, psychological aggression, controlling behavior by partner, Sternberg's triangular love theory, cluster analysis.

Main Text

Violence against women, particularly intimate partner violence (IPV), is a major public health problem and a violation of women's human rights. Worldwide, almost one third (27%) of women aged 15-49 years who have been in a relationship reported that they have been subjected to some form of physical and/or sexual violence by their intimate partner (World Health Organization, 2021). IPV encompasses various forms of harm caused by an intimate partner, which includes not only physical and sexual violence but also psychological abuse and controlling behaviors (Breiding et al., 2015; Kyle, 2023; Miller & McCaw, 2019; World Health Organization, 2021).

Psychological violence within couples involves behaviors aimed at controlling, manipulating, or inflicting emotional harm without necessarily resorting to physical force. While physical and sexual violence are more overt forms of harm, psychological abuse, such as verbal aggression, threats, intimidation, and isolation, constitutes a significant aspect of the harm inflicted within an intimate partnership (Johnson, 2006; O'Leary, 1999). Psychological IPV against women seems to be widespread, as a survey conducted across 28 countries members of the European Union found that the average prevalence of psychological IPV against women was 43%, ranging from 31% in Ireland to 60% in Latvia (Martín-Fernández et al., 2019). These forms of abuse can have severe and lasting effects on victims' mental health and well-being. Indeed, studies reported that psychological IPV was associated with poorer physical and mental health, including a number of ailments such as disability preventing work, chronic pain, various gut problems, stammering, etc. (Coker et al., 2000; Dutton & Goodman, 2005). Studies also reported association between psychological IPV and detrimental consequences on women's sexual health, particularly susceptibility to human immunodeficiency virus and other sexually transmitted infections, through various sexual risk behaviors (Coker et al., 2000; Overstreet et al., 2015). In

addition, a study in Spain reported that mothers with psychological IPV avoided breastfeeding to feed their new babies (Martin- de- las- Heras et al., 2019).

Determinants of psychological IPV against women remain poorly defined. Studies in Turkey and Iran reported an association of psychological IPV with husband/partner's addiction, notably to alcohol (Alkan et al., 2022; Mohammadbeigi et al., 2019). Additionally, other studies have begun to investigate the dynamics of love and psychological IPV within couples (DeWall et al., 2014; Kearney, 2001; Pocock et al., 2020; Rusbult & Martz, 1995). Contrary to popular belief, love does not serve as an inherent buffer against psychological violence. Indeed, studies revealed that abusive relationships can involve feelings of love, creating a complex and challenging dynamic where victims may rationalize or justify their partner's abusive behaviors (Kearney, 2001; Pocock et al., 2020; Rusbult & Martz, 1995). Victims may also struggle to recognize or leave abusive relationships due to emotional attachment or fear (Kearney, 2001; Pocock et al., 2020; Rusbult & Martz, 1995). Interestingly, a study reported evidence that an experimental boost of oxytocin, the "love hormone", resulted in higher IPV inclinations in people with high aggressive traits (DeWall et al., 2014), thus suggesting an hormonal regulation for the complex interplay between love and IPV. Nevertheless, understanding the dynamics of love and IPV in couples appears to be crucial for promoting healthy relationships and preventing harm.

Sternberg's Triangular Theory of Love conceptualizes love as being composed of three components: intimacy, passion, and commitment (Sternberg, 1986). Intimacy refers to closeness and affection bond involving sharing emotions, feeling and ideas. Passion encompasses physical and emotional attraction, including sexual desire. Commitment represents the effort to maintain the relationship over time, involving loyalty and willingness to work through difficulties in everyday life (Sternberg, 1986). Sternberg's theory is dynamic, suggesting that the levels of these components can fluctuate throughout a relationship, influencing the nature and quality of love

experienced by individuals involved. A recent study in 25 countries confirmed the cultural universality of this theoretical construct of love (Sorokowski et al., 2021).

Understanding the intricate interplay between love and psychological violence in couples is vital for interventions aimed at supporting victims, preventing abuse, and fostering healthy relationships. This study thus aimed to examine the dynamics of love and psychological IPV against women. It was performed through measurements of psychological aggression, controlling behaviors by the partner, and three dimensions of Sternberg's love components that women reported regarding their intimate partner. A cluster analysis was then achieved to obtain different profiles of participants according to different levels of love components. Clusters were then compared to each other regarding psychological aggression and controlling behaviors by intimate partner. The researchers expected to obtain different clusters shedding light on varying levels of love dimensions and their association with different patterns of psychological aggression and partner control.

