DISSERTATION

THE DEVELOPMENT OF THE YOUNG LOVE SCALES

Submitted by

Stacey S. Park

Department of Psychology

In partial fulfillment of the requirements

For the Degree of Doctor of Philosophy

Colorado State University

Fort Collins, Colorado

Summer 2015

Doctoral Committee:

Advisor: Lee A. Rosén

Larry Bloom
Alyssa Gibbons
Ashley Harvey

Copyright by Stacey S. Park 2015

All Rights Reserved

ABSTRACT

THE DEVELOPMENT OF THE YOUNG LOVE SCALES

Research on romantic relationships in emerging adulthood is essential to better understanding the trajectory of romantic relationships in adults, and the identity development of emerging adults. Measures of romantic relationship quality demonstrate flaws in a few ways: some are based on an atheoretical structure, which limits interpretation of the measure, some define relationship quality as multiple constructs (e.g., satisfaction and commitment) simultaneously, and some are limited to couples in marital relationships. The present study outlined the development and validation of the Young Love Scales, three measures of relationship commitment, satisfaction and adjustment. This study also examined the theoretical structure of these constructs, and the results showed that the first-order factors for the Young Love Scales appear to be subsumed under a second-order factor, which was labeled relationship quality. The results of this study also showed that adjustment (daily behaviors) predicts one's commitment to the relationship, but that satisfaction fully mediates this link. Overall, this suggests that individuals' actions in the relationship must add to a sense of satisfaction in order for them to feel that the relationship should continue. These results have implications for couple therapy interventions, and for better understanding the trajectory of romantic relationships in emerging adults.

TABLE OF CONTENTS

Abstract ii

Chapter I: Introduction 1
Romantic Relationships in Younghood 3
Theories of Romantic Relationship Quality 5
Measuring Romantic Relationship Quality 7
Commitment 11
Satisfaction 13
Adjustment 14
Measures of Romantic Relationship Quality 16
Limitations to Current Measures of Relationship Quality 20
An Exploratory Theory of Young Love 23
Current Study 26

Chapter II: Method 28
Construction of the Young Love Scales 28
Young Love Commitment Scale 28
Young Love Satisfaction Scale 29
Young Love Adjustment Scale 29
Pilot Study 29
Procedure 30

Chapter III: Study 1 – Exploratory Factor Analysis 32
Method 32
Participants 32
Measures 33
Young Love Commitment Scale 33
Young Love Satisfaction Scale 33
Young Love Adjustment Scale 33
Screening Survey 33
Demographic Questions 34
Results 34
Descriptive Results 34
Exploratory Factor Analysis 34

Chapter IV: Study 2 – Confirmatory Factor Analysis 36
Method 36
Participants 36
Measures 37
Young Love Scales 37
Perceived Relationship Quality Components Inventory 37
Relationship Assessment Scale 37

Marital Scales – Intent to Marry Scale 37
Marital Scales – General Attitudes towards Marriage Scale 38
Marital Scales – Aspects of Marriage Scale 38
Relationship Belief Inventory 38
Results 39
Confirmatory Factor Analysis 39
Reliability Analyses 40
Validity Analyses 41

Chapter V: Study 3 – Structural Equation Modeling 43
Method 43
Participants 43
Measures 43
Young Love Commitment Scale 43
Young Love Satisfaction Scale 44
Young Love Adjustment Scale 44
Results 44
Measurement Models 44
Structural Models 45
Mediation Model 46

Chapter VI: Discussion 48
Limitations and Directions for Future Research 55
Implications 56
Conclusion 58

Tables 59
Figures 93
References 96
Appendices 106

CHAPTER I

Introduction

Relationships are an individual's social connections to others, an "enduring association between two persons" (Reis, 2001). Researchers define relationships as associations in which individuals influence each other's thoughts, feelings, and behaviors (Reis, 2001). It is natural for people to experience many types of relationships, and for these relationships to start and end throughout the lifespan. What then is the defining relationship of the lifespan? Evolutionary theory suggests that individuals have a universal need to belong (Baumeister & Leary, 1995). This need is one that cannot be satisfied by sporadic social contact, rather, it is fulfilled by long-term relationships that are characterized by frequent interactions, by nonaversive actions to others and by an ongoing, continuous relational bond (Baumeister & Leary, 1995). It would seem that marital-like relationships, or committed, romantic partnerships are a unique example of how people will fulfill this need to belong. Perhaps the defining relationship of our developmental lifespan is romantic in nature.

Significant research has been done to examine the process of romantic relationships. Couples therapy and research is based on examining couple functioning and satisfaction in marital-like relationships. Research describes long-term, committed, romantic relationships as characterized by processes and expectations for romantic exclusivity and sexual fidelity (Schackelford & Buss, 1997). Romantic partnerships are specifically unique to an individual's development. While familial relationships initially satisfy one's need to belong, romantic partnerships offer an opportunity to make lasting bonds outside of that initial environment.

There are several necessary qualities for a relationship to be identified as a romantic relationship or partnership. Similarly to the basic description of relationships, there must be on-going interactions that are voluntary, and mutually acknowledged (Collins, 2003; Collins, Welsh & Furman, 2009; Reis, 2001). However, dissimilar to general relationships, there is a "peculiar intensity" in romantic relationships, marked by physical and emotional expressions of affection, as well as, the expectation of sexual intimacy (Collins, 2003; Collins, Welsh & Furman, 2009). Romantic relationships are not exclusive to opposite sex interactions nor are they defined by gender; adolescents in particular have relationships with same- or opposite-sex individuals (Diamond, Savin-Williams, & Dubé, 1999).

Reis, Collins, and Berscheid (2000) describe five characteristics that characterize the romantic relationship: involvement, partner selection, content, quality, and specific cognitive and emotional processes. Involvement is essentially dating status; it is the logistics of an individual's dating history, including facts on whether or not they are dating, the age they started to date, the frequency of dating, and the duration of their relationships. Partner selection refers to individuals' choice for their partner, their awareness of partner availability, and their awareness of other options that are available. Content refers to the diversity or similarity of shared activities among partners. Quality is the degree to which the relationship remains generally beneficial for each individual. Lastly, Reis and colleagues note that there are specific cognitive and emotional processes present in all romantic relationships. These processes include perceptions, schema, expectancies, emotional responses, and self-, other- and relationship-based attributions.

Romantic Relationships in Younghood

Emerging adulthood refers to a period of development consisting of the late teens through the twenties (Arnett, 2000). In particular, this period denotes a time of transition between adolescence and adulthood and some might call it young adulthood or late adolescence. This period between the ages of 18 and 25 has several distinct features (Arnett, 2000; Arnett, 2004; Fincham & Cui, 2010). First, this period is marked by continued identify explorations in which adolescents and young adults are determining their roles and responsibilities. Second, it is a time of instability in which young adults and late adolescents are changing vocational identities, deciding on choices for love, and moving from one residence to another. Third, young adults are self-focused. Individuals are able to make their own choices about romantic relationships, education, and work without the degree of parental monitoring they might have experienced previously. Fourth, it is an age in between adolescence and adulthood where individuals may feel displaced categorically. They do not fit into "adolescent" or "adult" categories. Lastly, this is a time of freedom in which young adults are free to explore alternatives and make choices.

Research consistently shows that most adolescents continue to explore their identity into young adulthood (Arnett, 2000; Waterman, 1982). The transition into young adulthood is the culmination of many biological, cognitive, social, and emotional changes that took place during adolescence (Collins, Welsh, & Furman, 2009). These changes are what allow for individuals to make determinations about their identity. The major characteristic of this period is experimentation and exploration, and in particular, forming one's identity in love, work, and worldviews or philosophies of life (Arnett, 2000). Thus, this time period is when one's identity in multiple domains, like love, is being established.

The importance of romantic relationships in this time period cannot be overstated. Emerging adulthood is the general period of time when adult roles and relationships are being established (Kaestle & Halpern, 2007). Emerging adults begin to develop important romantic attachments and commit to long-term relationships (Arnett, 2000; Fraley & Davis, 1997; Kaestle & Halpern, 2007); thus it is a time of "young love." Many individuals develop important romantic attachments to individuals that they may cohabitate with or marry with during emerging adulthood (Arnett, 2000; Kaestle & Halpern, 2007). This is a marked difference from adolescence because early- and middle-adolescents tend to experience romantic encounters and dating in groups (Arnett, 2000; Connolly, Craig, Goldberg, & Pepler, 2004). The typical developmental progression of romantic relationships consists of romantic interest, short encounters, and mixed-gender groups in early and middle adolescence – this then transitions to involvement in dyadic and lasting romantic relationships in late adolescence or emerging adulthood (Connolly, Craig, Goldberg, & Pepler, 2004). "Young love" truly signifies one's first experience in a lasting dyadic romantic relationship. By young adulthood, dating is more likely to take place in dyads and the focus is less on shared activities and more on the potential for physical and emotional intimacy (Arnett, 2000).

Romantic relationships are a crucial developmental task for young adults. 70% of adolescents report having experienced a romantic relationship by the age of 18 (Carver, Joyner, & Udry, 2003) and the average duration of romantic relationships for 17- and 18-year olds is 12 months or longer (Shulman & Scharf, 2000). Among individuals who identify as a sexual minority, 93% of boys and 85% of girls in adolescence report having had same-sex activity (Diamond et al., 1999). The average age for the first "serious" or meaningful same-sex relationship is 18 years old (Floyd & Stein, 2002). Thus, emerging adults have likely had

meaningful, romantic experiences with same-sex or opposite-sex partners during their late adolescent years, if not currently. The current study focuses on young love and relationship quality for early emerging adults; specifically, this study examines current relationships that individuals in transition from adolescence to adulthood (from 18-20 years of age) may have and also examines previous relationships that individuals had in late adolescence (from 16-18 years of age).

Theories of Romantic Relationship Quality

Karney and Bradbury (1995) outlined four theoretical perspectives (social exchange theory, behavioral theory, attachment theory, crisis theory) that have informed decades of research on marital and romantic relationships. Karney and Bradbury considered these four specific theoretical orientations because these theories encompassed a full range of predictors of marital outcomes, provided different levels of analysis, and accounted for variability in outcomes between couples and within couples over time.

Social exchange theory is an extension of interdependence theory (Kelley & Thibaut, 1978; Thibaut & Kelley, 1959). The theory suggests that relationships are a function of social exchange; or the exchange of the benefits and costs between the partners in a relationship, and between each individual member with others (Huston & Burgess, 1979). Levinger (1965) applied social exchange theory to marital relationships, suggesting that the relationship outcome is dependent on the attractions of the relationship, the barriers to leaving the relationship, and the presence of attractive alternatives to the relationship. Relationship satisfaction and stability are dimensions of and are predictive of marital outcomes (Lewis and Spanier, 1979). Based on social exchange theory, individuals can be placed in these categories: satisfied and stable, satisfied and unstable, dissatisfied and stable, dissatisfied and unstable. Individuals from couples

fall into these categories depending on the benefits they receive in the relationship, the costs to leaving it, and the awareness one has of other alternative partners.

Behavioral theories of marital relationships tend to originate from interdependence theory as well. The difference from social exchange theory is that behavioral theory emphasizes an exchange of interpersonal behaviors. The focus has been on behaviors used in resolving conflict and problems. This theory emphasizes that rewarding and positive behaviors contribute to marital relationship satisfaction while punishing and negative behaviors harm the relationship (e.g., Gottman, 1982; Stuart, 1981). Accumulating experiences with positive and negative behaviors influence individual's perceptions about the quality of the relationship (Gottman, 1990). Based on this theory, high quality relationships are marked by positive and reinforcing behaviors.

Bowlby's (1969) theory of attachment between parent and infant has also been applied to marital relationships. Attachment theory suggests that the nature of the first significant relationship between parent and infant signifies one's working model for relationships. As a result, close relationships during adulthood reflect the attachment style one had as an infant (Hazan & Shaver, 1987). Relationship quality and satisfaction depends on having one's needs met for comfort, care, and sexual gratification (Hazan & Shaver, 1994). Success of the relationship depends on whether or not a partner can meet those needs (Karney & Bradbury, 1995).

Hill's (1949) explanations of how families react to stressful events led to the creation of crisis theory. Overall, the theory explains how families use their resources to overcome challenges and adverse situations. Marital relationship researchers conceptualize poor

relationship satisfaction as a failure to overcome crises, such that couples experiencing more stressful events are more vulnerable to negative outcomes (Karney & Bradbury, 1995).

