



Unravelling the Link Between Self-control and Relationship Well-being: A Mediational Model of Gratitude and Forgiveness

Lydia Tin Hang WONG[✉] and Joe Tsz Kin NGAI

Hong Kong Shue Yan University, HKSAR, China
[✉]thwonglydia@gmail.com

Abstract. Healthy relationships are fundamental to individual, familial, and community flourishing. While research on self-control, gratitude, and forgiveness in romantic relationships is expanding, their interrelationships remain underexplored. This study suggested that gratitude and forgiveness mediate the relationship between self-control and relationship satisfaction among Hong Kong adults. A total of 113 adults currently engaged in romantic relationships participated in the study. The findings indicated that gratitude fully mediated the relationships between self-control and relationship satisfaction. In addition, the combined influence of gratitude and forgiveness also demonstrated a full sequential mediation: self-control enhanced gratitude, which in turn fostered forgiveness, ultimately promoting greater relationship satisfaction. Conversely, forgiveness alone did not mediate the relationship between self-control and relationship satisfaction. The current findings help to fill the research gap and enrich the theoretical understanding of the processes underlying the association between self-control and relationship satisfaction. Gratitude is likely to play an important role in facilitating forgiveness and relationship satisfaction. The results imply that couple therapy interventions may be substantially enhanced by integrating techniques that promote self-control and foster gratitude. Future research should incorporate longitudinal and experimental designs to more conclusively determine the causal pathways linking self-control, gratitude, forgiveness, and relationship satisfaction.

Keywords. Self-control, Gratitude, Relationship Satisfaction.

1. Background

Individuals engage in various types of relationships, including familial, romantic, friendship, and workplace connections, each playing a vital role in overall well-being (Mertika et al., 2020; Proulx et al., 2007). The World Health Organization (WHO) emphasizes a holistic view of well-being, encompassing physical, mental, and social health (WHO, 2022). Among different types of relationships, romantic relationships are of interest in the present study due to their voluntary commitment and inherent exclusivity (Collins et al., 2009). Romantic relationships involve complex emotions, such as passion, vulnerability, and jealousy (Berscheid & Reis, 1998). The quality of a couple's relationship is crucial for individual well-being (Proulx et al., 2007; Whitton et al., 2014), with poor relationship dynamics potentially leading to mental distress and

even the occurrence of suicidal ideation (Roberson et al., 2018a; Roberson et al., 2018b; Soller, 2014). In recent decades, divorce rates have been rising world-widely and locally, raising concerns about couple relationships (Census and Statistics Department, 2022; Sheykhi, 2020). Among industrial countries, the US has the highest divorce rate, with approximately 40-50% of marriages ending in divorce, while European countries have, on average, 40% of marriages leading to divorce (Sheykhi, 2020). In Hong Kong, the number of divorces has increased significantly over the past three decades, and the crude divorce rate has risen from 1.11 per 1,000 population in 1991 to 2.82 in 2019 (Census and Statistics Department, 2022). These may suggest a troubling trend in relationship quality. Although the breakup rate in dating relationships is rarely officially recorded, research suggests that many individuals consider maintaining romantic relationships more challenging nowadays (Pew Research Centre, 2020).

Conflicts are one of the threats to couple relationships. They can undermine the quality of the relationship and ultimately lead to separation (Stanley et al., 2002). Nonetheless, conflict itself is not necessarily detrimental; rather, how it is managed may determine the quality and outcome of the relationship. When partners address conflicts constructively, such as prioritizing relationship harmony, engaging in perspective-taking, and fostering effective communication, their couple relationship can be enhanced (Gere & Schimmack, 2013). Furthermore, these constructive ways are related to self-control (Luchies et al., 2011). Taken together, it is essential to explore the strategies for managing conflicts and enhancing the relationship quality to achieve success in couple relationships.

Empirical studies have revealed that several factors contribute to relationship satisfaction, such as individuals' attachment security, effective communication skills, and positive interpersonal constructs (Candel & Turliuc, 2019; Egeci & Gençöz, 2006; Ho et al., 2024; Wu et al., 2022). Regarding the positive interpersonal constructs, three character strengths from positive psychology — self-control, gratitude, and forgiveness — are identified as contributing to the quality of the couple relationship (Ho et al., 2024; Kaczmarek et al., 2014; Wu et al., 2022). Specifically, self-control has been found to predict gratitude (Kaczmarek et al., 2014). Moreover, self-control and gratitude have been shown to improve social relationships through the pathway of forgiveness, respectively (Ho et al., 2024; Wu et al., 2022). These findings suggest the potential impact of gratitude and forgiveness on the relationship between self-control and relationship well-being. Based on the findings of extant literature, the research question of the present study was to examine the role of gratitude and forgiveness in the association between self-control and relationship satisfaction. The aim was to explore the mediating effect of gratitude and forgiveness on self-control in romantic relationships.

2. Literature Review

2.1. Relationship Satisfaction

Interpersonal relationships, including parent-child, sibling, friendships, and romantic relationships, significantly impact people's lives and well-being (Vangelisti & Perlman, 2006). Research shows that satisfaction in couple relationships, that is, an individual's

overall assessment of the relationship, is strongly beneficial for subjective well-being, physical health, and longevity (Bühler et al., 2021; Vangelisti & Perlman, 2006). Even if romantic relationships end, higher satisfaction levels are correlated with less decrease in later life satisfaction (Rhoades et al., 2011). Nevertheless, intimate relationships can face threats, the mismatch of needs between partners, the impulse to mistreat partners, and the instinct to react adversely (Findley et al., 2014). Partners may then experience negativity, such as hurt and betrayal, and some remain in the relationships after being abused (Leisring, 2013; Vangelisti & Perlman, 2006). Subsequently, it is crucial to assess individuals' satisfaction levels in couple relationships.

2.2. Self-control

Defining Self-control. Self-control refers to an effortful and deliberate way of controlling oneself, also known as self-regulation or self-discipline (Duckworth, 2011; Duckworth & Steinberg, 2015). It is a process in which people exercise control over their actions to attain desirable goals, despite conflicting impulses to seek instant gratification (Duckworth & Steinberg, 2015; McCullough & Willoughby, 2009).

Self-control and Impact on Relationship Satisfaction. Empirical findings indicate a positive correlation between self-control and various benefits in romantic relationships, including relationship satisfaction, forgiveness, and effective communication (Halford et al., 2007; Zuo et al., 2020). It has also been found that lovers are happier when the overall self-control is greater in romantic relationships (Vohs et al., 2011). The self-regulatory model describes the association between trait self-control and relationship satisfaction. Individuals exert self-control to meet relationship goals, comprising three key and interrelated components: self-regulatory strength (the ability to control impulses for long-term benefits), self-regulatory content (prioritizing relationship-enriching objectives over self-focused goals), and self-regulatory strategy (employing techniques to regulate emotions and actions, such as reflective thinking and problem-solving techniques, to improve interactions) (Luchies et al., 2011).