Materials and Methods

Participants and Procedures

Participants were recruited through advertisements posted in Facebook groups centered on romantic relationships, as well as more general student or support groups. The ads were also shared on personal Instagram accounts to encourage word-of-mouth promotion. Potential participants were provided with a link to an online questionnaire on the LimeSurvey platform of [ANONYMIZED]. They were told that if they agreed to take part in the study, they would be asked to answer questions about loving feelings and conflicts that may appear between partners. To be eligible, participants had to be women aged over 18 and in a couple relationship since at least 12 months. Each participant provided informed consent. Answers were anonymous and participants did not receive compensation. The study protocol was approved by the local ethics

committee ([ANONYMIZED], file number 2020-333). Data were collected from January to March 2021.

Measures

Personal Information

Personal information was gathered including age, gender, educational level, parental status, and intimate partner's gender.

Psychological Aggression by Partner

Psychological violence committed by partner towards participant was measured using the psychological aggression subscale of the Revised Conflict Tactics Scales (CTS2) (Straus et al., 1996; Vega & O'Leary, 2007). It is composed of eight items assessing the frequency of behaviors that may occur in the context of intimate relationship during a one-year period. Items can be separated into "Severe psychological aggression" and "Minor psychological aggression". Item examples are: "My partner accused me of being a lousy lover"; "My partner destroyed something that belonged to me". Answers were rated from 0 to 7 (has never happened, has happened but not in the time period in question, happened one time, two times, three–five times, six–10 times, 11–20 times and more than 20 times, respectively). Higher total score indicated higher level of psychological violence against participants. The mean Cronbach's alpha coefficient for CTS2 was .77 in studies published up until 2005 (Chapman & Gillespie, 2019).

Controlling Behaviors by Partner

Controlling behaviors committed by partner towards participant were measured using the Controlling Behavior Scale-Revised (CBS-R) (Sleath et al., 2018). This version reflects a wide variety of controlling behaviors by containing 24 items and five subscales that assess various forms of this type of abuse. The five subscales include measures of control behaviors relating to economic, threatening, intimidating, emotional, and isolating behaviors. Items examples are: "My

partner made me difficult for me to work or study" (economic); "My partner threatened to leave the relationship" (threatening). Answers were rated from Never = 0 to Very often = 4. Higher total score indicated higher level of controlling behaviors by participant's partner. Cronbach's alpha value for CBS-R ranged from .73 to .91 in a former study (Sleath et al., 2018).

Sternberg's Triangular Love Scale

The components of the relationship between participant and her intimate partner was assessed using a reduced version of Sternberg's Triangular Love Scale (STLS-R) (Sorokowski et al., 2021; Sternberg, 1997; Ventura-León et al., 2020). The scale is composed of 16 items, assessing three dimensions, i.e., intimacy (six items), commitment (five items) and passion (five items). Items examples are: "I have fantasies about my partner" (intimacy); "I am determined to maintain my relationship with my partner" (commitment); "I really like physical contact with my partner" (passion). Answers were rated from rated from Never = 1 to Very often = 5. Higher total score for a subscale indicated higher level of the respective dimension. Cronbach's alpha value for STLS-R ranged from .81 to .87 in a former study (Ventura-León et al., 2020).

Data Analysis

Data Preparation

Participants with incomplete answers were excluded from the study. The missing data of items 8 and 13 of CBS-R were not missing completely at random (MCAR), Little's MCAR test, chi-square (981) = 932.25, p = .03 and .02, respectively. Missing data were imputed using Expectation-Maximization. Data were screened for univariate outliers using z-scores, and for multivariate outliers through Mahalanobis distance with p < .001 (Tabachnick & Fidell, 2007). Variables were checked for normality prior to analysis. Square root transformation was applied to total scores of CTS-2 and CBS-R that were both positively skewed. A square transformation was applied to total scores of STLS-R that were negatively skewed.

