

---

Electronic Thesis and Dissertation Repository

---

7-27-2015 12:00 AM

# A Latent Profile Analysis of Romantic Relationship Quality and Its Associations with Personality, Partner Support, and Psychological Well-Being

Samantha Chen  
*The University of Western Ontario*

Supervisor  
Dr. Don Saklofske  
*The University of Western Ontario*

Graduate Program in Psychology  
A thesis submitted in partial fulfillment of the requirements for the degree in Master of Science  
© Samantha Chen 2015

Follow this and additional works at: <https://ir.lib.uwo.ca/etd>



Part of the [Clinical Psychology Commons](#), and the [Social Psychology Commons](#)

---

## Recommended Citation

Chen, Samantha, "A Latent Profile Analysis of Romantic Relationship Quality and Its Associations with Personality, Partner Support, and Psychological Well-Being" (2015). *Electronic Thesis and Dissertation Repository*. 2977.

<https://ir.lib.uwo.ca/etd/2977>

This Dissertation/Thesis is brought to you for free and open access by Scholarship@Western. It has been accepted for inclusion in Electronic Thesis and Dissertation Repository by an authorized administrator of Scholarship@Western. For more information, please contact [wlsadmin@uwo.ca](mailto:wlsadmin@uwo.ca).

A LATENT PROFILE ANALYSIS OF ROMANTIC RELATIONSHIP QUALITY AND ITS  
ASSOCIATIONS WITH PERSONALITY, PARTNER SUPPORT, AND PSYCHOLOGICAL  
WELL-BEING

(Thesis format: Monograph)

by

Samantha Chen

Graduate Program in Psychology

A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Master of Science

The School of Graduate and Postdoctoral Studies  
The University of Western Ontario  
London, Ontario, Canada

© Samantha Chen 2015

## ABSTRACT

The current study investigated the number of relationship quality profiles that emerge from a latent profile analysis and subsequently examined the nature of each subgroup using predictors of partner social support and personality, as well as outcomes of psychological well-being. The application of latent profile analysis resulted in three profiles of low, moderate, and high relationship quality among a sample of university students. Additionally, predictors and outcomes of profile membership were incorporated to provide a greater descriptive understanding of the latent profiles. Results showed that the relationship between intimacy and passion and the relationship between relationship satisfaction and received esteem support were positively associated across all three profiles of relationship quality. In contrast, relationships of high quality generally show a greater number of intercorrelations among important relationship quality components, and are associated with lower levels of negative supportive behaviours. Furthermore, perceived partner support, emotional support, esteem support, and honesty-humility were significant predictors that distinguished between the profiles. Lastly, individuals in high quality relationships reported more positive and less negative psychological outcomes, which showed significant associations with relationship satisfaction and trust. Overall, the present study presents a novel use of a person-centred approach to the understanding of relationship quality.

*Keywords:* romantic relationships; relationship quality; partner support; social support; personality; well-being

## ACKNOWLEDGEMENTS

I would first like to express my sincere gratitude toward my thesis supervisor, Dr. Don Saklofske, for his support and guidance throughout my Master's degree. Thank you for inspiring me to grow as a researcher and for continuing to cultivate my love of research.

A very special thank you to Dr. Paul Tremblay for his statistical expertise and support. I am so grateful for your endless patience, responsiveness, and willingness to help.

I would also like to extend a warm thank you to Dr. Lorne Campbell, Dr. Shannon Stewart, and Dr. Leora Swartzman for serving on my thesis committee. Thank you very much for taking the time to be a part of my Master's thesis, and for offering your insights, suggestions, and expertise on this project.

Many thanks to my colleagues in the Saklofske lab, all of whom I enjoy working with and whose friendships I value greatly. Special thanks to Anjana Balakrishnan and Sarah Moroz – thank you for your friendship, warm memories, and much needed support.

Finally, I would like to thank the people in my life who have allowed me to get where I am today. To my amazing parents, Sai Lin and Ming Fei Chen, I am forever grateful to the both of you for everything you have done for me – thank you for giving me more than I ever needed and for your unconditional love, support, and encouragement. To Mark Chen, thank you for your generosity, your sense of humour, and for being the best brother a sister could ask for.

Lastly, a huge thank you to William Yuan, who has painstakingly reviewed every single written work I produced in my academic career. Thank you for always believing in me and helping me make my dreams a reality. Above all else, thank you for being my best friend for the last seven years.

## TABLE OF CONTENTS

<b>ABSTRACT</b> .....	ii
<b>ACKNOWLEDGEMENTS</b> .....	iii
<b>TABLE OF CONTENTS</b> .....	iv
<b>CHAPTER 1: INTRODUCTION</b>	
<b>1. Introduction</b> .....	1
<i>1.1. Relationship Quality</i> .....	1
<i>1.1.1. Satisfaction</i> .....	2
<i>1.1.2. Commitment</i> .....	5
<i>1.1.3. Intimacy</i> .....	7
<i>1.1.4. Trust</i> .....	9
<i>1.1.5. Passion</i> .....	10
<i>1.1.6. Love</i> .....	11
<i>1.2. Relationship Quality and Personality</i> .....	13
<i>1.2.1. Neuroticism</i> .....	14
<i>1.2.2. Agreeableness</i> .....	15
<i>1.2.3. Conscientiousness</i> .....	16
<i>1.2.4. Extraversion</i> .....	17
<i>1.2.5. Openness to Experience</i> .....	18
<i>1.2.6. Honesty-Humility</i> .....	19
<i>1.3. Social Support</i> .....	20
<i>1.4. Social Support and Relationship Quality</i> .....	24
<i>1.5. Romantic Relationships and Well-being</i> .....	25
<i>1.6. The Present Study</i> .....	28
<i>1.6.1. Use of Latent Profile Analysis</i> .....	31
<i>1.6.2. Rationale and Research Objectives</i> .....	33
<b>CHAPTER 2: METHOD</b>	
<b>2. Method</b> .....	35
<i>2.1. Participants</i> .....	35

2.2. Measures.....	35
2.2.1. Relationship Quality.....	35
2.2.2. Perceived Social Support.....	36
2.2.3. Received Social Support.....	37
2.2.4. Effectiveness of Received Social Support.....	38
2.2.5. Personality.....	38
2.2.6. Life Satisfaction.....	39
2.2.7. Positive and Negative Affect.....	40
2.2.8. Depression, Anxiety, and Stress.....	40
2.3. Procedure.....	41

## CHAPTER 3: RESULTS

3. Results.....	42
3.1. Data Screening.....	42
3.2. Data Analytic Strategy.....	42
3.2.1. Model Estimation.....	43
3.2.2. Class Enumeration.....	43
3.2.3. Inclusion of Covariates in LPA Solutions.....	45
3.3. Preliminary Analyses.....	46
3.3.1. Relations among Perceived Relationship Quality Variables.....	46
3.3.2. Relations among Relationship Quality and Predictor Variables.....	47
3.3.3. Relations among Relationship Quality and Outcome Variables.....	48
3.4. Results from Latent Profile Analysis of Relationship Quality.....	49
3.5. Profile Interpretation.....	51
3.5.1. Relations among Study Variables across the Three-Profile Solution.....	52
3.6. Results from the Inclusion of Profile Membership Covariates.....	54
3.6.1. Predictors of Relationship Quality Profiles.....	54
3.6.2. Outcomes of Relationship Quality Profiles.....	56

## CHAPTER 4: DISCUSSION

4. Discussion.....	58
--------------------	----

4.1. <i>Limitations and Future Directions</i> .....	64
4.2. <i>Concluding Remarks</i> .....	66
<b>REFERENCES</b> .....	69
TABLE 1. Descriptive Statistics.....	109
TABLE 2. Bivariate Correlations between Demographic Variables and Relationship Quality.....	111
TABLE 3. Bivariate Correlations between Perceived Partner Support and Relationship Quality.....	112
TABLE 4. Bivariate Correlations between Received Partner Support and Relationship Quality.....	113
TABLE 5. Bivariate Correlations between Effectiveness of Received Social Support and Relationship Quality.....	114
TABLE 6. Bivariate Correlations between Personality and Relationship Quality.....	115
TABLE 7. Bivariate Correlations between Relationship Quality and Well-being Outcomes	116
TABLE 8. Latent Profile Analysis Model Fit Statistics.....	117
TABLE 9. Classification Posterior Probabilities for the Three-Profile Solution.....	118
TABLE 10. Means of Relationship Quality Components across the Three-Profile Solution	119
TABLE 11. Correlation Matrix for all Study Variables for Profile 1.....	120
TABLE 12. Correlation Matrix for all Study Variables for Profile 2.....	122
TABLE 13. Correlation Matrix for all Study Variables for Profile 3.....	124
TABLE 14. Means of Predictor Variables across the Three-Profile Solution.....	126
TABLE 15. Results from the Multinomial Logistic Regression Evaluating the Effects of Predictors on Latent Profile Membership.....	127
TABLE 16. Results from the Tests of Mean Equality using the BCH Method of Auxiliary Analyses of Outcome Variables.....	128
TABLE 17. Means of Outcome Variables across the Three-Profile Solution.....	129
<b>CURRICULUM VITAE</b> .....	130

## CHAPTER 1: INTRODUCTION

### 1. Introduction

#### 1.1. *Relationship Quality*

Relationship quality is one of the most frequently and extensively studied constructs in relationship and marital literature. Relationship quality has been measured and viewed in terms of subjective evaluations that individuals hold with regard to their romantic partners and relationships (Fletcher, Simpson, & Thomas, 2000). The quality of a romantic relationship has been viewed as a broad construct that includes many narrower dimensions. Based on an extensive review of relationship theories and relationship quality measures, Fletcher and colleagues (2000) identified six constructs that commonly represent fundamental components of relationship quality: satisfaction, commitment, intimacy, trust, passion, and love. Many of these constructs have their origins in different theoretical perspectives. For example, commitment is a principal outcome variable in Rusbult's Investment Model (Rusbult, 1983). Passion has theoretical origins in various models of love, such as Sternberg's (1986) Triangular Theory of Love.

In terms of face validity, these constructs have different, although clearly overlapping meanings. Confirmatory factor analyses conducted by Fletcher and colleagues (2000) indicated that each of the six relationship quality components represent domain-specific and quasi-independent evaluative constructs that load onto a higher-order factor of global perceived relationship quality. In other words, people tend to be relatively consistent in the assessments of their romantic partners and/or relationships across different evaluative domains, but they also tend to evaluate their partners and/or relationships somewhat variably across the various domains.

The present study aims to present a comprehensive examination of the extent to which various relationship characteristics are important factors in distinguishing between relationships of different quality. Few studies have assessed multiple components of relationship quality and



often used only one component of relationship quality (usually relationship satisfaction). The current study seeks to provide a more holistic conceptualization of the composition of relationship quality profiles that emerge from a latent profile analysis based on the six commonly identified components of relationship quality including satisfaction, commitment, intimacy, trust, passion, and love. Moreover, the nature of each profile will be further investigated in terms of its associations with significant determinants and outcomes of relationship quality, including partner social support and personality variables, as well as individual well-being and psychological outcomes.

### *1.1.1. Satisfaction*

Relationship satisfaction refers to global sentiment or happiness toward one's relationship (Sternberg & Hojjat, 1997). The term satisfaction has been used to describe a person's subjective attitude toward his or her partner and the relationship. In general, satisfied couples feel positive about their relationship, and believe that both the relationship and their partner have many good qualities. Those who are highly dissatisfied with their relationship are often referred to as experiencing relationship distress.

Satisfaction is one of the most frequently studied variables in relationship and marital research. Despite the significant body of literature examining this construct, there is a lack of consensus among relationship researchers about how to conceptualize and measure relationship satisfaction, as well as an absence of a unifying theoretical approach to studying this construct. There have been two dominant approaches that have been used to examine relationship satisfaction, one that has focused on the relationship itself and another that has focused on individual feelings within the couple. Researchers who examine patterns of interactions in the relationship regarded satisfaction as an interpersonal characteristic, and viewed satisfaction as a

dyadic process, the outcome of which is determined by interaction patterns between the couple (Bradbury, Fincham, & Beach, 2000; Gottman, 1994; Lewis & Spanier, 1979). These researchers also conceptualize satisfaction as a multidimensional construct, which is assessed by specific types of interactions between spouses, such as the amount and type of communication and conflict.

The other major approach to the conceptualization of relationship satisfaction involved an intrapersonal and unidimensional perspective (Norton, 1983; Roach, Frazier, & Bowden, 1981; Schumm et al., 1986). This framework conceived relationship satisfaction as reflecting a person's subjective evaluation of the relationship rather than the reported quality of interaction between couples. Proponents of this approach often use unidimensional, global evaluative assessments of the relationship, which considers the individual as the unit of analysis, rather than the couple, and involves subjective reports of attitudes.

The investigation of the determinants of satisfaction has occupied a central place in relationship research for many decades. In general, negative behaviours appear to distinguish satisfied couples apart from dissatisfied couples (Gottman & Notarius, 2000; Kelly, Fincham, & Beach, 2003; Weiss & Heyman, 1997). For example, compared to happy couples, distressed couples show a range of dysfunctional communication patterns, including higher levels of specific negative behaviours such as criticism and complaining, hostility, defensiveness, and disengagement. Dissatisfied couples also fail to listen actively to each other when interacting.

With regard to patterns of interaction, dissatisfied couples are characterized by the existence of reciprocated negative behaviour that tend to escalate in intensity (Fincham & Beach, 1999; Gottman & Notarius, 2000; Weiss & Heyman, 1997). In contrast, satisfied couples appear to be more responsive to attempts to repair a negative interaction, and are therefore able to exit from negative exchanges early on. Another commonly observed interaction pattern in distressed

couples is called the demand-withdraw pattern whereby one member pressures the other using demands, complaints, and criticisms, and the partner withdraws with defensiveness and passive inaction (Caughlin & Huston, 2002; Rehman & Holtzworth-Munroe, 2006). Conflict interaction patterns appear to be relatively stable over time and are predictive of changes in marital satisfaction and marital stability (Karney & Bradbury, 1995; Gottman, Coan, Carrere, & Swanson, 1998).

Considerable research has also examined the role of cognitive variables in understanding relationship satisfaction (Fincham, 1994, 2001; Karney, McNulty, & Bradbury, 2001). The association between attributions and relationship satisfaction is one of the most robust, replicable findings in the study of intimate relationships (Fincham, 2001). Certain attributions for relationship events (e.g., a spouse arrives home late from work) can promote relationship satisfaction (e.g., “he or she was delayed by traffic”) or dissatisfaction (e.g., “he or she is selfish and cares more about work than me”). Longitudinal studies have demonstrated that attributions predict later satisfaction (Fincham, Harold, & Gano-Phillips, 2000; Karney & Bradbury, 2000). Relationship satisfaction has also been related to a number of other cognitive variables, including models of attachment, with greater satisfaction being related to secure attachment (Meyers & Landsberger, 2002); partner and ideal standards discrepancies, in which smaller discrepancies were associated with greater satisfaction (Campbell, Simpson, Kashy, & Fletcher, 2001); social comparison processes, with greater downward comparison being correlated with greater satisfaction (Buunk & Ybema, 2003); and self-evaluation maintenance processes that change the nature of couple communication (Beach et al., 1998; O’Mahen, Beach, & Tesser, 2000).

Physiology (e.g., the degree of physical arousal during couple interactions), social support, and intimate partner violence have also been identified as factors that are linked to

relationship satisfaction (Bradbury et al., 2000). Studies have also shown that marital satisfaction is significantly related to measures of individual well-being, including life satisfaction as well as physical and psychological health (Carr, Freedman, Cornman, & Schwarz, 2014; Horwitz, McLaughlin & White, 1998; Proulx, Helms, & Buehler, 2007; Umberson, Williams, Powers, Liu, & Needham, 2006; Whisman, 2001).

### *1.1.2. Commitment*

Commitment represents a long-term orientation towards one's relationship, including feelings of attachment to a partner and desire to maintain a relationship even when confronted with challenges (Rusbult, 1983; Rusbult, Martz, & Agnew, 1998). A committed romantic partner has been described as a person who has a strong personal intention to continue the relationship (Johnson, 1973; Rusbult & Buunk, 1993); feels attached or linked to the partner (Rusbult & Buunk, 1993; Stanley & Markman, 1992); feels morally obligated to continue the relationship (Johnson, 1991; Lydon, Pierce, & O'Regan, 1997); envisions being with the partner in the long-term future (Rusbult & Buunk, 1993); prioritizes their romantic relationship over other aspects of life (Stanley & Markman, 1992); has overcome challenges to the relationship (Brickman, Dunkel-Schetter, & Abbey, 1987; Lydon & Zanna, 1990); has relatively poor alternatives to the current relationship (Thibaut & Kelley, 1959); has many tangible and intangible resources that would be lost if the relationship were to end (Hinde, 1979; Johnson, 1973; Lund, 1985; Rosenblatt, 1977); and faces difficulties in ending the relationship (or experiences strong social pressure to continue the relationship) (Johnson, 1991; Rosenblatt, 1977).

The state of commitment has been conceptualized as a multidimensional construct involving three components (Arriaga & Agnew, 2001): 1) psychological attachment (the affective connection that develops between relationship partners), 2) long-term orientation (the cognitive

component that involves a strong assumption that the relationship will persist well into the future), and 3) intention to persist in the relationship (the conative or motivational component of being intrinsically motivated to continue the relationship into the long-term future).

The construct of commitment has been largely examined within the Investment Model of relationship commitment (Le & Agnew, 2003; Rusbult, 1983; Rusbult et al., 1998). According to this model, level of commitment is influenced by three factors: 1) satisfaction level (which refers to the degree to which an individual experiences positive versus negative affect as a result of the relationship), 2) quality of alternatives (which describes the perceived desirability of attractive and available alternatives to the current relationship), and 3) investment size (which refers to the magnitude and importance of the resources tied to a relationship, i.e., time, emotional effort, self-disclosures, that would be lost if the relationship were to end).

Empirical support for the Investment Model has consistently demonstrated that commitment is positively associated with satisfaction level and investment size, and is negatively associated with quality of alternatives, and that each of these variables contributes unique variance to predicting commitment (Rusbult et al., 1998). Strong commitment has also been shown to be associated with various relationship maintenance behaviours, including inclinations toward accommodative behaviour (Arriaga & Rusbult, 1998; Kilpatrick, Bissonnette, & Rusbult, 2002; Rusbult, Verette, Whitney, Slovik, & Lipkus, 1991), willingness to sacrifice personal interests for the good of a relationship (Powell & Van Vugt, 2003; Van Lange et al., 1997), and greater tendencies to forgive a partner following a betrayal (Cann & Baucom, 2004; Finkel, Rusbult, Kumashiro, & Hannon, 2002; McCullough et al., 1998).

Highly committed people also tend to display different relationship-related perceptions in comparison to less committed people, and these thoughts have an impact on the well-being of the relationship. For example, people with strong commitment guard themselves from alternative

partners by cognitively derogating attractive alternatives (Lydon, Meana, Sepinwall, Richards, & Mayman, 1999; Miller, 1997). Additionally, highly committed individuals react to periods of doubt or uncertainty by cognitively enhancing their partners and their relationship, such as denying negative qualities of the partner, developing unrealistically positive thoughts about their partner and/or the relationship, and casting others' relationships in a negative light (Agnew, Loving, & Drigotas, 2001; Arriaga, 2002; Arriaga, Slaughterbeck, Capezza, & Hmurovic, 2007; Murray & Holmes, 1999; Murray, Holmes, & Griffin, 1996; Rusbult, Van Lange, Wilschut, Yovetich, & Verette, 2000).

### *1.1.3. Intimacy*

Intimacy has been defined as a couple's level of closeness, sharing of ideas and values, shared activities, being sexually intimate, knowledge about each other, and acts of affection such as holding hands (Heller & Wood, 1998; Moss & Schwebel, 1993; Patrick, Sells, Giodano, & Tollerud, 2007; Waring, 1984). In Sternberg's (1986) Triangular Theory of Love, intimacy refers to feelings in a relationship that promote closeness, connectedness, and bondedness. The construct of intimacy has been assessed as a continuum of relational factors measured by quantity, degree, and intensity, such as the amount of time spent together, the variety of interactions that a couple partakes in together, and the extent to which the other person in the couple influences one's decisions and activities (Aron, Aron, & Smollan, 1992; Talmadge & Dabbs, 1990; Waring, 1988).

Intimacy has also been conceptualized as a quality of persons, a quality of interactions, or a quality of relationships. As a quality of persons, intimacy has been described as a motivation, reflecting the needs of the individual. This perspective views intimacy as a dispositional characteristic whereby intimacy motivation is defined as the recurrent preference or drive for

experiences of warm, close, and communicative interaction with others (McAdams, 1985). This motivation is believed to represent a stable personality component on which individuals can differ. Intimacy has also been defined as a quality of a particular interpersonal interaction. From this perspective, intimacy is based on a process of behavioural exchanges, and is reflected by behaviours such as increasing or decreasing interpersonal distance, making eye contact, or smiling. This behavioural conceptualization of intimacy evaluates the interaction of physiological arousal levels and behavioural exchanges that lead to increased positive emotional experience, closeness, and understanding that may become mutually reinforcing (Fruzzetti & Jacobson, 1990). Lastly, some researchers have described intimacy as a description of the quality of a particular type or set of relationships. For example, Schaefer and Olson (1981) considered an intimate relationship as one in which partners share experiences across a variety of areas (social, emotional, intellectual, sexual, and recreational), and in which such experiences and the relationship will continue over time.

Baumeister and Bratslavsky (1999) reviewed several definitions of intimacy in the literature and conceptualized intimacy as having three main dimensions. First, they proposed that intimacy involves the mutual disclosure of personal information resulting in an empathic reciprocal understanding that allows each person to feel that their partner understands him or her. Second, intimacy includes having a strong favourable attitude toward the other, which is manifested by positive, warm feelings and by a motivation to benefit the other. Third, intimacy involves the communication of affection, including verbal affection, acts that express concern, touching and attention, or sexual affection.

Research has shown that intimacy development is influenced by the amount of attention people give to potential relationship partners, as well as the trust they place in, and the extent to which they disclose themselves to these partners (Berscheid & Graziano, 1979; Collins & Miller,

1994; Simpson, 2007). Couples who report high levels of intimacy tend to be highly satisfied and maintain long-term, stable relationships (Goodman, 1999; Greeff & Malherbe, 2001; Patrick et al., 2007). Studies have also demonstrated that responsive support promotes the development of intimacy and closeness (Feeney & Collins, 2001, 2003; Albrecht, Burleson, & Goldsmith, 1994), and, reciprocally, intimacy promotes helpful and supportive behaviour (Maner et al., 2002; Mikulincer et al., 2001; Sanderson & Evans, 2001).

#### *1.1.4. Trust*

The concept of interpersonal trust represents the degree to which individuals believe they can depend on their current relationship partner to meet their most fundamental needs and to facilitate the accomplishment of their most important goals (Campbell, Simpson, Boldry, & Rubin, 2010). The fundamental features of trust include: a partner's dependability, being able to count on one's romantic partner for comfort and support during difficult times; and faith in the partner, being confident that one's romantic partner will always be available and supportive in the future (Simpson, 2007). Trust is a psychological state or orientation of an individual toward a specific partner with whom the individual is interdependent, that is, the individual needs his or her partner's cooperation to obtain valued outcomes or resources (Holmes & Rempel, 1989; Rempel, Holmes, & Zanna, 1985).

A review of the interpersonal trust literature by Simpson (2007) identified four fundamental principles of interpersonal trust. First, individuals evaluate the degree to which they can trust their partners by observing whether partners make personal sacrifices for the good of the individual and/or the relationship in "trust-diagnostic" situations. Second, these trust-diagnostic situations often occur naturally and unintentionally throughout daily life. However, depending on situational circumstances, individuals may sometimes enter, transform, or create trust-diagnostic



situations to test whether their current level of trust in a partner is warranted. Third, individual differences in attachment orientations, self-esteem, or self-differentiation may affect the growth or decline of trust over time in relationships. For example, individuals who are more securely attached, have higher self-esteem, or have more differentiated self-concepts tend to experience higher levels of trust and increases in trust in their relationships over time. Lastly, it is important to consider the dispositions and behaviours of both relationship partners when studying the level and the trajectory of trust in relationships.

Dyadic trust is one of the most significant predictors of relationship satisfaction, distress, and stability (Simpson, 1990). Individuals who report higher levels of trust tend to hold more optimistic and benevolent expectations regarding their partner's relationship motives and make more positive attributions for their partner's behaviours (Holmes, 1991; Rempel, Ross, & Holmes, 2001). People who are more trusting also tend to disregard or downplay their partner's negative relationship actions, which minimize the potential negative impact of minor partner transgressions (Rempel et al., 2001). In addition, more trusting individuals also view their partners more positively, even when recounting negative relationship experiences (Holmes & Rempel, 1989). Research has also shown that less trusting individuals experience greater variability in relationship quality over time and are more reactive to daily negative relationship events (Campbell et al., 2010).

#### *1.1.5. Passion*

Passion involves strong feelings of attraction for a romantic partner. In general, these feelings are experienced as a state of physiological arousal that is often motivational in nature. In Sternberg's (1986) Triangular Theory of Love, passion refers to internal drives that lead to romance, physical attraction, and sexual satisfaction. It involves what Hatfield and Walster

(1978) refer to as “a state of intense longing for union with another” (p. 9). Passionate love is generally associated with a variety of intense emotions such as fulfilment, ecstasy, sexual desire, and excitement when the relationship is going well, and periods of emptiness, anxiety, and despair when it is not (Regan, Kocan, & Whitlock, 1998; Sprecher & Regan, 1998).

Passionate love tends to occur fairly rapidly, and people who are passionately in love often idealize the loved one and become preoccupied with thoughts of the partner and the relationship (Berscheid & Regan, 2005; Hatfield & Rapson, 1993; Regan & Berscheid, 1999). Physiological arousal and its associated bodily sensations, such as racing pulse, heightened breathing, and “butterflies” in the stomach, represent another feature of passionate love (Regan, 2009). Research has shown that other indicators of passion include longing to be with the romantic partner, the degree of happiness felt in response to a partner’s positive responses, and the degree of despair over rejection by a partner (Baumeister & Bratslavsky, 1999).

Sexuality appears to be one of the central features of experiencing passion. People who are more passionately in love report experiencing higher levels of sexual excitement when thinking about their partner and also engaging in more frequent sexual activities with their partner in comparison to individuals who are less passionately in love (Aron & Henkemeyer, 1995; Hatfield & Sprecher, 1986; Sprecher & Regan, 1998). In addition, individuals generally report experiencing sexual desire for the people with whom they are passionately in love, the magnitude of which corresponds to their feelings of sexual attraction (Regan, 1998).

#### *1.1.6. Love*

Love is often considered a fundamental feature of romantic relationships. The construct of love has a number of definitions, models, and taxonomies. Love has been broadly defined as “the constellation of behaviours, cognitions, and emotions associated with a desire to enter or

maintain a close relationship with a specific other person” (Aron & Aron, 1991, p. 26). Rubin (1970) defined love as an attitude that predisposes an individual to think, feel, and act in particular ways towards the loved one. Furthermore, he described three components of love: need/attachment, which involves longing for an absent partner; intimacy, which refers to exclusive self-disclosure to a partner; and caring, which involves wanting to do things for a partner.

Much of the research on the nature of love has focused on identifying and differentiating types or aspects of love. For example, romantic love has been distinguished from more general kinds of love, such as familial love, compassionate love for strangers, or love of God. A key distinction has also been made between romantic love and liking, the former being associated with dependence, caring, and exclusiveness, and the latter emphasizing similarity, respect, and positive evaluation (Rubin, 1970). Research on the construct of love has also identified different types of love. Berscheid and Hatfield (1974) argued that love is not a single entity, but rather is best conceptualized in terms of two basic kinds: passionate love (an intense desire for connection with a particular other person) and companionate love (an affection that develops between two people whose lives are interconnected).

Hendrick and Hendrick (1986) proposed a typology of six different love styles: eros (intense, passionate love), ludus (game playing love), storge (friendship love), pragma (logical, practical love), mania (possessive, dependent love), and agape (selfless love). These love styles may be considered as attitudes or orientations toward a particular person, such as a romantic partner, but may also be considered as stable orientations toward relationships in general. Love has also been conceptualized in Sternberg’s (1986) Triangular Theory as having three primary components: intimacy, commitment, and passion. The various combinations of these facets produce diverse types of love. More recently, Berscheid (2010) proposed a model that specifies

four kinds of love: romantic/passionate love (eros, “being in love”), companionate love/liking (friendship love, storge, strong liking), attachment love (strong affectional bond with an attachment figure), and compassionate love (altruistic love, selfless love, agape, communal responsiveness).

It is important to note that some of the relationship qualities identified as a part or type of love has also often been distinguished from love. For example, love and commitment have been demonstrated to be overlapping but not identical concepts (Fehr, 1988; Fehr, 2001). Similarly, passion appears as a factor distinct from love (Fletcher et al., 2000), but is described as a component of many systems of love, such as Sternberg’s (1986) Triangular Theory and Hendrick and Hendrick’s (1986) love styles.