Karney and Bradbury (1995) present an additional vulnerability-stress-adaptation model of marriage, an integrated theory that combines essential components of the last four theories as well as many empirical findings from research. All of these theories are influential in describing the course of couples' relationships, especially in considering why relationships end. However, there is no one theory that best explains how positive marital quality develops. While each theory contributes to notions of what a good relationships looks like, for example, behavior theory provides the notion that the accumulation of positive and rewarding behaviors leads to high marital quality, no one theory defines the construct of marital quality, especially with considering theoretical differences in measuring relationship quality, satisfaction, adjustment, happiness, intimacy, and other relationship-related constructs.

Unfortunately, a significant portion of the research on relationship quality, as opposed to marital relationship quality, has been atheoretical (Karney & Bradbury, 1995). As a result, there is still much to discover about the development of marital relationships, or long-term romantic relationships.

Measuring Romantic Relationship Quality

Research indicates that relationship quality can be described as the degree of positive, beneficial romantic experiences as compared to the degree of negative, potentially harmful experiences in a relationship (Collins, 2003; Collins, Welsh & Furman, 2009). Low-quality relationships are characterized by irritation, antagonism, and high levels of conflict or controlling behaviors between partners (Galliher, Welsh, Rostosky, & Kawaguchi, 2004). In contrast, high-quality relationships are made distinct by the expressed supportiveness and intimacy in partners

(Collins et al., 2009). As an abstract concept, quality incorporates the notion that the benefits outweigh the costs of a relationship. However, the field examining marital and romantic relationships has struggled to find a cohesive definition of relationship quality, and most measures of this concept are atheoretical in origin. As an example, Spanier and Lewis (1980) define marital quality as the subjective evaluation of the relationship on various dimensions, implying that marital quality involves examining different aspects of the relationship. Alternatively, marital quality has also been defined as the global evaluation of the relationship (Fincham & Bradbury, 1987), implying that perceptions of different specific aspects in the relationship are less important than the overall global judgment. There is no one unified theory that clearly defines marital quality or relationship quality.

Marital satisfaction, happiness, adjustment, and quality are the most widely used constructs in the marital relationships literature (Spanier & Lewis, 1980); these terms are also used interchangeably depending on the researcher. A significant amount of attention has been given to clearly conceptualizing each of these areas as distinct rather than one construct (Fincham & Bradbury, 1987; Sabatelli, 1988; Spanier & Lewis, 1980). Marital and relationship quality has been historically operationalized as a hybrid concept of satisfaction and adjustment (Sabatelli, 1988). The concern with this hybrid concept is that one is concurrently examining the subjective measure of global satisfaction with the relationship and the objective measure of adjustment in separate domains of the relationship (Sabatelli, 1988); it would be best to measure both concepts separately.

There have been two approaches to measuring relationship and marital quality. While both rely on self-report measures, the first approach tends to be atheoretical and relies on these measures as substitutions for objective behaviors. The second approach tends to be based on

theory and uses these reports as reflections of attitudes and evaluations (Fincham, Beach, & Kemp-Fincham, 1997; Fletcher, Simpson & Thomas, 2000). Examples of the first atheoretical approach include the Marital Adjustment Test (Locke & Wallace, 1959) and the Dyadic Adjustment Scale (Spanier, 1976). Both scales have been widely used in the literature on relationship quality (Fletcher, et al., 2000) but are theoretically problematic because they were not built on theory and constructs (e.g., marital quality, satisfaction and adjustment) within each measure has a high degree of overlap (Fincham, Beach, & Kemp-Fincham, 1997; Fletcher, et al., 2000; Whisman, 1997). The second theoretical approach is theoretical in nature (Fletcher, et al., 2000) and has led to the development of many scales designed to examine distinct components of relationship quality, such as, commitment, trust, passion, and satisfaction.

Fletcher, Simpson and Thomas (2000) embody this theoretical approach in the measurement of distinct areas in relationship quality, and identify six essential constructs as the hallmark characteristics of relationship quality. The six constructs are satisfaction, commitment, trust, closeness/intimacy, passion, and love. Each construct tends to have a high degree of overlap with, and thus high correlations, with the other constructs. Fletcher et al. (2000) designed the Perceived Relationship Quality Components (PRQC) Inventory for the purpose of testing theoretical models designed to explain the relationship among these constructs and relationship quality. They found that the model with the best fit was the one in which the six perceived relationship quality factors loaded onto a higher order factor reflecting global relationship quality, also referred to as a hierarchical model of relationship quality. Their results suggest that general relationship quality is composed of several different factors and that these factors are related, yet independent from one another. Theoretically, this model postulates that individuals tend to evaluate their romantic partners relatively consistently across constructs but

can also vary considerably depending on the domain (Fletcher et al., 2000). This hierarchical model also proved to be significantly better than a model that allowed these constructs to correlate without a second-order factor (Fletcher et al., 2000), though fit statistics for both models were comparable.

While theoretically helpful to better understand relationship quality as a construct, there continues to be concerns with Fletcher, Simpson, and Thomas' (2000) research. Other researchers in relationship quality use the words satisfaction and quality synonymously; indicating that both constructs refer to one's overall feeling about his or her romantic relationship (Erbert & Duck, 1997; Huston & Vangelisti, 1991; Sabatelli, 1988; Whisman, 1997). The proposed hierarchical structure is problematic then if a general feeling of satisfaction is being measured at both levels (at the first-order and second-order factor levels). Second, several constructs are missing from the six-factor model of relationship quality, such as, quality of alternatives for potential romantic partners (e.g., Rusbult, 1983) or adjustment as a measure of daily behaviors (e.g., Hendrick & Hendrick, 1997; Sabatelli, 1988). The proposed hierarchical model of relationship quality could be missing crucial information about other domains related to romantic relationships. Third, Fletcher et al.'s (2000) line of research reflects the lack of existing measures in assessing quality in romantic relationships. Essentially, the researchers make their own inventory (using a small-number of highly face-valid measures) because of the lack of appropriate measures in the field that could be used without the risk of measuring overlapping constructs within one measure.

Primarily, there appear to be three distinctive considerations to make when examining relationship quality. Sabatelli (1988) noted that there are conceptual distinctions among defining ongoing, specific characteristics of marital relationships (adjustment), the general evaluation of

the relationship (satisfaction), and the stability of the relationship (commitment). Sabatelli (1988) indicated that, first, one should examine *commitment* to the relationship as the intent, or the desire, motivation, and cognitions related to staying in or maintaining the relationship. This reflects a cognitive attitude about the long-term stability of the relationship. Second, one should examine *satisfaction* as the general attitude about the relationships. This consists of one's general subjective feeling, as good or bad, as positive or negative, towards the relationship. This is the more affective attitude towards the relationship. Third, one should examine *adjustment* in different aspects of the relationship. For example, adjustment measures would examine the quality of ongoing interactions in intimacy, trust, sexual intimacy, etc. This is considered to be more of a behavioral assessment of the daily behaviors that occur in the relationship.

Commitment. Commitment refers to stability of the relationship (Sabatell, 1988) and it is made up of a complex interplay of intentions and perceptions (Ackerman, Griskevicius, & Li, 2011; Arriaga & Agnew, 2001; Le & Agnew, 2003). It is the term that describes the likelihood that an initial involvement will persist and grow into a long-term relationship (Arriaga & Agnew, 2001; Rusbult, 1980). Commitment also refers to dependence on the relationship, examining alternatives to the relationship, and a future orientation about the relationship (Sabatelli, 1988). Ackerman, Griskevicius, and Li (2011) asserted that commitment was best measured by whether or not there was a profession of love in the relationship. Ackerman et al. (2011) articulated that a relationship transitions from a short-term fling to a more serious, long-term relationship when there is a profession of love. Thus the decision that one loves their partner and acting on it is a behavioral form of commitment. Other researchers have examined commitment as incorporating several other factors (Stanley & Markman, 1992).

According to interdependence theory (Kelley & Thibaut, 1978; Thibaut & Kelley, 1959) and the investment model (Rusbult, 1983), commitment refers to the degree to which factors that drive one closer to a partner overwhelms the factors that may drive one away from a partner (Le & Agnew, 2003). At its very core, commitment is the decision that a romantic relationship is more beneficial to continue than it is to dissolve it. Commitment is characterized by a psychological attachment to one's partner (affective component), a long-term orientation regarding the relationship (cognitive component), and an intention to persist in the relationship (conative component; Agnew, van Lange, Rusbult, & Langston, 1998; Arriaga & Agnew, 2001; Rusbult, 1980). The predominant characteristic of commitment is to hold a long-term orientation, or a belief that the relationship will last (Arriaga & Agnew, 2001). According to Agnew et al. (1998), as partners become more committed to the relationship, individuals begin to think of themselves as belonging to a collective whole consisting of them and their partners; they also start to think of their partners as part of themselves. Overall, commitment appears to be best defined by three distinct constructs: attachment to or dependence on one's partner, belief that the relationship will last, and actions taken to maintain the relationship (e.g., professing love).

Stanley and Markman (1992) present an alternative way to conceptualize commitment. They indicate that commitment consists of two distinct constructs: personal dedication and constraint commitment. Personal dedication is the individual's desire to maintain or improve the quality of the relationship for the benefit of both individuals (Stanley and Markman, 1992). More specifically, personal dedication examines a person's belief that the relationship should continue, that the relationship takes precedence over other activities, that the couple is a team or a unit, one should sacrifice for the partner's benefit, and one's awareness of other individuals as

romantic alternatives. Constraint commitment refers to the forces that keep an individual in a relationship; typically these forces are external and internal (Stanley & Markman, 1992). These internal and external forces keep the relationship stable by making it such that the end of it would be too costly. Constraint commitment is characterized in several different ways (Stanley & Markman, 1992) and includes monetary investments, social pressures, and difficulty with legal actions to end the relationship, lack of alternative choices and partners, and moral opinion on divorce.

Satisfaction. Satisfaction refers to a general, subjective feeling about one's relationship (Hendrick & Hendrick, 1997; Sabatelli, 1988). It is the subjective assessment of the general positivity or negativity one experiences in a relationship (Le & Agnew, 2003) and it is the subjective evaluation by each individual of the quality, or happiness level, within an intimate relationship (Erbert & Duck, 1997; Huston & Vangelisti, 1991; Whisman, 1997). Satisfaction is an attitude towards the relationship or partner in general (Bradbury, Fincham, & Beach, 2000). In sum, relationship satisfaction measures the subjective, general quality of the relationship; it is the degree to which individuals are satisfied with their romantic relationship.

Satisfaction is not unidimensional. Based on the marital satisfaction literature, satisfaction is distinct from everyday behaviors and should be a global measure (Bradbury, Fincham, & Beach, 2000). Satisfaction should not be characterized as the absence of dissatisfaction (Bradbury, Fincham, & Beach, 2000); satisfaction and dissatisfaction as separate constructs have their own unique factors and determinants. Thus, measures of relationship satisfaction should examine both positive and negative dimensions, as separate yet related constructs (Bradbury, Fincham, & Beach, 2000).

Satisfaction is a fluid, changing construct (Bradbury, Fincham, & Beach, 2000), and it is a "process" (Whisman, 1997); levels of satisfaction vary throughout the relationship. Researchers propose that the measurement of satisfaction should rely on attitudes and not on behaviors (Whisman, 1997). Theoretically, satisfaction has been defined as expressed in emotional and behavioral ways. Barnes and Sternberg (1997) constructed a hierarchical model of love which relied on measuring satisfaction emotionally and behaviorally. Using principal components analysis, their results reveal one factor based on emotions, and three factors (togetherness, absence of tension and fighting, and shared intimacy) based on behaviors. Example items for the emotions factor include: "How satisfied are you with the relationship?" and "Do you feel fulfilled by the relationship?". Behavior-based items include: "Told their partner, 'I love you'", or "Considered ending [their] relationship". Though notable, Barnes and Sternberg's breakdown of 'satisfaction' appears to reflect similar, yet distinct constructs. Though their factor based on emotion appears to reflect how content or generally satisfied one is with their relationship, their sample items for behavioral satisfaction appear to reflect commitment. Thus, their factors describing behavior-based items could be measuring commitment or adjustment to the relationship as opposed to satisfaction.