In this model, self-control serves as the driving force that transforms a harmful impulse into a benign response, thereby supporting the long-term relationship objectives (Finkel & Campbell, 2001; Zuo et al., 2020). Higher self-control leads to behaviors that enhance relationships, such as effective communication and forgiveness (Zuo et al., 2020). As a result, individuals with higher self-control are likely to be viewed as responsive and reliable by their partners (Gomillion et al., 2014), ultimately contributing to greater relationship satisfaction. These studies suggest that stronger self-control is associated with higher levels of relationship satisfaction. While this association appears to be robust, the current study aims to investigate the underlying processes that facilitate this association.

2.3. Gratitude

Gratitude and Relationship Satisfaction. Gratitude is defined as an acknowledgement of receiving valuable things from others, which involves the ability to be open to others and to gratefully recognize their altruistic behaviors (Emmons & Mishra, 2011). It is an emotional tendency to appreciate the input and support of others

in things that they consider valuable, including positive experiences and outcomes such as attainment and enjoyment (Kubacka et al., 2011).

Gratitude has been shown to contribute to individuals' mental, physical, and social well-being. It is found to be correlated with perceived physical health and optimal mental health outcomes, such as increased positive affect and lower depression, as well as a positive association with hope and life satisfaction (McCullough et al., 2002; McGuire et al., 2020; Toussaint & Friedman, 2009). In the context of interpersonal relationships, gratitude is considered "an adaptation for reciprocal altruism" (McCullough et al., 2008, p. 281), referring to the social exchange of valuable benefits between non-kin. This reveals that gratitude not only reminds people of the benefits they have received from others, but it also motivates them to display prosocial behaviors in return (McCullough et al., 2008).

According to the broaden-and-build theory of positive emotions (Fredrickson, 2001), Gratitude, as a positive emotion, can broaden individuals' cognition and promote their awareness of positive aspects in life. This potentially increases relationship satisfaction. Concurrently, prior research has found that gratitude is positively associated with relational well-being, including relationship satisfaction, commitment, and stability in romantic relationships (Gordon et al., 2012; Joel et al., 2013; Wu et al., 2022). Algoe et al. (2010) even describe gratitude as 'a booster shot' (p 217) for couple relationships, which reminds people of their positive feelings towards partners and fosters mutual responsiveness that strengthens their bonding and relationship satisfaction. These studies demonstrate that stronger gratitude contributes to a greater level of relationship fulfillment.

Self-control, Gratitude, and Relationship Satisfaction. Prior studies have demonstrated that self-control is positively associated with gratitude in school-aged children (Hellman & Gwinn, 2017). Another study has indicated the correlation between self-regulation and gratitude among young adults (Anjun & Kaiping, 2018). Likewise, research on aggression reveals that higher self-control is linked to stronger gratitude in adolescents (García-Vázquez et al., 2020). Nevertheless, there is limited research on the association between self-control and gratitude in the context of romantic relationships.

When self-control is found to be correlated with gratitude, as mentioned in the section on gratitude and relationship satisfaction, gratitude is associated with relationship contentment. These findings lead to an interest in exploring their interrelationships. In light of the self-regulatory model (Luchies et al., 2011), which posits that people exercise self-control to regulate their impulses and perform pro-relationship behaviors, individuals with higher self-control are likely to display greater gratitude. It is because, when people have greater self-regulation, they are more likely to reflect on and reappraise negative situations. These experiences assist them in recognizing and being grateful for the positive aspects of their lives, which nurture gratitude. This process can then enhance the quality of the relationship. Therefore, gratitude may serve as a mediator of the association between self-control and relationship satisfaction. Given that the research on the linkage between self-control and gratitude is limited, the exploration of the interrelationships between self-regulation, gratitude, and relationship satisfaction is even rarer. This highlights the importance of future studies examining how the transition from impulsive to relational goals fosters

gratitude, which in turn enhances relationship satisfaction. This motivated a detailed investigation of the process in the present study.

2.4. Forgiveness

Forgiveness and Relationship Satisfaction. Forgiveness is a multidimensional construct that has been investigated by a broad range of disciplines, including psychology, philosophy, and theology (Cosgrove & Konstam, 2008). Researchers have identified manifold facets of forgiveness, including interpersonal forgiveness, self-forgiveness, and forgiveness from God (Worthington, 2020). For interpersonal forgiveness, it is typically defined as a conscious and intentional decision to let go of the feelings of resentment or the desire to retaliate against someone who has caused harm, regardless of whether that person is deemed to deserve forgiveness (Worthington, 2020). It should be emphasized that forgiveness extends beyond merely overlooking or excusing harmful behaviors. Instead, forgiveness is depicted as an evolving process that facilitates healing and fosters relationships by transforming one's inner emotional state and altering interpersonal dynamics (Worthington, 2020).

Forgiveness is viewed as fundamental in enhancing relationship satisfaction among romantic partners. It is a deliberate process of letting go of negative emotions that helps diminish the negative impact of conflicts (Braithwaite et al., 2011). Previous research has demonstrated that forgiveness is associated with various positive outcomes in intimate relationships, including a more positive relationship climate characterized by decreased aggression and a lower risk of future transgressions (Wallace et al., 2008). Studies have also found that forgiveness is positively associated with greater relationship satisfaction, relationship stability, and mental well-being (Arya et al., 2005; Cao et al., 2021). A study proposes that forgiveness improves relationship satisfaction in two major routes (Braithwaite et al., 2011). First, forgiveness alleviates the harmful conflicts, enabling couples to overcome disputes without lingering hostility. Second, it fosters relational effort by prompting couples to be more engaged in nurturing their relationships. Subsequent research has expanded on these findings by exploring forgiveness in different categories, namely decisional and emotional forgiveness (Wu et al., 2022). It suggests that forgiveness not only reduces negative emotions but also transforms positive traits, such as empathy, into greater relationship contentment (Wu et al., 2022). Thereby, forgiveness in couples' relationships is considered beneficial to relationship satisfaction.