Research has indicated that feelings of love are associated with factors such as self-disclosure, equity, frequent and satisfying sex, and positive beliefs about the relationship (Sprecher & Feinlee, 2007). Love is also a major determinant of how happy people are in their romantic relationships, and measures of love have been associated with relationship satisfaction and relationship stability (Fehr, 2013; Graham, 2011). In studies of relational experience, people tend to report high levels of love and commitment (Fehr, 1988; Gonzaga, Turner, Keltner, Campos, & Altemus, 2006; Sprecher & Regan, 1998). Moreover, love plays an important role in predicting the dissolution of romantic relationships (Attridge, Berscheid, & Simpson, 1995; Le, Dove, Agnew, Korn, & Mutso, 2010; Sbarra, 2006). Love has also been linked to life satisfaction as well as psychological and general health (Dietch, 1978; Kim & Hatfield, 2004).

### *1.2. Relationship Quality and Personality*

For the past several decades, the Five-Factor Model of personality (McCrae & Costa, 1997) has been the most dominant conceptualization of personality (Digman, 1990; Goldberg,

1993; McCrae & Costa, 1987). Each factor in the Five-Factor Model (also known as the ‘Big Five’) represents a bipolar dimension, and these five factors (Neuroticism, Agreeableness, Conscientiousness, Extraversion, and Openness to Experience) are believed to capture much, if not all, aspects of individual differences in personality. Extensive research has established the link between romantic relationship quality, functioning, and outcomes and broad personality traits such as the Big Five (Berry, Willingham, & Thayer 2000; Karney & Bradbury, 1995; Lehnart & Neyer, 2006; White, Hendrick, & Hendrick 2004).

### *1.2.1. Neuroticism*

Neuroticism (or emotionality) refers to the degree of emotional stability, and has been described as the tendency to experience negative emotions easily, such as anger, anxiety, depression, and vulnerability. In a recent comprehensive review of the literature on the Big Five and relationship outcomes, McNulty (2013) demonstrated that the strongest and most consistent finding has been the negative relation between neuroticism and desirable relationship outcomes. For example, marital dissatisfaction has been associated with neuroticism (Botwin, Buss, & Shackelford, 1997; Bouchard, Lussier, & Sabourn, 1999; Donnellan, Conger, & Bryan 2004) and reliably predicts greater marital instability and divorce (Karney & Bradbury, 1995; Kelly & Conley, 1987; Kurdek, 1993; Tucker, Kressin, Spiro, & Ruscio, 1998). Russell and Wells (1994) have also documented that neuroticism predicts reduced personal happiness with marriage in both spouses, which was mediated by each spouses’ perceptions of lower marital quality. A longitudinal study by Robins, Caspi, and Moffitt (2002) showed that negative emotionality at the age of 18 predicted higher levels of conflict and abuse and lower levels of quality in romantic relationships three and eight years later. They also demonstrated that the influence of negative emotionality on intimate relationships was quite stable.

A considerable body of research has examined the mechanisms in which neuroticism would lead to the types of perceptions and behaviours that tend to be associated with negative relationship outcomes (Caughlin & Vangelisti, 2000; Dijkstra & Barelds, 2008; Hellmuth & McNulty, 2008; Kurdek, 1997; Swickert, Hittner, & Foster, 2010). For example, Karney, Bradbury, Fincham, & Sullivan (1994) demonstrated that higher neuroticism predicted more global, stable, and internal attributions for the partner's undesirable behaviours. Similarly, Donnellan and colleagues (2004) reported that neuroticism predicted negativity between spouses during problem-solving interactions. Neuroticism has been shown to contribute to detrimental relationship outcomes in two major ways: (1) it results in more hostility from the partner through one's own hostility, and (2) it leads people to view their partners as behaving with more hostility than they actually do (Caughlin, Huston, & Houts, 2000; McNulty, 2008).

### *1.2.2. Agreeableness*

Agreeableness reflects the tendency to be compassionate, warm, trusting, and cooperative as opposed to being antagonistic, hostile, selfish, and suspicious towards others. Agreeableness has been positively correlated with desirable relationship outcomes in numerous studies (Barelds, 2005; Cook, Casillas, Robbins, & Dougherty, 2005; Demir, 2008; Donnellan et al., 2004; Gattis, Berns, Simpson, & Christensen, 2004). For example, Bouchard and colleagues (1999) demonstrated that higher levels of agreeableness were associated with greater relationship satisfaction in dating relationships. However, other studies have provided less consistent results. For instance, although agreeableness has been shown to be positively associated with satisfaction for men in dating and marital relationships, this link has been found to be non-significant among women (Kelly & Conley, 1987; White et al., 2004). In contrast, Watson, Hubbard, and Wiese (2000) found a positive link between agreeableness and satisfaction among men and women in

dating relationships, and among husbands in marital relationships. However, the association between wives' agreeableness and marital satisfaction was not significant. Moreover, Kurdek (1993) found no relationship between both spouses' agreeableness and divorce over the first 5 years of marriage.

Studies investigating the interpersonal processes through which agreeableness may affect relationship outcomes have indicated that agreeable people hold more positive perceptions for others' behaviour (Caughlin & Vangelisti, 2000; Donnellan et al., 2004; Graziano, Jensen-Campbell, & Hair, 1996; Jensen-Campbell & Graziano, 2001; Swickert et al., 2010), behave more constructively during discussions (Caughlin & Vangelisti, 2000; Donnellan et al., 2004; Holland & Roisman, 2008), are treated more positively by others (Jensen-Campbell et al., 2002), and report being less likely to engage in unfaithful behaviours (Buss & Shackelford, 1997).

### *1.2.3. Conscientiousness*

Conscientiousness is a trait dimension characterized by reliability, organization, thoroughness, and self-discipline versus carelessness, negligence, disorganization, and unreliability. Research on the association between conscientiousness and relationship outcomes has produced somewhat variable results. Whereas several studies have shown that conscientiousness is positively associated with relationship satisfaction and/or stability (Barelds, 2005; Bouchard et al., 1999; Cook et al., 2005; Donnellan et al., 2004; Gattis et al., 2004; Kurdek, 1993), other research has only demonstrated associations between men's conscientiousness and stability (Kelly & Conley, 1987), and several studies have reported non-significant associations between either sex's conscientiousness and relationship outcomes (Demir, 2008; Watson et al., 2000; White et al., 2004).

Research has also demonstrated inconsistent links between conscientiousness and various

relational processes. Several studies have found that conscientiousness is negatively associated with self-reported harmful relationship behaviours (Donnellan et al., 2004; Holland & Roisman, 2008) and positively associated with perceptions of behaviours that tend to be beneficial for relationships (Swickert et al., 2010). For example, Buss and Shackelford (1997) reported that less conscientious individuals reported being more likely to flirt with and kiss another person other than their spouse. However, several studies have reported that conscientiousness is unrelated to behaviours exchanged during problem-solving discussions (Caughlin & Vangelisti, 2000; Donnellan et al., 2004; Holland & Roisman, 2008). High conscientiousness has also been associated with lower levels of sexual desire (Costa, Fagan, Piedmont, Ponticas, & Wise, 1992; Heaven, Fitzpatrick, Craig, Kelly, & Sebar, 2000).

#### *1.2.4. Extraversion*

Extraversion refers to the personality factor characterized by energy, talkativeness, assertiveness, and gregariousness, and contrasts with such traits as passivity, solitariness, and reserve. Studies examining the associations between extraversion and relationship outcomes have demonstrated contradictory findings. While some studies indicate that greater extraversion is associated with positive relationship outcomes among both men and women (Barelds, 2005; Bouchard et al., 1999; Cook et al., 2005; Demir, 2008; Donnellan et al., 2004; Scollon & Diener, 2006), other studies demonstrate such positive associations only for men (Kelly & Conley, 1987; Watson et al., 2000), and some studies demonstrate no significant associations between extraversion and relationship outcomes for either men or women (Gattis et al., 2004; Kurdek, 1993; Lester, Haig, & Monello, 1989; White et al., 2004). Moreover, Kelly and Conley (1987) found that in successful marriages, higher levels of extraversion in husbands was associated with greater relationship satisfaction, however greater extraversion in husbands also led to a higher



likelihood of divorce by the end of the study.

Research has also demonstrated inconsistent links between extraversion and various interpersonal processes. Holland and Roisman (2008) reported that extraversion was positively associated with more positive and less negative affect during discussions between engaged couples, but not for dating and married couples. Individuals who display greater extraversion have been shown to be more accurate in their perception of support provision from their partners and to perceive their partners as providing better social support (Cutrona, Hessling, & Suhr, 1997; Swickert et al., 2010). In contrast, Dehle and Landers (2005) reported no significant associations between extraversion and support perceptions or behaviours. Extraversion has also been positively associated with increased sex drive, sexual curiosity, sexual excitement, and more sexual experience (Costa et al., 1992; Heaven et al., 2000).

#### *1.2.5. Openness to Experience*

Openness to experience reflects the degree of curiosity, perceptiveness, and creativity, as well as a preference for novelty and variety a person has. Openness to experience has been shown to be the weakest predictor of relationship outcomes. Most studies have found no associations between openness and relationship functioning (Cook et al., 2005; Demir, 2008; Donnellan et al., 2004; Gattis et al., 2004; Kwan et al., 1997; Kurdek, 1993; Watson et al., 2000). However, a few studies have reported significant relationships between openness to experience and relationship quality. For example, Bouchard et al. (1999) demonstrated a positive association between openness and relationship satisfaction for men, but not women. Furthermore, Donnellan et al. (2004) reported that openness was positively associated with sexual satisfaction for wives, whereas husbands' openness was unassociated with sexual satisfaction in either spouse.

Contradictory findings have also been reported between openness to experience and

relational processes. Positive associations between openness and more constructive behaviour have been found among both men and women (Donnellan et al., 2004; Holland & Roisman, 2008). Similarly, Donnellan and colleagues (2004) showed that spouses with higher levels of openness perceived their conversations more positively. In contrast, Caughlin and Vangelisti (2000) reported that openness was unrelated to both observations and perceptions of own and partner behaviours. Openness has been found to be unrelated to perceptions of support, as well as supportive behaviours in marital relationships (Dehle & Landers, 2005; Swickert et al., 2010). Furthermore, Costa et al. (1992) found that openness was positively associated with more diverse sexual experiences and increased sex drive, whereas Heaven et al. (2000) demonstrated that openness was unrelated to several sexual behaviours and attitudes.

#### *1.2.6. Honesty-Humility*

While most personality researchers reached a near-consensus favouring the Five-Factor Model of personality as the optimal structural framework for personality characteristics, some researchers have recently argued that more than five factors are needed. For example, Ashton and colleagues have proposed a replicable set of six personality dimensions which captures some important personality variance not represented within the five dimensional models (Ashton & Lee, 2005; Ashton et al., 2004; Lee & Ashton, 2008; Saucier, 2009). This HEXACO model essentially subdivides Agreeableness into two factors, the second being Honesty-Humility. The Honesty-Humility factor is characterized by honesty, sincerity, fairness, and modesty versus greediness, conceitedness, deceitfulness, and pretentiousness. To my knowledge, there are no known studies to date that have examined the factor of Honesty-Humility and its associations with romantic relationship quality.

### *1.3. Social Support*

Social support has been conceptualized as a second-order factor that is made up of two distinct first-order factors: structural support and functional support (Cohen & Wills, 1985; Hittner & Swickert, 2001; Russell, Booth, Reed, & Laughlin, 1997; Vaux & Harrison, 1985). Structural measures of support assess the existence and interconnection between various social relationships (e.g., marital status), whereas functional measures of support assess the particular functions that social relationships may serve (e.g., providing emotional support). In general, these two general social support factors are not perceived equally by the individual. For example, Hittner and Swickert (2001) found that individuals, when making judgements regarding their sense of support from others, gave greater weight to their perception of availability of support (functional support) over specific characteristics that define their social network (structural support).

Structural support is usually assessed with network measures that focus on the individual's report of social integration into a group and the interconnectedness of those within that group. The concept of social connectedness or social embeddedness refers to the quantity and quality of social ties or interpersonal connections that an individual has with others, including both formal (e.g., healthcare professionals, teachers) informal (e.g., family, friends) social relationships (Kaul & Lakey, 2003; Sarason, 1974). Structural support can be examined in regards to the number, type, structure, strength, density, and reciprocity of different personal relationships and roles (Williams, Barclay, & Schmied, 2004). Social network size has been shown to be associated with reduced mortality rates (Berkman & Syme, 1979; House, Robbins, & Metzner, 1982), greater resistance to particular disease processes (Cohen, Doyle, Skoner, Rabin, & Gwaltney, 1997), and reduced levels of anxiety, depression, and psychological distress (Cohen & Wills, 1985).

Functional support focuses on measures of perceived support and received support. Perceived support refers to subjective appraisals that support would be available if needed. These judgments can refer to a range of different support providers (e.g., a romantic partner) and time frames (e.g., the recipient's entire past or expected future, or to single social interactions). Measures of perceived availability of support have focused on assessing an individual's appraisal of the availability and/or the adequacy of support. Extensive research has shown the role of perceived social support in predicting reduced mortality and physical health outcomes (Cohen, 2003; House, Landis, & Umberson, 2003; Thoits, 2011; Uchino, Cacioppo, & Kiecolt-Glaser, 1996; Umberson & Montez, 2010), as well as lower levels of psychological distress (Krause, Liang, & Gu, 1998; Ystgaard, Tambs, & Dalgard, 1999).

While measures of perceived support capture an individual's appraisal of support, irrespective of whether or not they have received such support, measures of received support (also referred to as actual or enacted social support) focus on specific, supportive actions that a person reports as having actually been given by others in some specified time period. Enacted support measures typically rely less on subjective judgments of quality and instead focus on the occurrence or frequency of more objectively determined actions. Researchers have distinguished between four different types of social support: informational, tangible, esteem, and emotional support (Cobb, 1979; Kahn, 1979; Schaefer, Coyne, & Lazarus, 1981; Weiss, 1974). These support types have been further classified into two broad categories of action-facilitating support and nurturant support (Cutrona, 1990; Cutrona & Russell, 1990; Cutrona & Suhr, 1992).

Action-facilitating support reflects efforts to directly assist a stressed individual to solve or eliminate the problem that is causing his or her distress. Both informational support and tangible aid has been included in this category. Informational support involves the provision of information about the stressor itself or how to deal with it, such as giving advice, guidance,

factual input, skill development, or feedback on actions. Tangible aid refers to providing or offering to provide goods (e.g., money or food) or services (e.g., childcare, transportation, or housework) needed during stressful situations. Nurturant support represents efforts to comfort or console, without direct efforts to solve the problem causing stress. Emotional support and esteem support have been included in this category. Emotional support involves expressions of love, caring, concern, empathy, and sympathy. Esteem support refers to communicating respect or confidence for one's skills, abilities, and intrinsic value.

Although many positive effects of social support have been documented in the literature, it should be noted that social interactions with others are not always supportive in nature. Individuals can also respond negatively, such as criticizing or blaming recipients or demanding that recipients adopt their approach to dealing with a stressful situation. Interacting with others who are interfering, manipulative, or even hostile has been shown to have a negative impact on psychological well-being (Harber, Schneider, Everard, & Fisher, 2005; Rook, 1984). Research has demonstrated the importance of assessing both positive and negative behaviours in support interactions. Negative behaviours have been demonstrated to have independent effects above and beyond the levels of positive support offered (Rafaeli, Cranford, Green, Shrout, & Bolger, 2008; Feeney & Thrush, 2010; Overall, Fletcher & Simpson, 2010). In the context of romantic relationships, higher levels of nurturant and action-facilitating behaviours are generally associated with more positive feelings of support, whereas more negative behaviours are associated with perceiving the partner as less supportive (Collins & Feeney, 2000; Cutrona & Suhr, 1992; Pasch, Bradbury, & Sullivan, 1997; Verhofstadt, Buysse, Ickes, De Clercq, & Peene, 2005).

Moreover, research on received social support and positive supportive behaviours from close others has not demonstrated consistent positive effects on outcomes. Although recipients

report greater felt support when their partners provide more positive forms of support during observed discussions, inconsistent and modest effect sizes across studies ( $r$ s range from .09 to .41, average  $r = .25$ ) suggests that not all intended support behaviour is considered helpful (Bolger, Zuckerman, & Kessler, 2000). While some studies have shown positive effects, a large body of research has also demonstrated null or even negative effects of received support (Bolger & Amarel, 2007; Frazier, Tix, & Barnett, 2003; Howland & Simpson, 2010; Kaul & Lakey, 2003; Shrout et al., 2010). Moreover, perceptions of support availability and reports of received support are not always strongly intercorrelated and have been shown to have different patterns of links with mental health, physical health, and personality (Barrera, 1986; Dunkel-Schetter & Bennett, 1990; Haber, Cohen, Lucas, & Baltes, 2007; Sandler & Barrera, 1984; Sarason, Shearin, Pierce, & Sarason, 1987; Uchino, 2009; Vinokur, Schul, & Caplan, 1987; Wills & Shinar, 2000).

Researchers have recently attempted to improve the assessment of enacted support by asking for recipients' subjective judgments of enacted support quality (Maisel & Gable, 2009; Rini et al., 2006; Rini et al., 2011). For example, Rini and colleagues (2006, 2011) investigated the effectiveness of social support attempts in terms of the amount and type, not being difficult to obtain, being skillfully delivered, and not negatively influencing the recipients' self-concept. These studies that incorporated partner social support effectiveness found substantial links between positive perceptions of enacted support and low psychological distress. Similarly, Maisel and Gable (2009) found that recipients' favourable perceptions of enacted support were linked to lower anxiety and sadness as well as greater relationship connectedness. Thus, when measures of enacted support include subjective judgments of quality, enacted support appears to yield more consistent findings demonstrating the benefits and positive outcomes of received support.

#### *1.4. Social Support and Relationship Quality*

It has been proposed that examining social support processes within a particular interpersonal context, such as romantic relationships, allows for greater specificity and prediction. For example, specific relationships have been shown to contribute to personal adjustment over and beyond the impact of global perceived support (Sarason, Sarason, & Pierce, 1994). For most adults, an intimate relationship with a partner is one of the strongest sources of support in facing both major and minor life stress, and evidence suggests that support from other relationships cannot compensate for a lack of intimate or marital support (Coyne & DeLongis, 1986; Lieberman, 1982; O'Hara, 1986).

Support processes are important for optimal relationship functioning and have the potential to account for a significant amount of the variance in couple outcomes. Responsive care and support within a romantic relationship helps individuals cope with stress, creates an overall atmosphere of goodwill between partners, and communicates understanding and investment in a partner's well-being (Collins & Feeney, 2004; Cutrona, 1996). Furthermore, because people typically need social support when they are at their weakest and most vulnerable, support interactions serve as a key factor in the development of trust, intimacy, and security in close relationships (Collins, Guichard, Ford, & Feeney, 2006; Murray, Holmes, & Collins, 2006; Reis, Clark, & Holmes, 2004). In contrast, ineffective support exchanges can result in immediate and long-term strain on a couple's relationship (Lawrence, Pederson, et al., 2008; Sullivan, Pasch, Johnson, & Bradbury, 2010), and can lead to individual distress (Shrout, Herman, & Bolger, 2006; Shrout et al., 2010). Additionally, negative support (such as criticizing or blaming recipients) may create a sense of rejection, threat, and lack of closeness between partners.

The study of supportive behaviours within romantic relationships has demonstrated the importance of intimate partner support on relationship quality (Barry, Bunde, Brock, &

Lawrence, 2009; Bradbury et al., 2000; Cutrona, 1996; Kurdek, 2005; Lawrence, Bunde, et al., 2008; Sarason et al., 1994). A number of studies have shown that individuals were much more satisfied with their relationships when they perceived that their partners were more caring and supportive (Acitelli & Antonucci, 1994; Kane et al., 2007; Katz, Beach, & Anderson, 1996). The extent to which couples' support transactions helped in adapting to stressors and life transitions strongly influenced the developmental course of marriage (Bradbury, Cohan, & Karney, 2000; Karney & Bradbury, 1995).

Moreover, longitudinal studies have shown that supportive behaviours are an important predictor of marital satisfaction and distress over time (Cutrona, 1996; Davila, Bradbury, Cohan, & Tochluk, 1997; Franks & Stephens, 1996; Kurdek, 2005; McGonagle, Kessler, & Schilling, 1992; Pasch & Bradbury, 1998). For example, a 10-year longitudinal study of support and conflict in newlywed couples demonstrated that initial observed support behaviours predicted marital satisfaction and divorce 10 years later (Sullivan et al., 2010). Overall and colleagues (2010) also demonstrated that when partners behaved less negatively and provided more nurturant and action-facilitating support, recipients evaluated their relationships more positively, and these support behaviours predicted greater relationship quality over time. Overall, these studies provide strong evidence of an important link between support from one's partner and relationship quality.

### *1.5. Romantic Relationships and Well-being*

The protective effects of romantic relationships and marriage on physical and emotional well-being are widely documented. Research has consistently found that married couples have higher levels of psychological and physical well-being relative to individuals who are single, separated, or divorced (Bennett, 2006; Lillard & Waite, 1995; Rohrer, Bernard, Zhang,



Rasmussen, & Woroncow, 2008; Umberson, 1992; Waite, 1995; Waite & Gallagher, 2000). For example, being married is associated with lower morality risk (Dupre, Beck, & Meadows, 2009; Manzoli, Villari, Pironec, & Boccia, 2007), lower readmission rates for chronic health conditions (Wong, Gan, Burns, Sin, & van Eeden, 2008), greater cardiovascular health (Holt-Lunstad, Birmingham, & Jones, 2008; Maselko, Bates, Avendaño, & Glymour, 2009), better mental health outcomes (Horwitz, White, & Howell-White, 1996; Marks & Lambert, 1998; Simon, 2002), and less psychological distress (Barrett, 2000; Waite & Gallagher, 2000).

However, the mere presence of a romantic partner or spouse is not necessarily protective, and not all relationships are equally beneficial. Indeed a distressed or dysfunctional relationship itself may be a major stressor. In such cases, not only are partners left to manage life stressors from outside the relationship on their own, the relationship itself may be an additional source of distress. Relationship difficulties are one of the most frequent problems identified by adults seeking care from mental health providers (Revenson, Kayser, & Bodenmann, 2005). Although married people are generally found to have better physical and psychological health than their unmarried counterparts, whether or not married couples experience these beneficial effects are determined by the quality of the marriage. Relationship conflict has been associated with the onset of psychopathology, including mood, anxiety, eating, and substance use disorders (Fincham, 2003; Whisman & Baucom, 2012). Moreover, it has been shown that marital conflict alters immune and endocrine function (Barnett, Steptoe, & Gareis, 2005; Gouin et al., 2009; Kiecolt-Glaser et al., 1997; Kiecolt-Glaser et al., 2005; Loving, Heffner, Kiecolt-Glaser, Glaser, & Malarkey, 2004; Miller, Dopp, Myers, Stevens, & Fahey, 1999), and affects cardiovascular reactivity (Brown, Smith, & Benjamin, 1998; Ewart, Taylor, Kraemer, & Agras, 1991; Holt-Lunstad et al., 2008; Newton & Sanford, 2003; Smith et al., 2010). Over time, these negative marital interactions can lead to chronic health problems (Burman & Margolin, 1992; Kiecolt-

Glaser & Newton, 2001).

These findings suggest that a romantic partner or spouse has the potential to not only be the greatest source of satisfaction, but to also potentially be the greatest source of stress and conflict. This complicates the overall assessment of marriage and intimate relationships on benefits to health and well-being. Studies that combine both distressed and non-distressed relationships may underestimate the protective effects of positive relationships and overestimate the protective effects of negative relationships. Because positive and negative aspects of relationships may be independently related to various outcomes, these associations may be obscured if relationship quality is not considered.

There is a wide breadth of empirical evidence suggesting that romantic relationships are positively associated with well-being to the extent that these relationships are mutually supportive and rewarding, and negatively associated with well-being to the extent that they are not (Carr et al., 2014; Carr & Springer, 2010; Horwitz et al., 1998; Proulx et al., 2007; Umberson et al., 2006; Whisman, 2001; Whisman, Uebelacker, Tolejko, Chatav, & Meckelvie, 2006). For instance, Holt-Lunstad and colleagues (2008) showed that higher marital quality is associated with lower blood pressure, lower stress, less depression, and higher satisfaction with life, but on some measures, they revealed that single individuals were healthier than those in low-quality marriages. In another study, it was demonstrated that happily married husbands and wives are more likely to use health care services. In contrast, spouses in distressed marriages are less likely to seek medical care (Sandberg, Miller, Harper, Robila, & Davey, 2009). Furthermore, longitudinal research suggests that low marital quality is linked with lower levels of overall happiness, life satisfaction, self-esteem, and overall physical health as well as elevated levels of psychological distress (Hawkins & Booth, 2005).

The connection between relationship quality and individual well-being is part of a larger

body of research that has consistently demonstrated robust links between social relationships and health (Berkman, Glass, Brissette, & Seeman, 2000; House, Landis, & Umberson, 1988; Uchino, 2009). A recent meta-analysis across 148 studies indicated a 50% greater likelihood of survival for participants with stronger social relationships (Holt-Lunstad, Smith, & Layton, 2010). Indeed, social support has been called “one of the most well-documented psychological factors influencing physical health outcomes” (Uchino, 2009, p. 236).

Two main models have been proposed to explain how social support influences personal well-being. In main-effect models, high levels of social integration are health promoting, regardless of whether or not one is under stress (Berkman et al., 2000; Cohen, 2004; Cohen & Wills, 1985). Greater integration into one’s social network provides an individual with identity, purpose, and control, a perceived sense of security and embeddedness, and a source of reinforcement for health-promoting behaviours or punishment for health-compromising behaviours, all of which can promote individual well-being (Thoits, 2011). In the stress-buffering model (Cohen & Wills, 1985), the negative effects of external stressors (e.g., at work) are diminished by the presence of strong social support, which can alleviate stressful events directly or indirectly through reducing stress appraisals (Uchino, 2004). In both models, intimate relationships, such as a romantic relationship, serve as an important source of social support.

### *1.6. The Present Study*

The current study seeks to provide a comprehensive examination of the composition of relationship quality profiles that emerge from a latent profile analysis, and to subsequently investigate the nature of each profile and its associations with partner social support and personality variables, as well as individual well-being and psychological outcomes. To my knowledge, no study to date has examined profiles based on relationship quality among a sample

of university students. Moreover, few studies have assessed multiple components of relationship quality, and thus it is unclear whether certain aspects of a romantic relationship are influenced by partner support and/or personality, and make unique contributions to individual outcomes. The present study aims to present a more holistic conceptualization of the extent to which various relationship characteristics are important factors in distinguishing between relationships of different quality. Specifically, the current study will employ six commonly identified components of relationship quality including satisfaction, commitment, intimacy, trust, passion, and love. This multidimensional assessment of quality allows for a more comprehensive understanding of the associations between romantic relationships, partner social support, personality, and individual well-being outcomes.

Perceptions of support availability and of supportive behaviours have been theoretically and empirically connected to self-reported relationship quality. Multidimensional assessments of social support allow for an examination of more specific associations and mechanisms (Uchino et al., 1995; Uchino et al., 1996). Research examining social support is complex because partner support is a higher-order construct comprised of lower-order facets, such as perceived support, received support, and received support effectiveness. Each lower-order component provides unique information about the overall process of a supportive exchange and about the influence of support transactions on romantic relationship quality. Thus, in order to investigate the role of partner support in romantic relationships, it is important to assess the individual components of these supportive transactions. By examining distinctions between general perceptions of support, specific support behaviours (including positive supportive behaviours of emotional support, esteem support, information support, and tangible support, as well as negative forms of support such as criticism/blame, control/invalidation, minimization, and withdrawal), and recipients' judgments of their partners' supportive actions (the effectiveness of received partner support),

this research seeks to shed new light on how partner support shapes evaluations of relationship quality.

As previously discussed, the quality of a relationship is particularly important in understanding supportive perceptions and behaviours within that relationship. What is intended to be supportive in the context of a negative relationship may not only be perceived as not supportive, but it may also have a negative effect on the recipient. As such, this study seeks to investigate how variables of social support map onto differing profiles of relationship quality.

The specific characteristics of couple members is another important factor to consider in the understanding of relationship quality. As reviewed earlier, personality plays an important role in relationship functioning and processes. However, as the research literature on the Big Five traits and relationship processes and outcomes is still replete with inconsistent findings, it is important to continue to explore the relations between personality and relationship quality. Furthermore, no study to date has examined the role of honesty-humility on perceived relationship quality components, which is an important emerging factor in the personality literature.

The present study also utilizes multiple dimensions of individual well-being as important outcomes of relationship quality profiles. This will allow for a better understanding of the associations between relationship quality and personal well-being, as certain aspects of well-being may be affected by a particular relationship quality profile whereas a different profile may have very little or no impact. The indicators of personal well-being considered in the present study include satisfaction with life, positive and negative affect, and symptoms of depression, anxiety, and stress. The consideration of both positive and negative measures of well-being allow for a more multidimensional assessment of individuals' psychological functioning.

Furthermore, a limitation of the existing research is that it has focused largely on legal marriages and has paid less attention to the role of non-marital relationships. More recent work has begun to consider the role of romantic relationships in general, including those outside of marriage, and their effect in providing social support and promoting individual well-being. In particular, the transition to adulthood that young people experience is an important period in the context of developing romantic relationships. Less than one quarter of Americans now wed earlier than 25 years of age (Sassler, 2010), and young people today are spending a considerably larger amount of time in non-marital relationships than before (Furstenberg, 2010). As such, romantic partners may serve as crucial sources of social support during the transition into adulthood. As Simon and Barrett (2010) demonstrated, the quality of romantic relationships is predictive of physical and mental health outcomes for those who are unmarried as well.