Adjustment. Adjustment most consistently refers to specific processes necessary to achieve a harmonious and functional marital relationship (Locke, 1951; Sabatelli, 1988; Spanier, 1976; Spanier & Cole, 1976). Well adjusted relationships are characterized by ones in which partners frequently interact with one another, endure less conflict, communicate openly, and are able to compromise (Sabatelli, 1988). In marital relationships research, adjustment focuses on specific behavioral aspects of the relationship between that partners that provides insight into the couples' functioning (Thompson & Walker, 1982).

Adjustment as a construct consists of actual relationship behaviors and how the relationship works at a daily level (Hendrick & Hendrick, 1997). It goes beyond general satisfaction with the relationship (Whisman, 1997). Adjustment measures are objective in nature and do not focus on judgments of interactions (Erbert & Duck, 1997; Sabatelli, 1988). Thus, one might be measuring the frequency of a behavior occurring as opposed to the subjective feeling about the quality of the behavior. It is the difference between assessing the frequency of an item such as, "My partner and I share the events of our day" and measuring the degree to which an item like "I am satisfied with how often my partner and I share the events of our day" is true. However, general satisfaction is correlated to adjustment, such as the frequency of dyadic behaviors like self-disclosure, trust, intimacy, passion, etc. Individuals express higher relationship satisfaction when they engage in self-disclosure, trust, and interdependence with their romantic partners (Hendrick, 1981).

What then are the specific domains that should be included in relationship adjustment? Each domain should focus on a measureable behavior that occurs in a romantic relationship. For example, researchers have examined intimacy (Fletcher, Simpson, & Thomas, 2000; Sternberg, 1986). Intimacy is closeness as a result of discussion and disclosure of intimate topics and the sharing of experiences (Schaefer & Olson, 1981). Intimacy is therefore a domain in adjustment; it is part of one's everyday interaction with one's partner and can be viewed as a behavior as opposed to a judgment. Park and Rosén (2013) examined expectations for marital adjustment in several different domains. Factor analyses revealed six factors: romance, respect, trust, finances, meaning, and sexual intimacy (Park & Rosén, 2013).

Measures of Romantic Relationship Quality

There are several measures used by researchers and clinicians to assess for relationship commitment, satisfaction and adjustment.

The Marital Status Inventory (MSI; Weiss & Ceretto, 1980) is a 14-item instrument designed to measure behavioral steps taken towards divorce or separation. Responders are asked to rate each item as true or false, and scale items reflect a progression from thinking. For example, one item assess whether or not one has thoughts about separation and divorce, and then whether or not one has had discussions about it with close friends. The MSI asks also about steps towards financial independence and filing for divorce. Split-half reliability for the scale was a 0.86.

The Lund Commitment Scale (Lund, 1985) consists of nine items and is designed to assess one's thoughts about the likelihood of the relationship continuing. Items ask about the degree to which on pursues alternatives, perceived cost of ending the relationship, and one's feelings of desire and obligation to continue the relationship. Sample items include "How likely are you to pursue another relationship or single life in the future?" and "How obligated do you feel to continue this relationship?" The reported Cronbach's alpha was 0.82 on the original sample. Additionally, the initial principal-components analysis results indicated that the items loaded onto one factor, with loadings ranging from 0.29 to 0.81. Concerns were raised with the scales reliance on items assessing one's commitment as well as perception of their partner's commitment, thus decreasing the validity of the scale (Sabatelli, 1988).

The Sternberg Triangular Love Scale (STLS; Sternberg, 1987) consists of 72 items, 24 items each to measure Intimacy, Passion and Commitment. The STLS consists of 36 items (12 for each factor) regarding feelings about the relationship, and the other 36 items (12 for each

factor) involve one's actions. Each item is rated on a 1-9 point Likert scale (from not at all to extremely). Sternberg's (1997) validation study consisted of individuals completing these items when thinking of their mother, father, sibling, lover, friend, and ideal lover. Thus, this scale is not exclusive to romantic relationships. Sternberg (1997) reported good reliability; subscale reliabilities ranged from 0.80 and 0.90, and overall scale reliability was in the high 0.90s. However, studies (Acker & Davis, 1992; Hendrick & Hendrick, 1989) reveal a high degree of overlap among items, and lack of support for the three-factor structure.

The Investment Model Scale (IMS; Rusbult, Martz, & Agnew, 1998) consists of "facet" and "global" items for assessing Satisfaction, Quality of Alternatives, Investment, and Commitment. Facet items measured concrete examples of each construct while global items were designed as general measures of each construct. Prior to the creation of this scale, Rusbult and colleagues (1998) articulated that there was no published instrument for commitment and its determinants despite the numerous studies focused on the investment model. These items demonstrated good reliability and principal components analysis revealed four factors (Rusbult et al., 1998). Alphas ranged from 0.91 to 0.95 for commitment, 0.92 to 0.95 for satisfaction, 0.82 to 0.88 for quality of alternatives, and 0.82 to 0.84 for investment. There are a total of six satisfaction items, six quality of alternatives items, six investment items, and seven commitment items. Some items have sub-components, and each item or sub-component is on a 4-point or 9-point Likert scale. Sample items include "My partner fulfills my needs for intimacy (sharing personal thoughts, secrets, etc.)," and "My alternatives to our relationship are close to ideal (dating another, spending time with friends or on my own, etc.)."

The Relationship Assessment Scale (Hendrick, 1988) is unifactorial and contains seven items. Higher scores reflect greater Satisfaction in their relationship. Each item is anchored

differently and values range from 7 to 35. Sample items include, “In general, how satisfied are you with your relationship,” and “How many problems are there in your relationship?” Researchers reported a mean inter-item correlation of 0.49 and a Cronbach’s alpha of 0.86 for the sample (Hendrick, 1988). Additionally, the measure had a high correlation of 0.80 with the Dyadic Adjustment Scale, and was effective in discriminating couples still dating from couples who had broken up (Hendrick, 1988).

The Marital Satisfaction Inventory (MSI; Snyder, 1981) is a scale on Marital Satisfaction, which also attempts to control for socially desirable responses. Though called a measure of satisfaction, other researchers refer to the MSI as a measure of Adjustment (Sabatelli, 1988). The MSI consists of 280 true and false items and is designed to assess the following: global distress, affective communication, problem-solving communication, time together, disagreement about finances, sexual dissatisfaction, role orientation, family history of distress, dissatisfaction with children, and conflict over child rearing. Subscale alpha coefficients range from 0.80 to 0.97. Sample items include, “I believe our marriage is reasonably happy,” and “My spouse doesn’t take me seriously enough sometimes.” Because the scale attempts to control for socially desirable responses, items from specific factors are given different weight depending on one’s global satisfaction level. The validity of a participant’s responses is also assessed by global satisfaction. Researchers have stated that determining the validity of one’s response in this way is too limiting.

Quality of Marriage Index (QMI; Norton, 1983) is the third most widely cited satisfaction measure after the DAS and MAT (Funk & Rogge, 2007). The purpose of this measure is to assess one’s self-report evaluation of the general relationship. The QMI consists of six-items, and participants are asked to rate each item on a 6-point or 10-point scale. Items assess global

satisfaction, like, “We have a good relationship”. Scale items intercorrelations ranged from 0.69 to .85.

Kansas Marital Satisfaction Scale (Schumm, Nichols, Schectman, & Grinby, 1983) is a 3-item measure of Satisfaction. Participants are asked to respond on a 7-point Likert scale to questions like, “How satisfied are you with your marriage?” Individuals are asked directly about their level of satisfaction with their partner, with their marriage, and with their relationship with their spouse. Alphas ranged from 0.89 to 0.93.

The Couples Satisfaction Index (Funk & Rogge, 2007) is a 32-item measure designed from item response theory (IRT). 180 potential items were initially given to 5,315 participants and principal components analyses and IRT analyses were used to identify 32 items that were best able to capture relationship satisfaction. The CSI was designed to evaluate satisfaction with greater precision compared to the DAS or MAT. Cronbach’s alpha for the sample was 0.98.

The Marital Adjustment Test (MAT; Locke & Wallace, 1959) and its later version, the Locke-Wallace Short Marital Adjustment Scale (Cohen, 1985) were developed for assessing Adjustment of currently married couples. The shorter form of the Marital Adjustment Test and is considered to be easier to administer (Cohen, 1985). Researchers reported a split-half reliability of .90. The scale was developed to indicate the probability of the level of adjustment for two married individuals. Thus, its applicability is limited to individuals already in a marital relationship and does not indicate marital expectations for non-married individuals.

The Dyadic Adjustment Scale (DAS) (Spanier, 1976) was constructed to assess the quality of a romantic relationships for married and cohabitating couples. It consists of 32 items in which participants are asked to rate each item on a 5-point Likert scale. The DAS has four subscales: dyadic consensus (13 items), dyadic satisfaction (10 items), dyadic cohesion (5 items)

and affectional expression (4 items). Scale scores range from 0 to 151. Sample items include "How much do you agree on household tasks?" Spanier (1976) reported a reliability of 0.86. Cohen (1985) reported a reliability of .90, .94, .86, and a .73 for the consensus, satisfaction, cohesion, and affectional expression subscales respectively; reliability for the entire scale was a 0.96. The SDAS was designed to focus on individuals who are married or already cohabitating with their partner (Cohen, 1985; Spanier, 1976).

Limitations to Current Measures of Relationship Quality

Though several of these measures are widely used in research and in clinical practice, like the Dyadic Adjustment Scale (DAS, Spanier, 1976) or the Marital Adjustment Test (MAT, Locke & Wallace, 1959), several limitations and criticisms have been mentioned by researchers. Overall, the construct of relationship quality is still vague and poorly understood (Fincham, Beach, & Kemp-Fincham, 1997; Fletcher, Simpson, & Thomas, 2000). This construct remains muddled as measures of relationship quality are rarely based on theory, in addition to the fact that there are many competing (and research-supported) theories of love, relationship quality, relationship satisfaction, beliefs, intimacy, adjustment, commitment, etc. By developing measures that assess these constructs separately, perhaps future research can focus on building a more unified theory of romantic relationship quality. Developing these measures will also help to validate or replicate Fletcher, Simpson and Thomas' (2000) findings proposing a hierarchical model of relationship quality.

Fincham, Beach, and Kemp-Fincham (1997) outline several concerns in the field of marital quality measurement. First, they indicate that the concept of satisfaction and quality relied heavily on Western ideals of marital relationships. Thus, the measures we currently have and use do not adequately capture more diverse ideas of committed, romantic partnerships.

Whisman (1997) reported that measures on "married couples" are hard to generalize to other types of couples, such as, cohabitating couples, same-sex couples, and other types of close, romantic relationships. Second, Fincham and colleagues stated that the field and research is laid on a foundation of inadequate theory. They indicated that the development of the Spanier's DAS was flawed in that skewed items were removed from the final scale without sufficient reason. The assumption was that each item had to be normally distributed when perhaps, the construct and items reflecting satisfaction are not normally distributed.

Third, there is a significant overlap in constructs (Fincham et al., 1997; Whisman, 1997). Typically, studies that attempt to explain the variance in relationship or marital satisfaction have items that can cross-load into specific measures of satisfaction or adjustment and the global measure of satisfaction (Fincham & Bradbury, 1987). Thus, research studies using these measures of satisfaction in conjunction with measures of specific behaviors is inherently flawed in its methodology. The two measures would be capturing more shared variance and the results would be almost impossible to interpret. Similarly, satisfaction scales should not incorporate items specific to the frequency of physical or sexual intimacy (Whisman, 1997). Measures such as the Marital Adjustment Test (Locke & Wallace, 1959), and the Dyadic Adjustment Scale (Spanier, 1976) were being consistently used as measure of marital satisfaction (Bradbury, Fincham, & Beach, 2000). However, there is now widespread acknowledgement that these measures consist of evaluative judgments about the overall quality of the relationship as well as ratings on specific behaviors (Bradbury, Fincham, & Beach, 2000). These measures were attempting to capture both a sense of relationship satisfaction and relationship adjustment concurrently. What is needed in the field are measures that are designed to capture the distinct constructs of commitment, satisfaction, and adjustment. With better measures, we would be

better able to examine relationship quality in couples. Though measures have typically included items on commitment or adjustment to specific domains of the romantic relationship, it would be far more useful to be able to separate these constructs of commitment, satisfaction, and adjustment.

Fourth, several measures consist of a variety of items and response types (Fincham, et al., 1997). Thus, the items and measures are hard to interpret, especially if one item carries more weight than the others. Lastly, a frequent critique is the reliance on self-report measures and surveys when behavioral or observational measures could be available (Fincham et al., 1997; Whisman, 1997).