Self-control, Forgiveness, and Relationship Satisfaction. The correlation between self-regulation and forgiveness has also been examined. According to the self-regulatory model, which posits that individuals resist impulses and display relationship-building behaviors (Luchies et al., 2011), people with stronger self-control may also be more likely to exhibit higher levels of forgiveness (Ho et al., 2024). When having conflicts with partners, people may shift from raw impulses, such as seeking revenge and holding onto anger, to long-term relationship goals, including maintaining connection and fostering mutual growth. These processes encourage people to make relationship-enhancing responses, such as forgiveness (Ho et al., 2024). In fact, this process of exercising control on the self during conflicts or after being mistreated, such as avoiding expressing the feeling of anger instantly, resisting the desire to seek revenge

immediately, and finding ways to repair the relationship, can facilitate the occurrence of forgiveness which characterized by letting go of resentment and the desire of revenge, and moving forward constructively with offenders. Aligned with the self-regulatory model, several prior studies propose that trait self-control predicts forgiveness because self-control is related to the concern about the consequences of one's response and the long-term objectives of the relationship (Balliet et al., 2011; Pronk et al., 2019). The positive association between trait self-control and forgiveness is also supported by subsequent studies (Burnette et al., 2014; Tangney et al., 2004; Vohs et al., 2011). Likewise, research shows that individuals with high self-control can reduce anger and rumination, which increases the likelihood of forgiveness (Kong et al., 2020).

While self-regulation is shown to be correlated to forgiveness, and as mentioned, forgiveness in romantic relationships appears to be beneficial to relationship satisfaction, the interrelationships between self-control, forgiveness, and relationship satisfaction have raised curiosity in research. A recent study addressed this curiosity and found that self-regulation facilitates forgiveness in romantic relationships (Ho et al., 2024). Specifically, trait self-control is associated with a higher level of forgiveness, which subsequently leads to improved relationship quality, including greater relationship satisfaction, commitment, and closeness (Ho et al., 2024). The research demonstrates the pathway through which the effect of self-control on positive relationship outcomes can be mediated by forgiveness. The current study is driven to re-examine this newly identified mediation effect to assess its robustness.

Gratitude, Forgiveness and Relationship Satisfaction. The correlation between gratitude and forgiveness has also been explored. Previous studies have indicated that gratitude is positively associated with the overall tendency to forgive (McCullough et al., 2002; Neto, 2007). Experimental research also displays that a higher level of gratitude is concurrent with a higher level of forgiveness and empathy (Witvliet et al., 2008). It is suggested that gratitude and forgiveness share a similar ability to show empathy and take others' perspectives (Mikulincer & Shaver, 2007). Moreover, it is proposed that individuals who aspire to be superior to others will tend to lack gratitude and maintain unforgiveness (Sandage & Williamson, 2010).

When gratitude is positively correlated with forgiveness, and as mentioned, forgiveness is associated with relationship satisfaction, it is of research interest to explore the interrelationships between them. Specifically, research has investigated the underlying mechanism of the correlation between gratitude and relationship satisfaction. The link between gratitude and forgiveness can be understood by the model of the stress and coping framework proposed by Lazarus & Folkman (1984). The model suggests that when individuals perceive stress from objective stressors, such as physical illness, they manage the stress through specific coping strategies and related resources in certain contexts, including cognitive efforts, thereby achieving adaptive outcomes, such as subjective well-being (Wu et al., 2022). Applying the model to romantic relationships, transgressions create stress and tension among couples. Gratitude is a valuable psychological resource for mitigating the effects of stress. This emotional shift enables individuals to release resentment and anger, paving the way for forgiveness (Wu et al., 2022).

Recent research has explored the relationship between gratitude and forgiveness in romantic relationships (Wu et al., 2022). It has been found that emotional forgiveness,

which refers to an emotion-focused coping method that regulates stress by transforming negative feelings into positive ones, mediates the relationship between gratitude and satisfaction in dating relationships (Wu et al., 2022). The findings reveal that the effect of gratitude on relationship satisfaction can be mediated by forgiveness (Wu et al., 2022). Nevertheless, the study used a college student sample, which limits the generalizability of the findings to other life stages and types of romantic relationships, such as cohabitation and marriage. Further research is needed to examine the relationship between gratitude, forgiveness, and relationship satisfaction. This spurred an in-depth examination of this process in the current study.

2.5. Research Gap & Hypotheses

The current research question aimed to investigate the role of gratitude and forgiveness in the relationship between self-control and relationship satisfaction. The aim was to examine the mediating effect of gratitude and forgiveness on self-control in romantic relationships. To date, little is known about the relationship between self-control and gratitude in the context of romantic relationships. Furthermore, although self-control and gratitude are shown to enhance social relationships through the pathway of forgiveness, respectively, limited research has explored these constructs simultaneously in romantic relationships. Investigating them in one study would be beneficial to minimize the error rate in research.

Drawing on empirical findings, it is hypothesized that (1) self-control is positively associated with relationship satisfaction, (2) the association between self-control and relationship satisfaction is mediated by gratitude, (3) the association between self-control and relationship satisfaction is mediated by forgiveness, and (4) the association between self-control and relationship satisfaction is mediated by gratitude and then forgiveness (Fig. 1).

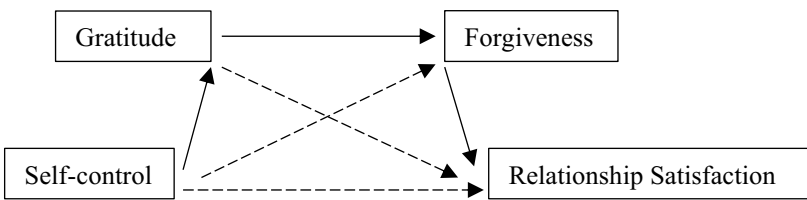


Figure 1: The Proposed Pathway of the Mediation Effect of Gratitude and Forgiveness on Self-Control in Romantic Relationship (Hypothesis 4)

3. Methodology

3.1. Research Design

The research design was an anonymous online survey, except for the students recruited from the participant pool system. Their names and student numbers were required in

order to award them the research participation points in the system. It was assumed that the age of the participants from the university participant pool would be 18 to early 20s. To attract participants of different ages, a digital poster was posted on social media, and advertisements were distributed on instant messaging platforms through convenience and snowball sampling. The responses of the university students' sample and the community sample were found to show no significant difference on the measures of interest; therefore, the data will be combined for the analysis.

3.2. Participants

The inclusion criteria were participants who (1) were adults, defined as individuals at least 18 years old, (2) were in a romantic relationship, and (3) resided in Hong Kong. The age criteria are based on Erikson's developmental stage, where individuals at the age of eighteen begin to enter the early adulthood stage, in which developing intimacy and romantic relationships become more dominant than before (Sokol, 2009). A romantic relationship included dating, cohabitation, engagement, and marriage. It is expected to collect data from the Hong Kong population. The sample consisted of 113 participants (69 females and 44 males) aged between 18 and 76 ($M = 33.65$, $SD = 12.63$). The majority of participants were born in Hong Kong (90.3%) compared to other places (9.7%). Regarding the relationship status, the number of participants who were dating (39.8%) was the same as those who were married (39.8%). Other participants reported being cohabiting (8.8%), engaged (8.0%), and in other relationship statuses (3.5%).