Statistical Analysis

Cluster analysis based on the three components of STLS-R was performed in two steps. In the first step, a hierarchical cluster analysis was performed based on z-scores of STLS-R components, using Ward's method with squared Euclidean distance. The resulting agglomeration schedule and dendrogram were used to identify the number of clusters. In the second step, K-means clustering was used to assign individuals to one of the identified clusters. Means between clusters were compared using one-way analysis of covariance (ANCOVA) with age as a covariate. Bonferroni's test was used as post-hoc. Analyses were conducted using IBM SPSS Statistics version 26.

Results

Sample Characteristics and Descriptive Statistics

Cluster Analysis

A cluster analysis was performed based on the three components of STLS-R (Intimacy, Commitment and Passion). In the first step, the resulting agglomeration schedule and dendrogram

both suggested a four-cluster solution, with a sudden increase of coefficient variation from 75.30 to 121.62 when four clusters merged to three clusters. In the second step, K-means clustering was used to assign individuals to one of four clusters. A discriminant analysis showed clear differences between clusters (Wilks' $\lambda = .10$, p < .001) with 94.3% of cases correctly classified.

Figure 1 represents the z-scores of the three STLS-R components for the four clusters. ----

Figure 1 about here

These clusters were named as follows, based on profiles plotted in this figure: a cluster was called "Moderate Love" (n = 515, 48.54%) as it contained participants with scores higher than the sample mean by about one half of standard deviation (SD) value when considering Intimacy, Commitment and Passion; another cluster was named "No Love" (n = 130, 12.25%) as it included individuals with scores lower than the sample mean by almost two SD values when considering any of three components. A third group was called "Low Passion" (n = 260, 24.51%) since it aggregated participants with scores close to the mean when considering Intimacy and Commitment and lower than the mean by almost one SD value when considering Passion. The fourth and last group was named "Mostly Passion" (n = 157, 14.80%). It contained individuals with Passion scores slightly higher than the mean but Intimacy and Commitment scores lower than the mean by nearly one SD value.

Clusters were then compared to each other (Table 1, third to last columns). As mean age was significantly different between clusters, they were compared using ANCOVA with age as a covariate. Significant differences were found between all groups regarding Intimacy,

Commitment and Passion, which further validated the classification.

Following these controls, cluster comparison was achieved regarding scores of minor and severe psychological aggression and of the five subtypes of controlling behaviors (Economic, Threatening, Intimidating, Emotional and Isolating). When considering any of these seven variables, all scores of "No Love" cluster were higher than those of "Moderate Love", with statistical significance for the seven variables. Not surprisingly, this indicated that psychological aggression and controlling behaviors were more received by participants involved in a relationship with lowest levels of Intimacy, Commitment and Passion, when compared with those involved in a partnership with higher levels of love components.

Most interestingly, when comparing the clusters "Low Passion" and "Mostly Passion", the level of severe psychological aggression was significantly higher in the "Mostly Passion" cluster. Regarding minor psychological aggression, "Mostly Passion" had also a greater score than "Low Passion" but without statistical significance. This suggested that severe psychological aggression was more associated with a combination of high Passion, low Intimacy and low Commitment than with a pattern of low Passion, high Intimacy and high Commitment.

Regarding controlling behaviors, the levels of both Threatening and Emotional controlling were higher in the "Mostly Passion" cluster in comparison with the "Low Passion" cluster, with statistical significance. With respect to other controlling behaviors (Economic, Intimidating and Isolating), "Mostly Passion" had also greater scores than "Low Passion" but without statistical significance. This suggests that participants in relationships characterized by high Passion, low Intimacy, and low Commitment (the "Mostly Passion" cluster) were more likely to experience controlling behaviors, such as threatening and emotional manipulation, compared to those in relationships with low Passion, high Intimacy, and high Commitment (the "Low Passion" cluster).

Discussion

The prevalence of IPV, encompassing physical, sexual, and psychological harm, is distressingly high globally, affecting nearly a third of women in relationships (World Health Organization, 2021). This study aimed to elucidate the complex interplay between love components and psychological IPV against women within intimate partnerships, as existing literature emphasizes the detrimental effects of psychological IPV on women's mental and physical health (Coker et al., 2000; O'Leary, 1999; Overstreet et al., 2015). This study thus explored the dynamics between love components and the experience of psychological aggression and controlling behaviors within relationships.

The composition of the final sample, comprising 1,061 female participants spanning a wide age range, provided valuable insights into the demographics and educational distribution.