More recently, Funk and Rogge (2007) validated these concerns regarding marital satisfaction measures. Funk and Rogge (2007) utilized item response theory to examine the quality of information provided by several popular and widely used measures of satisfaction, including the Dyadic Adjustment Scale, Marital Adjustment Test, Quality of Marriage Inventory, Kansas Marital Satisfaction Scale, and the Relationship Adjustment Scale. The results suggested that these widely used measures failed to be informative or precise when measuring relationship satisfaction. Funk and Rogge suggested that the primary reason for their findings was that a large amount of items overlapped in constructs – that having a mixture of specific satisfaction items on communication in combination with items on global satisfaction contributed to error variance.

Research has also started to separate these constructs when considering attitudes about marital relationships. Park and Rosén (2013) created three scales for examining attitudes about marital relationships. These marital scales examined intent to marry, general attitudes towards marriage, and expectations for aspects of marital relationships. Each of these constructs likely

map onto one's own relationship, and would consist of one's commitment towards their relationship (intent to marry), one's general feeling about their relationship (general attitudes towards marriage), and one's report of what it is like to be in the relationship on a daily level (expectations for marital relationships). In the marital scales, intent to marry was unifactorial. General attitudes about marriage consisted of three factors: positive attitudes, negative attitudes, and fears/doubts. Aspects consisted of six factors, called romance, respect, trust, finances, meaning, and physical intimacy. Correlations among the three scales fell in the small to moderate range, from 0.30 to 0.55, indicating that these three scales were indeed measuring separate and unique constructs.

An Exploratory Theory of Young Love

Relationship quality is subjectively held evaluation of the relationship, and is comprised of various components (Fletcher, Simpson, & Thomas, 2000). Though opinions on the various components vary (e.g., Aron, Aron, & Smollan, 1992; Sternberg, 1986), Fletcher and colleagues proposed that six distinct latent constructs (satisfaction, commitment, trust, closeness/intimacy, passion, and love) are subsumed under the higher order latent factor of perceived relationship quality. However, a crucial part of relationships is how one's daily behaviors impact perceived relationship quality, what researchers have coined as adjustment (e.g., Spanier, 1976). From the literature, 'satisfaction' denotes not just a sense of commitment to the relationship, but also a sense of general satisfaction with the relationship, and satisfaction for specific aspects of the relationship. There is little evidence to suggest that commitment, satisfaction, and adjustment are synonymous. Rather, widely used measures are criticized for mixing items that measure two or all three areas. Thus these constructs will be focused on as separate and unique.

Commitment is the intent to stay in one's relationship, *satisfaction* is a global evaluation of the positive and negative aspects of one's relationship, and *adjustment* assesses satisfaction with specific domains in the relationship. Commitment is one's thoughts about the future orientation of the relationship. This includes how attached one is to their partner, whether or not the individual desires to continue the relationship, and how aware an individual is of alternative options for a romantic partner. Satisfaction is one's general feeling about the relationship. Park and Rosén (2013) suggested that global attitudes towards marital relationships in general consisted of positive attitudes, negative attitudes, and a third factor of fears/doubts. It is expected that these three factors will be present in a relationship *satisfaction* scale; consequently, items will be created based on these three factors. Items on happiness are also incorporated to examine a possible fourth factor. As researchers have suggested (Fletcher, Simpson, & Thomas, 2000; Sabatelli, 1988), happiness about the relationship as a whole should also be considered when examining relationship quality. When compared to commitment, satisfaction consists of a more affective measure of the relationship, while commitment is more a cognitive stance about the relationship. As for *adjustment*, in addition to domains found in the literature based on research on intimacy and communication, domains that were explored and validated through the development of the Marital Scales (Park & Rosén, 2013) were used to create items for the adjustment scale. Adjustment consists of one's daily behaviors in specific domains of the romantic relationships.

How are satisfaction, commitment, and adjustment related to perceived relationship quality? Similarly to the work done by Fletcher, Simpson, and Thomas (2000), there are three possible models that were explored. First, there is the theoretical possibility that all of the items under these three constructs are distinct and subsumed under the idea of relationship quality.

Second, the first-order factors are distinct, yet correlated to one another. Last, the first-order factors load onto a second-order factor of overall relationship quality. While Fletcher and colleagues examine a fourth potential model that there these components are distinct and uncorrelated, they found that this model had a poor fit. Additionally, most of the theories on relationships (e.g., Sternberg, 1986) assume that the constructs should be correlated. A model where quality was a third-order factor with commitment, satisfaction, and adjustment was not explored at this time – primarily because it did not meet the basic assumptions of having three first-order factors for each construct, but also because of the difficulty with interpreting a third-order factor.

We also proposed a mediation model, where it was expected that one's daily behaviors in specific areas of the relationship (adjustment) would predict one's future orientation about the relationship (commitment). However, this relationship would be mediated by one's general sense of satisfaction with the relationship. This model was hypothesized based on a combination of theories on romantic relationship quality in the literature. Social exchange theory posits that people will maintain relationships where essentially the benefits of staying in it outweigh the costs of being in it (Kelley & Thibaut, 1978). Also based on this theory is Rusbult's (1980) Investment Model. Within these theories, commitment is assumed to be central to the future of the couple. Highly committed individuals are more likely to stay in the relationship because they feel satisfied with their current partner; they have weighed the costs, the benefits, and they do not perceive high-quality alternatives. Therefore, commitment is a measureable outcome of whether or not a person will choose to stay or to leave, and the decision is influenced by satisfaction with the cost-benefit ratio. Given that "adjustment" consists of individuals' evaluation of their attitudes about specific domains in their relationship, it is likely that this will predict both

commitment and satisfaction. However, attitudes about specific parts of the relationship are essentially meaningless unless they contribute to a sense of satisfaction, which then impacts a person's decision to stay in or to leave the relationship.

This hypothesized mediation model is also consistent with Gottman's model of couples therapy. The very premise of the Gottman model is that one's perception about the quality of the relationship is influenced by the positive and negative interactional behaviors between the couple (Gottman, 1982; Gottman, 1990). Furthermore, marital conflict is directly related to intense negative affect directed towards the partner and attempts to repair the relationship tend to fail because of the display of intense negative affect via criticism, stonewalling, defensiveness or contempt towards each other (Gottman & Silver, 1999). Therefore, individuals' perceptions of daily behaviors, specifically within communication, impact their emotional state, which in turn impacts their perception of quality.

The Current Study

Given the lack of appropriate measures for assessing commitment, satisfaction and adjustment as separate and unique constructs, this study developed new measures for understanding romantic relationships. This study also developed inclusive measures of romantic relationships that can be used for any population, and are not limited by age group, sexual orientation, or marital status. Romantic encounters and dating experience are the defining milestones for interpersonal relationships in late adolescents and young adults (Arnett, 2000; Arnett, 2004; Fincham & Cui, 2010). This study explores the factor structure of these new items and validates the factor structure by using two separate samples consisting of individuals that are young adults (from the ages of 18-20).

There are three main reasons for why romantic relationships in emerging adulthood are especially significant and worth researching (Fincham & Cui, 2010). First, forming and maintaining romantic relationships is a vital developmental task for young adults. This time period is generally when emerging adults learn to initiate relationships, to examine their options for romantic partners, and to gain relationship experience in terminating an abusive relationship or experiencing personal growth (Lewandowski & Bizzoco, 2007). Emerging adults or late adolescents have likely had romantic encounters and dating experience (Carver, Joyner, & Udry, 2003). This is also the time period in which establishing a sense of identity around romantic attachments is prominent (Kaestle, & Halpern, 2007).

Second, the development of romantic relationships has significant implications for well-being and adjustment. Identity development for emerging adults tends to be correlated to positive relationship qualities from romantic relationships, but not from friendships (Barry, Madsen, Nelson, Carroll & Badger, 2009). While friendships and relationships with one's mother in emerging adulthood tend to impact one's happiness, romantic relationships appear to have a greater effect on one's happiness (Demir, 2010). Third, patterns of romantic relationships during emerging adulthood are predictive of the course for later relationships and marriage. This age group is also ideal, given that most 17- and 18-year olds in romantic relationships report relationship duration of 12 months or longer (Shulman & Scharf, 2000).

CHAPTER II

Method

Construction of the Young Love Scales

The development of these three relationship scales for satisfaction, commitment and adjustment will follow the process outlined by Worthington and Whitaker (2006). First, the construct of interest was defined clearly and concretely through theory and research. Investigation of theories examining relationship satisfaction show that attitudes and perceptions towards one's own relationship may involve various constructs. Also given that the measures are meant to be analogous to the Marital Scales (Park & Rosén, 2013), items were based on the analogous measures for intent to marry, attitudes towards marital relationships, and expectations for marital life. According to Worthington and Whitaker (2006), the second step is to create a pool of items. The present items were written to reflect one's commitment to his or her own relationship, a sense of general satisfaction with the relationship, and items regarding accommodation to the relationship. These items were written using a clear, concise and readable language and will be reviewed by multiple groups of experts for their quality. Worthington and Whitaker (2006) articulated that after these items have been written and reviewed, one should administer them to the appropriate samples for analysis. The new items were administered in randomized order, then existing measures will be administered, and demographic information will be collected last.

Construction of the Young Love Measures

Young Love Commitment Scale. 19 items were written based on the literature to assess commitment to the relationship (See Appendix A). Items were written to form a three factor

structure – future orientation about the relationship, attachment to one's partner, and maintenance behaviors like ignoring alternative partner choices – proposed by empirical findings (Agnew, van Lange, Rusbult, & Langston, 1998; Arriaga & Agnew, 2001; Rusbult, 1980; Sabatelli, 1988; Stanley & Markman, 1992). These items are also based on the Intent to Marry Scale from the Marital Scales (Park & Rosén, 2013).

Young Love Satisfaction Scale. 26 items were generated to assess general satisfaction and dissatisfaction in one's relationship (see Appendix A; Bradbury, Fincham, & Beach, 2000; Erbert & Duck, 1997; Hendrick & Hendrick, 1997; Huston & Vangelisti, 1991; Le & Agnew, 2003; Sabatelli, 1988; Whisman, 1997). Based on the literature, items incorporated positive and negative feelings about the relationship, reflecting one's affective attachment to the relationship. Items assessing for fears and doubts were also incorporated in order to be similar to the General Attitudes towards Marriage Scale from the Marital Scales (Park & Rosén, 2013).

Young Love Adjustment Scale. 43 items were created to assess for daily behavioral functioning in multiple domains like communication, passion, intimacy, trust, love, romance, finances, conflict, and respect (see Appendix A; Fletcher, Simpson & Thomas, 2000; Hendrick & Hendrick, 1997; Sabatelli, 1988). Items are also analogous to the Aspects of Marriage Scale (Park & Rosén, 2013).

Pilot study. The constructed items were administered to five advanced doctoral students for feedback on item readability, clarity and redundancy. Any items that appeared to have a question about its readability or clarity were rewritten. Of the 88 sample items for the Young Love Scales, none were rewritten. Constructed items were also administered to three department faculty professors who are considered subject matter experts. These professors were provided with definitions for each construct. They were asked to match each item to a construct, and to

rate how highly the item appeared to represent the construct. Of the 88 items, the raters demonstrated some disagreement on 19 of the items. There were only two items where all three raters assigned a different construct to an item and those two items were not retained after the factor analyses.

Procedure

The current study required the recruitment of a minimum of several hundred participants, over the course of two separate samples. One sample was used to examine the factor structure of the items using exploratory factor analysis (EFA). The second sample was into two; half of the sample was used to validate the proposed factor structure of the Young Love Scales using confirmatory factor analysis (CFA) as well as reliability and validity analyses. The other half of the second sample is to explore the underlying theoretical model of relationship quality based on Fletcher and colleagues' (2000) work (see Figure 1), and to validate the proposed mediation theory of young love (see Figure 3).

Individuals were recruited from the psychology department pool, consisting of psychology students taking introductory college courses. Students were given course research credit for their participation. They were initially screened through the department website for either current involvement in a romantic relationship, or prior involvement sometime in the last two years. They were directed to an external link in which they were given information about informed consent, including details on the purpose of the study, the possible risks involved, and the possible benefits of the study. Participants were guaranteed their anonymity and confidentiality; no questions or requests for identifying information was made during the study.