#### *1.6.1. Use of Latent Profile Analysis*

Traditional variable-centered approaches (e.g., multiple regression or structural equation modelling) focus primarily on examining relations among variables. These approaches assume that the sample under study is homogenous and that the observed relationships among variables generalize to all members, without systematically considering that these relationships may meaningfully differ in subgroups of participants. In contrast, the person-centered framework focuses on differences between individuals and the relationships among individuals. Person-centered analytical approaches attempt to identify individuals who share a similar configuration or pattern of scores on a number of different variables (Bauer & Curran, 2004). Individuals are then classified to a specific subgroup or type based on similar “profiles” of scores. Person-centered approaches allow for the discussion of individuals or types of individuals. In contrast, within the variable-centered framework, the focus of discussion is limited to the variables

involved in the analyses without considering that the participants may come from different subpopulations in which the observed relations between variables may differ. Thus, the application of person-centered approaches presents the opportunity to more appropriately discuss the nature of the participants, both quantitatively and qualitatively, in addition to the actual analyses conducted.

Person-centered analyses include several forms such as median split procedures and cluster analysis. With median split techniques, participants are categorized as “high” if their score falls above the median on some variable or “low” if their score falls below the median. Once participants are classified into a particular subgroup, differences among profiles in outcome variables can be examined using analysis of variance techniques. Although easy to implement, given their numerous methodological shortcomings, the use of median split procedures is generally not recommended (Cohen, 1983; Irwin, & McClelland, 2003; MacCallum, Zhang, Preacher, & Rucker, 2002).

Another person-centered technique referred to as cluster analysis develops a classification system by grouping together individuals who have similar values on a set of variables, such that the within-cluster variation is minimized and the between-cluster variation is maximized (Everitt, Landau, & Leese, 2001). However, few rigorous or reliable guidelines exist to help in identifying the correct number of clusters in the data to maintain and interpret (Pastor, Barron, Miller, & Davis, 2007). Furthermore, trying to synthesize the results of different cluster analytic studies is difficult because of the subjective nature of cluster analysis.

Recent developments in mixture modelling offer new ways of circumventing the previously discussed limitations while remaining in line with the fundamental goal of cluster analyses. For instance, latent profile analysis (LPA) represents a model-based approach to clustering that offers several advantages over traditional cluster analyses (Magidson & Vermunt,

2004; Vermunt & Madgison, 2002). LPA allows for the direct specification of alternative models that can be compared with various fit statistics, and includes more objective criteria for assessing model-data fit. Mixture models also allow for the simultaneous inclusion of continuous, ordinal, and categorical measurement scales in the same model (McLachlan & Peel, 2000; Muthén & Muthén, 2008). Additionally, LPA allows for the direct inclusion of covariates (such as predictor and outcome variables) in the models. Although these covariates should not define or qualitatively change the profiles, this helps to limit Type 1 errors by combining analyses in which the profiles and all of the relationships are estimated in a single step (Marsh, Ludtke, Trautwein, & Morin, 2009). Furthermore, LPA has been shown to systematically reduce biases in the estimation of the model parameters, especially those describing the relationships between the predictors and the latent profiles, which otherwise tended to be underestimated (Bolck, Croon, & Hagnaars, 2004; Clark & Muthén, 2009; Lubke & Muthén, 2007).

### *1.6.2. Rationale and Research Objectives*

Most quantitative research on relationship quality use variable-centered approaches as the main form of analysis, such as analysis of variance, regression, factor analysis, and structural equation modelling. Previous research on relationship quality has yet to employ mixture models despite their advantages. To my knowledge, no study has used LPA to explore the presence of subpopulations of individuals differentiated on the basis of relationship quality. Therefore, with a central focus on the number and nature of profiles that emerge, the present study aims to present a person-centred approach to the understanding of relationship quality.

Multiple dimensions of relationship quality are ideally suited to demonstrate the strengths of LPA and should identify profiles of scores that differ qualitatively (profile shape) as well as quantitatively (profile level). The current study seeks to provide a comprehensive examination of



the number and composition of relationship quality profiles that emerge from an application of LPA, and to subsequently examine the nature of each class using partner social support, personality, as well as individual well-being and psychological outcomes. Three broad research questions are proposed:

*Research Question 1a:* How many distinct profiles emerge from an application of latent profile analysis to relationship quality variables (specifically satisfaction, commitment, intimacy, passion, trust, and love)?

*Research Question 1b:* What is the composition of these profiles based on relationship quality variables?

*Research Question 2:* Do partner social support variables (specifically perceived partner support, received partner support, and the effectiveness of received partner support) and/or the HEXACO personality factors (specifically honesty-humility, emotionality, extraversion, agreeableness, conscientiousness, and openness to experience) exhibit differential mean levels across the latent profiles of relationship quality?

*Research Question 3:* Do the latent profiles of relationship quality exhibit differential levels of impact on individual well-being and psychological outcomes (specifically satisfaction with life, positive affect, negative affect, and symptoms of depression, anxiety, and stress)?

## CHAPTER 2: METHOD

### 2. Method

#### 2.1. Participants

Participants were 240 undergraduate students (60 male; 180 female) currently involved in a romantic relationship for a minimum of 3 months. The average age was 18.37 years ( $SD = 2.23$ ). With respect to relationship status, approximately 41% of the sample identified themselves as being in an exclusive relationship, 55% reported being in a long-distance relationship, and 3% were living together with their partner. 1 participant was married, and 2 participants classified their relationship status as 'Other' (e.g., open relationship). Relationship length ranged from 3 months to 17.7 years ( $M = 17.55$  months,  $SD = 17.02$ ). The majority of the sample (96%) reported their sexual orientation as heterosexual, with 3 individuals identifying as gay or lesbian, and 6 participants as bisexual. The ethnicity of the sample was 65% Caucasian/North American, 26% Asian, and 9% Other.

#### 2.2. Measures

##### 2.2.1. Relationship Quality

Relationship quality was measured using the Perceived Relationship Quality Components Inventory (PRQC; Fletcher, Simpson & Thomas, 2000). The PRQC is a 18-item scale containing six 3-item subscales designed to measure individuals' evaluations of their relationship satisfaction (e.g., "How happy are you with your relationship?"), commitment (e.g., "How devoted are you to your relationship?"), intimacy (e.g., "How connected are you to your partner?"), trust (e.g., "How much can you count on your partner?"), passion (e.g., "How sexually intense is your relationship?"), and love (e.g., "How much do you cherish your partner?"). Participants responded to items using a 7-point Likert-type scale ranging from 1 (*Not*

*at All*) to 7 (*Extremely*). Subscale scores may range from 3 to 21, with higher scores indicating greater perceived quality of the relationship. A measure of global relationship quality is the summed total of six items, with one item from each of the six relationship quality components. The PRQC Inventory has been demonstrated to be reliable and possess high face validity as measures of perceptions of specific evaluative domains in close relationships in addition to being a measure of global perceived relationship quality (Fletcher et al., 2000). Each subscale has high internal consistency, producing coefficient alphas ranging from  $\alpha = .91-.93$  for satisfaction;  $\alpha = .94-.96$  for commitment;  $\alpha = .86-.88$  for intimacy;  $\alpha = .74-.78$  for trust;  $\alpha = .86-.89$  for passion; and  $\alpha = .89-.90$  for love (Fletcher et al., 2000).

### 2.2.2. *Perceived Social Support*

Perceived social support was assessed using The Social Provisions Scale, Spouse Version (SPS; Cutrona, 1989). This 24-item scale consists of 4-item subscales assessing six dimensions of relationship-specific perceived social support: attachment (emotional closeness from which one derives a sense of security; e.g., “I feel a strong emotional bond with my spouse.”), social integration (a sense of belonging that stems from sharing similar interests, values or ideas; e.g., “I feel that my spouse shares my attitudes and beliefs.”), reassurance of worth (feeling important to or recognized by others due to one’s competence, skills, and value; e.g., “My spouse admires my talents and abilities.”), reliable alliance (assurance that others can be counted on in times of stress; e.g., “I can depend on my spouse to help me if I really need it.”), guidance (receiving advice and/or information; e.g., “I can talk to my spouse about important decisions in my life.), and opportunity for nurturance (the sense that one’s partner relies upon him/her for their well-being; e.g., “I feel personally responsible for the well-being of my spouse.”). Responses were rated on a 4-point Likert-type scale ranging from 1 (*Strongly Disagree*) to 4 (*Strongly Agree*).

Full scale scores may range from 24 to 96, and scores on each subscale may range from 4 to 16. Research supports the reliability and validity of the SPS (Constable & Russell, 1986; Cutrona & Russell, 1987; Russell et al., 1987). Adequate reliability has been found for the individual social provision subscales: attachment ( $\alpha = .75$ ), social integration ( $\alpha = .67$ ), reassurance of worth ( $\alpha = .67$ ), reliable alliance ( $\alpha = .65$ ), guidance ( $\alpha = .76$ ), opportunity for nurturance ( $\alpha = .66$ ) (Cutrona & Russell, 1987). Vogel and Wei (2005) reported reliability estimates that ranged from .60 to .83 for the subscale scores. Estimates of internal consistency for the total social provision score has ranged from .83 to .92 (Cutrona & Russell, 1987; Green, Furrer, & McAllister, 2007; Green, Furrer, & McAllister, 2011; Ribas & Lamb, 2010; Vogel & Wei, 2005).

### 2.2.3. *Received Social Support*

Received social support was evaluated using a modified scale of a behavioural coding system for measuring types of partner support developed by Overall, Fletcher, and Simpson (2010). Participants were asked to recall the frequency of supportive behaviours that their romantic partner provided over the past month. This adapted self-report measure assessed three primary types of support: nurturant support (including emotional support, e.g., “My partner provided reassurance and comfort”; and esteem support, e.g., “My partner made me feel that I had the ability to deal with a stressful situation I encountered.”), action-facilitating support (including information support, e.g., “My partner offered me advice and ideas, and/or suggested possible actions to take”; and tangible support, e.g., “My partner offered or agreed to perform a task or do something that will help deal with a stressful situation.”), and negative support (including criticism/blame, e.g., “My partner criticized or derogated me”; control/invalidation, e.g., “My partner rejected and invalidated my point of view”; minimization, e.g., “My partner felt that I was overreacting in response to a stressful situation”; and withdrawal, e.g., “My partner

avoided being around me when I was feeling stressed.”). Participants responded to items using a 5-point Likert-type scale ranging from 1 (*Not at All*) to 5 (*About Every Day*). Scores for each type of supportive behaviour were computed as means across items.

#### 2.2.4. *Effectiveness of Received Social Support*

The effectiveness of received social support was measured using the 25-item Social Support Effectiveness Questionnaire (SSE-Q; Rini & Dunkel Schetter, 2010). This measure evaluates the effectiveness of three different types of support the participant received from his or her romantic partner over the past month: task support, informational support, and emotional support. For each of the three types of partner support, participants read a brief description of the type of support then respond to questions assessing a) how well the quantity of support matched the amount needed (0 = *Very Poor* to 4 = *Excellent*); b) the extent to which the respondent wished it had been different somehow (0 = *Not at All* to 4 = *Extremely*); (c) the extent to which it was perceived to have been provided skillfully (0 = *Not at All* to 4 = *Extremely*); (d) how difficult it was to get (0 = *Never* to 4 = *Always*); and (e) whether the partner ever offered the support without being asked (0 = *Never* to 4 = *Always*). The remaining 10 items assess unintended negative by-products of receiving support (e.g., feelings of guilt or indebtedness). Full scale scores may range from 0 to 80, and scores on each subscale may range from 0 to 20, with higher scores indicating more effective support during that time period. The SSE-Q has been demonstrated to have high internal reliability ( $\alpha = .95$ ; Rini et al., 2011).

#### 2.2.5. *Personality*

Personality was assessed using the 60-item version of the HEXACO Personality Inventory-Revised (HEXACO-60; Ashton & Lee, 2009). This measure is composed of six 10-item subscales designed to measure six major dimensions of personality: Honesty-Humility (i.e.,

sincerity, fairness, greed avoidance, and modesty; e.g., “I wouldn’t use flattery to get a raise or promotion at work, even if I thought it would succeed.”), Emotionality (i.e., fearfulness, anxiety, dependence, and sentimentality; e.g., “I would feel afraid if I had to travel in bad weather conditions.”), Extraversion (i.e., social self-esteem, social boldness, sociability, and liveliness; e.g., “I feel reasonably satisfied with myself overall.”), Agreeableness (i.e., forgiveness, gentleness, flexibility, and patience; e.g., “I rarely hold a grudge, even against people who have badly wronged me.”), Conscientiousness (i.e., organization, diligence, perfectionism, and prudence; e.g., “I plan ahead and organize things, to avoid scrambling at the last minute.”), and Openness to Experience (i.e., aesthetic appreciation, inquisitiveness, creativity, and unconventionality; e.g., “I would be quite bored by a visit to an art gallery.”). Responses were rated on a 5-point Likert-type scale ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). Scores on each subscale are computed as means across items. The HEXACO-60 has been demonstrated to have adequate internal consistency, producing coefficient alphas ranging from  $\alpha = .74-.79$  for honesty-humility,  $\alpha = .73-.78$  for emotionality,  $\alpha = .73-.80$  for extraversion,  $\alpha = .75-.77$  for agreeableness,  $\alpha = .76-.78$  for conscientiousness,  $\alpha = .77-.80$  for openness to experience in college and community samples (Ashton & Lee, 2009).

#### 2.2.6. *Life Satisfaction*

Life satisfaction was measured using the 5-item Satisfaction With Life Scale (SWLS; Diener et al., 1985; e.g., “I am satisfied with my life.”). Each statement is answered on a 7-point Likert-type scale ranging from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*). Scores on the SWLS range from 5 to 35, in which scores between 5-9 indicate that the respondent is extremely dissatisfied with life; scores between 10-14 are interpreted as falling in the dissatisfied range; scores between 15-19 indicate that the respondent is slightly dissatisfied with life; a score of 20

represents the neutral point on the scale; scores between 21-25 indicate slightly satisfied; scores between 26-30 are interpreted as falling in the satisfied range; and scores between 31-35 indicate that the respondent is extremely satisfied with life. Research supports the reliability and validity of the SWLS (Diener et al., 1985; Pavot & Diener, 1993; Adler & Fagley, 2005; Steger, Frazier, Oishi, & Kaler, 2006). A recent meta-analysis of over 60 studies using the SWLS reported a mean Cronbach's alpha of .78 with values ranging from .57 to .95 (Vassar, 2008).

### 2.2.7. *Positive and Negative Affect*

Positive and negative affect was measured using the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). This 20-item measure is composed of a 10-item subscale evaluating positive affect (e.g., "excited") and a 10-item subscale evaluating negative affect (e.g., "distressed"). Responses were rated on a 5-point Likert-type scale ranging from 1 (*Very slightly or not at all*) to 5 (*Extremely*) to indicate the extent to which participants felt a certain way during the past week. Scores on the positive and negative affect subscale each range from 10 to 50. The PANAS has been demonstrated to have high internal consistency (Watson, Clark, & Tellegen, 1988; Watson and Clark, 1994; Merz et al., 2013) for both the positive affect subscale ( $\alpha = .89$ ) and negative affect subscale ( $\alpha = .85$ ) (Crawford & Henry, 2004).

### 2.2.8. *Depression, Anxiety and Stress*

Symptoms of depression, anxiety, and stress were measured using the 21-item short form of the Depression, Anxiety and Stress Scale (DASS-21; Lovibond & Lovibond, 1995). This measure consists of three 7-item subscales assessing depression (e.g., "I felt down-hearted and blue."), anxiety (e.g., "I felt I was close to panic."), and stress (e.g., "I found it difficult to relax."). Participants responded to items using a 4-point Likert-type scale ranging from 0 (*Did not*

*apply to me at all*) to 3 (*Applied to me very much, or most of the time*) to indicate the extent to which they experienced symptoms during the past month. Scores on each of the three subscales range from 0 to 21. Research supports the reliability and validity of the DASS-21 with alpha coefficients ranging from  $\alpha = .88-.94$  for the depression subscale,  $\alpha = .80-.87$  for the anxiety subscale, and  $\alpha = .84-.91$  for the stress subscale in clinical and nonclinical samples (Antony, Bieling, Cox, Enns, & Swinson, 1998; Clara, Cox, & Enns, 2001; Henry & Crawford, 2005; Lovibond & Lovibond, 1995; Page, Hooke, & Morrison, 2007; Osman et al., 2012; Sinclair et al., 2012).

### 2.3. Procedure

The present study was approved by Western University's Research Ethics Board. Participants were recruited from the Psychology Research Participation Pool and directed to the online study. Inclusion criteria required participants to be currently in a romantic relationship of a minimum of 3 months in length. Following the completion of the online study, participants were debriefed and compensated with one research credit for their participation.



## CHAPTER 3: RESULTS

### 3. Results

#### 3.1. Data Screening

Standard data screening procedures were conducted to assess for skewness, kurtosis, multivariate outliers, and multicollinearity. Analysis of missing data was performed on all major non-demographic variables in the dataset, excluding computed total scores. 0.56% of data points were missing. Listwise deletion was used for analyses.

Multivariate normality was assessed by evaluating the skewness and kurtosis of all major study variables. Variables with absolute skew index values greater than 3 are considered extreme and tend to impact means (Byrne, 2012; Kline, 2011). Variables with absolute kurtosis index values greater than 10 have been shown to affect tests of variance and covariance (Byrne, 2012; Kline, 2011). Descriptive statistics showed no indications of significant skewness or kurtosis for any of the measured variables that would violate normality assumptions (refer to Table 1).

The Mahalanobis distance statistic ( $D^2$ ) was computed for each case to assess the presence of multivariate outliers for the set of predictor variables used in data analysis (partner social support and personality variables). A  $D^2$  for a case with a low  $p$  value ( $p < .001$ ) suggests the case is from a different population (Kline, 2011). No cases of multivariate outliers were found. Lastly, multicollinearity was evaluated using the Variance Inflation Factor (VIF). A variable with a VIF  $> 10$  is considered to be redundant (Kline, 2011). No variable had a VIF that exceeded the cut-off score.

#### 3.2. Data Analytic Strategy

Latent profile analysis (LPA) was derived from a mixture modelling person-centred framework that aims to identify groups of individuals that differ qualitatively and quantitatively

from one another in relation to a specific latent variable. This model-based approach characterizes relatively homogenous subgroups of individuals based on response patterns for a set of continuous indicators in which profile membership is believed to explain the observed covariation between indicators. LPA enables the classification of individuals into profiles and allows for prevalence estimates of each profile in the population. Profile membership is not known a priori but rather inferred from the data and represented by a latent categorical variable that is assumed to reflect substantively meaningful subpopulations. Because these profiles are latent, participants are assigned a probability of membership in all profiles.

### *3.2.1. Model Estimation*

In LPA, model parameters are commonly estimated using maximum-likelihood estimation via the expectation-maximization (EM) algorithm. Maximum-likelihood estimation chooses estimates of the model parameters whose values, if true, would maximize the probability of observing the sample data. The final parameter estimates chosen are those associated with the highest likelihood value. The logarithmic value of the likelihood (the log-likelihood) is often used as a measure of model fit with higher values (closer to 0) indicating better fit than lower values.

### *3.2.2. Class Enumeration*

In general, the first step in an LPA is to determine the number of subgroups with well-defined, differentiated profiles (Lubke & Muthén, 2005; Muthén & Muthén, 2008; Pastor, Barron, Miller, & Davis, 2007). This is completed in a mainly exploratory manner by comparing models differing in the number of profiles, including one latent profile up to a number of latent profiles that is higher than expected. In terms of evaluating the model, it is important to consider previous research, the relation to theory, the nature of the groups, and interpretation of the results, as well as alternative goodness-of-fit indices and tests of statistical significance.

A number of statistical tests and indices are available to help with determining the number of profiles to retain (McLachlan & Peel, 2000). Various distribution-free information criteria indices based on the model log-likelihood may be examined: the Akaike Information Criterion (AIC; Akaike, 1987), the Consistent AIC (adjusted for sample size and number of parameters; CAIC; Bozdogan, 1987), the Bayesian Information Criterion (BIC; Schwartz, 1978), and the Sample-Adjusted BIC (SABIC; Yang, 2006). These fit statistics can be used to compare models with different numbers of profiles in which a lower value on these indicators suggest better model fit.

During the class enumeration process, it is typical for the indicators, due to their sensitivity to sample size, to keep on suggesting the addition of profiles without ever reaching a maximum (Marsh, Ludtke, Trautwein, & Morin, 2009). In such cases, information criteria indices are graphically presented through “elbow plots” to illustrate the gains associated with additional profiles (Morin, Morizot, Boudrias, & Madore, 2011; Petras & Masyn, 2010). In these plots, the point after which the slope flattens out denotes the optimal number of profiles.

Another approach is to determine whether a more complex model is able to fit the data significantly better than a more parsimonious model. In other words, the statistical significance is tested to compare the increase in model fit by adding a profile. The fit of two such models can be compared using likelihood ratio test approximations: the standard and adjusted Lo, Mendell and Rubin’s (2001) likelihood ratio tests (LMR/aLMR), which typically yield the same conclusions, and the bootstrap likelihood ratio test (BLRT; McLachlan & Peel, 2000). These tests compare a model with  $k$  profiles to a model with  $k-1$  profiles, and significant  $p$ -values associated with the likelihood ratio test support the retention of a more complex solution with at least  $k$  profiles.

Simulation studies show that the BIC, SABIC, CAIC and BLRT are particularly effective in choosing the model which best recovers the sample’s true parameters (Henson, Reise, & Kim,

2007; McLachlan & Peel, 2000; Nylund, Asparouhov, & Muthén, 2007; Peugh & Fan, 2013; Tein, Coxe, & Cham, 2013; Tofighi & Enders, 2008; Yang, 2006). Furthermore, when these indicators fail to retain the optimal model, it has been shown that the AIC, SABIC, and BLRT tend to overestimate the number of profiles, whereas the BIC and CAIC tend to underestimate it.

Finally, the entropy indicates the precision with which the cases are classified into the profiles (Magidson & Vermunt, 2002), with larger values (closer to 1) indicating fewer classification errors. The entropy is not used to determine the optimal model, but provides a useful summary of the classification accuracy of a model.

### *3.2.3. Inclusion of Covariates in LPA Solutions*

An important advantage of mixture models over alternative classification procedures is the ability to include covariates (predictors and outcomes) directly in the model rather than having to perform two-step procedures where profile membership information is saved to an external file and used in a new series of analyses. This helps to limit Type 1 errors by combining analyses and have been shown to systematically reduce biases in the estimation of the model parameters, especially those describing the relationships between the covariates and the profiles (Bolck, Croon, & Hagnaars, 2004; Clark & Muthén, 2009; Lubke & Muthén, 2007).

These covariates should be logically and theoretically conceptualized as having an impact on profile membership (predictors) or as being impacted by profile membership (outcomes). Furthermore, the inclusion of important covariates in the model provides an assessment of the construct validity of the classification by verifying whether the identified profiles are related to theoretically meaningful variables not directly used in the classification process (Bauer & Curran, 2004; Muthén, 2004).

To this end, the associations between the profiles and some of the most commonly

identified predictors of relationship quality will be examined: partner social support variables (specifically, global perceived partner support, a variety of enacted supportive behaviours, and total partner support effectiveness) and personality variables (specifically, honesty-humility and emotionality). These covariates will be included as predictors of profile membership in the model through a multinomial logistic regression, although they will not be directly included in the classification algorithm (without allowing them to influence the nature of the profiles). Odds ratios of profile membership were also estimated for each predictor. As a further verification of the construct validity of the profiles, their association with a series of outcome variables often related to relationship quality will also be assessed, including satisfaction with life, positive affect and negative affect, and symptoms of depression, anxiety, and stress.

### 3.3. *Preliminary Analyses*

The means, standard deviations, alpha reliabilities, skew index, and kurtosis index for all major study variables are presented in Table 1. Alpha reliabilities for all measures were generally adequate (with the majority being  $\alpha \geq .70$ ) and were mostly consistent with past research findings.

#### 3.3.1. *Relations among Perceived Relationship Quality Variables*

Correlations among the six variables of relationship quality (satisfaction, commitment, intimacy, trust, passion, and love) ranged from .30 to .77 ( $ps < .001$ ), with the majority falling in the moderate range, demonstrating that these variables are positively associated although relatively distinct (refer to Table 2).

#### 3.3.2. *Relations among Relationship Quality and Predictor Variables*

Intercorrelations of all predictor variables and perceived relationship quality components

used in the latent profile analysis are presented in Tables 3-6. Bivariate correlations between perceived partner support as assessed using the Social Provisions Scale, Spouse Version (Cutrona, 1989) and relationship quality components as measured by the Perceived Relationship Quality Components Inventory (Fletcher et al., 2000) are presented in Table 3. In general, most subscales from the Social Provisions Scale, Spouse Version (Cutrona, 1989) are positively associated with variables of relationship quality, with many falling in the moderate range. The total score on the Social Provisions Scale, Spouse Version was used as global measure of perceived partner support as it was shown to have significant positive associations with all relationship quality components ( $r$ s ranging from .30 to .54,  $p$ s < .001).

Bivariate correlations between received partner support and perceived relationship quality components are presented in Table 4. In general, variables assessing supportive behaviours were significantly correlated with relationship quality variables. Specifically, supportive behaviours of emotional support, esteem support, information support, and tangible support were positively associated with global relationship quality ( $r$ s ranged from .38 to .56,  $p$ s < .001), whereas negative forms of support including criticism/blame, control/invalidation, and withdrawal were negatively associated with global relationship quality ( $r$ s ranged from -.36 to -.45,  $p$ s < .001). As a result, each type of received support was used as individual predictors of profiles of relationship quality in subsequent analyses.

Bivariate correlations between the effectiveness of partner support and perceived relationship quality components are presented in Table 5. All subscales from the Social Support Effectiveness Questionnaire (Rini & Dunkel Schetter, 2010) were positively associated with variables of relationship quality, with the majority falling in the moderate range. The total score on the Social Support Effectiveness Questionnaire (Rini & Dunkel Schetter, 2010) was used as a global measure of the effectiveness of received support as it was shown to be significantly

correlated with all relationship quality components ( $r$ s ranging from .29 to .64,  $p$ s < .001).

Bivariate correlations between personality variables and perceived relationship quality components are presented in Table 6. With respect to personality variables as measured using the HEXACO Personality Inventory-Revised (Ashton & Lee, 2009), only honesty-humility and emotionality were significantly associated with self-reported global relationship quality (honesty-humility:  $r = .31$ ,  $p < .001$ ; emotionality:  $r = .15$ ,  $p < .05$ ). As a result, these two personality variables were also used as predictors of relationship quality profiles in subsequent analyses.

None of the demographic variables (age, gender, relationship status, and relationship length) were significantly related to perceived global relationship quality (refer to Table 2). Thus, these variables were not used as predictors in subsequent analyses.

In summary, due to the significant associations between perceived global relationship quality with perceived partner support, received partner support (including positive supportive behaviours of emotional support, esteem support, information support, and tangible support, as well as negative forms of support such as criticism/blame, control/invalidation, minimization, and withdrawal), total partner support effectiveness, honesty-humility, and emotionality, these variables were used as predictors of relationship quality profiles.

### *3.3.3. Relations among Relationship Quality and Outcome Variables*

Intercorrelations of all outcome variables and perceived relationship quality components are presented in Table 7. Most of the relationship quality variables were positively associated with life satisfaction and positive affect, and negatively correlated with negative affect and stress. With respect to symptoms of anxiety, only relationship satisfaction and trust showed a weak, negative association with anxious symptoms. Relationship quality components of satisfaction, intimacy, and trust were also negatively associated with symptoms of depression. However, all

outcome variables, with the exception of anxiety, were significantly associated with self-reported global relationship quality.

### *3.4. Results from a Latent Profile Analysis of Relationship Quality*

The analyses for the current study utilized *Mplus* 7.3 (Muthén, & Muthén, 2012). In this study, all models were estimated using a maximum likelihood estimator with robust standard errors. In order to avoid converging on a local or suboptimal solution (i.e., a false maximum likelihood), it is recommended to estimate the model with multiple random sets of start values (Hipp & Bauer, 2006; McLachlan & Peel, 2000). In this study, the number of random start values used was 500, 100 iterations for each random start, and the 50 best sets of starting values identified by the highest likelihood values were retained for final optimization. The obtained solution was clearly replicated and the log-likelihood value was also replicated many times. Thus, it can be assumed that these solutions represent the best fitting solution. Within-class means and variances of the observed variables were estimated, with residual covariances between the indicators fixed to zero. This is consistent with the assumption of local independence in classical LPA that indicators within groups are uncorrelated and associations among indicators are explained in terms of the grouping variables (Bartholomew, 1987; McLachlan & Peel, 2000; Muthén, 2001; Uebersax, 1999).

In order to determine the optimal class solution, models positing between one and five groups were evaluated and contrasted. Results of the class enumeration procedure used to determine the optimal number of latent profiles are reported in Table 8. Solutions that did not have profiles with a small number of individuals and profile solutions that allowed individuals to be clearly classified into a single profile (i.e., have low posterior probability of being assigned to multiple classes) were preferred. For the four information indexes (AIC, CAIC, BIC, and



SABIC), the values continued to decrease across the range of models considered. Comparison of the AIC, CAIC, BIC, and SABIC for different models were contrasted using an elbow plot (refer to Figure 1 below). As illustrated, the elbow plot suggests that the improvement in fit reaches a plateau at three profiles and becomes negligible thereafter.