3.3. Materials

Respondents completed a self-report survey with 60 questions, including measures of demographic information, romantic relationship information, self-control (Brief Self-Control Scale (BSCS)), gratitude (Gratitude Questionnaire (GQ-6)), forgiveness (Forgiveness Scale), and relationship satisfaction (Couples Satisfaction Index (CSI-16)). The survey was presented bilingually, in both English and Chinese.

Demographic & Romantic Relationship Information. Participants' gender, age, place of birth, education level, employment status, and religious affiliation were obtained. These were based on the demographic information collected in Ho et al. (2024), which appeared to be the most recent study on self-regulation in couple relationships. Participants were also asked about their current relationship status and the duration of their relationship. They were asked to indicate the nature of the mistreatment performed by their partner through the selection of appropriate multiple-choice items and rated the severity of the mistreatment on a 4-point Likert scale.

Trait Self-control. The 13-item Chinese version of the Brief Self-Control Scale (BSCS) was utilized to evaluate an individual's overall tendency to exert self-control (Unger et al., 2016). The scale has demonstrated good internal consistency, with a Cronbach's alpha of .82 in a prior study (Unger et al., 2016). In the current study, this scale exhibited good internal consistency ($\alpha = .82$).

Gratitude. The 6-item Gratitude Questionnaire (GQ-6) was used to measure a general disposition of being grateful and appreciative towards perceived benefactors (McCullough et al., 2002). The GQ-6 was translated from English to Chinese through the standard translation process. The scale has demonstrated good internal consistency with Cronbach's alpha of .86 in a previous study (McCullough et al., 2002). The scale displayed adequate reliability in the current study ($\alpha = .76$).

State Forgiveness. The 15-item Forgiveness Scale was administered to assess forgiveness toward a romantic partner (Rye et al., 2001). The scale was translated from English to Chinese through the standard translation procedure. The scale has demonstrated good internal consistency, with a Cronbach's alpha of .87 in a prior study (Rye et al., 2001). In the present study, this scale demonstrated reliability ($\alpha = .89$).

Relationship Satisfaction. The 16-item Couples Satisfaction Index (CSI-16; Funk & Rogge, 2007) was employed to assess the satisfaction levels within existing romantic relationships. The scale was translated from English to Chinese through the standard translation process. The scale has been demonstrated to be a reliable measure ($\alpha = .93$) in a previous study. The internal consistency of the scale was excellent in the current study ($\alpha = .96$).

4. Results

4.1. Self-control and Relationship Satisfaction

The first hypothesis addressed in this study was whether self-control is associated with relationship satisfaction. As mentioned in the preliminary analyses section, a significant correlation exists between self-control and relationship satisfaction ($r = .19, p = .045$).

4.2. Self-control, Gratitude, and Relationship Satisfaction

The second hypothesis examined was whether the association between self-control and relationship satisfaction would be mediated by gratitude. A mediation analysis was conducted using Hayes' PROCESS macro (Model 4). In the model (Fig. 2), self-control was a significant predictor of gratitude ($\beta = 0.20, p < .001$). The direct effect of gratitude on relationship satisfaction was significant ($\beta = 0.70, p < .05$). The indirect effect of self-control on gratitude on relationship satisfaction was statistically significant ($\beta = 0.08, 95\% \text{ CI } [0.01, 0.16]$). This result supported a mediation model in which self-control influences relationship satisfaction, mediated by gratitude.

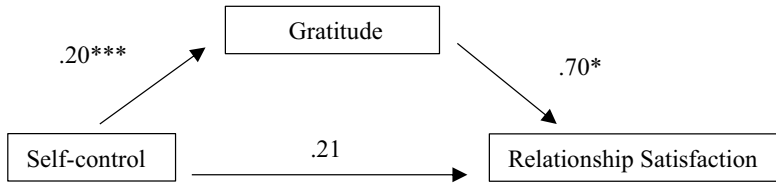


Figure 2: Results of the mediation effect of gratitude on self-control to relationship satisfaction

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

4.3. Self-control, Forgiveness, and Relationship Satisfaction

The third hypothesis examined whether the relationship between self-control and relationship satisfaction is mediated by forgiveness. A mediation analysis was conducted using Hayes' PROCESS macro (Model 4). In the model (Fig. 3), self-control did not significantly predict forgiveness; however, forgiveness was significantly predicted by gratitude ($\beta = 0.16$, $p = .09$). The direct effect of forgiveness on relationship satisfaction was significant ($\beta = 0.67$, $p < .001$). The indirect effect of self-control on forgiveness and relationship satisfaction was not statistically significant ($\beta = 0.06$, 95% CI = [-0.01, 0.15]). This result did not support a mediation model in which self-control influences relationship satisfaction through the mechanism of forgiveness.

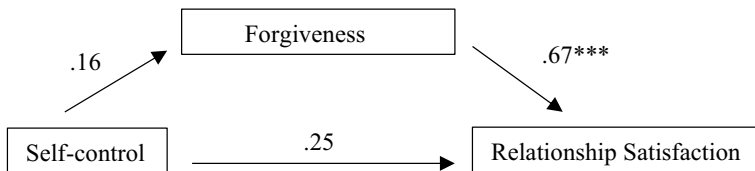


Figure 3: Results of the mediation effect of forgiveness on self-control to relationship satisfaction

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

4.4. Self-control, Gratitude, Forgiveness, and Relationship Satisfaction

The fourth hypothesis investigated was whether the association between self-control and relationship satisfaction would be mediated by gratitude and then forgiveness. A mediation analysis was conducted using Hayes' PROCESS macro (Model 6). In the model (Fig. 4), the indirect effect of self-control on gratitude to relationship satisfaction is not significant ($\beta = 0.06$, 95% CI [-0.003, 0.144]). The indirect effect of self-control on forgiveness on relationship satisfaction was also not significant ($\beta = 0.03$, 95% CI [-0.026, 0.110]). Nevertheless, the indirect effect of self-control on gratitude, forgiveness, and relationship satisfaction was significant ($\beta = 0.02$, 95% CI [0.001, 0.048]). The results supported a mediation model from self-control to relationship satisfaction, mediated by gratitude and then forgiveness.

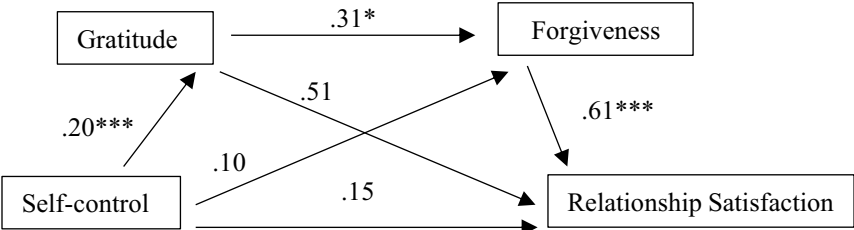


Figure 4: Results of the mediation effect of gratitude and forgiveness on self-control to relationship satisfaction Note. $^*p < .05$, $^{**}p < .01$, $^{***}p < .001$.