After indicating consent, participants were directed to a screening survey, which included questions on their current relationship status, and if single, whether or not they had been in a

romantic relationship sometime in the last two years. They were asked to think of one specific relationship as they answered the survey questions. Participants from both samples were then administered the Young Love Scales items in randomized order. Individuals from the second sample were also administered additional measures (see below) for the purpose of exploring the relationship between marital attitudes and relationship attitudes, and for establishing measurement validity. All participants were then asked to complete items regarding demographic information, such as their age, gender, sexual orientation, and ratings of their relationship. Participants were then directed to a debriefing form. All procedural components and study materials were submitted to and approved by the University Institutional Review Board.

CHAPTER III

Study 1 – Exploratory Factor Analysis

The purpose of this study was to conduct an exploratory factor analysis on the items for the Young Love scales. Even though the items were written based on the Marital Scales and based on what research was present on relationship quality, this was a necessary step given the lack of theory on relationship quality to assess for latent factors in the new items.

Method

Participants. During the spring semester, 514 students at a large university in the western US were recruited to respond to questions regarding their current or past romantic relationship. All of the participants volunteered to participate in the study for course credit in an introductory psychology course. Thirteen individuals were removed from the study for various reasons, including one individual who responded to the items while thinking of two intimate relationships, one who had never been in a relationship, and nine individuals who were missing more than 10% of their survey responses or had stopped responding altogether. Out of the 501 participants in the first study, there were 174 individuals who identified as male, 319 as female, 1 as transgender and 1 as unknown (6 missing). The average age of the participants was 19.68 (*SD* = 2.31). 78.8% of the sample self-identified as Caucasian/White, 12.6% as Latino or Hispanic, 3% as African-American or Black, 1.4% as Asian American, 1% as Middle Eastern, 1% as Hawaiian or Pacific Islander, and 1.2% as biracial. 95.2% of the participants identified as heterosexual, or sexually interested in the opposite sex. 36.7% were not currently in a relationship, 11.8% identified their current status as dating, 31.9% as dating exclusively, 1.8% as cohabitating, and 1.8% indicated they were married.

Measures

Young Love Commitment Scale. 19 items were written to assess commitment to the relationship (see Appendix A). Items will be based on a three factor structure – future orientation about the relationship, attachment to one's partner, and maintenance behaviors like ignoring alternative partner choices – proposed by empirical findings (Agnew, van Lange, Rusbult, & Langston, 1998; Arriaga & Agnew, 2001; Rusbult, 1980; Sabatelli, 1988; Stanley & Markman, 1992).

Young Love Satisfaction Scale. 26 items were generated to assess general satisfaction and dissatisfaction in one's relationship (see Appendix A; Bradbury, Fincham, & Beach, 2000; Erbert & Duck, 1997; Hendrick & Hendrick, 1997; Huston & Vangelisti, 1991; Le & Agnew, 2003; Sabatelli, 1988; Whisman, 1997). Items will also incorporate positive and negative feelings about the relationship, like fears/doubts (Park & Rosén, 2013).

Young Love Adjustment Scale. 43 items were created to assess for daily behavioral functioning in multiple domains like communication, passion, intimacy, trust, love, romance, finances, conflict, and respect (see Appendix A; Fletcher, Simpson & Thomas, 2000; Hendrick & Hendrick, 1997; Sabatelli, 1988). All of the Young Love Scale items were based on the Marital Scales (Park & Rosén, 2013).

Screening survey. Participants were first taken to a screening survey, which assessed participants' dating status. Participants were then asked to indicate if they are in a current relationship, or have been in one sometime in the last two years. If participants met the exclusion criteria, they were directed to the survey, and asked to think about one particular relationship as they respond to the surveys.

Demographic questions. Participants were asked to report their age, gender, ethnicity, and sexual orientation. They were also asked about their current dating status, previous relationships, and duration of those relationships (see Appendix B).

Results

Descriptive results. Means and standard deviations for the Young Love Scales are presented for the Commitment items in Table 1, the Satisfaction items in Table 2, and the Adjustment items in Table 3. An examination of the data revealed significantly negative skew and significant kurtosis. This is also consistent with previous research indicating that individuals have a tendency to rate their romantic partners and relationships positively. The correlations among the commitment items ranged from $r = 0.08$ ($p = .10$) to $r = 0.93$ ($p < .001$). Correlations for the satisfaction items ranged from $r = 0.05$ ($p = .24$) to $r = 0.84$ ($p < .001$), and from $r = 0.00$ ($p = 0.97$) to $r = 0.86$ ($p < .001$) for the adjustment items.

Exploratory factor analysis. Given the dearth of theory-driven measures of romantic relationship quality, and exploratory factor analysis (EFA) was used to investigate latent constructs for commitment, satisfaction, and adjustment, concepts that have been previously unexamined, or have only been incorporated in research via atheoretical means. Mplus (Version 6.11) for windows (Muthén & Muthén, 1998-2011) was used to calculate all latent models. Because of the nonnormality present in the dataset, a maximum likelihood estimation with robust standard errors (MLR) method was used. This method is uniquely advantageous because it can address both missing data (using full information maximum likelihood) and non-normal data. Factors were retained based on eigenvalue (if greater than 1; Kaiser, 1958) and by visual examination of the scree plot (Cattell, 1966).

Analyses revealed three factors for the Commitment scale (see Table 4), two factors for the Satisfaction scale (see Table 8), and five factors for the Adjustment scale (see Table 13). Factors with more then three variables were retained, and items were assessed for a minimum standardized factor loading of 0.32 (Tabachnick & Fidell, 2001). For the Commitment items, all items loaded strongly onto one of three factors, with the exception of one item that had a factor loading of 0.46 and 0.36 on two separate factors. Themes that emerged from the factors suggested the items were grouping on ideas about having a future orientation for the relationship, thinking it was a stable relationship, and making declarations of love towards one's partner. The Satisfaction items demonstrated strong factor loadings on independent factors. All of the items written to reflect satisfaction with the relationship, dissatisfaction with the relationship, and happiness with the relationship fell onto one factor, while all of the items to reflect fears and doubts loaded onto another factor. As for the Adjustment analysis, some items loaded strongly onto two of the five suggested factors. No clear theme emerged from the items under the first two factors (see Table 13). The third factor that emerged from the EFA grouped together items about finances, the fourth grouped items on conflict, and the fifth was comprised of items on physical intimacy.

CHAPTER IV

Study 2 – Confirmatory Factor Analysis

The purpose of this study was to build on the findings of the first study and pare down items for each factor to produce the Young Love Scales. Confirmatory factor analysis was used to assess for the best model fit for the Young Love Scales. Reliability and validity analyses were also conducted on the newly constructed scales to provide further information on the psychometric properties of the new scales.

Method

Participants. During the fall semester at a large university in the western United States, 635 students were recruited to participate in a study on love. All students volunteered in exchange for course credit in an introductory psychology course. Of the 635 responses, 27 were removed from the data analyses. A few individuals indicated they had never been in a romantic relationship and were thinking of their "ideal" relationship. Other responses were removed where more than 10% of the data was missing, or where participants had stopped responding altogether. The remaining sample of 608 was then randomly split into two separate samples for Study 2 ($N = 305$), and Study 3 ($N = 303$). For this sample, 84 individuals identified as male, and 213 as female (8 missing), and the average age of the participants was 19.02 ($SD = 2.33$). 81.6% of the sample identified as Caucasian/White, 11.8% as Latino/Hispanic, 2.3% as Asian, 1.3% as African American or Black, 1% as Hawaiian or Pacific Islander, 0.3% as American Indian/Native American, 0.3% as Middle Eastern, and 0.3% identified as biracial. 92.1% identified as heterosexual. 36.7% were not currently in a relationship, 12.8% indicated they were

dating, while 40.3% reported they were dating exclusively, 3.6% of the sample indicated they were cohabitating, and 1.3% reported they were married.

Measures

Young Love Scales. 88 potential items for the Young Love Scales were administered to the participants. 19 items assessed general commitment to the relationship, 26 items explored one's sense of satisfaction with the relationship, and 43 items examined one's daily behavioral functioning in the relationship.

Perceived Relationship Quality Components Inventory (PRQC; Fletcher, Simpson, & Thomas, 2000). The PRQC consists of 18 items, and was designed to be highly face valid assessment of six commonly assessed markers of relationship quality: satisfaction, commitment, intimacy, trust, passion, and love. Fletcher and colleagues reported alphas ranging from 0.74 to 0.96 for two separate samples. Cronbach's alpha for this sample for satisfaction was 0.98, commitment was 0.98, intimacy was 0.89, trust was 0.93, passion was 0.81, love was 0.93, and overall was a 0.96 for this sample.

Relationship Assessment Scale (RAS; Hendrick, 1988). The RAS consists of seven items designed to measure the latent construct of relationship satisfaction, with higher scores demonstrating greater satisfaction. Hendrick reported an inter-item correlation of 0.49 and Cronbach's alpha of 0.86 for the sample. For this sample, Cronbach's alpha was 0.92.

Marital Scales – Intent to Marry Scale (IMS; Park & Rosén, 2013). The IMS is a unifactorial, three-item measure to examine one's intent to marry. The Young Love Commitment Scale is meant to be analogous to the IMS, with the focus on one's commitment towards his or her own relationship. The IMS is administered on a seven-point Likert scale, and Cronbach's alpha for this sample was 0.91.

Marital Scales – General Attitudes Towards Marriage Scale (GAMS; Park & Rosén, 2013). Similarly to the IMS, the GAMS is also meant to be comparable to the Young Love Satisfaction Scale, with the emphasis on one's own romantic relationship as opposed to attitudes towards all marital relationships. The GAMS consists of ten items, and three factors: positive attitudes, negative attitudes, and fears and doubts. Cronbach's alpha for this sample was 0.83 for positive attitudes, 0.73 for negative attitudes and 0.79 for fears/doubts.

Marital Scales – Aspects of Marriage Scale (AMS; Park & Rosén, 2013). The AMS consists of 23 items divided in two six factors for romance, respect, trust, finances, meaning, and physical intimacy. Items are rated on a seven-point Likert scale, and are designed to assess one's attitudes towards different aspects of everyday living in a marital relationship. The Young Love Adjustment scale was also created to represent the AMS, with the focus being on one's own romantic relationship instead of general marital relationships. Cronbach's alpha for this sample was 0.79 for romance, 0.96 for respect, 0.89 for trust, 0.50 for finances, 0.89 for meaning, and 0.78 for physical intimacy.

Relationship Belief Inventory (RBI; Eidelson & Epstein, 1982). The RBI measures five types of dysfunctional relationship beliefs (disagreement is destructive, mindreading is expected, partners cannot change, sexual perfectionism, and the sexes are different). The RBI consists of 40 items, rated on a 6-point Likert scale, and respondents are asked to rate the extent to which they believe a statement to be true. Sample items include: "I do not expect my partner to sense all my moods" and "My partner does not seem capable of behaving other than s/he does now." Eidelson and Epstein (1982) reported a Cronbach alpha ranging from 0.72 to 0.81. For this sample, Cronbach's alpha for the full scale was 0.86, 0.83 for disagreement is destructive,

0.73 for mindreading is expected, 0.74 for partners cannot change, 0.72 for sexual perfectionism, and 0.67 for the sexes are different.

Results

Confirmatory factor analysis (CFA). CFA was completed using Mplus (Version 6.11) for windows (Muthén & Muthén, 1998-2011). Because of the apparent non-normality present in the dataset, robust measures of fit (see Bentler & Dudgeon, 1996; Chou, Bentler, & Sattora, 1991; Curran, West, & Finch, 1996) were used. A maximum likelihood estimation with robust standard errors (MLR) method was used to account for missing data and a non-normal distribution in the data. Model fit was assessed using Hu and Bentler's (1999) recommendations: a Comparative Fit Index (CFI) greater than or equal to 0.95 and a standardized root mean squared residual (SRMR) less than or equal to 0.08. A non-significant chi-square will be also be used to assess for good model fit to the data, though it is sensitive to large samples (Cole, 1987).

Initially, three factors for the Young Love Commitment Scale were examined based on the results of the EFA (see Table 5). Fit appeared good, with a Robust CFI of 0.95 and a RMSEA of 0.07. Factor loadings were also high, ranging from 0.42 to 0.98. Themes also emerged from the items, and seemed to fall under future orientation for the relationship, love, and attitudes about stability of the relationship. However, the correlation between future orientation and stability was very high and one of the items appeared to have loaded on both factors, so a two-factor model was explored (see Table 6). The two-factor model showed excellent fit and also demonstrated a significant improvement in chi-square when compared to the three-factor model. Items for the first factor appears to group around the idea of having a future orientation for the relationship, and was named Future Orientation. As for the second

factor, items were based on whether or not raters had professed their love to their partner was called, Love.