Notably, the majority held at least an undergraduate degree, signifying a relatively well-educated sample. Additionally, the prevalence of participants identifying as mothers and the overwhelming presence of male intimate partners underscored the familial and relational aspects within the studied population.

Through a robust cluster analysis based on Sternberg's Triangular Theory of Love components (Sorokowski et al., 2021; Sternberg, 1997), distinct profiles emerged, highlighting varying levels of intimacy, passion, and commitment within the sampled relationships.

Employing hierarchical and K-means clustering methods facilitated the identification of distinct clusters within the dataset. A four-cluster solution emerged, delineating significant variations in love components among participants, each cluster representing varying levels of intimacy, commitment, and passion. Exclusion criteria for incomplete participant responses, identification of missing data patterns, imputation techniques, outlier screenings, and normalization protocols fortified the integrity of the subsequent analyses.

The four clusters, namely "Moderate Love", "No Love", "Low Passion" and "Mostly Passion" not only reflected the diversity in relationship dynamics but also elucidated distinct patterns in how love components interplayed within partnerships. Significant disparities observed between clusters, particularly in scores across Intimacy, Commitment, and Passion, corroborated the robustness of the clustering technique. This validation further reinforced the distinctiveness and relevance of the identified clusters in representing varying levels of romantic involvement and emotional investment within relationships.

Interestingly, the "No Love" cluster exhibited significantly higher levels of psychological aggression and controlling behaviors compared to clusters characterized by higher levels of love components. This indicated that psychological aggression and controlling behaviors were more received by participants involved in a relationship with lowest levels of Intimacy, Commitment and Passion, when compared with those involved in a partnership with higher levels of love components. This underscores the association between lower levels of Intimacy, Passion, and Commitment with heightened experiences of abuse within relationships.

Of particular interest was the unexpected finding that, contrary to conventional assumptions, the "Mostly Passion" cluster, characterized by higher Passion but lower Intimacy and Commitment, experienced notably higher levels of severe psychological aggression compared to the "Low Passion" cluster. This emphasizes a unique and counterintuitive link between high Passion, low Intimacy, and low Commitment in contributing to severe psychological aggression within relationships. Moreover, the prevalence of Threatening and Emotional controlling behaviors was notably higher in the "Mostly Passion" cluster compared to the "Low Passion" group. This distinction accentuated the vulnerabilities associated with high Passion but low Intimacy and Commitment, emphasizing the complexity of emotional dynamics within intimate relationships.

This study has limitations, notably the reliance on self-reported data and the cross-sectional design, limiting causal inferences. It has also cultural and geographic limitations, as it focused on women living in a Western Europe country, which might limit the generalizability of the findings to other regions or cultures where the subtleties of love and psychological IPV may differ. Another limitation is that this study may not fully account for other variables that could influence the relationship between love components and psychological IPV, such as personality traits, mental health status, or past experiences of abuse, which could act as confounders.

Future research should build on the findings of this study by exploring the longitudinal dynamics between love components and psychological IPV. Longitudinal designs would enable researchers to capture the temporal dynamics between love components and experiences of psychological IPV, providing deeper insights into the evolution of relationships and associated adversities. Additionally, expanding the scope of research to include diverse cultural and geographic contexts would enhance the generalizability of findings, as the interplay between love and IPV may vary across different populations. Incorporating other potential confounding variables, such as personality traits, mental health status, and past experiences of abuse, could provide a more comprehensive understanding of the factors that influence psychological IPV. Future studies should also consider examining the role of interventions aimed at strengthening healthy love components and reducing harmful relationship dynamics, potentially leading to more effective prevention strategies and support mechanisms for those affected by IPV.

In conclusion, this study starts to delineate interactions between love components and psychological IPV within intimate relationships. The observed clusters shed light on how varying levels of intimacy, passion, and commitment may be associated with different patterns of psychological aggression and partner control, offering insights for interventions and support mechanisms. By recognizing the complexities of love components and their associations with

psychological IPV, interventions could be tailored to address specific relationship dynamics, fostering healthier and safer partnerships.