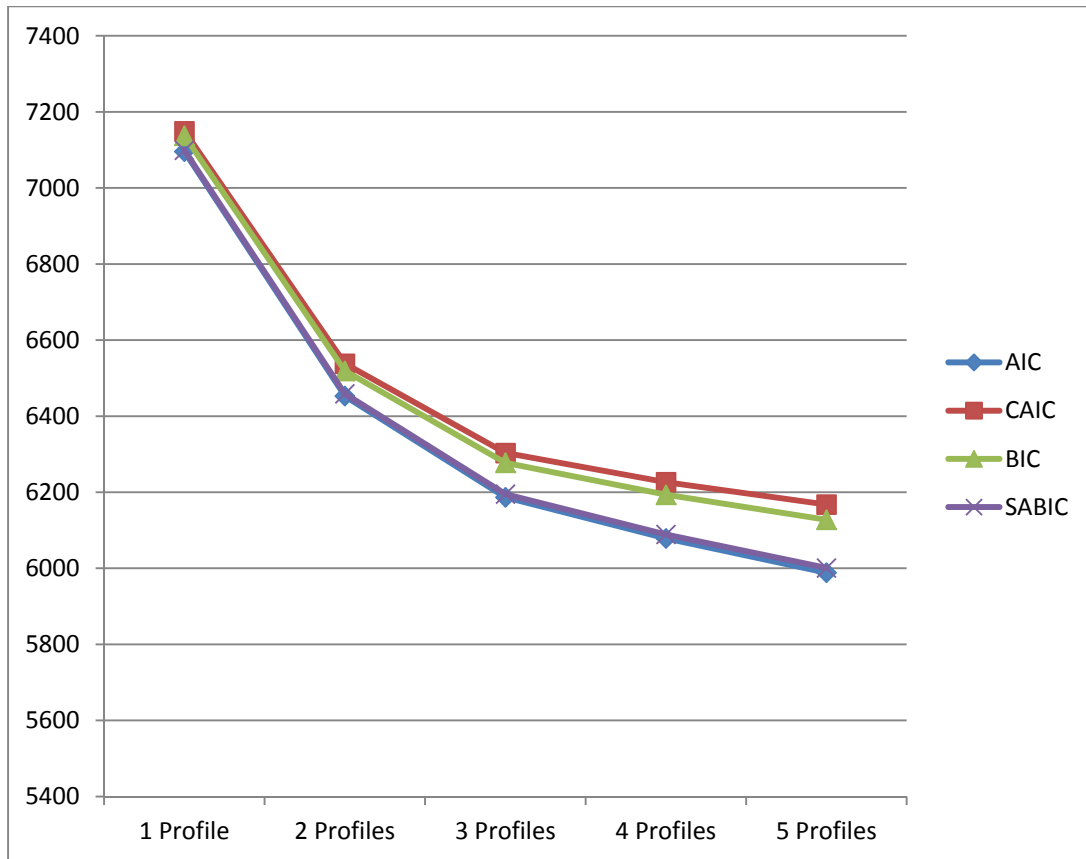


Figure 1. *Elbow Plot of the Information Criteria for the Latent Profile Analysis*

The results based on the aLMR and BLRT tests were not consistent in terms of choosing the appropriate number of groups. The adjusted Lo, Mendell and Rubin's (2001) likelihood ratio test (aLMR) was non-significant across all models, with the exception of the four-profile model. However, the four-profile model was rejected as it was composed of one subgroup which

contained only a single individual. The bootstrap likelihood ratio test was significant across all the models. Entropy values were high and almost identical across all the models.

Based on exploratory analyses, a three-group solution was chosen as providing the best representation of the data in relation to a priori predictions that observed groups would represent a combination of level (i.e., high, medium, and low relationship quality averaged across the different subscales) and shape. As previously discussed, a range of different goodness-of-fit indexes and tests of statistical significance were also used to aid in the determination of the number of groups: the adjusted Lo, Mendell and Rubin's (2001) likelihood ratio test, the bootstrap likelihood ratio test, and information criterion indexes (the AIC, CAIC, BIC, and SABIC). As the classification posterior probabilities are reasonably high (refer to Table 9), these results also suggest that the profiles constituting the three-class solution are relatively distinct from one another. Furthermore, this model positing three profiles resulted in groups with over 5% of the cases.

### 3.5. *Profile Interpretation*

A label is generally assigned to a group of individuals who comprise a particular class in LPA, similar to the process of labelling factors in exploratory factor analysis. The mean scores for each of the relationship quality variables across the three profiles are presented in Table 10, and total subscale scores for the relationship quality components are illustrated in Figure 2. Profile 1 ( $n = 14$ ) was labelled 'low relationship quality' as its members (6% of the sample) demonstrated comparatively lower mean scores across all the relationship quality variables. Profile 2 ( $n = 171$ ) is characterized by comparatively higher scores across the relationship quality components. This 'high relationship quality' profile describes 71% of the sample. Profile 3 ( $n = 55$ ) which represented 23% of total participants was categorized as 'moderate relationship

quality,' reflecting scores that fell within the mid-range across relationship quality. Based on this three-profile solution, it is important to consider the issue of power to detect differences between groups in subsequent analyses due to the small sample size for the 'low relationship quality' profile.

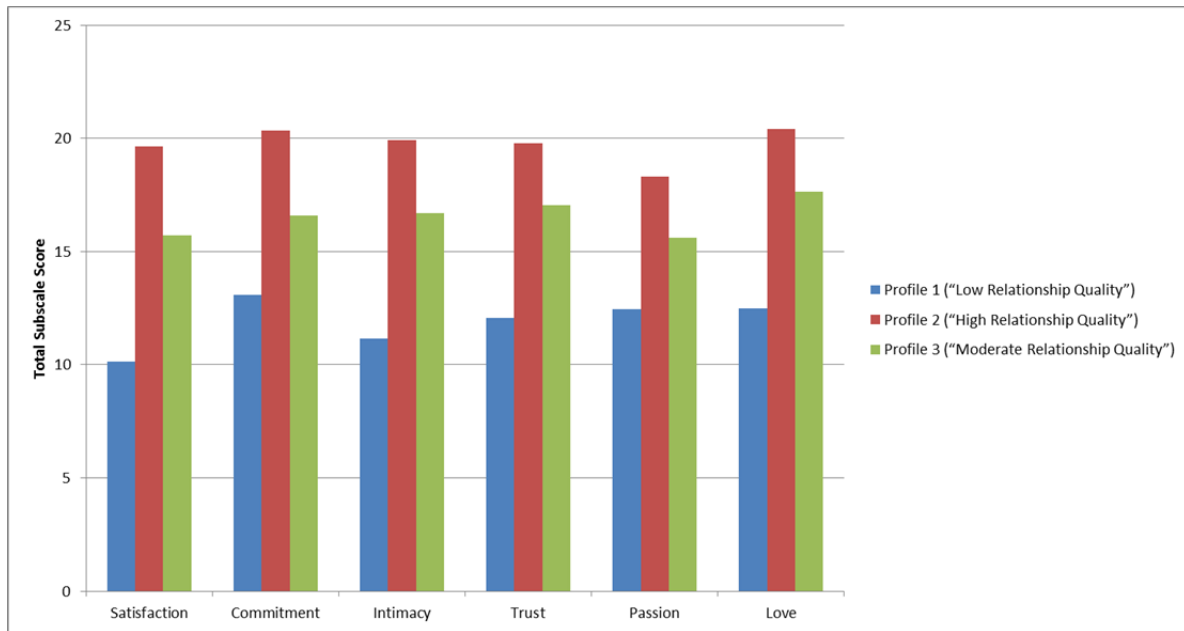


Figure 2. *Characteristics of Relationship Quality across the Three-Profile Solution*

### 3.5.1. *Relations among Study Variables across the Three-Profile Solution*

Intercorrelations among all major study variables for each of the three profiles are presented in Tables 11-13. With regard to associations among the six perceived relationship quality components (satisfaction, commitment, intimacy, trust, passion, and love), intimacy and passion show a significant strong positive association across all three profiles of low ( $r = .69, p < .05$ ), moderate ( $r = .41, p < .001$ ), and high relationship quality ( $r = .52, p < .001$ ). Unique correlational patterns were also found across the different profile groups. Results related to variables of relationship quality indicate that the high relationship quality subgroup is characterized by a greater number of significant correlations among relationship quality variables

(10 significant correlations; refer to Table 12) in comparison to the low (refer to Table 11) and moderate (refer to Table 13) relationship quality profiles, both of which display only two significant correlations among the relationship quality indicators.

Intercorrelations of partner social support variables and perceived relationship quality components also show differing patterns across profile membership. For example, the high relationship quality profile is characterized by several significant negative associations between indicators of relationship quality and negative forms of support, specifically criticism/blame, control/invalidation, minimization, and withdrawal (refer to Table 12), which are not found in the other two profile groups. However, a positive association between relationship satisfaction and esteem support appears across all three profile groups of low ( $r = .57, p < .05$ ), moderate ( $r = .50, p < .001$ ), and high relationship quality ( $r = .19, p < .05$ ).

Lastly, with respect to outcome variables, in comparison to profiles of low and moderate relationship quality, the high relationship quality group is characterized by significant positive associations between relationship quality indicators and positive outcomes of psychological well-being (refer to Table 12), including weak correlations between life satisfaction with both relationship satisfaction ( $r = .20, p < .05$ ) and trust ( $r = .19, p < .05$ ), as well as weak correlations between positive affect with both satisfaction ( $r = .27, p < .001$ ) and trust ( $r = .24, p < .001$ ). In addition, significant negative associations between relationship quality variables and negative outcomes of psychological well-being were shown for the high relationship quality group, including weak correlations between stress with both satisfaction ( $r = -.18, p < .05$ ) and trust ( $r = -.20, p < .05$ ), as well as anxiety and satisfaction ( $r = -.16, p < .05$ ).

### 3.6. *Results from the Inclusion of Profile Membership Covariates*

Once the three-profile model was determined to be the best solution, covariates were included in the model without allowing them to influence the nature of the profiles (Asparouhov & Muthén, 2014). Predictors, which included variables assessing partner social support and personality, were used to predict class membership through a multinomial logistic regression. In addition, outcomes variables, including satisfaction with life, positive and negative affect, and symptoms of depression, anxiety, and stress, were used to validate the profiles through the auxiliary variable function, specifically the BCH method (Bakk & Vermunt, 2014), in *Mplus 7.3* to compare probabilities-based profiles on outcome variables.

#### 3.6.1. *Predictors of Relationship Quality Profiles*

Table 14 presents the mean scores and standard deviations for the predictor variables across each relationship quality group. Predictors of profile membership included variables of partner social support, specifically perceived partner support, received partner support (including positive forms of supportive behaviours such as emotional, esteem, informational, and tangible support, and negative forms of support such as criticism/blame, control/invalidation, minimization, and withdrawal), and the effectiveness of received partner support, as well as personality (specifically honesty-humility and emotionality).

Results show differences in reported scores among the set of predictor variables across the three group profiles. For example, the “low relationship quality” group, which was previously characterized as having the lowest scores across all relationship quality variables (satisfaction, commitment, intimacy, trust, passion, and love), was also found to have comparatively low scores across the set of predictor variables, including lower total perceived partner support, lower frequency of received supportive behaviours (emotional, esteem, informational, and tangible

support) and higher frequency of received negative support (criticism/blame, control/invalidation, minimization, and withdrawal), and lower reported effectiveness of received support (refer to Table 14). In contrast, the group characterized by “high relationship quality” was associated with greater partner support across the same set of predictor variables.

Results from the multinomial logistic regression in which variables of partner support and personality were used to predict profile membership are reported in Table 15. These results show that total perceived partner support is significantly associated with the probability of profile membership. Specifically, higher scores of total perceived partner support increase the likelihood of membership into the “moderate relationship quality” ( $OR = 1.33, p = .005$ ) and “high relationship quality” latent profiles ( $OR = 1.71, p < .001$ ) compared to the “low relationship quality.” This indicates that for each unit increase in the total score for perceived partner support, participants had 33% and 71% increased odds of belonging to the “moderate relationship quality” and “high relationship quality” group, respectively. Total perceived partner support was also associated with a higher probability of belonging to the “high relationship quality” profile compared to the “moderate relationship quality” profile ( $OR = 1.28, p = .003$ ). This suggests that for each unit increase in the total score for perceived partner support, participants were 28% more likely to belong to the “high relationship quality” group when compared to the “moderate relationship quality” group.

Results also show that participants who reported greater received emotional support had an increased likelihood of belonging into the “high relationship quality” profile compared to the “moderate relationship quality” profile ( $OR = 6.43, p = 0.011$ ). However, esteem support was associated with a decreased probability of belonging to the “high relationship quality” profile compared to the “moderate relationship quality” profile ( $OR = 0.16, p = 0.016$ ), indicating that a greater level of esteem support is associated with a higher likelihood of belonging to the

“moderate relationship quality” profile than to the “high relationship quality” group. This result seems to be counterintuitive given that descriptive statistics show that the “high relationship quality” profile has higher mean scores of received esteem support ( $M = 4.12$ ,  $SD = .65$ ) relative to the “moderate relationship quality” group ( $M = 3.76$ ,  $SD = .66$ ) (refer to Table 14). Furthermore, the bivariate logistic regression (i.e., with esteem support as the only predictor) shows that greater levels of esteem support are indeed associated with a higher likelihood of belonging to the “high relationship quality” profile in comparison to the “moderate relationship quality” profile ( $coefficient = .91$ ,  $standard\ error = .25$ ,  $OR = 2.49$ ,  $p < .001$ ). This discrepancy between the regression coefficient in the regression analysis including several predictors in addition to esteem support versus the bivariate analysis including only esteem support may be accounted for by a common statistical phenomenon referred to as suppression (a phenomenon that occurs when the regression coefficient of a predictor has the opposite sign of its bivariate (zero-order) correlation with the criterion; Shieh, 2006). Such observations are often due to the inclusion of other predictors.

Lastly, results show that higher scores of honesty-humility is associated with a higher probability of belonging to the “high relationship quality” profile compared to the “low relationship quality” ( $OR = 31.47$ ,  $p = 0.036$ ) and the “moderate relationship quality” ( $OR = 3.61$ ,  $p = 0.020$ ) latent profiles.

### 3.6.2. *Outcomes of Relationship Quality Profiles*

Equality of means for the outcome variables was tested across each profile group using the BCH method (Bakk & Vermunt, 2014) available in *Mplus* 7.3 (Asparouhov & Muthén, 2014), which evaluates the mean scores across classes for continuous auxiliary variables (refer to Table 16). The outcome variables included satisfaction with life, positive affect, negative affect,

and symptoms of depression, anxiety, and stress. Table 17 presents the mean scores for the outcome variables across each relationship quality group. Results showed that the “high relationship quality” subgroup is characterized by comparatively higher scores of self-reported satisfaction with life ( $M = 27.92$ ,  $SD = 5.12$ ) and positive affect ( $M = 36.11$ ,  $SD = 7.07$ ), and the lowest levels of negative affect ( $M = 20.08$ ,  $SD = 6.81$ ) and symptoms of stress ( $M = 12.91$ ,  $SD = 3.78$ ) in comparison to both the “moderate relationship quality” and “low relationship quality” profiles. Participants in the “moderate relationship quality” profile were not statistically distinct from the “low relationship quality” profile with respect to outcome variables. No profiles were characterized by differences in symptoms of anxiety or depression.



## CHAPTER 4: DISCUSSION

### 4. Discussion

The present study provides a more holistic conceptualization of the extent to which various relationship characteristics are important factors in distinguishing between relationships of different quality. This multidimensional assessment of quality allows for a more comprehensive understanding of the associations between romantic relationships, partner social support, personality, and individual well-being.

The current study aimed to investigate the number of relationship quality profiles that emerge from a latent profile analysis and to subsequently examine the nature of each subgroup using predictors of partner social support and personality, as well as outcomes of psychological well-being. Based on a number of fit indices and statistical tests, a three-profile solution was chosen as the best representation of the data. Results based on this three-profile model revealed three latent clusters varying in levels of relationship quality. First, participants who consistently reported lower scores across all six relationship quality components of satisfaction, commitment, intimacy, trust, passion, and love were classified as the low relationship quality profile. Second, individuals in the high relationship quality group were elevated on all of the relationship quality indicators. The final cluster, the moderate relationship quality profile, was characterized by scores that fell within the mid-range across relationship quality variables.

Results showed some associations that were consistent across all three profiles. Intimacy and passion were positively associated across all profiles of relationship quality. This is consistent with past research showing these constructs to be interrelated (Baumeister & Bratslavsky, 1999; Patton & Waring, 1985; Sternberg, 1986). For example, Rubin and Campbell (2012) found that daily increases in intimacy for both relationship members predicted higher relationship passion, a higher probability of having sex, and more sexual satisfaction. Findings

also indicated that relationship satisfaction and received esteem support were positively associated across the three relationship quality profiles. Esteem support involves communicating respect or confidence for one's skills, abilities, and intrinsic value, and has been shown to be related to positive relationship evaluations and relationship stability (Katz, Anderson, & Beach, 1996; Overall et al., 2010). For example, research has shown that individuals who received more self-enhancing feedback from their romantic partners reported greater satisfaction and intimacy (Katz, Anderson, & Beach, 1996, 1997; Swann, De La Ronde, & Hixon, 1994).

Unique patterns were also found across the profile groups. The high relationship quality profile was characterized by a greater number of associations among the relationship quality components of satisfaction, commitment, intimacy, trust, passion, and love. Furthermore, within this profile cluster, several indicators of relationship quality were negatively associated with negative forms of support, including criticism/blame, control/invalidation, minimization, and withdrawal. These findings suggest that relationships of high quality generally show a greater number of intercorrelations among important relationship quality components, and are associated with lower levels of negative supportive behaviours.

Additionally, predictors and outcomes of the latent profiles were examined to further extend the understanding of the characteristics associated with the established profiles. Variables of partner social support, specifically perceived partner support, received partner support (including positive forms of supportive behaviours such as emotional, esteem, informational, and tangible support, and negative forms of support such as criticism/blame, control/invalidation, minimization, and withdrawal), and the effectiveness of received partner support, as well as personality (specifically honesty-humility and emotionality) were used to predict profile membership.

Overall, results showed that perceived partner support, emotional support, esteem support,

and honesty-humility were significant predictors that distinguished between the profiles. Specifically, higher scores of perceived partner support led to greater likelihood of being classified in the high relationship quality profile compared to the moderate and low relationship quality profiles, as well as being associated with a higher probability of belonging to the moderate relationship quality profile than to the low relationship quality profile. Perceived partner support involves the perception of one's romantic partner as "supportive," and can also be considered to be the belief that the option for support is available if a stressful situation were to arise or if one were to ask for support. The findings from the present study suggest that perceived partner support is significantly related to the overall perception of relationship quality, and that the perception of support availability is more likely to occur within the context of relationships that are characterized by high levels of satisfaction, commitment, intimacy, trust, passion, and love. This is consistent with past literature that have previously demonstrated that perceptions where a partner provides good support in times of distress are related to measures of relationship quality and better functioning relationships (Acitelli & Antonucci, 1994; Cutrona, Russell, & Gardner, 2005; Gurung, Sarason, & Sarason, 1997; Kane et al., 2007; Reis, Clark, & Holmes, 2004; Tramonti, Gerini, & Stampacchia, 2015).

In terms of supportive behaviours, participants who reported receiving more emotional support showed a greater likelihood of belonging to the high relationship quality profile compared to the moderate relationship quality profile. In addition, individuals in relationships of reportedly high quality demonstrated higher scores of received esteem support relative to those reporting moderate levels of relationship quality. Both emotional support and esteem support have been categorized as types of nurturant support, which involves efforts to comfort or console, without direct efforts to solve the problem causing stress. Emotional support involves expressions of love, caring, concern, empathy, and sympathy, and can involve behaviours such as talking and

listening to each other, holding hands, hugging, or letting the partner know he or she understands. Esteem support refers to communicating respect or confidence for one's skills, abilities, and intrinsic value, and can involve expressing assurance in one's ability to handle things, or telling the partner he or she is not to blame for the problem. Previous research has demonstrated the importance of nurturant support for positive relationship functioning and outcomes (Collins & Feeney, 2000; Cutrona, Shaffer, Wesner, & Gardner, 2007; Cramer, 2004). For example, emotional support has been shown to have positive effects on perceived intimacy (Gleason, Iida, Shrout, & Bolger, 2008). Using both self-report and observed couple interactions, Overall and colleagues (2010) found that greater nurturant partner support predicted greater positive relationship evaluations across time.

With respect to personality variables, results showed that participants with higher scores of honesty-humility were more likely to belong in the high relationship quality group relative to the profiles of low and moderate relationship quality. Within the HEXACO model (Lee & Ashton, 2004), honesty-humility is generally defined as a person who is honest, sincere, fair, and modest versus greedy, conceited, deceitful, and pretentious. While no study to date has specifically examined the personality trait of honesty-humility within the context of romantic relationship quality, research has demonstrated important relational characteristics associated with this trait. For example, research has shown that humble individuals are easy to relate to, willing to admit limits, and are not self-centered (Exline et al., 2004; Myers, 1995; Rowatt et al., 2006). Humility has also been associated with positive qualities and behaviours, including greater tendencies towards forgiveness (Powers, Nam, Rowatt, & Hill, 2007), cooperation (Hilbig & Zettler, 2009), and providing help to others (LaBouff, Rowatt, Johnson, Tsang, & McCullough, 2012). One recent study demonstrated positive associations between dispositional humility and social relationship quality, which was defined as the degree to which one is happy or satisfied

with social relationship partners, such as friends or roommates, even when controlling for other personality dimensions (Peters, Rowat, & Johnson, 2011).

An examination of outcome variables of psychological well-being showed that individuals in high quality relationships reported comparatively higher scores of life satisfaction and positive affect, and lower levels of negative affect and symptoms of stress in comparison to both the moderate relationship quality and low relationship quality profiles. Furthermore, the profile of high relationship quality was characterized by a number of significant positive associations between relationship quality indicators and positive outcomes of psychological well-being. For example, examination of the intercorrelations indicated that higher levels of relationship satisfaction and trust were associated with higher levels of life satisfaction and positive affect, and lower levels of stress. By assessing multiple dimensions of relationship quality, not only was it shown that profiles of relationship quality have an impact on various psychological outcomes, but it also allowed for a more comprehensive evaluation of the specific factors that influence these positive outcomes. In the current study, results suggest that relationship satisfaction and trust play an important role in individual well-being and psychological outcomes within high quality romantic relationships.

There are two additional considerations that warrant discussion. First, while the application of latent profile analysis resulted in profiles of scores that differed quantitatively in the levels of relationship quality, no qualitative differences in profile shape emerged (e.g., profiles characterized by varying levels across the perceived relationship quality components). In general, participants described their relationships as happy, supportive, and healthy, and showed fairly low levels of psychological distress. For example, the mean scores across the six relationship quality components ranged from 17.36 to 19.32 (refer to Table 1) across subscales that had a range of possible scores from 3 to 21. Furthermore, even within the “low relationship

quality” profile, the mean scores across the relationship quality components were objectively in the mid-range across the subscales (ranging from 10.14 to 13.07; refer to Table 10). Additionally, this “low relationship quality” profile was composed of only 6% of the total proportion of participants. Therefore, the lack of variability and qualitative differences in profile shape of relationship quality may have been attributable to the disproportionate reports of high relationship quality in the present sample. However, based on past research, it appears that high levels of self-reported relationship quality may be common among young adults in university samples (Brock, Barry, Dey, & Rolffs, 2012; Demir, 2008; Galliher, Welsh, Rostosky, & Kawaguchi, 2004).

Another important consideration that merits attention is that a considerable proportion of participants (55%) in the present sample reported being in a long-distance relationship. Previous research has demonstrated inconsistent findings with regard to relationship quality of long-distance relationships. Some studies have found that those in long-distance dating relationships tend to have lower levels of relationship quality when compared to their close-proximity counterparts (Cameron & Ross, 2007; Van Horn et al., 1997), whereas other researchers report the reverse finding (Kelmer, Rhoades, Stanley, & Markman, 2013; Stafford & Merolla, 2007; Stafford & Reske, 1990). There are also a comparable number of findings supporting the notion that long-distance dating relationships are equivalent to close-proximity dating relationships in terms of various aspects of relationship quality, including similar levels of intimacy, degree of relationship progress or seriousness, and trust (Guldner & Swensen, 1995).

In the current study, while preliminary analyses generally did not find significant differences between long-distance and close-proximity dating relationships across the major study variables, it is important to consider the role that a long-distance relationship status may play in terms of reported relationship quality. For example, Kelmer and colleagues (2013) found

that individuals in long-distance relationships generally reported higher levels of relationship quality, as well as greater likelihood of eventual marriage and lower likelihood of breakup within the next year. However, in terms of actual stability, participants in long-distance relationships were just as likely as individuals in close-proximity relationships to have broken up with their partners at follow-up. Over half of the participants in the present study reported being in a long-distance relationship, and past findings have shown that such individuals may be less accurate in appraisals of their relationship, specifically, reporting higher levels of relationship quality and having greater optimism with respect to the future of their relationships. As such, it is possible that the extremely high scores of relationship quality found in this study sample may have been elevated from biased reports of those individuals in long-distance relationships.

#### *4.1. Limitations and Future Directions*

Several limitations of the present study should be noted. First, a convenience sample of undergraduate students was used and may not be representative of the general population. Specifically, the majority of these students were in their first year of study, with a mean age of approximately 18 years, and predominantly female. Within a developmental context, individuals between the ages of 18 and 29 have been described as emerging adults, individuals who are neither adolescents nor adults but who are in the process of becoming an adult (Arnett, 2000, 2004). The formation and maintenance of romantic relationships are central to the lives of emerging adults (Kan & Cares, 2006; Roisman, Masten, Coatsworth, & Tellegen, 2004). Important interpersonal needs previously fulfilled in relationships with family members and peers are often transferred to long-term romantic relationships during this period. Furthermore, the university environment provides a context in which important developmental tasks of this age can be explored. Studies show that romantic relationships constitute an important part of the

everyday lives of college students (Gable, Reis, Impett, & Asher, 2004; Lokitz & Sprandel, 1976), and most college students consider their romantic involvement to be the most intimate relationship they have (Berscheid, Snyder, & Omoto, 1989). Furthermore, the romantic relationships experienced and explored during emerging adulthood begin to become serious, more intimate, and more committed relative to those of the adolescent period (Arnett, 2000; Montgomery, 2005). Therefore, young adult romantic relationships offer a unique developmental context with new challenges and different needs, although these romantic relationships are also expected to serve similar interpersonal functions to those served by later marital relationships.

Another important limitation is that the sample consisted primarily of nonclinical or low-risk relationships. As previously discussed, no qualitative differences in profile shape were found, and participants generally described their relationships as happy, supportive, and healthy, and demonstrated fairly low levels of psychological distress. The quality of romantic relationships among clinical samples may be vastly different, and examining distressed couples or the relationships of high-risk youth may yield more variable profiles that differ in shape and level across the various indicators of relationship quality. For example, previous work studying the romantic relationships of high-risk adolescents has revealed much higher levels of conflictual and aggressive behaviour (Capaldi & Crosby, 1997).

An additional limitation is the issue of power to detect differences between groups due to the small sample size for the 'low relationship quality' profile ( $n = 14$ ). As a result, the significance and magnitude of the associations between the major study variables of relationship quality, partner support, personality, and individual well-being, as well as the differences between profiles should be interpreted with caution, and future studies should include a larger sample size, particularly for profiles characterized by low relationship quality, to ensure that findings are accurate and reliable.



Further limitations of the current study include the reliance on data collected from only one member of a couple. This makes it difficult to assess interdependent processes in close relationships. Future research should include self and partner reports of relationship quality, and consider examining profiles based on couples' perceptions of relationship quality. For example, analyzing dyadic data based on the actor-partner interdependence model (Kenny, 1996; Kenny, Kashy, & Cook, 2006) would allow for the analysis of both the unique effect of a person's own predictor on his or her own outcome and the unique effect of that person's predictor on their partner's outcome. In addition, future studies should incorporate different methods to examine relationship quality beyond self-report, including observations of interaction patterns, daily diary studies, or physiological responses. Additionally, the use of a longitudinal design would allow for profiles of relationship quality to be tracked over time and to monitor possible transitions among profile membership across different developmental stages of a relationship.

#### 4.2. *Concluding Remarks*

Despite the limitations, the present study offers a contribution to the literature by way of using a person-centered approach to examine the different types of individuals represented by the domain of relationship quality components. The application of latent profile analysis to the understanding of relationship quality is novel within the intimate relationship literature. Multiple indicators of commonly identified relationship quality variables were submitted to LPA, including relationship satisfaction, commitment, intimacy, trust, passion, and love. While previous studies often used only one component of relationship quality (usually relationship satisfaction), the incorporation of multiple components in the present study provides a more comprehensive overview of perceived relationship quality. Moreover, the use of predictors and outcomes further extends the descriptive understanding of these profiles based on relationship

quality and are important for identifying significant determinants and effects of relationship quality.