A theory-driven and an EFA-driven model were explored for the Young Love Satisfaction Scale (see Tables 9 and 10, respectively). The theory-driven model was based solely on how the items were written to reflect unique factors. Though fit appeared good, correlations among the factors were very high, ranging from 0.81 to 0.99, and a more parsimonious model was pursued. The EFA-driven model also showed good fit and themes emerged from the two factors to represent attitudes towards the relationship, and fears/doubts. Correlations between the factors remained high, so a one-factor model that collapsed both factors was examined. This model provided excellent fit (see Table 11), and also demonstrated a significant change in chi-square when compared to the two-factor model (see Table 12). The one factor is simply referred to as Satisfaction.

Similarly to the other Young Love Scales, analysis of the Adjustment Scale started with a theory-driven focus, examining the proposed eight-factor structure. Model fit was less than optimal (see Table 15), with very high factor correlations among some of the factors. Based on the results of the EFA, the Young Love Adjustment Scale was pared down to six factors producing excellent fit (see Table 16). The six factors are called: Communication, Respect, Emotional Support, Trust, Romance, and Intimacy. Again, the simpler model produced a significant change in chi-square and appears to present a better fit than the hypothesized solution (see Table 17).

Reliability analyses. Cronbach's coefficient alpha (α), a test of inter-items correlations was used to examine the internal consistency of the newly constructed Young Love Scales. George and Mallery (2003) indicate that a Cronbach's alpha above .7 is considered acceptable,

an α above .8 is considered good, and an α above .9 is considered excellent. Results showed an alpha of 0.91 and 0.95 for the Commitment factors, both falling in the excellent range (see Table 6). Table 11 shows that alpha for the Satisfaction scale also fell in the excellent range. Alphas for the Adjustment scale fell from the acceptable to excellent range (see Table 16), ranging from 0.77 to 0.92.

Validity analyses. A Pearson correlation coefficient was computed to determine if the newly constructed Young Love Scales showed good construct validity. Correlations among the new scales were examined first. Commitment and Satisfaction had a correlation of 0.83 (p <.001), which is higher than expected given that the scales are designed to measure separate constructs. Similarly, Satisfaction and Adjustment were highly correlated ($r = 0.86$, $p < .001$), as well as Commitment and Adjustment ($r = 0.76$, $p < .001$). Factor correlations are reported in Table 18, with correlations ranging from 0.22 to 0.94, and all were significant at the $p < .05$ level. These results generally show variable construct validity for the new Young Love Scales, an issue which should be further explored.

Correlations among the new scales and the PRQC was also examined. It was expected that the Young Love Scales should be highly correlated to the PRQC as they are measuring similar constructs. The Commitment scale and the PRQC were highly correlated ($r = 0.77$, p <.001), as well as the Satisfaction scale and the PRQC ($r = 0.78$, $p < .001$), and the Adjustment Scale and the PRQC ($r = 0.81$, p <.001).

The Marital Scales and the RBI provided discriminant validity for the Young Love Scales. While these scales measure attitudes about relationships, they are theoretically dissimilar in that the Marital Scales examine attitudes about general marital relationships while the Young Love Scales are designed to measure attitudes about a one's current or very recent romantic

relationship. The Intent to Marry Scale demonstrated low correlations with the Young Love Commitment ($r = 0.36$, $p < .001$), Satisfaction ($r = 0.36$, $p < .001$), and Adjustment ($r = 0.32$, $p < .001$) scales. Similarly, the General Attitudes towards Marriage Scale also showed low to moderate correlations with the Commitment ($r = 0.40$, $p < .001$), Satisfaction ($r = 0.43$, $p < .001$), and Adjustment ($r = 0.39$, $p < .001$) scales. Correlations between the Young Love Scales and the Aspects of Marriage Scale fell in the low range (Commitment and AMS: $r = 0.28$, $p < .001$; Satisfaction and AMS: $r = 0.24$, $p < .001$; and Adjustment and AMS: $r = 0.32$; $p < .001$).

Similarly, the RBI is a measure on dysfunctional beliefs about relationships in general and should only be moderately correlated to a measure on one's own relationship. Correlations among the Young Love Scales and the RBI fell in the moderate range (Commitment and RBI, $r = 0.40$; Satisfaction and RBI, $r = 0.50$; and Adjustment and RBI, $r = 0.55$; all with a p-value of less than .001).

CHAPTER V

Study 3 – Structural Equation Modeling

This study provided a second sample to assess the psychometric properties of the newly developed Young Love Scales, and also assessed for a second-order construct of relationship quality that tied all of the first-order constructs from the Young Love Scales together. The last purpose of this study was to examine a mediation model for the newly developed scales.

Method

Participants. 303 students attending a large Midwestern university participated in this study. The mean age for the participants in this sample was 18.96 (*SD* = 1.44). 55 identified as male, 237 as female, and 2 as transgender (9 missing). 79.9% of Sample 3 identified as White/Caucasian, 10.6% as Latino or Hispanic, 3.6% as Asian, 1.3% as African American/Black, 1.3% as Hawaiian/Pacific Islander, 1% as biracial, 0.7% as Middle Eastern, and 0.3% as American Indian/Native American. 94.4% identified as heterosexual. 39.9% of the sample indicated that they were single, 17.5% of the sample was dating, 34.3% were dating exclusively, 1.3% were cohabitating at the time of the survey, and 1.8% indicated they were married.

Measures

Young Love Commitment Scale. This scale consists of 10 items that explores one's general sense of commitment to a relationship. Seven items fall on a factor that represents future orientation about the relationship, and three items assess for declarations of love, or what the literature would refer to as maintenance behaviors in the relationship (Agnew, van Lange, Rusbult, & Langston, 1998; Arriaga & Agnew, 2001; Rusbult, 1980; Sabatelli, 1988; Stanley &

Markman, 1992). For both the Future Orientation and Love factors, Cronbach's alpha for this sample was 0.93.

Young Love Satisfaction Scale. This scale is a unifactorial assessment of one's general satisfaction with a romantic relationship. It consists of 11 items designed to examine general satisfaction and dissatisfaction in one's relationship (Bradbury, Fincham, & Beach, 2000; Erbert & Duck, 1997; Hendrick & Hendrick, 1997; Huston & Vangelisti, 1991; Le & Agnew, 2003; Sabatelli, 1988; Whisman, 1997), in addition to positive and negative feelings about the relationship, such as fears and doubts (Park & Rosén, 2013). Cronbach's alpha for this sample was 0.96.

Young Love Adjustment Scale. Six factors with three items each comprise the Young Love Satisfaction scale. This scale was created to assess for daily behavioral functioning in multiple domains like communication, passion, intimacy, trust, love, romance, finances, conflict, and respect (Fletcher, Simpson & Thomas, 2000; Hendrick & Hendrick, 1997; Sabatelli, 1988). For Communication, this sample had a Cronbach's alpha of 0.85, 0.85 for Respect, 0.89 for Emotional Support, 0.80 for Trust, 0.88 for Romance, and 0.85 for Physical Intimacy.

Results

Measurement models. All structural equation models were completed using Mplus (Version 6.11) for windows (Muthén & Muthén, 1998-2011). Similarly to the second study, robust measures of fit (see Bentler & Dudgeon, 1996; Chou, Bentler, & Sattora, 1991; Curran, West, & Finch, 1996) were used to account for the non-normality present in the dataset. Model fit was assessed using Hu and Bentler's (1999) recommendations: a Comparative Fit Index (CFI) greater than or equal to 0.95 and a standardized root mean squared residual (SRMR) less than or equal to 0.08.

Similar to the previous studies, missing information was addressed using full information maximum likelihood. A maximum likelihood estimation with robust standard errors (MLR) method was used in the measurement model and subsequent structural models. The measurement model for the Commitment scale showed good fit, (*SBS* $\chi^2(34) = 108.60$, $p < .001$; *Robust CFI* = 0.94, *SRMR* = 0.04, and *RMSEA* = 0.09). All factor loadings for the Commitment scale were high, positive, and significant at the $p < .001$ level. For the first factor, Future Orientation, factor loadings ranged from 0.71 to 0.90, and for the second factor, Love, factor loadings ranged from 0.79 and 0.98. The correlation between the two factors was in the moderate range ($r = 0.39$, $p < .001$). The measurement model for the Satisfaction scale also demonstrated good fit (*SBS* $\chi^2(44) = 146.89$, $p < .001$; *Robust CFI* = 0.94, *SRMR* = 0.04, and *RMSEA* = 0.09). All factor loadings for the Satisfaction scale were high, positive, and significant at the $p < .001$ level, ranging from 0.68 to 0.91. The Adjustment scale also demonstrated a good fit (*SBS* $\chi^2(120) = 394.98$, $p < .001$; *Robust CFI* = 0.89, *SRMR* = 0.06, and *RMSEA* = 0.09). Factor loadings for all six subscales were positive at above 0.60, and significant at the $p < .001$ level. Factor correlations ranged from 0.24 ($p < .05$) to 0.90 ($p < .001$).

Structural models. Based on past research (e.g., Fletcher, Simpson, & Thomas, 2000), it was hypothesized that all first-order factors from the Commitment, Satisfaction, and Adjustment scales would load onto one higher-order factor (referred to as Model 3; see Figure 1). Two alternative models provided a comparison: Model 1 where there are no existing factors and all of the items load onto one factor of relationship quality, and Model 2 where there are indeed independent factors which moderately correlate to one another but do not load onto a second-order factor. All three models were calculated through Mplus.

Model 1 demonstrated poor fit (see Table 19). Factor loadings were positive and significant at the $p < .001$ level, ranging from 0.23 to 0.90. However, examination of the model also revealed large residual variances, ranging from 0.19 to 0.95. Model 2 appeared to provide a better fit than Model 1 with a *Robust CFI* value of 0.88, a reduced *RMSEA* of 0.07, and a significant change in chi-square when comparing the two models through the Satorra-Bentler scaled chi-square difference test. Factor loadings ranged from 0.61 to 0.98, and all were significant at the $p < .001$ level. Factor correlations ranged from $r = 0.23$ ($p < .01$) to $r = 0.90$ ($p < .001$). Model 3 also demonstrated improved fit when compared to Model 1, with a *Robust CFI* of 0.86, a RMSEA of 0.08, and an significant change in chi-square (see Table 19). Items' factor loadings ranged from 0.60 to 0.98. All were positive and significant at the $p < .001$ level. Commitment, satisfaction, and adjustment factors also loaded onto a higher order factor, with loadings ranging from 0.38 to 0.96 (see Figure 2).

Mediation model. Following the steps of Baron and Kenny (1986), a mediation model was assessed using structural equation modeling in Mplus. As hypothesized it was expected that a relationship between one's daily experience (Adjustment) and one's future orientation to the relationship (Commitment) would be mediated by one's general sense of satisfaction in the relationship (Satisfaction). The maximum likelihood (ML) estimate of 0.85 for the relationship between Adjustment and Commitment was significant ($SE = 0.02$, $p < .001$). The next step determined that there was a significant relationship between Commitment and Satisfaction ($MLE = 0.96$, $SE = 0.01$, $p < .001$), and between Satisfaction and Adjustment ($MLE = 0.90$, $SE = 0.02$, $p < .001$). The last step tested the model including the effects of Satisfaction and Adjustment on Commitment. While the relationship between Satisfaction and Adjustment ($MLE = 0.90$, $SE = 0.02$, $p < .001$), and Satisfaction and Commitment remained significant, ($MLE = 0.98$, $SE = 0.11$,

$p < .001$), the relationship between Commitment and Adjustment was no longer significant (*MLE* = -0.03, *SE* = 0.12, $p = .80$). A Sattora-Bentler chi-square difference test was used to determine if there was an improvement in fit between the second (*SBS* $\chi^2(693) = 1780.71$, $p < .001$) and third step (*SBS* $\chi^2(692) = 1783.46$, $p < .001$). There was no improvement in fit ($\Delta X^2(\Delta df = 1) = 0.00$, $p = .96$), suggesting that general Satisfaction indeed mediates the relationship between Adjustment and Commitment to the relationship.