5. Discussion

5.1. Major Findings

Self-control and Relationship Satisfaction. The current study aimed to examine the role of gratitude and forgiveness in the association between self-control and relationship satisfaction. It was hypothesized that self-control would be positively associated with relationship satisfaction. The present findings supported this hypothesis. Results demonstrated that participants with stronger self-control have greater satisfaction in their romantic relationships. This finding is consistent with Vohs et al. (2011), which suggests that individuals’ ability to self-regulate contributes to a favorable relational climate in romantic relationships. Similarly, Zuo et al. (2020) reveal that self-regulation serves as an internal resource that assists couples in managing conflicts by shifting from impulsive actions to long-term relational goals, thereby constructing a positive environment for the couples. Hence, current results appear to strengthen the idea that individuals with greater self-control are likely to be more satisfied in a couple relationship.

Self-control, Gratitude, and Relationship Satisfaction. It was anticipated that the correlation between self-control and relationship satisfaction would be mediated by gratitude. Current findings support this hypothesis. Results exhibited that gratitude fully mediated the association between self-control and relationship satisfaction. This finding aligns with prior studies, including those by Hellman & Gwinn (2017) and Anjun & Kaiping (2018), which have also found a positive relationship between self-control and gratitude in school-aged children and young adults, respectively. Similarly, García-Vázquez et al. (2020) in their study on aggression showed that the greater the adolescents’ ability to regulate their emotions and behaviors, the more likely they were to be grateful.

Additionally, current results support the idea proposed by Algoe et al. (2010) that grateful interactions can energize relationships, reinforce bonding, and promote a more profound sense of connection in couples’ relationships. More remarkably, the present finding extends the understanding of the association between self-control and gratitude in the context of romantic relationships, indicating that self-control is positively related to gratitude. Furthermore, the role of gratitude has been shown to

serve a critical role in the correlation between self-control and relationship satisfaction. The complete mediation of gratitude in their correlation reveals that individuals with higher self-control are more likely to experience gratitude, which in turn, contributes to greater relationship satisfaction. Therefore, current findings deepen our understanding of the role of gratitude as a vital mechanism explaining the correlation between self-control and relationship fulfillment.

Self-control, Forgiveness, and Relationship Satisfaction. It was hypothesized that the construct of forgiveness would mediate the association between self-control and relationship satisfaction. Contrary to the expectation, the hypothesis was not supported. Prior research suggested that people with higher self-control can reduce rumination and anger, thereby increasing the likelihood of forgiveness (Kong et al., 2020). Additionally, forgiveness is shown to be constructive in maintaining relational satisfaction (Schumann, 2012). Moreover, a recent study proposed the self-regulatory model of forgiveness, demonstrating that the effect of self-control on positive relationship outcomes is mediated by forgiveness (Ho et al., 2024). Several factors may explain the unexpected findings of the absence of a mediation effect in the current study compared to the recent study. For instance, there is a difference in the measurements of forgiveness. The current study utilized the Forgiveness Scale, as developed by Rye et al. (2001), which measures forgiveness towards a particular offender.

Meanwhile, Ho et al. (2024) employed the Transgression-Related Interpersonal Motivations Inventory in the Chinese Context (C-TRIM-12) that assesses participants' motivation to avoid a transgressor and to seek revenge. The differences in the wording or applied context of the items may lead to variation in the observed relationships. Another possible explanation was the difference in sample characteristics. Regarding religious affiliation, more than half of the participants in the current study identified as Protestant, whereas the majority of participants in the study by Ho et al. (2024) reported being non-religious. Specifically, participants affiliated with Protestant and non-religious groups may vary in their understanding and expression of forgiveness. For Protestant respondents, forgiveness may be less about individuals' self-control and more about obeying religious teachings or adhering to community expectations. This may indicate that, even though self-regulation and relationship satisfaction vary among them, they still report similar levels of forgiveness due to shared religious values. For non-religious respondents, forgiveness may be experienced and expressed more variably, serving as an active and self-driven process that facilitates the connection between self-control and relationship satisfaction. Nonetheless, the current study found that forgiveness alone did not mediate the association between self-control and relationship satisfaction. This suggests that the mediation effect of forgiveness on the correlation between self-control and relationship satisfaction is not robust. In short, although forgiveness contributes to relationship satisfaction, its role as an independent mediator between self-control and relationship satisfaction may be limited.

Self-control, Gratitude, Forgiveness, and Relationship Satisfaction. It was anticipated that the association between self-control and relationship satisfaction is mediated by gratitude, which in turn leads to forgiveness. Present findings lend support to this hypothesis. Empirical research suggests that the effects of self-control and gratitude on relationship satisfaction are mediated by forgiveness, respectively (Ho et

al., 2024; Wu et al., 2022). Despite the absence of a mediation effect of forgiveness on the association between self-control and relationship satisfaction, forgiveness is a critical mediator between gratitude and relationship satisfaction. In particular, it is highlighted that cultivating gratitude not only promotes the appreciation of positive aspects in partners but also fosters forgiveness, which in turn eases conflicts and helps develop fulfilling relationships (Wu et al., 2022). Drawing on previous studies, the current research examined self-control, gratitude, forgiveness, and relationship satisfaction simultaneously in the context of a couple relationship, thereby minimizing the error rate in the research. The present findings reveal a sequential mediation, specifically that self-control appears to lead to gratitude, which in turn enhances forgiveness, and ultimately fosters relationship satisfaction. This extends the understanding of the interrelationships between the attributes and suggests the interrelated role of gratitude and forgiveness in the association between self-control and relationship satisfaction. In brief, current results suggest that gratitude may be a fundamental factor in triggering forgiveness, which then contributes to stronger relationship satisfaction.

5.2. Theoretical Implications

Self-control and Positive Relationship Outcomes. The present findings align with the theoretical framework of the self-regulatory model, which emphasizes the role of self-control in interpersonal relationships (Ho et al., 2024). In particular, individuals monitor and adjust their thoughts, emotions, and behaviors to achieve a desirable outcome in the relationship. In the context of romantic relationships, individuals with higher self-regulation are more likely to appreciate the positive aspects of their experiences and to manage their impulses, thereby exhibiting pro-relationship responses during conflicts and stressful situations, which contribute to positive interactions within the relationship. Hence, the current study reinforces the association between self-control and relationship contentment.