A further strength of the present study was the comprehensive assessment of social support variables, including perceived support, received support, and the effectiveness of the support received. Few studies have incorporated multiple measures of partner support despite findings that demonstrate that perceptions of support availability and reports of received support are not always strongly intercorrelated and have differential effects on individual well-being and psychological outcomes (Barrera, 1986; Dunkel-Schetter & Bennett, 1990; Haber, Cohen, Lucas, & Baltes, 2007; Sandler & Barrera, 1984; Sarason, Shearin, Pierce, & Sarason, 1987; Uchino, 2009; Wills & Shinar, 2000). Moreover, different types of support are independently associated with perceptions of support, and these independent effects are informative about how partners can be helpful. In the present study, findings showed that nurturant support from a romantic partner may be particularly valuable.

Furthermore, this is the first study, to my knowledge, that has examined the personality trait of honesty-humility in the context of romantic relationships. Much research attention has been placed on negative traits which affect interpersonal relationships, such as neuroticism or emotionality. In contrast to these negative traits, findings from the present study suggest that honesty-humility has potential relational benefits. It may be important for researchers to continue to explore and consider the adaptive and positive effects related to the trait of honesty-humility, which has been rarely investigated within the context of romantic relationship functioning.

Lastly, the present study addresses various distinct yet interrelated research areas, including the literature on social support, personality, and individual well-being within the context of intimate relationships. There have been extensive research linking these different areas, such as the literature examining the relations between social support and well-being,

relationship functioning and well-being, social support and relationship processes, as well as personality and relationship processes. The current study seeks to contribute to the understanding of the specific associations within these individual research areas while also bringing them together in one study.

In conclusion, the present study identified latent clusters of relationship quality among a sample of university students. The application of latent profile analysis resulted in three profiles of low, moderate, and high relationship quality. Additionally, predictors and outcomes of profile membership were incorporated to provide a greater descriptive understanding of the latent profiles. Results showed that the relationship between intimacy and passion and the relationship between satisfaction and received esteem support were positively associated across all three profiles of relationship quality. In contrast, relationships of high quality generally show a greater number of intercorrelations among important relationship quality components, and are associated with lower levels of negative supportive behaviours. Furthermore, perceived partner support, emotional support, esteem support, and honesty-humility were found to be significant predictors that distinguished between the profiles. Lastly, individuals in high quality relationships reported more positive and less negative psychological outcomes, which showed significant associations with relationship satisfaction and trust. Overall, the present study presents a novel use of a person-centred approach to the understanding of relationship quality.

## REFERENCES

- Acitelli, L. K. & Antonucci, T. C. (1994). Gender differences in the link between marital support and satisfaction in older couples. *Journal of Personality and Social Psychology*, *67*, 688–698.
- Adler, M. G., & Fagley, N. S. (2005). Appreciation: Individual differences in finding value and meaning as a unique predictor of subjective well-being. *Journal of Personality*, *73*, 79–114.
- Agnew, C. R., Loving, T. J., & Drigotas, S. M. (2001). Substituting the forest for the trees: Social networks and the prediction of romantic relationship state and fate. *Journal of Personality and Social Psychology*, *81*, 1042–1057.
- Akaike, H. (1987). Factor analysis and AIC. *Psychometrika*, *52*, 317–332.
- Albrecht, T. L., Burleson, B. R., & Goldsmith, D. (1994). Supportive communication. In M. L. Knapp & G. R. Miller (Eds.), *Handbook of interpersonal communication* (2nd ed., pp. 419–449). Thousand Oaks, CA: Sage.
- Antony, M. M., Bieling, P. J., Cox, B. J., Enns, M. W., & Swinson, R. P. (1998). Psychometric properties of the 42-item and 21-item versions of the depression anxiety stress scales (DASS) in clinical groups and a community sample. *Psychological Assessment*, *10*, 176–181.
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, *55*, 469–480.
- Arnett, J. J. (2004). *Emerging adulthood: The winding road from late teens through twenties*. New York: Oxford University Press.
- Aron, A., & Aron, E. N. (1991). Love and sexuality. In K. McKinney & S. Sprecher S (Eds.). *Sexuality in close relationships* (pp. 25–48). Hillsdale, NJ: Erlbaum.

- Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of other in the self scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology, 63*, 596–612.
- Aron, A., & Henkemeyer, L. (1995). Marital satisfaction and passionate love. *Journal of Social and Personal Relationships, 12*, 141–149.
- Arriaga, X. B. (2002). Joking violence among highly committed individuals. *Journal of Interpersonal Violence, 17*, 591–610.
- Arriaga, X. B., & Agnew, C. R. (2001). Being committed: Affective, cognitive, and conative components of relationship commitment. *Personality and Social Psychology Bulletin, 27*, 1190–1203.
- Arriaga, X. B., & Rusbult, C. E. (1998). Standing in my partner's shoes: Partner perspective-taking and reactions to accommodative dilemmas. *Personality and Social Psychology Bulletin, 24*, 927–948.
- Arriaga, X. B., Slaughterbeck, E. S., Cappelz, N. M., & Hmurovic, J. L. (2007). From bad to worse: Relationship commitment and vulnerability to partner imperfections. *Personal Relationships, 14*, 389–409.
- Ashton, M. C., & Lee, K. (2005). Honesty-Humility, the Big Five, and the Five-Factor Model. *Journal of Personality, 73*, 1321–1353.
- Ashton, M. C., & Lee, K. (2009). The HEXACO-60: A short measure of the major dimensions of personality. *Journal of Personality Assessment, 91*, 340–345.
- Ashton, M. C., Lee, K., Perugini, M., Szarota, P., De Vries, R. E., Di Blass, L., Boies, K., & De Raad, B. (2004). A six-factor structure of personality descriptive adjectives: solutions from psycholexical studies in seven languages. *Journal of Personality and Social Psychology, 86*, 356–366
- Asparouhov, T. & Muthén, B. (2014). Auxiliary variables in mixture modeling: Using the BCH

- method in Mplus to estimate a distal outcome model and an arbitrary second model. Web note 21.
- Attridge, M., Berscheid, E., & Simpson, J. A. (1995). Predicting relationship stability from both partners versus one. *Journal of Personality and Social Psychology*, *69*, 254–268.
- Bakk, Z., & Vermunt, J. K. (2014). Robustness of stepwise latent class modeling with continuous distal outcomes. *Structural Equation Modeling*. Retrieved from: <http://members.home.nl/jeroenvermunt/bakk2014.pdf>
- Barelds, D. P. H. (2005). Self and partner personality in intimate relationships. *European Journal of Personality*, *19*, 501–518.
- Barnett, R. C., Steptoe, A., & Gareis, K. C. (2005). Marital-role quality and stress-related psychobiological indicators. *Annals of Behavioral Medicine*, *30*, 36–43.
- Barrera, M. (1986). Distinctions between social support concepts, measures, and models. *American Journal of Community Psychology*, *14*, 413–445.
- Barrett, A. E. (2000). Marital Trajectories and Mental Health. *Journal of Health and Social Behavior*, *41*, 451–464.
- Barry, R., Bunde, M., Brock, R. L., & Lawrence, E. (2009). Validity and utility of a multidimensional model of received support in intimate relationships. *Journal of Family Psychology*, *23*, 48–57.
- Bartholomew, D. J. (1987). *Latent variable models and factor analysis*. London: Griffin.
- Bauer, D. J., & Curran, P. J. (2004). The integration of continuous and discrete latent variable models: Potential problems and promising opportunities. *Psychological Methods*, *9*, 3–29.
- Baumeister, R. F., & Bratslavsky, E. (1999). Passion, intimacy, and time: Passionate love as a function of change in intimacy. *Personality and Social Psychology Review*, *3*, 49–67.
- Beach, S. R. H., Tesser, A., Fincham, F. D., Jones, D. J., Johnson, D., & Whitaker, D. J. (1998).

- Pleasure and Pain in Doing Well Together: An Investigation of Performance Related Affect in Close Relationships. *Journal of Personality and Social Psychology*, 74, 923–938.
- Bennett, K. M. (2006). Does marital status and marital status change predict physical health in older adults? *Psychological Medicine: A Journal of Research in Psychiatry and the Allied Sciences*, 36, 1313–1320.
- Berkman, L. F., Glass, T., Brissette, I., & Seeman, T. E. (2000). From social integration to health: Durkheim in the new millennium. *Social Science & Medicine*, 51, 843–857.
- Berkman, L. F., & Syme, S. L. (1979). Social networks, host resistance, and mortality: a nine-year follow-up study of Alameda County residents. *American Journal of Epidemiology*, 109, 186–204.
- Berry, D. S., Willingham, J. K., & Thayer, C. A. (2000). Affect and personality as predictors of conflict and closeness in young adults' friendships. *Journal of Research in Personality*, 34, 84–107.
- Berscheid, E. (2010). Love in the fourth dimension. *Annual Review of Psychology*, 61, 1–25.
- Berscheid, E., & Graziano, W. (1979). The initiation of social relationships and interpersonal attraction. In R. L. Burgess & T. L. Huston (Eds.), *Social exchange in developing relationships* (pp. 31–60). New York: Academic Press.
- Berscheid, E. & Hatfield, E. (1974). A little bit about love. In T. Huston (Ed.), *Foundations of interpersonal attraction* (pp. 157–215). New York: Academic Press.
- Berscheid, E., & Regan, P. C. (2005). *The psychology of interpersonal relationships*. Upper Saddle River, NJ: Pearson.
- Berscheid, E., Snyder, M., & Omoto, A. M. (1989). Issues in studying relationships: Conceptualizing and measuring closeness. In C. Hendrick (Ed.), *Close relationships: Vol. 10. Review of personality and social psychology* (pp. 63–91). Newbury Park, CA: Sage.

- Bolck, A., Croon, M., & Hagenaars, J. (2004). Estimating latent structure models with categorical variables: One-step versus three-step estimators. *Political Analysis, 12*, 3–27.
- Bolger, N., & Amarel, D. (2007). Effects of social support visibility on adjustment to stress: Experimental evidence. *Journal of Personality and Social Psychology, 92*, 458–475.
- Bolger, N., Zuckerman, A., & Kessler, R. C. (2000). Invisible support and adjustment to stress. *Journal of Personality and Social Psychology, 79*, 953–961.
- Botwin, M. D., Buss, D. M., & Shackelford, T. K. (1997). Personality and mate preferences: five factors in mate selection and marital satisfaction. *Journal of Personality, 35*, 107–136.
- Bouchard, G., Lussier, Y., & Sabourin, S. (1999). Personality and marital adjustment: Utility of the five-factor model of personality. *Journal of Marriage and the Family, 61*, 651–660.
- Bozdogan, H. (1987). Model Selection and Akaike's information criterion (AIC): The general theory and its analytical extensions. *Psychometrika, 52*, 345–370.
- Bradbury, T. N., Cohan, C. L., & Karney, B. R. (2000). Optimizing longitudinal research for understanding and preventing marital dysfunction. In T.N. Bradbury (Ed.), *The developmental course of marital dysfunction* (pp. 279–311). New York: Cambridge University Press.
- Bradbury, T. N., Fincham, F. D., & Beach, S. R. H. (2000). Research on the nature and determinants of marital satisfaction: A decade in review. *Journal of Marriage and the Family, 62*, 964–980.
- Brickman, P., Dunkel-Schetter, C., & Abbey, A. (1987). The development of commitment. In P. Brickman (Ed.), *Commitment, conflict, and caring* (pp. 145–221). Englewood Cliffs, NJ: Prentice Hall.
- Brock, R. L., Barry, R. A., Lawrence, E., Dey, J., Rolffs, J. (2012). Internet administration of paper-and-pencil questionnaires used in couple research: Assessing psychometric equivalence.



- Assessment*, 19, 226–242.
- Brown, P. C., Smith, T. W., & Benjamin, L. S. (1998). Perceptions of spouse dominance predict blood pressure reactivity during marital interactions. *Annals of Behavioral Medicine*, 20, 294–301.
- Burman, B., & Margolin, G. (1992). Analysis of the association between marital relationships and health problems: an interactional perspective. *Psychological Bulletin*, 112, 39–63.
- Buss, D. M., & Shackelford, T. K. (1997). Susceptibility to infidelity in the first year of marriage. *Journal of Research in Personality*, 31, 193–221.
- Buunk, B. P., & Ybema, J. F. (2003). Feeling bad, but satisfied: The effects of upward and downward comparison upon mood and marital satisfaction. *British Journal of Social Psychology*, 42, 613–628.
- Byrne, B. M. (2012). *Structural equation modeling with mplus: Basic concepts, applications, and programming*. Routledge/Taylor & Francis Group, New York, NY.
- Cameron, J. J., & Ross, M. (2007). In times of uncertainty: Predicting the survival of long-distance relationships. *The Journal of Social Psychology*, 147, 581–606.
- Campbell, L., Simpson, J. A., Boldry, J., & Rubin, H. (2010). Trust variability in relationship evaluations and relationship processes. *Journal of Personality and Social Psychology*, 99, 14–31.
- Campbell, L., Simpson, J. A., Kashy, D., & Fletcher, G. (2001). Ideal standards, the self, and flexibility of ideals in close relationships. *Personality and Social Psychology Bulletin*, 27, 447–462.
- Cann, A., & Baucom, T. R. (2004). Former partners and new rivals as threats to a relationship: Infidelity type, gender, and commitment as factors related to distress and forgiveness. *Personal Relationships*, 11, 305–318.

- Capaldi, D., & Crosby, L. (1997). Observed and reported psychological and physical aggression in young at-risk couples. *Social Development, 6*, 184–206.
- Carr, D., & Springer, K. W. (2010). Advances in families and health research in the 21st century. *Journal of Marriage and Family, 72*, 743–761.
- Carr, D., Freedman, V. A., Cornman, J. C., & Schwarz, N. (2014). Happy marriage, happy life? Marital quality and subjective well-being in later life. *Journal of Marriage and Family, 76*, 930–948.
- Caughlin, J. P., & Huston, T. L. (2002). A contextual analysis of the association between demand-withdraw and marital satisfaction. *Personal Relationships, 9*, 95–119.
- Caughlin, J. P., Huston, T. L., & Houts, R. M. (2000). How does personality matter in marriage? An examination of trait anxiety, interpersonal negativity, and marital satisfaction. *Journal of Personality and Social Psychology, 78*, 326–336.
- Caughlin, J. P., & Vangelisti, A. L. (2000). An individual difference explanation of why married couples engage in the demand/withdraw pattern of conflict. *Journal of Social and Personal Relationships, 17*, 523–551.
- Clara, I. P., Cox, B. J., & Enns, M. W. (2001). Confirmatory factor analysis of the depression-anxiety-stress scales in depressed and anxious patients. *Journal of Psychopathology and Behavioral Assessment, 23*, 61–67.
- Clark, S., & Muthén, B. (2009). Relating latent class analysis results to variables not included in the analysis. Unpublished paper available at [www.statmodel.com/download/relatinglca.pdf](http://www.statmodel.com/download/relatinglca.pdf).
- Cobb, S. (1979). *Social support and health through the life course*. In M. W. Riley (Ed.), *Aging from birth to death: Interdisciplinary perspectives* (pp. 93–106). Boulder, CO: Westview.
- Cohen, S. (2003). Psychosocial models of the role of social support in the etiology of physical disease. In P. Salovey & A.J. Rothman (Eds.) *Social psychology of health* (pp. 227–44).

New York: Psychology Press.

Cohen, S. (2004). Social relationships and health. *American Psychologist, 59*, 676–684.

Cohen, S., Doyle, W. J., Skoner, D. P., Rabin, B. S., & Gwaltney, J. M., Jr. (1997). Social ties and susceptibility to the common cold. *Journal of the American Medical Association, 277*, 1940–1944.

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*, 310–357.

Collins, N. L., & Feeney, B. C. (2000). A safe haven: An attachment theory perspective on support seeking and caregiving in intimate relationships. *Journal of Personality and Social Psychology, 78*, 1053–1073.

Collins, N. L., & Feeney, B. C. (2004). Working models of attachment shape perceptions of social support: Evidence from experimental and observational studies. *Journal of Personality and Social Psychology, 87*, 363–383.

Collins, N. L., Guichard, A. C., Ford, M. B., & Feeney, B. C. (2006). Responding to need in intimate relationships: Normative processes and individual differences. In M. Mikulincer & G. Goodman (Eds.), *Dynamics of romantic love: Attachment, caregiving, and sex* (pp. 149–189). New York: Guilford Press.

Collins, N. L., & Miller, L. C. (1994). Self-disclosure and liking: a meta-analytic review. *Psychological Bulletin, 116*, 457–475.

Constable, J. F., & Russell, D. (1986). The effect of social support and the work environment upon burnout among nurses. *Journal of Human Stress, 12*, 20–26.

Cook, D. B., Casillas, A., Robbins, S. B., & Dougherty, L. M. (2005). Goal continuity and the “Big Five” as predictors of older adult marital adjustment. *Personality and Individual Differences, 38*, 519–531.

- Costa, P. T., Fagan, P. J., Piedmont, R. L., Ponticas, Y., & Wise, T. N. (1992). The five-factor model of personality and sexual functioning in outpatient men and women. *Psychiatric Medicine, 10*, 199–215.
- Coyne, J. C., & DeLongis, A. (1986). Going beyond social support: the role of social relationships in adaptation. *Journal of Consulting and Clinical Psychology, 54*, 454–460.
- Cramer, D. (2004). Satisfaction with a romantic relationship, depression, support and conflict. *Psychology and Psychotherapy: Theory, Research, and Practice, 77*, 449–461.
- Crawford, J. R., Henry, J. D., 2004. The Positive and Negative Affect Schedule (PANAS): construct validity, measurement properties and normative data in a large non-clinical sample. *British Journal of Clinical Psychology, 43*, 245–265.
- Cutrona, C. E. (1989). Ratings of social support by adolescents and adult informants: Degree of correspondence and prediction of depressive symptoms. *Journal of Personality and Social Psychology, 57*, 723–730.
- Cutrona, C. E. (1990). Stress and social support: In search of optimal matching. *Journal of Social and Clinical Psychology, 9*, 3–14.
- Cutrona, C. E. (1996). Social support as a determinant of marital quality: The interplay of negative and supportive behaviors. In G. R. Pierce, B. R. Sarason, & I. G. Sarason (Eds.), *Handbook of social support and the family* (pp.173–194). New York: Plenum Press.
- Cutrona, C. E., Hessling, R. M., & Suhr, J. A. (1997). The influence of husband and wife personality on marital social support interactions. *Personal Relationships, 4*, 379–393.
- Cutrona, C. E., & Russell, D. W. (1987). The provisions of social relationships and adaptation to stress. In W.H. Jones & D. Perlman (Eds.), *Advances in personal relationships* (Vol. 1, pp. 37–67). Greenwich, Conn.: JAI Press.

- Cutrona, C. E., & Russell, D. W. (1990). Type of social support and specific stress: Toward a theory of optimal matching. In I. G. Sarason, B. R. Sarason, & G. R. Pierce (Eds.), *Social support: An interactional view* (pp. 319–366). New York: Wiley.
- Cutrona, C. E., Russell, D. W., & Gardner, K. A. (2005). The relationship enhancement model of social support. In T. A. Revenson, K. Kayser, & G. Bodenmann (Eds.), *Couples coping with stress: Emerging perspectives on dyadic coping* (pp. 73–95). Washington, DC: American Psychological Association.
- Cutrona, C. E., Shaffer, P. A., Wesner, K. A., & Gardner, K. A. (2007). Optimally matching support and perceived spousal sensitivity. *Journal of Family Psychology, 21*, 754–758.
- Cutrona, C. E., & Suhr, J. A. (1992). Controllability of stressful events and satisfaction with spouse support behaviors. *Communication Research, 19*, 154–174.
- Davila, J., Bradbury, T. N., Cohan, C. L., & Tochluk, S. (1997). Marital functioning and depressive symptoms: Evidence for a stress generation model. *Journal of Personality and Social Psychology, 73*, 849–861.
- Dehle, C., & Landers, J. E. (2005). You can't always get what you want, but can you get what you need? Personality traits and social support in marriage. *Journal of Social and Clinical Psychology, 24*, 1051–1076.
- Demir, M. (2008). Sweetheart, you really make me happy: Romantic relationship quality and personality as predictors of happiness among emerging adults. *Journal of Happiness Studies, 9*, 257–277.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*, 71–75.
- Dietch, J. (1978). Love, sex roles, and psychological health. *Journal of Personality Assessment, 42*, 626–634.

- Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology, 41*, 417–440.
- Dijkstra, P., & Barelds, D. P. H. (2008). Self and partner personality and responses to relationship threats. *Journal of Research in Personality, 42*, 1500–1511.
- Donnellan, M. B., Conger, R. D., & Bryant, C. M. (2004). The Big Five and enduring marriages. *Journal of Research in Personality, 38*, 481–504.
- Dunkel-Schetter, C., & Bennett, T. L. (1990). Differentiating the cognitive and behavioral aspects of social support. In B.R. Sarason & I.G. Sarason (Eds.), *Social support: An interactional view* (pp. 267–296). New York: Wiley.
- Dupre, M. E., Beck, A. N., & Meadows, S. O. (2009). Marital trajectories and mortality among US adults. *American Journal of Epidemiology, 170*, 546–555.
- Ewart, C. K., Taylor, C. B., Kraemer, H. C., & Agras, W. S. (1991). High blood pressure and marital discord: Not being nasty matters more than being nice. *Health Psychology, 10*, 155–163.
- Exline, J. J., Campbell, W. K., Baumeister, R. F., Joiner, T., Krueger, J., & Kachorek, L. V. (2004). Humility and modesty. In C. Peterson, & M. Seligman (Eds.), *The values in action (VIA) classification of strengths* (pp. 461–475). Cincinnati, OH: Values in Action Institute.
- Feeney, B. C., & Collins, N. L. (2001). Predictors of caregiving in adult intimate relationships: An attachment theoretical perspective. *Journal of Personality and Social Psychology, 80*, 972–994.
- Feeney, B. C., & Collins, N. C. (2003). Motivations for caregiving in adult intimate relationships: Influences on caregiving behavior and relationship functioning. *Personality and Social Psychology Bulletin, 29*, 950–968.

- Feeney, B. C., & Thrush, R. L. (2010). Relationship influences on exploration in adulthood: The characteristics and function of a secure base. *Journal of Personality and Social Psychology, 98*, 57–76.
- Fehr, B. (1988). Prototype analysis of the concepts of love and commitment. *Journal of Personality and Social Psychology, 55*, 557–579.
- Fehr, B. (2001). The status of theory and research on love and commitment. In G. J. O. Fletcher, & M. S. Clark (Eds.), *Blackwell handbook of social psychology: Interpersonal processes* (pp. 331–356). Oxford, UK: Blackwell.
- Fehr, B. (2013). The social psychology of love. In J. A. Simpson & L. Campbell (Eds.), *The Oxford handbook of close relationships* (pp. 201–235). New York, NY: Oxford University Press.
- Fincham, F. D. (1994). Cognition in marriage: Current status and future challenges. *Applied and Preventive Psychology: Current Scientific Perspectives, 3*, 185–198.
- Fincham, F. D. (2001). Attributions and close relationships: From balkanization to integration. In G. J. Fletcher & M. Clark (Eds.), *Blackwell handbook of social psychology* (pp. 3–31). Oxford, UK: Blackwells.
- Fincham, F. D. (2003). Marital conflict: Correlates, structure and context. *Current Directions in Psychological Science, 12*, 23–27
- Fincham, F. D., & Beach, S. R. (1999). Marital conflict: Implications for working with couples. *Annual Review of Psychology, 50*, 47–77.
- Fincham, F. D., Harold, G. T., & Gano-Phillips, S. (2000). The longitudinal association between attributions and marital satisfaction: Direction of effects and role of efficacy expectations. *Journal of Family Psychology, 14*, 267–285.
- Finkel, E. J., Rusbult, C. E., Kumashiro, M., & Hannon, P. A. (2002). Dealing with betrayal in close relationships: Does commitment promote forgiveness? *Journal of Personality and*

*Social Psychology*, 82, 956–974.

Fletcher, G. J. O., Simpson, J. A., & Thomas, G. (2000). The measurement of perceived relationship quality components: A confirmatory factor analytic approach. *Personality and Social Psychology Bulletin*, 26, 340–354.

Franks, M. M., & Stephens, M. A. P. (1996). Social support in the context of caregiving: Husbands' provision of support to wives involved in parent care. *Journal of Gerontology: Psychological Sciences*, 51B, 43–52.

Frazier, P. A., Tix, A. P., & Barnett, C. L. (2003). The relational context of social support: Relationship satisfaction moderates the relations between enacted support and distress. *Personality and Social Psychology Bulletin*, 29, 1133–1146.

Fruzzetti, A. E., & Jacobson, N. S. (1990). Toward a behavioral conceptualization of adult intimacy: Implications for marital therapy. In E. Blechman (Ed.), *Emotions and the family: For better or for worse* (pp. 117–135). Hillsdale, NJ: Lawrence Erlbaum Associates.

Furstenberg, F. (2010). On a new schedule: Transitions to adulthood and family change. *Future of the Children*, 20, 67–87.

Gable, S. L., Reis, H. T., Impett, E. A., & Asher, E. R. (2004). What do you do when things go right? The intrapersonal and interpersonal benefits of sharing of positive events. *Journal of Personality and Social Psychology*, 87, 228–245.

Galliher, R. V., Welsh, D. P., Rostosky, S. S., & Kawaguchi, M. C. (2004). Interaction and relationship quality in late adolescent romantic couples. *Journal of Social and Personal Relationships*, 21, 203–216.

Gattis, K. S., Berns, S., Simpson, L. E., & Christensen, A. (2004). Birds of a feather or strange birds? Ties among personality dimensions, similarity, and marital quality. *Journal of Family Psychology*, 18, 564–574.



- Gleason, M. E. J., Iida, M., Shrout, P. E., & Bolger, N. (2008). Receiving support as a mixed blessing: Evidence for dual effects of support on psychological outcomes. *Journal of Personality and Social Psychology, 94*, 824–838.
- Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist, 48*, 26–34.
- Gonzaga, G. C., Turner, R. A., Keltner, D., Campos, B., & Altemus, M. (2006). Romantic love and sexual desire in close relationships. *Emotion, 6*, 163–179.
- Goodman, C. (1999). Intimacy and autonomy in long term marriage. *Journal of Gerontological Social Work, 32*, 83–97.
- Gottman, J. M. (1994). *Why marriages succeed or fail*. New York: Simon & Schuster.
- Gottman, J. M., Coan, J., Carrere, S., & Swanson, C. (1998). Predicting marital happiness and stability from newlywed interactions. *Journal of Marriage and Family, 60*, 5–22.
- Gottman, J. M., & Notarius, C. I. (2000). Decade review: Observing marital interaction. *Journal of Marriage and the Family, 62*, 927–947.
- Gouin, J. P., Glaser, R., Loving, T. J., Malarkey, W. B., Stowell, J., Houts, C., & Kiecolt-Glaser, J. K. (2009). Attachment avoidance predicts inflammatory responses to marital conflict. *Brain, Behavior, and Immunity, 23*, 898–904.
- Graham, J. M. (2011). Measuring love in romantic relationships: A meta-analysis. *Journal of Social and Personal Relationships, 28*, 748–771.
- Graziano, W. G., Jensen-Campbell, L. A., & Hair, E. C. (1996). Perceiving interpersonal conflict and reacting to it: The case for agreeableness. *Journal of Personality and Social Psychology, 70*, 820–835.
- Greeff, A. P., & Malherbe, H. L. (2001). Intimacy and marital satisfaction in spouses. *Journal of Sex & Marital Therapy, 27*, 247–257.