CHAPTER VI

Discussion

The primary purpose of this study was to expand on the work done in creating the Marital Scales (Park & Rosén, 2013) by creating analogous measures where individuals' attitudes towards their own individual relationships could be explored. The Young Love Scales are also geared specifically to the emerging adult population. It is unlikely that one's attitudes towards marital relationships would be unrelated to one's attitude about specific romantic relationships, thus the Young Love Scales were designed as a way to explore the relationship between those two constructs (attitudes towards marital relationships and attitudes towards one's own romantic relationship). Similarly to the Marital Scales, the Young Love Scales are designed to be separate measures of Commitment, Satisfaction, and Adjustment to romantic relationships.

The Young Love Scales were constructed using Worthington and Whitaker's (2006) recommendations. Two samples of data were collected, and one sample was split to allow for three separate samples: the first sample was used to conduct an exploratory factor analysis (EFA) on the latent structure of the scales, the second sample was used for confirmatory factor analysis (CFA) to determine the best fit in the latent structure as well as reliability and validity analyses of the newly constructed scales, and the last sample was used for structural equation modeling to examine the potential for a higher order factor and a moderation relationship among the constructs measured by the Young Love Scales. Thus far, there is little theoretical knowledge on the constructs being measured by these scales, so it was expected that EFA would be needed to explore the latent structure of all of the constructs. Despite the scarcity of theory on relationship quality, a review of the literature revealed the constructs of commitment as a cognitive attitude

towards the relationship, satisfaction as an affective attitude towards the relationship, and adjustment as an attitude about daily behaviors in the relationship. Items were constructed based on the literature that was available as well as an established measure, such as the Marital Scales. These items were given to graduate students as a review of their clarity and readability, and the items were also provided to subject matter experts to ensure that the items appeared to match the construct. Based on the "theory" work that was done with the literature and using a preexisting measure as its foundation, CFA was used to compare EFA-driven to "theory-driven" structures. Model comparisons were also used to pare down the measures to be as parsimonious as possible.

The items for the Commitment scale were initially written to reflect a future orientation about the relationship (Arriaga & Agnew, 2001; Rusbult, 1980; Sabatelli, 1998), attachment to one's partner (Agnew, van Lange, Rusbult, & Langston, 1998; Arriaga & Agnew, 2001; Rusbult, 1980), and maintenance behaviors like ignoring alternative partner choices (Ackerman, Griskevicius, & Li, 2011; Le & Agnew, 2003). Initially, EFA results suggested three factors should be retained to measure Commitment. However, these three factors of having a future orientation, maintenance behaviors such as love, and attitudes about the stability of the relationship were slightly different than the three observed factors in the literature. While future orientation towards the relationship remained the same, as did maintenance behaviors such as love, the third EFA factor named stability deviated from the idea that one was attached to one's partner and could not leave the relationship for emotional reasons. Also problematic was the high factor loading for one of the stability items on another factor, and the high observed correlation between two of the factors (future orientation and stability). Thus, the stability factor was removed, and the Commitment scale was formed via two factors: Future Orientation and Love. Comparison of model fit confirmed that the two-factor approach to commitment had

excellent fit (*CFI* = 0.97; *RMSEA* = 0.06) and was a significantly better fit than the three-factor approach (*CFI* = 0.93; *RMSEA* = 0.07, $\Delta\chi^2(53) = 163.30$, $p < .001$). Factor loadings are high for each factor, and reliability also appears excellent with Cronbach's α at 0.91 and 0.95 for the Future Orientation and Love factors, respectively. Sample items include: "I expect to end this relationship," and "I have told my partner, 'I love you.'"

As for the Satisfaction scale, there have been numerous scales written in the literature to assess relationship satisfaction (Funk & Rogge, 2007; Norton, 1983; Hendrick, 1988; Locke & Wallace, 1959; Schumm, Nichols, Schectman, & Grinby, 1983; Snyder, 1981; Spanier, 1976). However, research on relationship satisfaction has been void of theory and many of the scales that were written have been criticized for confusing satisfaction with other related but unique constructs (Fincham, Beach, & Kemp-Fincham, 1997; Fletcher, Simpson, & Thomas, 2000). Items written for the Young Love Satisfaction scale were initially designed to assess for positive attitudes, negative attitudes, fears/doubts, and happiness. Contrary to the four factor theory-driven model, EFA results suggested a two-factor solution was ideal. In this two-factor solution, items reflecting both positive and negative attitudes towards the relationship and happiness were on one factor, and items reflecting fears and doubts were on a second factor. While CFA results showed excellent fit (*CFI* = 0.96, *RMSEA* = 0.06) and high factor loadings for the two-factor model, the correlation between the factors also remained high. A one-factor model was assessed, as it would be a simpler measurement of satisfaction. A one-factor model allowed for items that were originally written to reflect four different aspects of satisfaction. This model had excellent fit and was a significant improvement in fit when compared to the two-factor model (*CFI* = 0.97; *RMSEA* = 0.06, $\Delta\chi^2(74) = 159.52$, $p < .001$). Factor loadings are high, and reliability excellent

(Cronbach's $\alpha = 0.97$). Sample items include: "I am content with my relationship," and "I have doubts about my relationship."

Items for the Young Love Adjustment scale were initially designed to measure daily behavioral functioning for eight factors: communication, passion, intimacy, trust, love and romance, finances, conflict, and respect (Locke, 1951; Park & Rosén, 2013; Sabatelli, 1988; Spanier, 1976; Spanier & Cole, 1976). EFA results suggested a five-factor model, with a problematic latent structure. Several items cross-loaded onto a couple of factors, and unclear themes were present with two of the factors. The EFA results were used to reduce the number of factors from eight to six and both models were compared using CFA. The eight-factor model that retained all of the items provided good fit (*CFI* = 0.87; *RMSEA* = 0.06). Factor loadings were high and reliability fell in the good to excellent range for all eight of the factors. However, there were high factor correlations noted among the eight factors. The factor labeled Finances also appeared to be too lowly correlated to any of the other factors. Items written to reflect Finances and Conflict were both removed and the remaining six-factor model provided excellent fit and was a significant improvement when compared to the eight-factor model (*CFI* = 0.96; *RMSEA* = 0.06, $\Delta\chi^2(712) = 1645.73$, $p < .001$). Factor loadings are high and reliability ranged from acceptable to excellent for the six factors: Communication, Respect, Emotional Support, Trust, Romance, and Intimacy. There continue to be some concerns with this latent structure with high correlations observed among some of the factors (e.g., Respect and Emotional Support: $r = 0.92$, $p < .001$).

Commitment and Adjustment have not been examined as unique latent constructs in the literature thus far. Some might suggest that relationship satisfaction might include or overlap with constructs that are measured by commitment and adjustment (Bradbury, Fincham, & Beach,

2000; Fincham, Beach, & Kemp-Fincham, 1997; Fletcher, Simpson, & Thomas, 2000; Whisman et al., 1997). This study was designed to assess the three domains as separate and unique constructs. While latent factor structures and reliability for each of the measures appeared to provide strong evidence for the existence of three distinct measures, preliminary validity analyses suggests that further research needs to be done. As described above, Satisfaction was highly correlated to Commitment and to Adjustment ($r = 0.83$ and $r = 0.86$, respectively). The observed correlations were higher than expected given that these scales are designed to measure separate constructs and is proof of questionable construct validity. The correlation between Commitment and Adjustment was also strong ($r = 0.76$).

Further examination of subscale correlations revealed that Satisfaction was highly correlated to many of the subscales from the Commitment and the Adjustment scale with correlations ranging from 0.83 to 0.94. The only exceptions are the Romance and Intimacy subscales from the Adjustment scale ($r = 0.54$ and $r = 0.37$, respectively). Similarly strong correlations and a few moderate correlations were observed for the Future Orientation factor from the Commitment scale, and the Communication, Respect, and Emotional Support factors from the Adjustment scale. Weak to moderate correlations were observed for the Love factor from the Commitment scale, and the Romance and Intimacy subscales from the Adjustment scale. This suggests that perhaps relationship satisfaction is measured by future orientation to the relationship, feelings of satisfaction and dissatisfaction with the relationship, communication, respect, and emotional support. However, stating that one loves his or her partner, feels romance, and values intimacy in the relationship are indeed separate constructs from relationship satisfaction.

Comparison to existing measures also provided evidence for questionable construct validity. All three scales from highly correlated to the PRQC (Fletcher, Simpson, & Thomas, 2000), which was to be expected since all of these measures assess relationship quality. However, the PRQC is a single scale, which further suggests that perhaps the Young Love Scales should not be separate measures. Evidence of discriminant validity for the Young Love Scales was shown by comparisons to other existing measures of relationship attitudes. It was expected that the Young Love Scales should only demonstrate low to moderate correlations with the Marital Scales (Park & Rosén, 2013), and the RBI (Eidelson & Epstein, 1982). The results showed low correlations between the Young Love Scales and the Marital Scales, and low to moderate correlations between the Young Love Scales and the RBI, confirming that these are distinct measures.

Overall, the three developed Young Love Scales for Commitment, Satisfaction, and Adjustment have strong psychometric properties and are reliable. However, validity for the necessity of the three scales remained as a question. This was further explored by structural equation modeling to examine how the scales conceptually related to one another.

The third study allowed us to examine whether or not these scales are indeed separate constructs, and if so, whether or not they were simply correlated or related by a higher order factor. Structural equation modeling (SEM) was used to assess for the model that best accounted for the data. Model 1 assumed that all of the items reflected one construct and had the poorest fit. This provides some evidence for the validity of the three scales given that one would expect this model to have better fit if the constructs were overlapping. Model 2 posited that the constructs were all correlated but that they were not first-order factors. This model had better fit than the first one suggesting that there are definitely unique constructs being measured by the

items. Model 3 provided the best fit for the data, and this model tested a hierarchical model. This model showed that relationship quality is a second-order factor that is being measured by commitment, satisfaction, and adjustment. This finding is similar to previous research done on the construct of relationship satisfaction (Fletcher, Simpson, & Thomas, 2000).

Additionally, a mediation model was calculated to examine the role of satisfaction on the relationship between adjustment and commitment. As expected, one's daily sense of adjustment predicted commitment to the relationship. Adjustment also predicted satisfaction for the relationship, and satisfaction predicted one's sense of commitment to the relationship. Results demonstrated that one's sense of satisfaction with the relationship fully mediates the relationship between adjustment and commitment to the relationship. In other words, one's daily sense of adjustment in the relationship is relatively meaningless to relationship commitment unless those actions contribute to a sense of satisfaction with the relationship. Thus, one's affective state and attitude towards the relationship is crucial to the strength of the relationship. These findings are consistent with behavioral theories of marital relationships, which suggest that positive behavioral experiences contribute to a sense of satisfaction with the relationship (Gottman, 1982; Stuart, 1981) and that negative affect tends to hinder communication and positive interactions (Gottman & Silver, 1999). This finding is also consistent with past research which showed that individuals reported higher relationship satisfaction and commitment to a relationship based on their daily experiences (e.g., Hendrick, 1981), as well as aspects of the Investment Model (Rusbult, 1980) which also posited that the decision to stay in a relationship was based on one's level of satisfaction with the cost-benefit ratio of the relationship.

Limitations and Directions for Future Research

One of the strengths of the current study was its use of three distinct samples of data to conduct the analyses. However, the scales were constructed and validated based on two convenience samples of introductory psychology students. While these scales were designed to specifically examine the romantic attitudes of emerging adults, it will be important to consider the lack of generalizability to others in the population. Another study based on a random sample or another sample relevant to this population would make the measures more psychometrically sound.

Questions remain about the validity of these new measures. While the scales to appear distinct when compared to other existing measures, the high correlations observed among the three scales suggest that they may in fact be overlapping constructs. While the SEM models validated that they are separate measures, the question remains of why there was such a high degree of overlap among the scales when looking at relationship quality. This question will need to be further explored with studies that examine relationship quality as a measure of commitment, satisfaction, and adjustment but without romance, intimacy, or declarations of love as part of the measure. Future studies should also continue to develop a theory of relationship quality in emerging adults so as to better understand the development of relationships in this population. Current measures are geared more for couples in marital relationships or older couples, and do not account for the uniqueness in the emerging adult population.

Another limitation of this study would be the lack of factors that might be more unique to the emerging adult population. For example, examining the use of technology in budding romantic relationships may be helpful to better understand the development of relationships and marital-like relationships in the future. Future research should examine the use of social media

and how that might impact satisfaction or commitment with one's relationship. Other questions remain about how the use of social media daily might reflect a different type of adjustment behavior as well. More research in this area is crucial to developing a theoretical model for romantic relationships in the emerging adult population.