Forgiveness as a Complex Role. The present findings suggest that forgiveness may not be an independent mediator of the correlation between self-control and relationship satisfaction; however, its role in sequential mediation is noteworthy. Specifically, self-control was found to contribute to gratitude, which in turn improved forgiveness and ultimately enhanced relationship satisfaction. This suggests that forgiveness may be more effective when it is grounded in gratitude. In other words, forgiveness has a more significant impact when it is introduced after gratitude has been expressed. Hence, current research challenges the simplistic understanding of forgiveness and proposes a potential view that the benefit of forgiveness is more likely to be greater when it follows gratitude.

Gratitude as an Essential Facilitator for Conflict Resolution. The current finding is consistent with the broaden-and-build theory of positive emotions (Fredrickson, 2001), which posits that positive emotions can broaden individuals' cognition and promote awareness of positive aspects in life. The mediation effect of positive emotions, namely gratitude, in the current study reveals that self-control may not directly influence relationship satisfaction, but rather through promoting a mentality of appreciating the

positive aspects of life. This means that when individuals refrain from acting on impulse in the moment of irritation, they create mental space to acknowledge their partner's positive intentions and past efforts, thereby nurturing deeper appreciation and mutual respect. This mentality then creates room for adaptive responses during conflicts, which promotes relationship satisfaction. By viewing disagreements through a grateful lens, couples are more likely to replace defensive counterarguments with cooperative problem-solving strategies—shifting the dialogue from ‘you are wrong’ to ‘how can we resolve this together?’ Thus, the present study underscores the role of gratitude in romantic relationships as a facilitator of positive interactions, ultimately leading to more fulfilling relationships.

5.3. Practical Implications

Interventions in Couple Relationships. The current study suggests that interventions focused on improving self-control can create secondary benefits by nurturing gratitude, which may promote forgiveness and contribute to relationship contentment. When mental health professionals provide couples therapy and workshops, promoting self-regulation and highlighting gratitude can intensify those positive processes to bolster fulfillment in couples' relationships. Self-control interventions can include cognitive reappraisal to view the situation with a positive perspective, impulse control training such as establishing time-out approaches to inhibit automatic responses, and mindfulness-based practices to increase self-awareness (Schnitker et al., 2017; Suárez-García et al., 2020). Interventions to cultivate and express gratitude can include writing gratitude lists or letters, keeping gratitude journals, and expressing gratitude to others or partners (Davis et al., 2016). For clients who are spiritual or religious, prayer or meditation (Davis et al., 2016) may also be beneficial to foster gratitude. In brief, the present research proposes interventions in self-control and gratitude to enhance couple relationships.

Conflict Management Strategies. Gratitude appears to set the stage for forgiveness, as indicated by the findings of the present study. This inspires counselling psychologists and other mental health professionals with strategies to assist couples when they encounter conflicts and stressful situations. In particular, the strategies can first encourage couples to recall and express what they appreciate about their partners during or after disputes, before exploring possible options for forgiveness. This appears to be more effective in preventing the escalation of the couple's negative emotions and providing a pathway to reconciliation, thereby enhancing their relationship satisfaction. Hence, the current study suggests exploring gratitude before forgiveness as a potential approach to help couples manage their conflicts.

5.4. Future Research Directions

Longitudinal and Experimental Designs. Future research can utilize longitudinal methods to investigate the dynamic relationship between self-control, gratitude, forgiveness, and relationship satisfaction over time. Furthermore, experimental methods can be employed by manipulating gratitude expressions, such as writing gratitude letters to their partner or describing a time when their partner supported them,

to examine in detail the process of subsequent transformations in forgiveness and satisfaction levels in their romantic relationships.

Expanding Relationship Types. Future research can investigate the relationships between self-control, gratitude, forgiveness, and relationship satisfaction across various types of relationships, including family relationships, friendships, and work relationships. This can deepen the understanding of how these attributes interact and function in diverse interpersonal contexts, providing a more comprehensive view of fostering relationship satisfaction.

6. Conclusions

The current study was designed to explore the role of gratitude and forgiveness in the association between self-control and relationship satisfaction. It is considered the first study to investigate the correlation between self-control and gratitude in the context of romantic relationships. Additionally, it appears to be the first study to examine the constructs of self-control, gratitude, and forgiveness simultaneously in romantic relationships. Participants were recruited to complete an anonymous online survey to indicate their levels of self-control, gratitude, forgiveness, and relationship satisfaction. Several intriguing results were exhibited. Self-control appears to fuel relationship satisfaction, but it does so indirectly—by first boosting gratitude, which then encourages partners to forgive each other, and ultimately deepens their bonding. Moreover, forgiveness alone does not seem to link self-control to relationship satisfaction, but the gratitude-forgiveness sequence that matters. The present study offers psychologists and other mental health professionals valuable insights into strategies, specifically incorporating self-control and gratitude practices, to help couples manage conflicts and enhance relationship quality. Further investigation is warranted to examine the dynamic interplay among self-control, gratitude, forgiveness, and relationship satisfaction, ultimately leading to the development of interventions that nurture flourishing and enduring couple relationships.

References

- Algoe, S. B., Gable, S. L., & Maisel, N. C. (2010). It's the little things: Everyday gratitude as a booster shot for romantic relationships. *Personal Relationships, 17*(2), 217–233.
- Anjun, P., & Kaiping, P. (2018). Gratitude facilitates self-control. *Studies of Psychology and Behavior, 16*(3), 378.
- Arya, B., & Kaushik, N. (2015). Forgiveness and relationship quality: A dyadic perspective. *Indian Journal of Health and Wellbeing, 6*(1), 57.
- Balliet, D., Li, N. P., & Joireman, J. (2011). Relating trait self-control and forgiveness within prosocials and proselves: Compensatory versus synergistic models. *Journal of Personality and Social Psychology, 101*(5), 1090–1105.
- Berscheid, E., & Reis, H. T. (1998). Attraction and close relationships. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The Handbook of Social Psychology* (4th ed., pp. 193–281). McGraw-Hill.
- Braithwaite, S. R., Selby, E. A., & Fincham, F. D. (2011). Forgiveness and relationship satisfaction: Mediating mechanisms. *Journal of Family Psychology, 25*(4), 551–559.