- Green, B. L., Furrer, C. J., & McAllister, C. (2007). How do relationships support parenting? Effects of attachment style and social support on parenting behavior in an at-risk population. *American Journal of Community Psychology, 40*, 96–108.
- Green, B. L., Furrer, C. J., & McAllister, C. (2011). Does attachment style influence social support or the other way around? Results from a longitudinal study of Early Head Start mothers. *Attachment and Human Development, 13*, 27–47.
- Guldner, G. T., & Swensen, C. H. (1995). Time spent together and relationship quality: Long-distance relationships as a test case. *Journal of Social and Personal Relationships, 12*, 313–320.
- Gurung, R. A. R., Sarason, B. R., & Sarason, I. G. (1997). Personal characteristics, relationship quality, and social support perceptions and behavior in young adult romantic relationships. *Personal Relationships, 4*, 319–339.
- Haber, M. G., Cohen, J. L., Lucas, T., & Baltes, B. B. (2007). The relationship between self-reported received and perceived support: A meta-analytic review. *American Journal of Community Psychology, 39*, 133–144.
- Harber K., Schneider, J., Everard, K., & Fisher, E. (2005). Directive support, nondirective support, and morale. *Journal of Social and Clinical Psychology, 24*, 691–722.
- Hatfield, E., & Rapson, R. L. (1993). *Love, sex, and intimacy: Their psychology, biology, and history*. New York: HarperCollins.
- Hatfield, E., & Sprecher, S. (1986). Measuring passionate love in intimate relationships. *Journal of Adolescence, 9*, 383–410.
- Hatfield, E., & Walster, G. W. (1978). *A new look at love*. Lanham, MA: University Press of America.
- Hawkins, D.N., & Booth, A. (2005). Unhappily ever after: Effects of long-term, low-quality

- marriages on well-being. *Social Forces*, 84, 451–471.
- Heaven, P. C. L., Fitzpatrick, J., Craig, F. L., Kelly, P., & Sebar, G. (2000). Five personality factors and sex: Preliminary findings. *Personality and Individual Differences*, 28, 1133–1141.
- Heller, P., & Wood, B. (1998). The process of intimacy: Similarity, understanding and gender. *Journal of Marital and Family Therapy*, 24, 273–288.
- Hellmuth, J. C., & McNulty, J. K. (2008). Neuroticism, marital violence, and the moderating role of stress and behavioral skills. *Journal of Personality and Social Psychology*, 95, 166–180.
- Hendrick, C., & Hendrick, S. (1986). A theory and method of love. *Journal of Personality and Social Psychology*, 50, 392–402.
- Henry, J. D., & Crawford, J. R. (2005). The short-form version of the depression anxiety stress scales (DASS-21): Construct validity and normative data in a large non-clinical sample. *British Journal of Clinical Psychology*, 44, 22–239.
- Henson, J. M., Reise, S. P., & Kim, K. H. (2007). Detecting mixtures from structural model differences using latent variable mixture modeling: A comparison of relative model fit statistics. *Structural Equation Modeling*, 14, 202–226.
- Hilbig, B. E., & Zettler, I. (2009). Pillars of cooperation: Honesty-Humility, social value orientations, and economic behavior. *Journal of Research in Personality*, 43, 516–519.
- Hinde, R. A. (1979). *Towards understanding relationships*. London: Academic Press.
- Hipp, J. R., & Bauer, D. J. (2006). Local solutions in the estimation of growth mixture models. *Psychological Methods*, 11, 36–53.
- Hittner, J. B., & Swickert, R. J. (2001). Modeling functional and structural social support via confirmatory factor analysis: Evidence for a second-order global support construct. *Journal of Social Behavior and Personality*, 16, 69–80.
- Holland, A. S., & Roisman, G. I. (2008). Big Five personality traits and relationship quality: Self-

- reported, observational, and physiological evidence. *Journal of Social and Personal Relationships*, 25, 811–829.
- Holmes, J. G. (1991). Trust and the appraisal process in close relationships. In W. H. Jones & D. Perlman (Eds.), *Advances in personal relationships* (Vol. 2, pp. 57–104). London, England: Jessica Kingsley.
- Holmes, J. G., & Rempel, J. K. (1989). Trust in close relationships. In C. Hendrick (Ed.), *Close relationships* (pp. 187–220). Newbury Park, CA: Sage.
- Holt-Lunstad, J., Birmingham, W., & Jones, B. Q. (2008). Is there something unique about marriage? The relative impact of marital status, relationship quality, and network social support on ambulatory blood pressure and mental health. *Annals of Behavioral Medicine*, 35, 239–244.
- Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010). Social relationships and mortality risk: A meta-analytic review. *PLoS Medicine*, 7, e1000316.
- Horwitz, A. V., McLaughlin, J., & White, H. R. (1998). How the negative and positive aspects of partner relationships affect the mental health of young married people. *Journal of Health and Social Behavior*, 39, 124–136.
- Horwitz, A. V., White, H. R., & Howell-White, S. (1996). Becoming Married and Mental Health: A Longitudinal Study of a Cohort of Young Adults. *Journal of Marriage and the Family*, 58, 895–907.
- House, J. S., Landis, K. R., & Umberson, D. (1988). Social relationships and health. *Science*, 241, 540–545.
- House, J. S., Landis, K. R., & Umberson, D. (2003). Social relationships and health. In P. Salovey, & A.J. Rothman (Eds.) *Social psychology of health* (pp. 218–226). New York: Psychology Press.

- House, J. S., Robbins, C., & Metzner, H. L. (1982). The association of social relationships and activities with mortality: Prospective evidence from the Tecumseh Community Health study. *American Journal of Epidemiology*, *116*, 123–140.
- Howland, M., & Simpson, J. A. (2010). Getting in under the radar: A dyadic view of invisible support. *Psychological Science*, *21*, 1878–1885.
- Jensen-Campbell, L. A., & Graziano, W. G. (2001). Agreeableness as a moderator of interpersonal conflict. *Journal of Personality*, *69*, 323–362.
- Jensen-Campbell, L. A., Rosselli, M., Workman, K. A., Santisi, M., Rios, J. D., & Bojan, D. (2002). Agreeableness, conscientiousness, and effortful control processes. *Journal of Research in Personality*, *36*, 476–489.
- Johnson, M. P. (1973). Commitment: A conceptual structure and empirical application. *Sociological Quarterly*, *14*, 395–406.
- Johnson, M. P. (1991). Commitment to personal relationships. In W. H. Jones & D. Perlman (Eds.), *Advances in personal relationships* (Vol. 3, pp. 117–143). London: Jessica Kingsley.
- Kahn, R. L. (1979). *Aging and social support*. In M. W. Riley (Ed.), *Aging from birth to death: Interdisciplinary perspectives* (pp. 77–91). Boulder, CO: Westview.
- Kan, M. L., & Cares, A. C. (2006). From “friends with benefits” to “going steady”: New directions in understanding romance and sex in adolescence and emerging adulthood. In A. C. Crouter & A. E. Booth (Eds.), *Romance and sex in adolescence and emerging adulthood: Risks and opportunities* (pp. 241–258). Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.
- Kane, H. S., Jaremka, L. M., Guichard, A. C., Ford, M. B., Collins, N. L., & Feeney, B. C. (2007). Feeling supported and feeling satisfied: How one partner's attachment style predicts the

- other partner's relationship experiences. *Journal of Social and Personal Relationships*, *24*, 535–555.
- Karney, B. R., & Bradbury, T. N. (1995). The longitudinal course of marital quality and stability: A review of theory, method, and research. *Psychological Bulletin*, *118*, 3–34.
- Karney, B. R., & Bradbury, T. N. (2000). Attributions in marriage: State or trait? A growth curve analysis. *Journal of Personality and Social Psychology*, *78*, 295–309.
- Karney, B. R., Bradbury, T. N., Fincham, F. D., & Sullivan, K. T. (1994). The role of negative affectivity in the association between attributions and marital satisfaction. *Journal of Personality and Social Psychology*, *66*, 413–424.
- Karney, B. R., McNulty, J. K., & Bradbury, T. N. (2001). Cognition and the development of close relationships. In G. J. Fletcher (Ed.), *Blackwell Handbook of Social Psychology* (Vol. 2, pp. 32–59). Malden, MA: Blackwell Publishers Inc.
- Katz, J., Beach, S. R. H., & Anderson, P. (1996). Self-enhancement versus self-verification: Does spousal support always help? *Cognitive Therapy and Research*, *20*, 345–360.
- Katz, J., Anderson, P., & Beach, S.R.H. (1997). Dating relationship quality: Effects of global self-verification and self-enhancement. *Journal of Social and Personal Relationships*, *14*, 829–842.
- Kaul, M., & Lakey, B. (2003). Where is the support in perceived support? The role of generic relationship satisfaction and enacted support in perceived support's relation to low distress. *Journal of Social and Clinical Psychology*, *22*, 59–78.
- Kelley, H. H., Berscheid, E., Christensen, A., Harvey, J. H., Huston, T. L., Levinger, G., et al. (1983). Analyzing close relationships. In H. H. Kelley, E. Berscheid, A. Christensen, J. H. Harvey, T. L. Huston, G. Levinger, et al. (Eds.), *Close relationships* (pp. 20–67). New York: Freeman.

- Kelly, E. L., & Conley, J. J. (1987). Personality and compatibility: A prospective analysis of marital stability and marital satisfaction. *Journal of Personality and Social Psychology*, *52*, 27–40.
- Kelly, A., Fincham, F.D., & Beach, S.R.H. (2003). Emerging perspectives on couple communication. In J.O. Greene & B.R. Burlson (Eds.), *Handbook of communication and social interaction skills* (pp. 723–752). Mahwah, NJ: Erlbaum.
- Kelmer, G., Rhoades, G. K., Stanley, S., & Markman, H. J. (2013). Relationship quality, commitment, and stability in long-distance relationships. *Family Process*, *52*, 257–270.
- Kenny, D. A. (1996). Models of non-independence in dyadic research. *Journal of Social and Personal Relationships*, *13*, 279–294.
- Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis* (1st ed.). New York, NY: Guilford.
- Kiecolt-Glaser, J. K., Glaser, R., Cacioppo, J. T., MacCallum, R. C., Snydersmith, M., Kim, C., & Malarkey, W. B. (1997). Marital conflict in older adults: Endocrinological and immunological correlates. *Psychosomatic Medicine*, *59*, 339–349.
- Kiecolt-Glaser, J. K., Loving, T. J., Stowell, J. R., Malarkey, W. B., Lemeshow, S., Dickinson, S. L., & Glaser, R. (2005). Hostile marital interactions, proinflammatory cytokine production, and wound healing. *Archives of General Psychiatry*, *62*, 1377–1384.
- Kiecolt-Glaser, J. K., & Newton, T. L. (2001). Marriage and health: His and hers. *Psychological Bulletin*, *127*, 472–503.
- Kilpatrick, S. D., Bissonnette, V. L., & Rusbult, C. E. (2002). Empathic accuracy and accommodative behavior among newly married couples. *Personal Relationships*, *9*, 369–393.
- Kim, J. & Hatfield, E. (2004). Love types and subjective well-being. *Social Behavior and Personality: An International Journal*, *32*, 173–182.

- Kline, R.B. (2011). *Principles and practice of structural equation modeling, 3rd ed.* New York: The Guilford Press.
- Krause, N., Liang, J., & Gu, S. (1998). Financial strain, received support, anticipated support, and depressive symptoms in the People's Republic of China. *Psychology and Aging, 13*, 58–68.
- Kurdek, L. A. (1993). Predicting marital dissolution: A 5-year prospective longitudinal study of newlywed couples. *Journal of Personality and Social Psychology, 64*, 221–242.
- Kurdek, L. A. (1997). Relation between neuroticism and dimensions of relationship commitment: Evidence from gay, lesbian, and heterosexual couples. *Journal of Family Psychology, 11*, 109–124.
- Kurdek, L. A. (2005). Gender and marital satisfaction early in marriage: A growth curve approach. *Journal of Marriage and Family, 67*, 68–74.
- LaBouff, J. P., Rowatt, W. C., Johnson, M. K., Tsang, J. A., & Willerton, G. M. (2012). Humble persons are more helpful than less humble persons: Evidence from three studies. *The Journal of Positive Psychology, 7*, 16–29.
- Lawrence, E., Bunde, M., Barry, R., Brock, R., Sullivan, K., Pasch, L., et al. (2008). Partner support and marital satisfaction: Support amount, adequacy, provision, and solicitation. *Personal Relationships, 15*, 445–463.
- Lawrence, E., Pederson, A., Bunde, M., Barry, R. A., Brock, R. L., Fazio, E., et al. (2008). Objective ratings of relationship skills across multiple domains as predictors of marital satisfaction trajectories. *Journal of Social and Personal Relationships, 25*, 445–466.
- Le, B., & Agnew, C. R. (2003). Commitment and its theorized determinants: a meta-analysis of the investment model. *Personal Relationships, 10*, 37–57.
- Le, B., Dove, N. L., Agnew, C. R., Korn, M. S., & Mutso, A. A. (2010). Predicting nonmarital romantic relationship dissolution: A meta-analytic synthesis. *Personal Relationships, 17*,



- 377–390.
- Lee, K., & Ashton, M. C. (2004). Psychometric properties of the HEXACO Personality Inventory. *Multivariate Behavioral Research, 39*, 329–358.
- Lee, K., & Ashton, M. C. (2008). The HEXACO personality factors in the indigenous personality lexicons of English and 11 other languages. *Journal of Personality, 76*, 1001–1053.
- Lehnart, J., & Neyer, F. J. (2006). Should I stay or should I go? Attachment and personality in stable and instable romantic relationships. *European Journal of Personality, 20*, 475–495.
- Lester, D., Haig, C., & Monello, R. (1989). Spouses' personality and marital satisfaction. *Personality and Individual Differences, 10*, 253–254.
- Lewis, R. A., & Spanier, G. B. (1979). Theorizing about the quality and stability of marriage. In W. R. Burr, R. Hill, F. I. Nye, & I. L. Reiss (Eds.). *Contemporary theories about the family* (pp. 268–294). Vol. 2, New York: The Free Press.
- Lieberman, M. A. (1982). The effects of social supports on responses to stress. In L. Golberger & S. Breznitz (Eds.), *Handbook of stress: Theoretical and clinical aspects* (pp. 764–784). New York: Academic Press.
- Lillard, L. A., & Waite, L. J. (1995). 'Til death do us part': Marital disruption and mortality. *American Journal of Sociology, 100*, 1131–1156.
- Lo, Y., Mendell, N., & Rubin, D. (2001). Testing the number of components in a normal mixture. *Biometrika, 88*, 767–778.
- Lokitz, B. D., & Sprandel, H. Z. (1976). The first year: A look at the freshman experience. *Journal of College Student Personnel, 17*, 274–279.
- Lovibond, S. H., & Lovibond, P. F. (1995). The structure of negative emotional states: Comparison of the depression anxiety stress scales (DASS) with the beck depression and anxiety inventories. *Behavioural Research and Therapy, 33*, 335–343.

- Loving, T. J., Heffner, K. L., Kiecolt-Glaser, J. K., Glaser, R., & Malarkey, W. B. (2004). Stress hormone changes and marital conflict: Spouses' relative power makes a difference. *Journal of Marriage and Family, 66*, 595–612.
- Lubke, G. H., & Muthén, B. (2005). Investigating population heterogeneity with factor mixture models. *Psychological Methods, 10*, 21–39.
- Lubke, G., & Muthén, B. (2007). Performance of factor mixture models as a function of model size, criterion measure effects, and class-specific parameters. *Structural Equation Modeling, 14*, 26–47.
- Lund, M. (1985). The development of investment and commitment scales for predicting continuity of personal relationships. *Journal of Social and Personal Relationships, 2*, 3–23.
- Lydon, J. E., Meana, M., Sepinwall, D., Richards, N., & Mayman, S. (1999). The commitment calibration hypothesis: When do people devalue attractive alternatives? *Personality and Social Psychology Bulletin, 25*, 152–161.
- Lydon, J. E., Pierce, T., & O'Regan, S. (1997). Coping with moral commitment to long-distance dating relationships. *Journal of Personality and Social Psychology, 73*, 104–113.
- Lydon, J. E., & Zanna, M. P. (1990). Commitment in the face of adversity: A value-affirmation approach. *Journal of Personality and Social Psychology, 58*, 1040–1047.
- Magidson, J., & Vermunt, J.K. (2002). Latent class models for clustering: A comparison with K-Means. *Canadian Journal of Marketing Research, 20*, 37–44.
- Maisel N., & Gable, S. L. (2009). The paradox of received social support: The importance of responsiveness. *Psychological Science, 20*, 928–932.
- Maner, J. K., Luce, C. L., Neuberg, S. L., Cialdini, R. B., Brown, S., Sagarin, B. J., & Rice, W. R. (2002). The effects of perspective taking on motivations for helping: Still no evidence for altruism. *Personality and Social Psychology Bulletin, 28*, 1601–1610.

- Manzoli, L., Villari, P., Pironec, G. M., & Boccia, A. (2007). Marital status and mortality in the elderly: A systematic review and meta-analysis. *Social Science and Medicine*, *64*, 77–94.
- Marks, N. F. & Lambert, J. D. (1998). Marital Status Continuity and Change among Young and Midlife Adults: Longitudinal Effects on Psychological Well-Being. *Journal of Family Issues*, *19*, 652–686.
- Marsh, H. W., Ludtke, O., Trautwein, U., & Morin, A. J. S. (2009). Classical latent profile analysis of academic self-concept dimensions: Synergy of person- and variable-centered approaches to theoretical models of self-concept. *Structural Equation Modeling*, *16*, 191–225.
- Maselko, J., Bates, L. M., Avendaño, M., & Glymour, M. M. (2009). The intersection of sex, marital status, and cardiovascular risk factors in shaping stroke incidence: Results from the Health and Retirement Study. *Journal of the American Geriatrics Society*, *57*, 2293–2299.
- McAdams, D. P. (1984). Human motives and personal relationships. In V. Derlega (Ed.), *Communication, intimacy, and close relationships* (pp. 41–70). New York: Academic Press.
- McCrae, R. R., & Costa, P. T. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology*, *52*, 81–90.
- McCrae, R. R., & Costa, P. T., Jr. (1997). Personality trait structure as a human universal. *American Psychologist*, *52*, 509–516.
- McCullough, M. E., Rachal, K. C., Sandage, S. J., Worthington, E. L., Jr., Brown, S. W., & Hight, T. L. (1998). Interpersonal forgiving in close relationships II: Theoretical elaboration and measurement. *Journal of Personality and Social Psychology*, *75*, 1586–1603.
- McGonagle, K. A., Kessler, R. C., & Schilling, E. A. (1992). The frequency and determinants of marital disagreements in a community sample. *Journal of Social and Personal Relationships*, *9*, 507–524.
- McLachlan, G., & Peel, D. (2000). *Finite mixture models*. New York, NY: Wiley.

- McNulty, J. K. (2008). Neuroticism and interpersonal negativity: The independent contributions of behavior and perceptions. *Personality and Social Psychology Bulletin, 34*, 1439–1450.
- McNulty, J. K. (2013). Personality and relationships. In J. A. Simpson & L. Campbell (Eds.), *The Oxford Handbook of Close Relationships*. (pp. 535–552). New York: Oxford University Press.
- Merz, E. L., Malcarne, V. L., Roesch, S. C., Ko, C. M., Emerson, M., Roma, V. G., et al. (2013). Psychometric properties of Positive and Negative Affect Schedule (PANAS) original and short forms in an African American community sample. *Journal of Affective Disorders, 151*, 942–949.
- Meyers, S. A. & Landsberger, S.A. (2002). Direct and indirect path ways between adult attachment style and marital satisfaction. *Personal Relations, 9*, 159–172.
- Mikulincer, M., Gillath, O., Halevy, V., Avihou, N., Avidan, S., & Eshkoli, N. (2001). Attachment theory and reactions to others' needs: Evidence that activation of the sense of attachment security promotes empathic responses. *Journal of Personality and Social Psychology, 81*, 1205–1224.
- Miller, R. S., (1997). Inattentive and contented: Relationships commitment and attention to alternatives. *Journal of Personality and Social Psychology, 73*, 758–766.
- Miller, G., Dopp, J. M., Myers, H. F., Stevens, S. Y., & Fahey, J. L. (1999). Psychosocial predictors of natural killer cell mobilization during marital conflict. *Health Psychology, 18*, 262–271.
- Montgomery, M. J. (2005). Psychosocial intimacy and identity: From early adolescence to emerging adulthood. *Journal of Adolescent Research, 20*, 346–374.
- Morin, A. J. S., Morizot, J., Boudrias, J.-S., & Madore, I. (2011). A multifoci person-centered perspective on workplace affective commitment: A latent profile/factor mixture analysis. *Organizational Research Methods, 14*, 58–90.

- Moss, B., & Schwebel, A. (1993). Defining intimacy in romantic relationships. *Family Relations*, 42, 31–37.
- Murray, S. L., & Holmes, J. G. (1999). The (mental) ties that bind: Cognitive structures that predict relationship resilience. *Journal of Personality and Social Psychology*, 77, 1228–1244.
- Murray, S. L., Holmes, J. G., & Collins, N. L. (2006). Optimizing assurance: The risk regulation system in relationships. *Psychological Bulletin*, 132, 641–666.
- Murray, S. L., Holmes, J. G., & Griffin, D. W. (1996). The self-fulfilling nature of positive illusions in romantic relationships: Love is not blind, but prescient. *Journal of Personality and Social Psychology*, 71, 1155–1180.
- Muthén, B. (2001). Latent variable mixture modeling. In G. A. Marcoulides & R. E. Schumacker (eds.), *New Developments and Techniques in Structural Equation Modeling* (pp. 1–33). Lawrence Erlbaum Associates.
- Muthén, B. O. (2004). Latent variable analysis: Growth mixture modeling and related techniques for longitudinal data. In D. Kaplan (Ed.), *Handbook of quantitative methodology for the social sciences* (pp. 345–368). Newbury Park, CA: SAGE.
- Muthén, L., & Muthén, B. O. (2008). *Mplus user's guide (5th ed.)*. Los Angeles: Muthén & Muthén.
- Muthén, L. K., & Muthén, B. O. (2012). *Mplus 7*. [Computer program]. Los Angeles, CA: Muthén & Muthén.
- Myers, D. G. (1995). Humility: Theology meets psychology. *Reformed Review*, 48, 195–206.
- Newton, T. L., & Sanford, J. M. (2003). Conflict structure moderates associations between cardiovascular reactivity and negative marital interactions. *Health Psychology*, 22, 270–278.
- Norton, R. (1983). Measuring marital quality: A critical look at the dependent variable. *Journal of Marriage and the Family*, 45, 141–151.

- Nylund, K. L., Asparouhov, A., & Muthén, B. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study. *Structural Equation Modeling, 14*, 535–569.
- O'Hara, M. W. (1986). Social support, life events, and depression during pregnancy and the puerperium. *Archives of General Psychiatry, 43*, 569–573.
- O'Mahen, H. A., Beach, S. R. H., & Tesser, A. (2000). Relationship ecology and negative communication in romantic relationships: A self-evaluation maintenance perspective. *Personality and Social Psychology Bulletin, 26*, 1343–1352.
- Osman, A., Wong, J. L., Bagge, C. L., Freedenthal, S., Gutierrez, P. M., & Lozano, G. (2012). The depression anxiety stress Scales—21 (DASS-21): Further examination of dimensions, scale reliability, and correlates. *Journal of Clinical Psychology, 68*, 1322–1338.
- Overall, N. C., Fletcher, G. J., & Simpson, J. A. (2010). Helping each other grow: Romantic partner support, self-improvement, and relationship quality. *Personality and Social Psychology Bulletin, 36*, 1496–1513.
- Page, A. C., Hooke, G. R., & Morrison, D. L. (2007). Psychometric properties of the Depression Anxiety Stress Scales (DASS) in depressed clinical samples. *British Journal of Clinical Psychology, 46*, 283–297.
- Pasch, L. A., & Bradbury, T. N. (1998). Social support, conflict, and the development of marital dysfunction. *Journal of Consulting and Clinical Psychology, 66*, 219–230.
- Pasch, L. A., Bradbury, T. N., & Sullivan, K. T. (1997). Social support in marriage: An analysis of intraindividual and interpersonal components. In G. R. Pierce, B. Lakey & I. G. Sarason (Eds.), *Sourcebook of social support and personality* (pp. 229–256). New York, NY: Plenum.
- Pastor, D. A., Barron, K. E., Miller, B. J., & Davis, S. L. (2007). A latent profile analysis of college

- students' achievement goal orientation. *Contemporary Educational Psychology*, 32, 8–47.
- Patrick, S., Sells, J. N., Giodano, F. G., & Tollerud, T. R. (2007). Intimacy, differentiation, and personality variables as predictors of marital satisfaction. *The Family Journal*, 15, 359–367.
- Patton, D., & Waring, E. M. (1985). Sex and marital intimacy. *Journal of Sex and Marital Therapy*, 11, 176–184.
- Pavot, W., & Diener, E. (1993). Review of the Satisfaction With Life Scale. *Psychological Assessment*, 5, 164–172.
- Peters, A. S., Rowat, W. C., & Johnson, M. K. (2011). Associations between dispositional humility and social relationship quality. *Psychology*, 2, 155–161.
- Petras, H., & Masyn, K. (2010). General growth mixture analysis with antecedents and consequences of change. In A. Piquero & D. Weisburd (Eds.), *Handbook of Quantitative Criminology* (pp. 69–100). New York, NY: Springer.
- Peugh, J. & Fan, X. (2013). Modeling unobserved heterogeneity using latent profile analysis: A Monte Carlo simulation. *Structural Equation Modeling*, 20, 616–639.
- Powell, C., & Van Vugt, M. (2003). Genuine giving or selfish sacrifice?: The role of commitment and cost level upon willingness to sacrifice. *European Journal of Social Psychology*, 33, 403–412.
- Powers, C., Nam, R., Rowatt, W. C., & Hill, P. (2007). Associations between humility, spiritual transcendence, and forgiveness. In R. Piedmont (Ed.), *Research in the social scientific study of religion* (pp. 74–94). Herndon, VA: Brill Academic Publishers.
- Proulx, C. M., Helms, H. M., & Buehler, C. (2007). Marital quality and personal well-being: A meta-analysis. *Journal of Marriage and Family*, 69, 576–593.

- Rafaeli, E., Cranford, J. A., Green, A. S., Shrout, P. E., & Bolger, N. (2008). The good and bad of relationships: How social hindrance and social support affect relationship feelings in daily life. *Personality and Social Psychology Bulletin*, *34*, 1703–1718.
- Regan, P. C. (1998). Of lust and love: Beliefs about the role of sexual desire in romantic relationships. *Personal Relationships*, *5*, 139–157.
- Regan, P. C. (2009). Love, Companionate and Passionate. In H. T. Reis & S. Sprecher (Eds). *Encyclopedia of Human Relationships* (Vol. 2, pp. 1007–1011). Thousand Oaks, CA: Sage.
- Regan, P. C., & Berscheid, E. (1999). *Lust: What we know about human sexual desire*. Thousand Oaks, CA: Sage.
- Regan, P. C., Kocan, E. R., & Whitlock, T. (1998). Ain't love grand! A prototype analysis of romantic love. *Journal of Social and Personal Relationships*, *15*, 411–420.
- Rehmann, U. S., & Holtzworth-Munroe, A. (2006). A cross-cultural analysis of the demand-withdraw marital interaction: Observing couples from a developing country. *Journal of Consulting and Clinical Psychology*, *74*, 755–766.
- Reis, H. T., Clark, M. S., & Holmes, J. G. (2004). *Perceived partner responsiveness as an organizing construct in the study of intimacy and closeness*. In D. Mashek & A. Aron (Eds.), *Handbook of closeness and intimacy* (pp. 201–225). Mahwah, NJ: Lawrence Erlbaum Associates.
- Rempel, J. K., Holmes, J. G., & Zanna, M. P. (1985). Trust in close relationships. *Journal of Personality and Social Psychology*, *49*, 95–112.
- Rempel, J. K., Ross, M., & Holmes, J. G. (2001). Trust and communicated attributions in close relationships. *Journal of Personality and Social Psychology*, *81*, 57–64.
- Revenson, T., Kayser, K., & Bodenmann, G. (2005). *Couples coping with stress: Emerging perspectives on dyadic coping*. Washington, DC: American Psychological Association.



- Ribas, A. & Lam, C. (2010). Social support and quality of life among Latinos with mental illness. *The Journal of Nervous and Mental Disease, 198*, 137–143.
- Rini, C., & Dunkel Schetter, C. (2010). The effectiveness of social support transactions in intimate relationships. In J. Davila & K. Sullivan (Eds.), *Support processes in intimate relationships* (pp. 26–67). New York, NY: Oxford.
- Rini, C., Dunkel Schetter, C., Hobel, C. J., Glynn, L. M., & Sandman, C. A. (2006). Effective social support: Antecedents and consequences of partner support during pregnancy. *Personal Relationships, 13*, 207–229.
- Rini, C., Redd, W., Austin, J., Mosher, C. E., Meschian, Y. M., Isola, L., Scigliano, E., Moskowitz, C. H., Papadopoulos, E., Labay, L. E., Rowley, S., Burkhalter, J. E., Dunkel Schetter, C., DuHamel, K. N. (2011). Effectiveness of partner social support predicts enduring psychological distress after hematopoietic stem cell transplantation. *Journal of Consulting and Clinical Psychology, 79*, 64–74.
- Roach, A. J., Frazier, L. P., & Bowden, S. R. (1981). The Marital Satisfaction Scale: Development of a measure for intervention research. *Journal of Marriage and the Family, 43*, 537–546.
- Robins, R. W., Caspi, A., & Moffitt, T. E. (2000). Two personalities, one relationship: Both partners' personality traits shape the quality of their relationship. *Journal of Personality and Social Psychology, 79*, 251–259.
- Rohrer, J. E., Bernard, M. E., Zhang, Y., Rasmussen, N. H., & Woroncow, H. (2008). Marital status, feeling depressed and self-rated health in rural female primary care patients. *Journal of Evaluation in Clinical Practice, 14*, 214–217.
- Roisman, G. I., Masten, A. S., Coatsworth, J. D., & Tellegen, A. (2004). Salient and emerging developmental tasks in the transition to adulthood. *Child Development, 75*, 123–133.
- Rook, K. (1984). The negative side of social interaction: impact on psychological wellbeing.