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Table 1							
Descriptive statistics	of whole sample a	and cluster classifi	cation based on 3	dimensions of tri	iangular love: dif	ferences in	n the experience of
psychological agress	sion and controlling	g behaviors (cluste	er comparison us	ing analysis of cov	variance with Age	e as covar	iate)
	Sample	Cluster M (SD)					
	N= 1,061	Low	Mostly	No	Moderate	F	Significant
		passion (LP)	passion (MP)	love (NL)	love (ML)		comparisons
	M (SD)	<i>n</i> = 260 24%	n = 157 14%	n = 130 12%	n = 515 48%		
Age (year)	30.46 (9.17)	31.45 (9.24)	29.96 (8.77)	35.56 (9.86)	28.82 (8.54)	21.18*	LP,MP,ML < NL ML < LP
Triangular Love							
Intimacy	689.95 (174.88)	684.97 (107.04)	554.2 (115.27)	400.25 (147.28)	806.97 (85.38)	601.72*	NL < MP < LP < ML
Commitment	496.37 (149.68)	509.9 (91.15)	389.99 (98.62)	212.48 (100.94)	593.64 (56.00)	903.91*	NL < MP < LP < ML
Passion	416.77 (146.13)	316.18 (75.48)	436.9 (92.73)	173.06 (89.50)	522.93 (70.94)	821.11*	NL < LP < MP < ML
Psycholog. Aggres.							
Minor	2.68 (1.23)	2.75 (1.10)	2.90 (1.14)	3.23 (1.06)	2.42 (1.26)	13.44*	ML < LP,MP < NL
Severe	0.42 (0.80)	0.41 (0.79)	0.64 (0.92)	0.77 (1.04)	0.28 (0.64)	21.31*	ML,LP < MP,NL
Controlling Behav.							
Economic	0.75 (0.84)	0.78 (0.83)	0.89 (0.85)	1.08 (0.85)	0.60 (0.80)	15.19*	ML < LP,MP,NL LP < NL
Threatening	0.59 (0.71)	0.55 (0.64)	0.91 (0.77)	1.12 (0.76)	0.38 (0.59)	61.10*	ML < LP < MP < NL
Intimidating	0.45 (0.64)	0.48 (0.65)	0.60 (0.66)	0.95 (0.72)	0.25 (0.51)	49.36*	ML < LP,MP < NL
Emotional	0.82 (0.88)	0.84 (0.83)	1.11 (0.89)	1.38 (0.99)	0.57 (0.76)	46.65*	ML < LP < MP < NL
Isolating	1.42 (1.04)	1.39 (0.98)	1.67 (1.05)	1.75 (1.03)	1.26 (1.03)	32.83*	ML < MP,NL LP < NL
* <i>p</i> < .001							

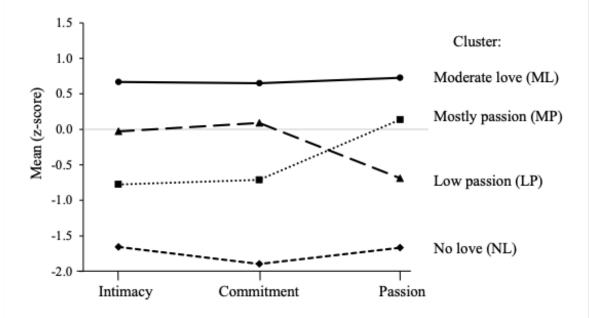


Figure 1. Four-cluster solution based on the three dimensions of Sternberg's triangular love (in the X-axis).

Author Bio Statements

Cécylia Ablana is a clinical psychologist with a Master's degree from the University of Toulouse Jean-Jaurès. Her academic and professional work has focused on understanding the experiences of both victims and perpetrators of violence. Recently, she has been exploring the dynamics of romantic relationships, with a particular focus on psychological violence between intimate partners.

Patrick Raynal, Ph.D., is a research scientist with the National Institute of Health and Medical Research (INSERM) and member of the laboratory CERPPS (Centre d'Etudes et de Recherche en Psychopathologie et en Psychologie de la Santé). Originally trained as a biochemist, his early research focused on intracellular communication. Since the mid 2010s, he has shifted his focus to the human sciences, where he now explores topics related to psychopathology and other psychological phenomena.

Natalène Séjourné, Ph.D., is an assistant professor at the Department of Psychology at the University Toulouse-Jean Jaurès and a member of the laboratory CERPPS. Her research focuses on the difficulties and psychopathology encountered by mothers and parents in the transition to parenthood. In recent years, she has also turned her attention to couple's relationship and psychological violence.