- Bühler, J. L., Krauss, S., & Orth, U. (2021). Development of relationship satisfaction across the life span: A systematic review and meta-analysis. *Psychological Bulletin*, 147(10), 1012–1053. <https://doi.org/10.1037/bul0000342>
- Burnette, J. L., Davison, E. K., Finkel, E. J., Van Tongeren, D. R., Hui, C. M., & Hoyle, R. H. (2014). Self-control and forgiveness: A meta-analytic review. *Social Psychological and Personality Science*, 5(4), 443–450.
- Candel, O. S., & Turliuc, M. N. (2019). Insecure attachment and relationship satisfaction: A meta-analysis of actor and partner associations. *Personality and Individual Differences*, 147, 190–199.
- Cao, W., Van Der Wal, R. C., & Taris, T. W. (2021). When work relationships matter: Interpersonal forgiveness and work outcomes. *International Journal of Stress Management*, 28(4), 266. <http://dx.doi.org/10.1037/str0000192>
- Census and Statistics Department (2022). *Hong Kong Monthly Digest of Statistics (January 2022)*. https://www.censtatd.gov.hk/en/data/stat_report/product/FA100055/att/B72201FB2022XXXXB0100.pdf
- Collins, W. A., Welsh, D. P., & Furman, W. (2009). Adolescent romantic relationships. *Annual Review of Psychology*, 60(1), 631–652.
- Cosgrove, L., & Konstam, V. (2008). Forgiveness and forgetting: Clinical implications for mental health counselors. *Journal of Mental Health Counseling*, 30, 1–13.
- Davis, D. E., Choe, E., Meyers, J., Wade, N., Varjas, K., Gifford, A., Quinn, A., Hook, J. N., Van Tongeren, D. R., Griffin, B. J., & Worthington Jr, E. L. (2016). Thankful for the little things: A meta-analysis of gratitude interventions. *Journal of Counseling Psychology*, 63(1), 20.
- Duckworth, A. L. (2011) The significance of self-control. *Proceedings of the National Academy of Sciences*, 108(7): 2639–2640.
- Duckworth, A. L., & Steinberg, L. (2015). Unpacking self-control. *Child Development Perspectives*, 9(1), 32–37. <https://doi.org/10.1111/cdep.12107>
- Eğeci, İ. S., & Gençöz, T. (2006). Factors associated with relationship satisfaction: Importance of communication skills. *Contemporary Family Therapy*, 28, 383–391.
- Emmons, R. A., & Mishra, A. (2011). Why gratitude enhances well-being: What we know, what we need to know. In K. M. Sheldon, T. B. Kashdan, & M. F. Steger (Eds). *Designing positive psychology: Taking stock and moving forward*. (pp.248–262). Oxford University Press.
- Findley, M. B., Carvallo, M., & Bartak, C. P. (2014). The effect of self-control on willingness to sacrifice in close relationships. *Self and Identity*, 13(3), 334–344.
- Finkel, E. J., & Campbell, W. K. (2001). Self-control and accommodation in close relationships: An interdependence analysis. *Journal of Personality and Social Psychology*, 81, 263.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56(3), 218.
- Funk, J. L., & Rogge, R. D. (2007). Testing the ruler with item response theory: Increasing precision of measurement for relationship satisfaction with the Couples Satisfaction Index. *Journal of Family Psychology*, 21(4), 572.
- García-Vázquez, F. I., Valdés-Cuervo, A. A., & Parra-Pérez, L. G. (2020). The effects of forgiveness, gratitude, and self-control on reactive and proactive aggression in bullying. *International Journal of Environmental Research and Public Health*, 17(16), 5760.
- Gere, J., & Schimmack, U. (2013). When romantic partners' goals conflict: Effects on relationship quality and subjective well-being. *Journal of Happiness Studies*, 14, 37–49.

- Gomillion, S., Lamarche, V. M., Murray, S. L., & Harris, B. (2014). Protected by your self-control: The influence of partners' self-control on actors' responses to interpersonal risk. *Social Psychological and Personality Science*, 5(8), 873-882.
- Gordon, A. M., Impett, E. A., Kogan, A., Oveis, C., & Keltner, D. (2012). To have and to hold: Gratitude promotes relationship maintenance in intimate bonds. *Journal of Personality and Social Psychology*, 103(2), 257-274. <https://doi.org/10.1037/a0028723>
- Halford, W. K., Lizzio, A., Wilson, K. L., & Occhipinti, S. (2007). Does working at your marriage help? Couple relationship self-regulation and satisfaction in the first 4 years of marriage. *Journal of Family Psychology*, 21(2), 185.
- Hellman, C. M., & Gwinn, C. (2017). Camp HOPE as an intervention for children exposed to domestic violence: A program evaluation of hope, and strength of character. *Child and Adolescent Social Work Journal*, 34, 269-276.
- Ho, M. Y., Liang, S., & Van Tongeren, D. R. (2024). Self-regulation facilitates forgiveness in close relationships. *Current Psychology*, 43(3), 1-11. <https://doi.org/10.1007/s12144-023-04504-5>
- Joel, S., Gordon, A. M., Impett, E. A., MacDonald, G., & Keltner, D. (2013). The things you do for me: Perceptions of a romantic partner's investments promote gratitude and commitment. *Personality and Social Psychology Bulletin*, 39(10), 1333-1345.
- Kaczmarek, L. D., Kashdan, T. B., Drajkowski, D., Bujacz, A., & Goodman, F. R. (2014). Why do greater curiosity and fewer depressive symptoms predict gratitude intervention use? Utility beliefs, social norm, and self-control beliefs. *Personality and Individual Differences*, 66, 165-170.
- Kong, F., Zhang, H., Xia, H., Huang, B., Qin, J., Zhang, Y., Sun, X., & Zhou, Z. (2020). Why do people with self-control forgive others easily? The role of rumination and anger. *Frontiers in Psychology*, 11, 129.
- Kubacka, K. E., Finkenauer, C., Rusbult, C. E., & Keijsers, L. (2011). Maintaining close relationships: Gratitude as a motivator and a detector of maintenance behavior. *Personality and Social Psychology Bulletin*, 37(10), 1362-1375. <https://doi.org/10.1177/0146167211412196>
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping* (Vol. 464). Springer.
- Leisring, P. A. (2013). Physical and emotional abuse in romantic relationships: Motivation for perpetration among college women. *Journal of Interpersonal Violence*, 28(7), 1437-1454. <https://doi.org/simsrad.net.ocs.mq.edu.au/10.1177/0886260512468236>
- Luchies, L. B., Finkel, E. J., & Fitzsimons, G. M. (2011). The effects of self-regulatory strength, content, and strategies on close relationships. *Journal of Personality*, 79(6), 1251-1280.
- McCullough, M. E., & Willoughby, B. L. (2009). Religion, self-regulation, and self-control: Associations, explanations, and implications. *Psychological Bulletin*, 135(1), 69.
- McCullough, M. E., Emmons, R. A., & Tsang, J. A. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology*, 82(1), 112-127.
- McCullough, M. E., Kimeldorf, M. B., & Cohen, A. D. (2008). An adaptation for altruism: The social causes, social effects, and social evolution of gratitude. *Current Directions in Psychological Science*, 17(4), 281-285. <https://doi.org/10.1111/j.1467-8721.2008.00590.x>
- McGuire, A. P., Szabo, Y. Z., Murphy, K. M., & Erickson, T. M. (2020). Direct and indirect effects of trait and state gratitude on health-related quality of life in a prospective design. *Psychological Reports*, 123(6), 2248-2262.
- Mertika, A., Mitskidou, P., & Stalikas, A. (2020). "Positive Relationships" and their impact on wellbeing: A review of current literature. *Psychology: The Journal of the Hellenic Psychological Society*, 25(1), 115-127.
- Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood: Structure, dynamics, and change*. Guilford Press.