- Journal of Personality and Social Psychology*, 46, 1097–1108.
- Rosenblatt, P. C. (1977). Needed research on commitment in marriage. In G. Levinger & H. L. Raush (Eds.), *Close relationships: Perspective on the meaning of intimacy* (pp. 73–86). Amherst: University of Massachusetts Press.
- Rowatt, W., Powers, C., Targhetta, V., Comer, J., Keenedy, S., & La-bouff, J. (2006). Development and initial validation of an implicit measure of humility relative to arrogance. *The Journal of Positive Psychology*, 1, 198–211.
- Rubin, Z. (1970). Measurement of romantic love. *Journal of Personality and Social Psychology*, 16, 265–273.
- Rubin, H., & Campbell, L. (2012). Day-to-day changes in intimacy predict heightened relationship passion, sexual occurrence, and sexual satisfaction: A dyadic diary analysis. *Social Psychological and Personality Science*, 3, 224–231.
- Rusbult, C. E. (1983). A longitudinal test of the investment model: The development (and deterioration) of satisfaction and commitment in heterosexual involvements. *Journal of Personality and Social Psychology*, 45, 101–117.
- Rusbult, C. E., & Buunk, B. P. (1993). Commitment processes in close relationships: An interdependence analysis. *Journal of Social and Personal Relationships*, 10, 175–204.
- Rusbult, C. E., Martz, J. M., & Agnew, C. R. (1998). The investment model scale: Measuring commitment level, satisfaction level, quality of alternatives, and investment size. *Personal Relationships*, 5, 357–391.
- Rusbult, C. E., Van Lange, P. A. M., Wildschut, T., Yovetich, N. A., & Verette, J. (2000). Perceived superiority in close relationships: Why it exists and persists. *Journal of Personality and Social Psychology*, 79, 521–545.
- Rusbult, C. E., Verette, J., Whitney, G. A., Slovik, L. F., & Lipkus, I. (1991). Accommodation

- processes in close relationships: Theory and preliminary empirical evidence. *Journal of Personality and Social Psychology*, *60*, 53–78.
- Russell, D., Altmaier, E., & Van Velzen, D. (1987). Job-related stress, social support, and burnout among classroom teachers. *Journal of Applied Psychology*, *72*, 269–274.
- Russell, D. W., Booth, B., Reed, D., & Laughlin, P. R. (1997). Personality, social networks, and perceived social support among alcoholics: a structural equation analysis. *Journal of Personality* *65*, 649–692.
- Russell, R. J. H., & Wells, P. A. (1994). Predictors of happiness in married couples. *Personal and Individual Differences*, *17*, 313–321.
- Sandberg, J. G., Miller, R. B., Harper, J. M., Robila, M., & Davey, A. (2009). The impact of marital conflict on health and health care utilization in older couples. *Journal of Health Psychology*, *14*, 9–17.
- Sanderson, C. A., & Evans, S.M. (2001). Seeing one's partner through intimacy-colored glasses: An examination of the processes underlying the intimacy goals-relationship satisfaction link. *Personality and Social Psychology Bulletin*, *27*, 461–471.
- Sandler, I. N., & Barrera, M. (1984). Toward a multimethod approach to assessing the effects of social support. *American Journal of Community Psychology*, *12*, 37–52.
- Sarason, S. B. (1974). *The psychological sense of community: Prospects for a community psychology*. San Francisco: Jossey-Bass.
- Sarason, I. G., Sarason, B. R., & Pierce, G. R. (1994). Social support: Global and relationship-based levels of analysis. *Journal of Social and Personal Relationships*, *11*, 295–312.
- Sarason, B. R., Shearin, E. N., Pierce, G. R., & Sarason, I. G. (1987). Interrelations of social support measures: Theoretical and practical implications. *Journal of Personality and Social Psychology*, *52*, 813–832.

- Sassler, S. (2010). Partnering Across the Life Course: Sex, Relationships, and Mate Selection. *Journal of Marriage and Family, 72*, 557–575.
- Saucier, G. (2009). Recurrent personality dimensions in inclusive lexical studies: Indications for a Big Six structure. *Journal of Personality, 77*, 1577–1614.
- Sbarra, D. A. (2006). Predicting the onset of emotional recovery following nonmarital relationship dissolution: Survival analyses of sadness and anger. *Personality and Social Psychology Bulletin, 32*, 298–312.
- Schaefer, C., Coyne, J. C., & Lazarus, R. S. (1981). The health-related functions of social support. *Journal of Behavioral Medicine, 4*, 381–406.
- Schaefer, M. T., & Olson, D. H. (1981). Assessing intimacy: The PAIR inventory. *Journal of Marital and Family Therapy, 7*, 47–60.
- Schetter, C., DuHamel, K. N. (2011). Effectiveness of partner social support predicts enduring psychological distress after hematopoietic stem cell transplantation. *Journal of Consulting and Clinical Psychology, 79*, 64–74.
- Schumm, W. R., Paff-Bergen, L. A., Hatch, R. C., Obiorah, F. C., Copeland, J. M., Meens, L. D., & Bugaighis, M. A. (1986). Concurrent and discriminant validity of the Kansas Marital Satisfaction Scale. *Journal of Marriage and the Family, 48*, 381–387.
- Schwartz, G. (1978). Estimating the dimension of a model. *The Annals of Statistics, 6*, 461–464.
- Scollon C. N., & Diener E. (2006). Love, work, and changes in extraversion and neuroticism over time. *Journal of Personality and Social Psychology, 91*, 1152–1165.
- Shieh, G. (2006). Suppression situations in multiple linear regression. *Educational and Psychological Measurement, 66*, 435–447.
- Shrout, P. E., Bolger, N., Iida, M., Burke, C., Gleason, M. E. J., & Lane, S. P. (2010). The effects of daily support transactions during acute stress: Results from a diary study of bar exam

- preparation. In K. T. Sullivan & J. Davila (Eds.), *Support processes in intimate relationships* (pp. 175–199). New York: Oxford University Press.
- Shrout, P. E., Herman, C. M., & Bolger, N. (2006). The costs and benefits of practical and emotional support on adjustment: A daily diary study of couples experiencing acute stress. *Personal Relationships, 13*, 115–134.
- Simon, R. W. (2002). Revisiting the Relationships among Gender, Marital Status, and Mental Health. *American Journal of Sociology, 107*, 1065–1096.
- Simon, R. W., & Barrett, A. E. (2010). Nonmarital Romantic Relationships and Mental Health in Early Adulthood: Does the Association Differ for Women and Men? *Journal of Health and Social Behavior, 51*, 168–182.
- Simpson, J. A. (1990). Influence of attachment styles on romantic relationships. *Journal of Personality and Social Psychology, 59*, 971–980.
- Simpson, J. A. (2007). Foundations of interpersonal trust. In A. W. Kruglanski & E. T. Higgins (Eds.), *Social psychology: A handbook of basic principles* (2nd ed., p. 587–607). New York: Guilford.
- Sinclair, S. J., Siefert, C. J., Slavin-Mulford, J. M., Stein, M. B., Renna, M., & Blais, M. A. (2012). Psychometric evaluation and normative data for the depression, anxiety, and stress scales-21 (DASS-21) in a nonclinical sample of US adults. *Evaluation & the Health Professions, 35*, 259–279.
- Smith, T. W., Cribbet, M. R., Nealey-Moore, J. B., Uchino, B. N., Williams, P. G., MacKenzie, J., & Thayer, J. F. (2010). Matters of the variable heart: Respiratory sinus arrhythmia response to marital interaction and associations with marital quality. *Journal of Personality and Social Psychology, 100*, 103–119.
- Sprecher, S., & Felmlee, D. (2007). Love. In R. Baumeister, & K. Vohs (Eds.), *Encyclopedia of*

- social psychology*. (pp. 538–540). Thousand Oaks, CA: SAGE Publications, Inc.
- Sprecher, S., & Regan, P. C. (1998). Passionate and companionate love in courting and young married couples. *Sociological Inquiry*, *68*, 163–185.
- Stafford, L., & Merolla, A. J. (2007). Idealization, reunions, and stability in long-distance dating relationships. *Journal of Social and Personal Relationships*, *24*, 37–54.
- Stafford, L., & Reske, J. R. (1990). Idealization and communication in long-distance premarital relationships. *Family Relations*, *39*, 274–279.
- Stanley, S. M., & Markman, H. J. (1992). Assessing commitment in personal relationships. *Journal of Marriage and the Family*, *54*, 595–608.
- Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The Meaning in Life Questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology*, *53*, 80–93.
- Sternberg, R. J. (1986). A triangular theory of love. *Psychological Review*, *93*, 119–135.
- Sternberg, R. J. (1997). Construct validation of a triangular love scale. *European Journal of Social Psychology*, *27*, 313–335.
- Sternberg, R. (Ed.), & Hojjat, M. (Ed.). (1997). *Satisfaction in close relationships*. New York, NY: Guilford Press.
- Sullivan, K. T., Pasch, L. A., Johnson, M. D., & Bradbury, T. N. (2010). Social support, problem solving and the longitudinal course of newlywed marriage. *Journal of Personality and Social Psychology*, *98*, 631–644.
- Swann, W.B., De La Ronde, C., & Hixon, J.G. (1994). Authenticity and positivity strivings in marriage and courtship. *Journal of Personality and Social Psychology*, *66*, 857–869.
- Swickert, R. J., Hittner, J. B., & Foster, A. (2010). Big five traits interact to predict perceived social support. *Personality and Individual Differences*, *48*, 736–741.

- Talmadge, L., & Dabbs, J. (1990). Intimacy, conversational patterns, and concomitant cognitive/emotional processes in couples. *Journal of Social and Clinical Psychology, 9*, 473–488.
- Tein, J. Y., Coxe, S., & Cham, H. (2013). Statistical power to detect the correct number of classes in latent profile analysis. *Structural Equation Modeling, 20*, 640–657.
- Thibaut, J. W., & Kelley, H. H. (1959). *The social psychology of groups*. New York: John Wiley.
- Thoits, P. A. (2011). Mechanisms linking social ties and support to physical and mental health. *Journal of Health and Social Behavior, 52*, 145–161.
- Tofighi, D., & Enders, C. (2008). Identifying the correct number of classes in growth mixture models. In G.R. Hancock & K.M. Samuelsen (Eds.), *Advances in latent variable mixture models* (pp. 317–341). Charlotte, NC: Information Age.
- Tramonti, F., Gerini, A., & Stampacchia, G. (2015). Relationship quality and perceived social support in persons with spinal cord injury. *Spinal Cord, 53*, 120–124.
- Tucker, J. S., Kressin, N. R., Spiro, A., & Ruscio, J. (1998). Intrapersonal characteristics and the timing of divorce: A prospective investigation. *Journal of Social and Personal Relationships, 15*, 211–225.
- Uchino, B. N. (2004). *Social support and physical health: Understanding the health consequences of relationships*. New Haven, CT: Yale University Press.
- Uchino, B. N. (2009). Understanding the links between social support and physical health: A life-span perspective with emphasis on the separability of perceived and received support. *Perspectives on Psychological Science, 4*, 236–255.
- Uchino, B. N., Cacioppo, J. T., & Kiecolt-Glaser, J. K. (1996). The relationship between social support and physiological processes: a review with emphasis on underlying mechanisms and implications for health. *Psychological Bulletin, 119*, 488–531.

- Uchino, B. N., Cacioppo, J. T., Malarkey, W., Glaser, R., & Kiecolt-Glaser, J. K. (1995). Appraisal support predicts age-related differences in cardiovascular function in women. *Health Psychology, 14*, 556–562.
- Uebersax, J. S. (1999). Probit latent class analysis with dichotomous or ordered category measures: Conditional independence/dependence models. *Applied Psychological Measurement, 23*, 283–297.
- Umberson, D. (1992). Gender, marital status and the social control of health behavior. *Social Science & Medicine, 34*, 907–917.
- Umberson, D., & Montez, J. K. (2010). Social relationships and health: A flashpoint for health policy. *Journal of Health and Social Behavior, 51*, 54–66.
- Umberson, D., Williams, K., Powers, D. A., Liu, H., & Needham, B. (2006). You make me sick: Marital quality and health over the life course. *Journal of Health and Social Behavior, 47*, 1–16.
- Van Horn, K. R., Arnone, A., Nesbitt, K., Desilets, L., Sears, T., Giffin, M., et al. (1997). Physical distance and interpersonal characteristics in college students' romantic relationships. *Personal Relationships, 4*, 25–34.
- Van Lange, P. A. M., Rusbult, C. E., Drigotas, S. M., Arriaga, X. B., Witcher, B. S., & Cox, C. L. (1997). Willingness to sacrifice in close relationships. *Journal of Personality and Social Psychology, 72*, 1373–1395.
- Vassar, M. (2008). A note on the score reliability for the satisfaction with life scale: An RG study. *Social Indicators Research, 86*, 47–57.
- Vaux, A., & Harrison, D. (1985). Support network characteristics associated with support satisfaction and perceived support. *American Journal of Community Psychology, 13*, 245–268.



- Verhofstadt, L. L., Buysse, A., Ickes, W., De Clercq, A., & Peene, O. J. (2005). Conflict and support interactions in marriage: An analysis of couples' interactive behavior and on-line cognition. *Personal Relationships, 12*, 23–42.
- Vermunt, J. K., & Magidson J. (2002). Latent class cluster analysis. In J. A. Hagenaars & A. McCutcheon (Eds.), *Applied latent class analysis* (pp. 89–106). Cambridge, UK: Cambridge University Press.
- Vinokur, A., Schul, Y., & Caplan, R. D. (1987). Determinants of perceived social support: interpersonal transactions, personal outlook, and transient affective states. *Journal of Personality and Social Psychology, 53*, 1137–1145.
- Vogel, D. & Wei, M. (2005). Adult attachment and help-seeking intent: The mediating roles of psychological distress and perceived social support. *Journal of Counseling Psychology, 52*, 347–357.
- Waite, L. J. (1995). Does marriage matter? *Demography, 32*, 483–507.
- Waite, L. J., & Gallagher, M. (2000). *The case for marriage: Why married people are happier, healthier, and better off financially*. New York, NY: Doubleday.
- Waring, E. (1984). The measurement of marital intimacy. *Journal of Marital and Family Therapy, 10*, 185–192.
- Waring, E. M. (1988). *Enhancing marital intimacy through facilitating cognitive self-disclosure*. New York: Brunner/Mazel.
- Watson, D., Clark, L.A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS Scales. *Journal of Personality and Social Psychology 47*, 1063–1070.
- Watson, D., & Clark, L.A. (1984). Negative affectivity: the disposition to experience aversive emotional states. *Psychological Bulletin, 96*, 465–490.

- Watson, D., Hubbard, B., & Wiese, D. (2000). General traits of personality and affectivity as predictors of satisfaction in intimate relationships: Evidence from self- and partner-ratings. *Journal of Personality, 68*, 413–449.
- Weiss, R. S. (1974). The provisions of social relationships. In Z. Rubin (Ed.), *Doing unto others* (pp. 17–26). Englewood Cliffs, NJ: Prentice-Hall.
- Weiss, R. L., & Heyman, R. E. (1997). A clinical–research overview of couple interactions. In W. K. Halford & H. J. Markman (Eds.), *The clinical handbook of marriage and couples interventions* (pp. 13–42). New York: Wiley.
- Whisman, M. A. (2001). The association between depression and marital satisfaction. In S. R. H. Beach (Ed.), *Marital and family processes in depression: A scientific foundation for clinical practice* (pp. 3–24). Washington, DC: American Psychological Association.
- Whisman, M. A., & Baucom, D. H. (2012). Intimate relationships and psychopathology. *Clinical Child and Family Psychology Review, 15*, 4–13.
- Whisman, M. A., Uebelacker, L. A., Tolejko, N., Chatav, Y., & Meckelvie, M. (2006). Marital discord and well-being in older adults: Is the association confounded by personality? *Psychology and Aging, 21*, 626–631.
- White, J. K., Hendrick, S. S., & Hendrick, C. (2004). Big Five personality variables and relationship constructs. *Personality and Individual Differences, 37*, 1519–1530.
- Williams, P., Barclay, L., & Schmied, V. (2004). Defining social support in context: A necessary step in improving research, intervention, and practice. *Qualitative Health Research, 14*, 942–960.
- Wills, T. A., & Shinar, O. (2000). Measuring perceived and received social support. In S. Cohen, L. G. Underwood, & B. H. Gottlieb (Eds.), *Social support measurement and intervention: A guide for health and social scientists* (pp. 86–135). New York: Oxford University Press.

- Wong, A. W. M., Gan, W. Q., Burns, J., Sin, D. D., & van Eeden, S. F. (2008). Acute exacerbation of chronic obstructive pulmonary disease: influence of social factors in determining length of hospital stay and readmission rates. *Canadian Respiratory Journal: Journal of the Canadian Thoracic Society*, *15*, 361–364.
- Yang, C. (2006). Evaluating latent class analyses in qualitative phenotype identification. *Computational Statistics & Data Analysis*, *50*, 1090–1104.
- Ystgaard, M., Tambs, K., & Dalgard, O. S. (1999). Life stress, social support and psychological distress in late adolescence: A longitudinal study. *Social Psychiatry & Psychiatric Epidemiology*, *34*, 12–19.

Table 1.

*Descriptive Statistics*

Variable	<i>M</i>	<i>SD</i>	$\alpha$	<i>Skewness</i>	<i>Kurtosis</i>
Age (years old)	18.37	2.23	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
Relationship Length (in months)	17.55	17.02	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
Relationship Satisfaction	18.17	3.16	.93	-1.38	2.02
Relationship Commitment	19.04	2.88	.93	-1.77	3.08
Relationship Intimacy	18.69	2.77	.83	-1.91	4.70
Relationship Trust	18.70	2.68	.78	-1.79	4.82
Relationship Passion	17.36	3.30	.75	-1.29	2.29
Relationship Love	19.32	2.51	.87	-2.28	6.65
Global Relationship Quality	37.18	4.79	.94	-1.31	1.67
Perceived Guidance	14.59	1.76	.67	-1.74	5.11
Perceived Reassurance of Worth	14.08	2.01	.65	-1.18	2.14
Perceived Social Integration	12.80	1.89	.74	-.78	2.11
Perceived Attachment	14.45	1.85	.63	-1.39	1.95
Perceived Opportunity for Nurturance	11.84	2.07	.60	-.26	-.12
Perceived Reliable Alliance	14.46	1.85	.59	-1.23	1.45
Total Perceived Partner Support	82.28	7.84	.83	-1.61	6.21
Received Emotional Support	4.04	.72	.80	.99	1.14
Received Esteem Support	3.97	.72	.80	-.66	.49
Received Information Support	3.19	.84	.82	-.11	-.60
Received Tangible Support	3.56	.84	.79	-.57	.02
Received Criticism/Blame	1.57	.62	.74	1.78	3.79
Received Control/Invalidation	1.52	.69	.81	2.16	5.25
Received Minimization	2.60	.89	.74	.48	-.14
Received Withdrawal	1.49	.73	.76	2.02	4.00

*Note.* *M* = Mean; *SD* = Standard Deviation;  $\alpha$  = Cronbach's alpha.

Table 1. (Continued)

*Descriptive Statistics*

Variable	<i>M</i>	<i>SD</i>	$\alpha$	<i>Skewness</i>	<i>Kurtosis</i>
Task Support Effectiveness	13.96	3.20	.75	-.52	-.04
Information Support Effectiveness	14.61	3.31	.78	-.57	.24
Emotional Support Effectiveness	15.20	3.94	.86	-.87	.59
Negative Support	15.95	4.65	.79	-1.26	1.20
Total Support Effectiveness	59.97	12.08	.91	-.78	.56
Honesty/Humility	3.17	.66	.78	-.12	-.16
Emotionality	3.58	.65	.80	-.62	.25
Extraversion	3.49	.62	.81	-.38	.20
Agreeableness	3.10	.64	.79	-.60	.10
Conscientiousness	3.73	.53	.74	-.17	-.27
Openness to Experience	3.19	.60	.70	-.05	-.57
Satisfaction with Life	26.74	5.73	.87	-.96	.58
Positive Affect	35.04	7.18	.87	-.37	-.11
Negative Affect	21.43	7.70	.87	1.04	.82
Stress	13.49	3.94	.81	.64	.13
Anxiety	11.05	3.52	.75	1.34	2.43
Depression	10.60	3.92	.88	1.84	3.42

*Note.* *M* = Mean; *SD* = Standard Deviation;  $\alpha$  = Cronbach's alpha.

Table 2.

*Bivariate Correlations between Demographic Variables and Relationship Quality*

	1	2	3	4	5	6	7	8	9	10	11
1. Age (years old)	1.00										
2. Gender	-.04	1.00									
3. Relationship Status	.36**	.00	1.00								
4. Relationship Length (months)	.69**	-.01	.26**	1.00							
5. Satisfaction	-.01	.01	-.06	.09	1.00						
6. Commitment	.01	-.05	-.05	.11	.67**	1.00					
7. Intimacy	-.11	-.05	-.12	.03	.77**	.59**	1.00				
8. Trust	-.01	-.06	-.06	.04	.73**	.55**	.65**	1.00			
9. Passion	-.26**	-.01	-.15*	-.17*	.47**	.30**	.66**	.41**	1.00		
10. Love	-.03	-.02	-.03	.09	.72**	.76**	.68**	.63**	.39**	1.00	
11. Global Relationship Quality	-.10	.02	-.11	.02	.88**	.74**	.86**	.77**	.64**	.77**	1.00

Note. \* $p < .05$ ; \*\* $p < .001$

Table 3.

*Bivariate Correlations between Perceived Partner Support and Relationship Quality*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Satisfaction	1.00													
2. Commitment	.67**	1.00												
3. Intimacy	.77**	.59**	1.00											
4. Trust	.73**	.55**	.65**	1.00										
5. Passion	.47**	.30**	.66**	.41**	1.00									
6. Love	.72**	.76**	.68**	.63**	.39**	1.00								
7. Global Relationship Quality	.88**	.74**	.86**	.77**	.64**	.77**	1.00							
8. Perceived Guidance	.46**	.41**	.47**	.57**	.27**	.49**	.51**	1.00						
9. Perceived Reassurance of Worth	.28**	.30**	.24**	.32**	.06	.33**	.31**	.47**	1.00					
10. Perceived Social Integration	.38**	.27**	.27**	.37**	.16*	.32**	.33**	.42**	.39**	1.00				
11. Perceived Attachment	.59**	.44**	.62**	.50**	.39**	.56**	.61**	.64**	.48**	.39**	1.00			
12. Perceived Opportunity for Nurturance	.08	.06	.12	.07	.17*	.04	.12	.13*	.18*	.17*	.15*	1.00		
13. Perceived Reliable Alliance	.44**	.44**	.40**	.47**	.19**	.52**	.47**	.57**	.48**	.37**	.59**	.11	1.00	
14. Total Perceived Support	.53**	.45**	.50**	.54**	.30**	.53**	.56**	.77**	.73**	.67**	.78**	.45**	.75**	1.00

Note. \* $p < .05$ ; \*\* $p < .001$

Table 4.

*Bivariate Correlations between Received Partner Support and Relationship Quality*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Satisfaction	1.00														
2. Commitment	.67**	1.00													
3. Intimacy	.77**	.59**	1.00												
4. Trust	.73**	.55**	.65**	1.00											
5. Passion	.47**	.30**	.66**	.41**	1.00										
6. Love	.72**	.76**	.68**	.63**	.39**	1.00									
7. Global Relationship Quality	.88**	.74**	.86**	.77**	.64**	.77**	1.00								
8. Emotional Support	.56**	.38**	.56**	.51**	.31**	.40**	.56**	1.00							
9. Esteem Support	.50**	.29**	.49**	.50**	.34**	.34**	.51**	.87**	1.00						
10. Information Support	.37**	.21**	.35**	.32**	.21**	.21**	.38**	.72**	.69**	1.00					
11. Tangible Support	.41**	.24**	.39**	.39**	.25**	.25**	.42**	.73**	.73**	.78**	1.00				
12. Criticism/Blame	-.45**	-.34**	-.34**	-.48**	-.10	-.35**	-.36**	-.27**	-.29**	-.07	-.10	1.00			
13. Control/Invalidation	-.39**	-.35**	-.35**	-.49**	-.13*	-.37**	-.36**	-.25**	-.28**	-.04	-.08	.82**	1.00		
14. Minimization	-.12	-.14*	-.03	-.23**	-.02	-.18**	-.11	.13	.04	.20**	.09	.41**	.39**	1.00	
15. Withdrawal	-.52**	-.38**	-.46**	-.53**	-.21**	-.47**	-.45**	-.39**	-.34**	-.17*	-.25**	.62**	.60**	.39**	1.00

Note. \* $p < .05$ ; \*\* $p < .001$



Table 5.

*Bivariate Correlations between Effectiveness of Received Social Support and Relationship Quality*

	1	2	3	4	5	6	7	8	9	10	11	12
1. Satisfaction	1.00											
2. Commitment	.67**	1.00										
3. Intimacy	.77**	.59**	1.00									
4. Trust	.73**	.55**	.65**	1.00								
5. Passion	.47**	.30**	.66**	.41**	1.00							
6. Love	.72**	.76**	.68**	.63**	.39**	1.00						
7. Global Relationship Quality	.88**	.74**	.86**	.77**	.64**	.77**	1.00					
8. Task Support Effectiveness	.53**	.39**	.44**	.46**	.32**	.41**	.50**	1.00				
9. Information Support Effectiveness	.53**	.44**	.46**	.45**	.23**	.44**	.51**	.63**	1.00			
10. Emotional Support Effectiveness	.61**	.36**	.54**	.51**	.32**	.44**	.56**	.61**	.66**	1.00		
11. Negative Support	.44**	.23**	.32**	.40**	.21**	.21**	.41**	.44**	.40**	.50**	1.00	
12. Total Support Effectiveness	.64**	.44**	.52**	.54**	.29**	.48**	.59**	.81**	.82**	.84**	.77**	1.00

Note. \*\* $p < .001$

Table 6.

*Bivariate Correlations between Personality and Relationship Quality*

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Satisfaction	1.00												
2. Commitment	.67**	1.00											
3. Intimacy	.77**	.59**	1.00										
4. Trust	.73**	.55**	.65**	1.00									
5. Passion	.47**	.30**	.66**	.41**	1.00								
6. Love	.72**	.76**	.68**	.63**	.39**	1.00							
7. Global Relationship Quality	.88**	.74**	.86**	.77**	.64**	.77**	1.00						
8. Honesty/Humility	.32**	.31**	.22**	.31**	.09	.25**	.31**	1.00					
9. Emotionality	.15*	.19**	.14*	.13*	.11	.17*	.15*	.08	1.00				
10. Extraversion	.01	.14*	.00	.04	-.01	.11	.04	-.03	-.10	1.00			
11. Agreeableness	.10	.07	.07	.14*	-.01	.01	.08	.47**	.02	.13*	1.00		
12. Conscientiousness	.11	.18*	-.01	.08	-.14*	.08	.08	.24**	.16*	.18*	.20**	1.00	
13. Openness to Experience	.00	.01	-.04	.06	-.08	.03	-.01	.00	-.06	.24**	.20**	.06	1.00

Note. \* $p < .05$ ; \*\* $p < .001$

Table 7.

*Bivariate Correlations between Relationship Quality and Well-being Outcomes*

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Satisfaction	1.00												
2. Commitment	.67**	1.00											
3. Intimacy	.77**	.59**	1.00										
4. Trust	.73**	.55**	.65**	1.00									
5. Passion	.47**	.30**	.66**	.41**	1.00								
6. Love	.72**	.76**	.68**	.63**	.39**	1.00							
7. Global Relationship Quality	.88**	.74**	.86**	.77**	.64**	.77**	1.00						
8. Life Satisfaction	.31**	.36**	.22**	.31**	.11	.38**	.31**	1.00					
9. Positive Affect	.31**	.24**	.21**	.26**	.15*	.27**	.33**	.48**	1.00				
10. Negative Affect	-.24**	-.17*	-.18*	-.24**	-.05	-.09	-.21**	-.29**	-.16*	1.00			
11. Stress	-.27**	-.14*	-.18**	-.29**	-.10	-.15*	-.22**	-.34**	-.32**	.55**	1.00		
12. Anxiety	-.15*	-.06	-.07	-.13*	-.07	-.07	-.10	-.35**	-.29**	.55**	.71**	1.00	
13. Depression	-.16*	-.17*	-.08	-.14*	-.04	-.11	-.13*	-.48**	-.37**	.55**	.70**	.72**	1.00

Note. \* $p < .05$ ; \*\* $p < .001$

Table 8.

*Latent Profile Analysis Model Fit Statistics*

Model	LL	#fp	Scaling	AIC	CAIC	BIC	SABIC	Entropy	aLMR	BLRT	# of Participants in Each Profile
1 Profile	-3535.753	12	1.9547	7095.505	7149.274	7137.273	7099.236	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
2 Profiles	-3207.488	19	2.4355	6452.976	6538.108	6519.108	6458.883	0.946	0.1692	0.0000	43, 197
3 Profiles	-3067.476	26	2.1196	6186.952	6303.449	6277.449	6195.035	0.942	0.1623	0.0000	14, 171, 55
4 Profiles	-3006.382	33	1.4719	6078.764	6226.625	6193.625	6089.023	0.958	0.0248	0.0000	55, 1, 13, 171
5 Profiles	-2954.261	40	2.0768	5988.522	6167.748	6127.748	6000.957	0.921	0.7908	0.0000	12, 2, 30, 72, 124

*Note.* LL: Model Log-Likelihood; #fp: Number of Free Parameters; AIC = Akaike Information Criterion; CAIC = Consistent AIC; BIC = Bayesian Information Criterion; SABIC = Sample-size Adjusted BIC; aLMR = adjusted Lo, Mendell, and Rubin likelihood ratio test; BLRT = Bootstrap Likelihood Ratio Test.

Table 9.

*Classification Posterior Probabilities for the Three-Profile Solution*

	Profile 1	Profile 2	Profile 3
Profile 1	<b>0.999</b>	0.000	0.001
Profile 2	0.000	<b>0.976</b>	0.024
Profile 3	0.000	0.054	<b>0.946</b>

*Note.* Values in boldface are the average posterior probability associated with the profile to which individuals were assigned.

Table 10.

*Means of Relationship Quality Components across the Three-Profile Solution*

	Profile					
	Profile 1 ("Low Relationship Quality")		Profile 2 ("High Relationship Quality")		Profile 3 ("Moderate Relationship Quality")	
	Mean	<i>SD</i>	Mean	<i>SD</i>	Mean	<i>SD</i>
Satisfaction	10.14	2.69	19.62	1.70	15.73	1.94
Commitment	13.07	4.20	20.36	1.19	16.44	2.52
Intimacy	11.15	3.26	19.91	1.24	16.62	1.95
Trust	12.07	3.45	19.79	1.54	16.96	1.81
Passion	12.46	5.70	18.28	2.64	15.64	2.69
Love	12.50	3.74	20.41	.91	17.63	1.78

*Note.* Subscale scores may range from 3 to 21, with higher scores indicating greater perceived quality of the relationship.

Table 11.

*Correlation Matrix for all Study Variables for Profile 1 (Low Relationship Quality)*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Satisfaction	1.00														
2. Commitment	-.47	1.00													
3. Intimacy	.44	-.33	1.00												
4. Trust	.31	-.36	.10	1.00											
5. Passion	.34	-.21	.69*	.20	1.00										
6. Love	-.50	.78**	-.28	-.35	-.33	1.00									
7. Total Perceived Support	-.14	-.26	-.34	.35	-.61*	.14	1.00								
8. Emotional Support	.47	-.47	.34	.55	.28	-.49	.13	1.00							
9. Esteem Support	.57*	-.55*	.58	.71*	.56	-.45	.11	.81**	1.00						
10. Information Support	.45	-.39	.27	.18	.30	-.46	-.05	.78**	.43	1.00					
11. Tangible Support	.42	-.37	.22	.14	.28	-.34	.11	.72*	.49	.86**	1.00				
12. Criticism/Blame	-.38	.44	-.18	-.54	.37	.39	-.44	-.39	-.35	.00	-.01	1.00			
13. Control/Invalidation	-.12	.30	-.21	-.55	.35	.23	-.47	-.57*	-.37	-.20	-.08	.84**	1.00		
14. Minimization	.30	-.25	.68*	.09	.78**	-.16	-.25	.16	.54	.14	.33	.29	.32	1.00	
15. Withdrawal	-.04	-.05	-.03	-.08	.45	.18	-.06	-.43	-.01	-.29	-.21	.57*	.69*	.48	1.00
16. Total Support Effectiveness	.46	-.22	-.42	-.14	-.54	-.26	.19	.72*	.20	.67*	.72*	-.38	-.37	-.29	-.58
17. Honesty-Humility	.23	-.27	.28	.43	.28	-.42	-.12	.46	.60*	-.05	.08	-.56*	-.45	.21	-.35
18. Emotionality	-.30	.00	-.01	-.01	-.21	-.26	-.06	-.08	-.30	.21	.13	-.03	-.14	.00	-.40
19. Extraversion	-.32	.65*	-.43	.09	-.23	.56*	.05	-.48	-.34	-.51	-.41	.29	.29	-.18	.13
20. Agreeableness	.35	-.39	.12	.30	.04	-.56*	-.11	.55	.52	.51	.59*	-.37	-.22	.37	-.41
21. Conscientiousness	-.47	.11	-.66*	-.19	-.86**	.22	.62*	-.34	-.48	-.39	-.23	-.29	-.26	-.44	-.26
22. Openness to Experience	.19	.02	-.26	.14	-.14	-.31	-.20	.08	-.08	.09	-.29	-.16	-.13	-.51	-.23
23. Life Satisfaction	-.33	.68*	-.31	-.31	-.15	.52	-.24	-.53	-.46	-.41	-.30	.50	.50	-.09	.05
24. Positive Affect	-.08	.42	-.33	-.30	.03	.43	.00	-.33	-.16	-.32	-.08	.50	.60*	.11	.35
25. Negative Affect	-.22	.09	-.11	-.33	.20	.17	.03	-.35	-.31	.12	.18	.76**	.69*	.32	.62*
26. Stress	-.45	.23	-.41	.03	-.49	.46	.70*	-.24	-.29	-.27	-.35	-.02	-.19	-.39	.25
27. Anxiety	-.25	.02	-.75*	-.15	-.81**	.09	.52	-.43	-.64*	-.10	-.13	-.02	.10	-.60*	.05
28. Depression	-.09	-.30	.16	.18	.19	-.22	.17	.16	.11	.20	-.14	-.06	-.29	-.05	.21

Note. \* $p < .05$ ; \*\* $p < .001$

Table 11. (Continued)

*Correlation Matrix for all Study Variables for Profile 1 (Low Relationship Quality)*

Variable	16	17	18	19	20	21	22	23	24	25	26	27	28
16. Total Support Effectiveness	1.00												
17. Honesty-Humility	.16	1.00											
18. Emotionality	-.17	-.11	1.00										
19. Extraversion	-.26	-.22	-.08	1.00									
20. Agreeableness	.42	.37	.57*	-.32	1.00								
21. Conscientiousness	.24	-.13	.32	.14	.01	1.00							
22. Openness to Experience	-.06	-.11	.04	-.05	.10	-.11	1.00						
23. Life Satisfaction	-.23	-.31	.02	.86**	-.29	.03	-.05	1.00					
24. Positive Affect	.02	-.20	-.52	.59*	-.45	.01	-.18	.70**	1.00				
25. Negative Affect	-.34	-.72**	.13	.15	-.25	-.04	-.26	.27	.40	1.00			
26. Stress	-.31	-.43	-.12	.05	-.54	.46	.11	-.21	-.03	.21	1.00		
27. Anxiety	.12	-.62*	.34	.14	-.05	.69*	.24	.04	-.02	.39	.55	1.00	
28. Depression	-.42	-.22	.08	-.54	-.15	-.09	.36	-.65*	-.54	.12	.65*	.13	1.00

Note. \* $p < .05$ ; \*\* $p < .001$



Table 12.

*Correlation Matrix for all Study Variables for Profile 2 (High Relationship Quality)*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Satisfaction	1.00														
2. Commitment	.37**	1.00													
3. Intimacy	.33**	.13	1.00												
4. Trust	.40**	.17*	.16*	1.00											
5. Passion	.09	-.02	.52**	.09	1.00										
6. Love	.39**	.33**	.23**	.20*	.13	1.00									
7. Total Perceived Support	.22**	.09	.15	.15	.13	.18*	1.00								
8. Emotional Support	.18*	.09	.16*	.25**	.11	.08	.18*	1.00							
9. Esteem Support	.19*	.07	.13	.25**	.18*	.11	.27**	.85**	1.00						
10. Information Support	.12	.00	.09	.23**	.11	.07	.18*	.70**	.68**	1.00					
11. Tangible Support	.19*	.04	.06	.29**	.15	.07	.19*	.66**	.67**	.73**	1.00				
12. Criticism/Blame	-.16*	-.16*	.11	-.18*	.10	-.08	-.16*	-.06	-.09	.05	.02	1.00			
13. Control/Invalidation	-.03	-.22**	.09	-.18*	.09	-.11	-.09	-.05	-.08	.10	.05	.68**	1.00		
14. Minimization	-.15	-.11	.00	-.29**	-.09	-.14	-.17*	.11	.00	.19*	.03	.44**	.38**	1.00	
15. Withdrawal	-.22**	-.10	-.06	-.30**	-.15	-.16*	-.19*	-.20*	-.20*	-.04	-.19*	.39**	.34**	.37**	1.00
16. Total Support Effectiveness	.41**	.23**	.10	.32**	.09	.10	.21*	.45**	.50**	.38**	.42**	-.34**	-.19*	-.20*	-.58**
17. Honesty-Humility	.21**	.22**	-.07	.15	-.11	.24**	.06	.07	.14	.15	.10	-.30**	-.32**	-.15	-.15
18. Emotionality	-.13	-.06	-.08	-.12	.10	.05	.01	.07	.08	-.01	-.03	-.03	-.08	.10	.10
19. Extraversion	.02	.02	.03	.04	.03	-.01	.14	.11	.09	.09	.08	-.14	-.12	-.15	-.09
20. Agreeableness	.07	.09	-.07	.00	-.02	-.02	-.01	.03	.04	.10	-.01	-.14	-.19*	-.10	-.10
21. Conscientiousness	.15	.10	-.04	.06	-.18*	.00	.19*	.20*	.16*	.10	.03	-.27**	-.15	-.01	-.19*
22. Openness to Experience	-.03	-.08	.01	.16*	-.03	.05	.00	.05	.08	.13	.07	.06	.10	-.05	.10
23. Life Satisfaction	.20*	.07	.09	.19*	.00	.15	.17*	.15	.17*	.02	.13	-.03	-.15	-.22**	-.25**
24. Positive Affect	.27**	.00	.04	.24**	.05	.05	.25**	.29**	.28**	.22**	.27**	-.11	.00	-.14	-.23**
25. Negative Affect	-.14	-.03	.02	-.10	.03	-.01	.01	.01	.02	.06	.02	.30**	.21*	.25**	.26**
26. Stress	-.18*	-.02	-.02	-.20*	-.03	.06	-.04	.01	-.01	-.05	-.08	.17*	.11	.34**	.28**
27. Anxiety	-.16*	.00	.03	-.10	-.02	-.04	-.12	-.04	-.03	-.04	-.12	.19*	.13	.26**	.27**
28. Depression	-.14	-.10	.01	-.13	-.04	.03	-.08	-.08	-.10	-.02	-.10	.25**	.20*	.32**	.39**

Note. \* $p < .05$ ; \*\* $p < .001$

Table 12. (Continued)

*Correlation Matrix for all Study Variables for Profile 2 (High Relationship Quality)*

Variable	16	17	18	19	20	21	22	23	24	25	26	27	28
16. Total Support Effectiveness	1.00												
17. Honesty-Humility	.21 <sup>*</sup>	1.00											
18. Emotionality	-.13	.01	1.00										
19. Extraversion	.14	-.09	-.14	1.00									
20. Agreeableness	.15	.42 <sup>**</sup>	-.10	.23 <sup>**</sup>	1.00								
21. Conscientiousness	.34 <sup>**</sup>	.15	.07	.20 <sup>*</sup>	.12	1.00							
22. Openness to Experience	-.01	-.02	-.09	.28 <sup>**</sup>	.15 <sup>*</sup>	.06	1.00						
23. Life Satisfaction	.24 <sup>**</sup>	-.04	-.18 <sup>*</sup>	.49 <sup>**</sup>	.05	.10	.03	1.00					
24. Positive Affect	.39 <sup>**</sup>	-.11	-.20 <sup>*</sup>	.48 <sup>**</sup>	.05	.27 <sup>**</sup>	.20 <sup>*</sup>	.45 <sup>**</sup>	1.00				
25. Negative Affect	-.39 <sup>**</sup>	-.13	.18 <sup>*</sup>	-.38 <sup>**</sup>	-.28 <sup>**</sup>	-.25 <sup>**</sup>	.00	-.37 <sup>**</sup>	-.29 <sup>**</sup>	1.00			
26. Stress	-.32 <sup>**</sup>	-.10	.28 <sup>**</sup>	-.28 <sup>**</sup>	-.32 <sup>**</sup>	-.15	-.12	-.37 <sup>**</sup>	-.40 <sup>**</sup>	.58 <sup>**</sup>	1.00		
27. Anxiety	-.35 <sup>**</sup>	-.13	.23 <sup>**</sup>	-.39 <sup>**</sup>	-.26 <sup>**</sup>	-.21 <sup>*</sup>	-.13	-.44 <sup>**</sup>	-.37 <sup>**</sup>	.59 <sup>**</sup>	.72 <sup>**</sup>	1.00	
28. Depression	-.42 <sup>**</sup>	-.04	.19 <sup>*</sup>	-.47 <sup>**</sup>	-.26 <sup>**</sup>	-.13	-.07	-.49 <sup>**</sup>	-.42 <sup>**</sup>	.58 <sup>**</sup>	.70 <sup>**</sup>	.75 <sup>**</sup>	1.00

*Note.* <sup>\*</sup> $p < .05$ ; <sup>\*\*</sup> $p < .001$

Table 13.

*Correlation Matrix for all Study Variables for Profile 3 (Moderate Relationship Quality)*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Satisfaction	1.00														
2. Commitment	.23	1.00													
3. Intimacy	.22	-.04	1.00												
4. Trust	.02	-.08	-.06	1.00											
5. Passion	.10	-.21	.41**	-.09	1.00										
6. Love	.33*	.11	.07	.19	.05	1.00									
7. Total Perceived Support	-.08	.10	.16	.29*	.04	.13	1.00								
8. Emotional Support	.54**	.12	.49**	.13	-.05	.10	.25	1.00							
9. Esteem Support	.50**	.00	.42**	.28*	-.05	.03	.32*	.84**	1.00						
10. Information Support	.44**	.09	.36*	.03	-.06	-.12	.17	.69**	.61**	1.00					
11. Tangible Support	.42**	.06	.43**	.11	-.04	-.11	.33*	.77**	.76**	.82**	1.00				
12. Criticism/Blame	-.08	-.10	.05	-.16	.22	-.02	.00	.05	-.08	.17	.19	1.00			
13. Control/Invalidation	.09	.00	.16	-.14	.13	.09	-.09	.21	-.02	.26	.27*	.86**	1.00		
14. Minimization	.22	.03	.20	-.08	.18	-.10	-.04	.52**	.35*	.45**	.43**	.36*	.41**	1.00	
15. Withdrawal	-.20	.17	.00	-.21	.19	-.16	.03	-.09	-.11	.08	.10	.59**	.51**	.41**	1.00
16. Total Support Effectiveness	.34*	-.13	.33*	.21	.06	.03	.22	.49**	.57**	.43**	.51**	-.27	-.20	.09	-.25
17. Honesty-Humility	-.09	.22	-.09	-.03	-.10	-.09	-.25	-.23	-.18	-.17	-.14	-.04	.04	-.24	.03
18. Emotionality	.31*	.19	.10	.12	-.11	.03	.08	.30*	.24	.39**	.20	-.28*	-.08	.07	-.28*
19. Extraversion	-.06	.14	-.11	-.12	-.15	.14	.03	-.04	-.14	.02	.00	.04	.04	.01	-.05
20. Agreeableness	-.16	-.03	.01	.27*	-.22	-.09	-.24	-.16	-.10	-.09	-.09	-.20	-.06	-.18	.01
21. Conscientiousness	-.09	.11	-.16	-.03	-.14	-.19	.02	-.16	-.03	-.04	-.05	-.32*	-.26	-.25	-.06
22. Openness to Experience	.09	.18	-.09	.00	-.26	.28*	-.10	.12	.03	-.04	-.04	-.24	-.09	.12	.00
23. Life Satisfaction	-.03	.04	-.36*	.22	-.12	.17	.20	-.09	.02	-.05	.00	-.18	-.22	-.28*	-.25
24. Positive Affect	.13	.09	.04	.07	.06	.15	.20	.23	.13	.22	.24	.04	.07	.19	-.02
25. Negative Affect	.07	.08	.04	-.03	.19	.46**	.28*	.19	.05	.03	-.04	.24	.26	.25	.09
26. Stress	.04	.09	.24	-.27	.27*	-.13	.23	.34*	.19	.16	.17	.42**	.35*	.34*	.28*
27. Anxiety	.04	.08	.23	-.05	.20	.05	.11	.15	.02	.15	.06	.47**	.47**	.10	.19
28. Depression	.04	-.02	.16	.02	.16	.08	.06	.21	.11	.10	.07	.53**	.52**	.25	.43**

Note. \* $p < .05$ ; \*\* $p < .001$

Table 13. (Continued)

*Correlation Matrix for all Study Variables for Profile 3 (Moderate Relationship Quality)*

Variable	16	17	18	19	20	21	22	23	24	25	26	27	28
16. Total Support Effectiveness	1.00												
17. Honesty-Humility	-.06	1.00											
18. Emotionality	.21	.07	1.00										
19. Extraversion	.00	.17	-.02	1.00									
20. Agreeableness	.12	.60**	.09	-.03	1.00								
21. Conscientiousness	-.01	.43**	.25	.12	.34*	1.00							
22. Openness to Experience	.18	.10	.04	.18	.34*	.12	1.00						
23. Life Satisfaction	.19	.21	.14	.37*	.17	.34*	.18	1.00					
24. Positive Affect	.28*	.00	.17	.48**	-.01	.01	.13	.30*	1.00				
25. Negative Affect	-.11	-.38**	.09	.13	-.43**	-.38**	.03	-.07	.25	1.00			
26. Stress	-.07	-.23	.09	-.13	-.38**	-.18	-.28*	-.12	.05	.48**	1.00		
27. Anxiety	-.23	-.14	.16	-.09	-.24	-.19	-.25	-.17	-.04	.48**	.71**	1.00	
28. Depression	-.15	-.17	-.04	-.25	-.18	-.32*	-.13	-.33*	-.05	.53**	.68**	.75**	1.00

Note. \* $p < .05$ ; \*\* $p < .001$

Table 14.

*Means of Predictor Variables across the Three-Profile Solution*

	Profile					
	Profile 1		Profile 2		Profile 3	
	("Low Relationship Quality")		("High Relationship Quality")		("Moderate Relationship Quality")	
	Mean	<i>SD</i>	Mean	<i>SD</i>	Mean	<i>SD</i>
Total Perceived Support	68.50	7.43	84.81	6.53	78.15	5.89
Emotional Support	2.85	.70	4.23	.57	3.72	.76
Esteem Support	2.85	.69	4.12	.65	3.76	.66
Information Support	2.42	.77	3.33	.80	2.95	.82
Tangible Support	2.56	.84	3.70	.78	3.37	.82
Criticism/Blame	2.60	.92	1.42	.47	1.76	.68
Control/Invalidation	2.74	1.13	1.36	.50	1.71	.74
Minimization	3.10	1.06	2.54	.87	2.67	.90
Withdrawal	2.90	1.14	1.29	.46	1.79	.85
Total Support Effectiveness	38.09	11.79	63.69	9.62	53.30	11.33
Honesty/Humility	2.64	.67	3.29	.61	2.94	.67
Emotionality	3.18	.86	3.66	.63	3.41	.59

*Note.* Scores for total perceived partner support may range from 24 to 96; Scores for each type of received partner support were computed as means across items (individual items may range from 1 to 5); Scores for total support effectiveness may range from 0 to 80; Scores for personality variables were computed as means across items (individual items may range from 1 to 5).

Table 15.

*Results from the Multinomial Logistic Regression Evaluating the Effects of Predictors on Latent Profile Membership*

Predictor	Latent Profile 2 vs 3†			Latent Profile 2 vs 1‡			Latent Profile 3 vs 1‡		
	Coefficient (SE)	OR	95% CI	Coefficient (SE)	OR	95% CI	Coefficient (SE)	OR	95% CI
Total Perceived Support	0.25 (0.08)*	1.28	1.09-1.51	0.54 (0.13)**	1.71	1.32-2.22	0.29 (0.10)*	1.33	1.09-1.63
Emotional Support	1.86 (0.73)*	6.43	1.54-26.89	-0.31 (2.13)	0.74	0.01-47.79	-2.17 (2.07)	0.11	0.00-6.62
Esteem Support	-1.85 (0.77)*	0.16	0.03-0.71	2.38 (2.34)	10.76	0.11-1054.10	4.23 (2.26)	68.58	0.82-5731.20
Information Support	-0.13 (0.73)	0.88	0.21-3.65	1.09 (1.11)	2.99	0.34-26.35	1.22 (0.98)	3.39	0.50-23.08
Tangible Support	-0.17 (0.52)	0.85	0.31-2.33	-0.63 (1.23)	0.53	0.05-5.96	-0.47 (1.15)	0.63	0.07-5.98
Criticism/Blame	0.36 (0.75)	1.43	0.33-6.20	0.13 (2.39)	1.14	0.01-123.88	-0.23 (2.17)	0.80	0.01-55.72
Control/Invalidation	-0.87 (0.71)	0.42	0.11-1.67	-1.16 (2.84)	0.31	0.00-82.95	-0.29 (2.73)	0.75	0.00-157.88
Minimization	0.39 (0.43)	1.48	0.64-3.42	-0.29 (1.22)	0.75	0.07-8.10	-0.69 (1.21)	0.50	0.05-5.43
Withdrawal	-0.40 (0.59)	0.67	0.21-2.12	-1.58 (0.99)	0.21	0.03-1.44	-1.18 (0.80)	0.31	0.06-1.46
Total Support Effectiveness	0.07 (0.04)	1.07	1.00-1.15	0.16 (0.12)	1.17	0.92-1.47	0.09 (0.12)	1.09	0.87-1.37
Honesty/Humility	1.28 (0.55)*	3.61	1.22-10.67	3.45 (1.64)*	31.47	1.26-784.75	2.16 (1.54)	8.71	0.43-177.41
Emotionality	0.50 (0.45)	1.65	0.69-3.95	0.98 (0.71)	2.66	0.66-10.77	0.48 (0.54)	1.62	0.56-4.63

*Note.* \* $p < .05$ ; \*\* $p < .001$ ; SE: Standard Error of the coefficient; OR: Odds Ratio; CI: Confidence Intervals; † Profile 3 as the referent group; ‡ Profile 1 as the referent group; Profile 1: “low relationship quality”, Profile 2: “high relationship quality”, Profile 3: “moderate relationship quality”

Table 16.

*Results from the Tests of Mean Equality using the BCH Method of Auxiliary Analyses of Outcome Variables*

	Global $\chi^2$	Profile 1 vs. Profile 2	Profile 1 vs. Profile 3	Profile 2 vs. Profile 3
Satisfaction with Life	21.38**	7.98*	1.65	15.15**
Positive Affect	13.72**	8.26*	1.94	7.45*
Negative Affect	17.31**	11.08**	0.22	8.72*
Stress	12.71*	7.49*	1.29	6.88*
Anxiety	2.95	1.24	0.00	2.21
Depression	4.56	2.40	0.40	2.76

*Note.* \* $p < .05$ ; \*\* $p \leq .001$ ; Profile 1: “low relationship quality”, Profile 2: “high relationship quality”, Profile 3: “moderate relationship quality”

Table 17.

*Means of Outcome Variables across the Three-Profile Solution*

	Profile					
	Profile 1 ("Low Relationship Quality")		Profile 2 ("High Relationship Quality")		Profile 3 ("Moderate Relationship Quality")	
	Mean	<i>SD</i>	Mean	<i>SD</i>	Mean	<i>SD</i>
Satisfaction with Life	21.31	8.65	27.84	5.12	24.62	5.46
Positive Affect	29.93	8.07	36.04	7.07	33.25	6.48
Negative Affect	25.43	5.88	20.18	6.81	24.24	9.50
Stress	16.08	4.19	12.95	3.78	14.56	3.99
Anxiety	11.69	2.87	10.80	3.53	11.63	3.57
Depression	12.15	4.47	10.27	3.88	11.26	3.80

*Note.* Scores for satisfaction with life may range from 5 to 35; Scores on the positive and negative affect subscale each range from 10 to 50; Scores on the three subscales of stress, anxiety, and depression each range from 0 to 21.



## CURRICULUM VITAE

**Name:** Samantha Chen

**Post-secondary Education and Degrees:** University of Toronto  
Toronto, Ontario, Canada  
2007-2012 B.Sc.

The University of Western Ontario  
London, Ontario, Canada  
2013-2015 M.Sc.

**Honours and Awards:** Social Sciences and Humanities Research Council (SSHRC)  
Joseph-Armand Bombardier Canada Graduate Scholarship – Master’s Award  
2013-2014

University of Toronto  
Recognition of Exceptional Academic Achievement: “Dean’s List”  
2009-2012

University of Toronto  
New College Entrance Scholarship  
2007

**Related Work Experience:** Teaching Assistant  
The University of Western Ontario  
2013-2015

Research Assistant  
Child and Adolescent Mental Health Care Program, Children’s Hospital  
2014–Current

### Research Contributions

#### Peer-Reviewed Journal Articles:

Kim, S., Al-Haj, M., **Chen, S.**, Fuller, S., Jain, U., Carrasco, M., & Rosemary T. (2014). Color vision in ADHD: Part 1 – Testing the retinal dopaminergic hypothesis. *Behavioral and Brain Functions, 10*, 38.

Kim, S., Al-Haj, M., Fuller, S., **Chen, S.**, Jain, U., Carrasco, M., & Rosemary T. (2014). Color vision in ADHD: Part 2 – Does Attention influence Color Perception? *Behavioral and Brain Functions, 10*, 39.

Kim, S., **Chen, S.**, & Rosemary T. (2014). Visual function and color vision in adults with ADHD. *Journal of Optometry, 7(1)*, 22-36.

### Other Refereed Publications:

- Chen, S.**, & Balakrishnan, A. (2014). Review of the book *How I Learn: A Kid's Guide to Learning Disability* by B. S. Miles & C. A. Patterson. Joint Newsletter for the Canadian Psychological Association, Educational and School Psychology Section, and Canadian Association of School Psychologists, *Fall Issue 2014*, 6-8.
- Chen, S.**, Tohver, G., & Balakrishnan, A. (2014). Review of the book *Autism spectrum disorder in children and adolescents: Evidence-based assessment and intervention in schools*, by L. A. Wilkinson (Ed.). *Canadian Journal of School Psychology*, *29*, 338-341.
- Chen, S.** (2012). The psychological secrets to finding Mr. and Mrs. Right: An examination of gender differences on mate selection preferences. *Inkblot: The Undergraduate Journal of Psychology (University of Toronto)*, *1*, 68-72.

### Conference Presentations:

- Chen, S.**, Moroz, S., & Daljeet, K. *The Dark Triad and Breakup Distress: Indirect Effects Through Relationship Investment and Commitment*. Poster accepted for the International Society for the Study of Individual Differences 2015 Conference.
- Tohver, G., **Chen, S.**, & Stewart, S. L. *Resiliency and Practice: Does Type of Clinician Contacted Mediate Resiliency's Protective Function Against Psychological Diagnoses?* Poster accepted for the International Society for the Study of Individuals Differences 2015 Conference.
- Chen, S.** (2015, June). *As Long as You Love Me: The Impact of Partner Support on Relationship Quality*. Poster presented at the 76<sup>th</sup> Annual Canadian Psychological Association Convention, Ottawa, ON.
- Chen, S.**, Daljeet, K., & Moroz, S. (2015, June). *Bad Romance: Examining the Effects of Relationship Investment and the Dark Triad in Breakup Distress*. Poster presented at the 76<sup>th</sup> Annual Canadian Psychological Association Convention, Ottawa, ON.
- Moroz, S., **Chen, S.**, & Daljeet, K. (2015, June). *Narcissism and Break-Up Distress: The Indirect Effect of Commitment, Investment, and Quality of Alternatives*. Poster presented at the 76<sup>th</sup> Annual Canadian Psychological Association Convention, Ottawa, ON.
- Daljeet, K., **Chen, S.**, & Moroz, S. (2015, June). *Machiavellianism and Break-Up Distress: The Mediating Role of Relationship Investment*. Poster presented at the 76<sup>th</sup> Annual Canadian Psychological Association Convention, Ottawa, ON.
- Chen, S.**, Hahn, C., Eichstedt, J., Collins, K., & Singh, D. (2014, November). *Prioritizing Patients Waiting for Children's Mental Health Services*. Poster presented at the Second Annual Child and Adolescent Psychiatry Research Half Day at London Health Sciences Centre, London, ON.

- Kim, S., Al-Haj, M., **Chen, S.**, Fuller, S., Jain, U., Carrasco, M., & Tannock, R. (2014, October). *Colour Vision in ADHD: Testing the Retinal Dopaminergic Hypothesis*. Poster presented at the Inaugural ADHD Research Day, Toronto, ON.
- Chen, S.** (2014, May). *Examining the Effects of Relationship Quality and Partner Support on Psychological Wellbeing*. Presentation at the Trent-Western Psychology Research Forum: Emotions, Health, and Wellbeing: New Directions and Cross-Cultural Perspectives, Peterborough, ON.
- Kim, S., Al-Haj, M., **Chen, S.**, Fuller, S., Jain, Umesh, Carrasco, M., & Tannock, R. (2014, May). *ADHD & Vision: Color Vision and the Role of Attention*. Poster presented at the 3<sup>rd</sup> Eunethydis International Conference on ADHD, Istanbul, Turkey.
- Kim, S., Carrasco, M., **Chen, S.**, Al-Haj, M., Fuller, S., & Tannock, R. (2014, April). *Female Superiority in Red Color Perception*. Poster accepted for the 21<sup>st</sup> Annual Meeting of Cognitive Neuroscience Society, Boston, MA.
- Clinkard, D., Gleason, J., Eade M., Ismiil, N., **Chen, S.**, & Brydges, R. (2013, December). *Barriers and opportunities to collaboration in Personal Support Workers (PSW) simulation training among GTA Colleges*. Poster presented at the Ontario Simulation Exposition, Toronto, ON.
- Chen, S.**, Kim, S., Kulanit S., Hamed D., & Tannock, R. (2012, November). *Do adults with ADHD perceive visual function difficulties in everyday life?* Poster presented at the 59<sup>th</sup> Annual Meeting of the American Academy of Child and Adolescent Psychiatry, San Francisco, CA.