- Neto, F. (2007). Forgiveness, personality and gratitude. *Personality and Individual Differences*, 43(8), 2313–2323.
- Pew Research Centre. (2020). *Key Takeaways on Americans' Views of and Experiences with Dating and Relationships*. <https://pewrsr.ch/2Ylwhqd>
- Pronk, T. M., Buyukcan-Tetik, A., Ilias, M. M. A. H., & Finkenauer, C. (2019). Marriage as a training ground: Examining change in self-control and forgiveness over the first 4 years of marriage. *Journal of Social and Personal Relationships*, 36(1), 109–130.
- Proulx, C. M., Helms, H. M., & Buehler, C. (2007). Marital quality and personal well-being: A meta-analysis. *Journal of Marriage and family*, 69(3), 576–593.
- Rhoades, G. K., Kamp Dush, C. M., Atkins, D. C., Stanley, S. M., & Markman, H. J. (2011). Breaking up is hard to do: The impact of unmarried relationship dissolution on mental health and life satisfaction. *Journal of Family Psychology*, 25(3), 366–374. <https://doi.org/10.1037/a0023627>
- Roberson, P. N., Lenger, K. A., & Olmstead, S. B. (2018a). Examining how romantic relationship quality influences individual psychological distress over time for men and women. *Journal of Adult Development*, 25, 259–269.
- Roberson, P. N., Norona, J. C., Lenger, K. A., & Olmstead, S. B. (2018b). How do relationship stability and quality affect wellbeing?: Romantic relationship trajectories, depressive symptoms, and life satisfaction across 30 years. *Journal of Child and Family Studies*, 27, 2171–2184.
- Rye, M. S., Loiacono, D. M., Folck, C. D., Olszewski, B. T., Heim, T. A., & Madia, B. P. (2001). Evaluation of the psychometric properties of two forgiveness scales. *Current Psychology*, 20, 260–277.
- Sandage, S. J., & Williamson, I. (2005). Forgiveness in cultural context. In E. L. Worthington Jr. (Ed.), *Handbook of forgiveness* (pp. 41–56). Routledge.
- Schnitker, S. A., Felke, T. J., Fernandez, N. A., Redmond, N., & Blews, A. E. (2017). Efficacy of self-control and patience interventions in adolescents. *Applied Developmental Science*, 21(3), 165–183.
- Schumann, K. (2012). Does love mean never having to say you're sorry? Associations between relationship satisfaction, perceived apology sincerity, and forgiveness. *Journal of Social and Personal Relationships*, 29(7), 997–1010.
- Sheykhi, M. T. (2020). Worldwide increasing divorce rates: A sociological analysis. *Konfrontasi: Jurnal Kultural, Ekonomi Dan Perubahan Sosial*, 7(2), 116–123.
- Sokol, J. T. (2009). Identity development throughout the lifetime: An examination of Eriksonian theory. *Graduate Journal of Counseling Psychology*, 1(2), 14.
- Soller, B. (2014). Caught in a bad romance: Adolescent romantic relationships and mental health. *Journal of Health and Social Behavior*, 55(1), 56–72.
- Stanley, S. M., Markman, H. J., & Whitton, S. W. (2002). Communication, conflict, and commitment: Insights on the foundations of relationship success from a national survey. *Family Process*, 41(4), 659–675.
- Suárez-García, Z., Álvarez-García, D., García-Redondo, P., & Rodríguez, C. (2020). The effect of a mindfulness-based intervention on attention, self-control, and aggressiveness in primary school pupils. *International journal of environmental research and public health*, 17(7), 2447.
- Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality*, 72, 271–324.
- Toussaint, L., & Friedman, P. (2009). Forgiveness, gratitude, and well-being: The mediating role of affect and beliefs. *Journal of Happiness Studies*, 10, 635–654.
- Unger, A., Bi, C., Xiao, Y. Y., & Ybarra, O. (2016). The revising of the Tangney Self-control Scale for Chinese students. *PsyCh journal*, 5(2), 101–116.

- Vangelisti, A. L., & Perlman, D. (2006). *The Cambridge handbook of personal relationships* (1st ed.). Cambridge University Press.
- Vohs, K. D., Finkenauer, C., & Baumeister, R. F. (2011). The sum of friends' and lovers' self-control scores predicts relationship quality. *Social Psychological and Personality Science*, 2(2), 138-145.
- Wallace, H. M., Exline, J. J., & Baumeister, R. F. (2008). Interpersonal consequences of forgiveness: Does forgiveness deter or encourage repeat offenses? *Journal of Experimental Social Psychology*, 44, 453-460.
- Whitton, S. W., Rhoades, G. K., & Whisman, M. A. (2014). Fluctuation in relationship quality over time and individual well-being: Main, mediated, and moderated effects. *Personality and Social Psychology Bulletin*, 40(7), 858-871.
- Witvliet, C. V., Worthington, E. L., Root, L. M., Sato, A. F., Ludwig, T. E., & Exline, J. J. (2008). Retributive justice, restorative justice, and forgiveness: An experimental psychophysiology analysis. *Journal of Experimental Social Psychology*, 44(1), 10-25.
- World Health Organization (2022). *Mental Health*. https://www.who.int/health-topics/mental-health#tab=tab_1
- Worthington, E. L., Jr. (2020). Understanding forgiveness of other people: Definitions, theories, and processes. In E. L. Worthington, Jr. & N. G. Wade (Eds.), *Handbook of forgiveness* (2nd ed., pp. 11-21). Routledge.
- Wu, Q., Chi, P., Lin, X., Du, H., Zhou, N., Cao, H., & Liang, Y. (2022). Gratitude and satisfaction in romantic relationships: Roles of decisional forgiveness and emotional forgiveness. *Current Psychology*, 1-9.
- Zuo, P. Y., Karremans, J. C., Scheres, A., Kluwer, E. S., Burk, W. J., Kappen, G., & Ter Kuile, H. (2020). A dyadic test of the association between trait self-control and romantic relationship satisfaction. *Frontiers in Psychology*, 11, 594476.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