Implications

The purpose of the current study was to create analogous measures of the Marital Scales (Park & Rosén, 2013) so that attitudes towards marital relationships could be compared to attitudes towards one's own romantic relationship. These newly developed Young Love Scales are designed for the emerging adult population, given the importance of romantic relationships in identity development for young adults (Arnett, 2000; Barry, Madsen, Nelson, Carroll & Badger, 2009). Previous measures of relationship commitment, satisfaction, and adjustment in romantic relationships have been limited to married adult couples (Locke & Wallace, 1959; Norton, 1983; Snyder, 1981; Spanier, 1976; Weiss & Ceretto, 1980), or to examining only one construct (Funk & Rogge, 2007; Hendrick, 1988; Lund, 1985). Generally measures of relationship quality are also mostly atheoretical in nature, or have also been designed to measure a first-order and second-order construct simultaneously (Fincham, Beach, & Kemp-Fincham, 1997; Fletcher, Simpson, & Thomas, 2000).

The Young Love Scales are different from other measures because they are capable of capturing a comprehensive set of attitudes towards one's own romantic relationship. The scales are designed to examine commitment, satisfaction, and adjustment as three separate constructs. This is advantageous over other measures that have combined some of these constructs together without a theoretical basis. It is also advantageous to use the Young Love Scales over existing measures because of its broad view on different types of attitudes – most existing measures do

not examine adjustment as attitudes about behavioral functioning in different domains of the relationship (e.g., trust and intimacy). The Young Love Scales appear to have strong psychometric properties, as shown through excellent fit and strong factor loadings across two separate samples. Internal reliability also appears strong across separate samples, however, validity needs to be further explored. Most of the previous existing scales are not analyzed for their psychometric properties (e.g., Locke & Wallace, 1959; Norton, 1983; Snyder, 1981; Spanier, 1976; Weiss & Ceretto, 1980).

It is especially important to examine the course of romantic relationships in the emerging adult population. Forming romantic relationships for this age group is not only a crucial developmental task where individuals learn how to initiate, evaluate, and potentially end relationships, but also because of the potential for individual growth (Fincham & Cui, 2010; Lewandowski & Bizzoco, 2007). These new measures could contribute to research that examines the trajectory of romantic relationships for emerging adults. The measures also could contribute to providing insight to individuals in couples who are struggling with making decisions about their commitment to the relationship. Interventions for these individuals might be effective if geared towards increasing their sense of satisfaction from daily behaviors, or making changes that contributes to their partner's sense of satisfaction.

Research shows that emerging adulthood is the time in which individuals establish a sense of identity about their romantic selves (Kaestle, & Halpern, 2007), which then impacts future romantic relationships. These new measures could help further understanding about how "romantic selves" are fostered in emerging adults, and how a sense of identity might be related to an ability to be insightful about adjustment, satisfaction, or commitment to relationship. Emerging adults' sense of well-being, happiness, and adjustment to adulthood is also more

impacted by romantic relationships than relationships with friends or parents (Barry, Madsen, Nelson, Carroll & Badger, 2009; Demir, 2010). Therefore, helping distressed young couples find a sense of better relationship quality via couples therapy interventions may be a route to impact not only their sense of identity, but also a sense of well-being, happiness, and general adjustment to adulthood for each individual in the relationship. Couples therapy methods focused on altering the emotional state of each individual, such as the Gottman method (Gottman, 1982; Gottman, 1992; Gottman & Silver, 1999) or emotionnally focused therapy for couples (Johnson, 2004), may be especially effective for increasing the sense of satisfaction and commitment in young relationships.

Conclusion

The Young Love Scales consists of three measures: the Young Love Commitment Scale, Young Love Satisfaction Scale, and the Young Love Adjustment Scale. The instrument was designed for the emerging adult population and is a comprehensive measure of different types of attitudes about one's own romantic relationship. The instrument was developed and validated using as sample of college students. The results of these studies indicate that the three measures have strong psychometric properties. While validity for the measures remains a question, the scales provide a way to further explore the best way to measure relationship quality. Future studies should work to continue to develop a theory about romantic relationship quality in emerging adults, and to further understand romantic relationship quality and its impact on identity development in emerging adults.

TABLES

Table 1

Descriptive Statistics for Young Love – Commitment Items

	Sample 1 (*N*=501)		Sample 2 (*N*=305)		Sample 3 (*N*=303)	
	M	*SD*	*M*	*SD*	*M*	*SD*
1. I would like to continue my relationship.	3.00	1.16	3.11	1.13	3.03	1.21
2. I would like to end this relationship.*	2.99	1.10	3.04	1.15	3.00	1.12
3. I expect to end this relationship.*	2.71	1.22	2.82	1.23	2.85	1.22
4. I hope to continue this relationship.	3.01	1.03	3.14	1.07	3.01	1.14
5. I have considered ending my relationship.*	2.25	1.24	2.18	1.25	2.30	1.31
6. I have told my partner, 'I love you'.	2.76	1.49	3.19	1.23	2.99	1.37
7. I have not considered ending my relationship.	2.05	1.26	2.05	1.25	2.03	1.33
8. I have not told my partner, 'I love you'.*	2.50	1.61	2.87	1.50	2.78	1.48
9. I can date my partner for the long-term.	2.85	1.23	3.10	1.13	3.04	1.17
10. I cannot date my partner for the long-term.*	2.80	1.26	3.05	1.06	2.98	1.17
11. I cannot end this relationship.	1.83	1.25	2.10	1.17	1.96	1.24
12. I could end this relationship.*	2.20	1.28	2.37	1.24	2.33	1.25
13. This is a stable relationship.	2.76	1.14	2.81	1.18	2.73	1.21
14. This is an unstable relationship.*	2.91	1.14	2.95	1.13	2.90	1.17
15. I will do what I can to continue this relationship.	3.11	0.91	3.20	0.94	3.06	1.02

16. I do not care if this relationship ends.*	3.19	0.97	3.21	1.00	3.21	1.04
17. It is important that this relationship continues.*	1.31	1.09	1.12	1.07	1.24	1.13
18. My partner and I have both said, 'I love you.'	2.70	1.54	3.21	1.25	3.01	1.38
19. My partner and I have not said, 'I love you.'*	2.75	1.50	3.13	1.29	2.98	1.40

Note. *Items are reverse scored.

Table 2

Descriptive Statistics for Young Love – Satisfaction Items

	Sample 1 (*N*=501)		Sample 2 (*N*=305)		Sample 3 (*N*=303)	
	M	*SD*	*M*	*SD*	*M*	*SD*
1. My relationship is beneficial.	3.08	0.88	3.14	0.92	3.09	0.94
2. My relationship is important.	3.28	0.80	3.36	0.80	3.28	0.85
3. I am satisfied with my relationship.	2.82	1.07	3.00	1.05	2.90	1.13
4. I feel personally fulfilled by my relationship.	2.74	1.06	2.99	0.97	2.76	1.15
5. My relationship satisfies me.	3.00	0.97	3.14	0.97	3.02	1.07
6. My relationship fulfills me.	2.82	1.04	3.01	0.99	2.84	1.10
7. My relationship is not beneficial.*	3.00	1.00	3.12	0.99	3.03	1.04
8. My relationship is unimportant.*	3.27	0.89	3.37	0.80	3.32	0.88
9. I feel unfulfilled by my relationship.*	2.85	1.15	2.98	1.16	2.90	1.17
10. My relationship is unsatisfactory. *	3.02	1.03	3.19	0.95	3.02	1.12
11. My relationship does not fulfill me.*	2.84	1.10	2.93	1.10	2.84	1.15
12. I feel dissatisfied by my relationship.*	2.86	1.09	3.02	1.03	2.91	1.10
13. I have fears about my relationship.*	2.21	1.22	2.34	1.19	2.22	1.25
14. I do not have fears about my relationship.	1.69	1.15	1.88	1.13	1.80	1.16
15. My relationship causes me to doubt.*	2.56	1.14	2.67	1.09	2.51	1.16
16. My relationship does not cause me to doubt.	2.16	1.14	2.28	1.18	2.20	1.20
17. I have doubts about my relationship.*	2.21	1.22	2.35	1.21	2.34	1.21
18. I do not have doubts about my relationship.	2.13	1.22	2.23	1.20	2.07	1.25

19. I feel cautious about my relationship.	1.74	1.17	1.50	1.13	1.83	1.16
20. I do not feel cautious about this relationship.*	1.93	1.20	1.78	1.16	1.92	1.20
21. My relationship makes me happy.	3.21	0.84	3.31	0.82	3.29	0.87
22. My relationship does not make me happy.*	3.06	0.97	3.14	0.97	3.10	1.03
23. I am content with my relationship.	2.78	1.08	2.94	1.04	2.79	1.15
24. I feel discontent in my relationship.*	2.76	1.06	2.84	1.09	2.84	1.14
25. This relationship is a happy situation.	2.94	1.02	3.12	0.97	2.95	1.11
26. This relationship is an unhappy situation.*	3.05	1.05	3.14	1.04	3.08	1.08

Note. *Items are reverse scored.

Table 3

Descriptive Statistics for Young Love – Adjustment Items

	Sample 1 (*N*=501)		Sample 2 (*N*=305)		Sample 3 (*N*=303)	
	M	*SD*	*M*	*SD*	*M*	*SD*
1. My partner and I communicate well in this relationship.	2.69	1.10	2.84	1.06	2.76	1.03
2. My partner and I value communication.	3.14	0.85	3.16	0.95	3.19	0.88
3. In this relationship, communication is not valued.*	3.27	0.83	3.21	0.97	3.25	0.92
4. My partner and I do not communicate well.*	2.75	1.09	2.73	1.16	2.77	1.08
5. In this relationship, communication is valued.	3.11	0.90	3.20	0.93	3.13	0.96
6. My partner respects me.	3.16	0.87	3.19	1.01	3.18	0.97
7. I feel respected by my partner.	3.15	0.88	3.22	0.93	3.17	0.99
8. My partner does not respect me.*	3.36	0.85	3.34	0.93	3.34	0.96
9. I do not feel respected by my partner.*	3.13	0.93	3.16	1.03	3.16	1.01
10. Respect is important to this relationship.	3.44	0.71	3.44	0.80	3.45	0.84
11. I trust my partner completely.	2.74	1.15	2.86	1.20	2.79	1.19
12. I have a hard time trusting my partner.*	2.89	1.13	2.96	1.15	2.86	1.17
13. Staying faithful is important to this relationship.	3.43	0.82	3.53	0.78	3.44	0.97

14. It is difficult to stay faithful to my partner.*	3.31	1.00	3.43	0.91	3.47	0.93
15. Trust is important to our relationship.	3.42	0.74	3.42	0.80	3.44	0.79
16. Trust is not necessary in our relationship.*	3.39	0.93	3.46	0.89	3.40	0.97
17. I feel that my partner trusts me.	3.02	0.98	3.14	0.98	3.00	1.03
18. Financial stability is important to our relationship.	2.41	1.11	2.53	1.06	2.52	1.01
19. Financial stability is not important to our relationship.*	2.23	1.08	2.35	1.05	2.33	0.96
20. Our relationship values financial stability.	2.17	1.06	2.30	1.02	2.27	0.96
21. Our relationship does not value financial stability.*	2.31	1.05	2.45	1.02	2.33	1.00
22. Financial stability is necessary for our relationship.	2.13	1.10	2.27	1.10	2.26	1.09
23. My partner emotionally supports me.	2.99	1.00	3.10	1.00	3.08	1.00
24. I do not feel emotionally supported by my partner.*	3.05	0.93	3.14	1.02	3.07	0.99
25. I feel emotionally supported by my partner.	3.02	0.94	3.16	1.01	3.08	0.98
26. My partner does not emotionally support me.*	3.15	0.91	3.17	1.01	3.22	0.90
27. Emotionally supporting each other is	3.26	0.83	3.27	0.91	3.28	0.87

valued.						
28. Emotional support it not important in this relationship.*	3.17	1.01	3.25	0.99	3.15	1.01
29. We value physical intimacy.	3.11	0.80	3.17	0.82	3.10	0.89
30. Physical intimacy is not valuable in our relationship.*	3.12	0.92	3.14	0.89	3.12	0.92
31. Physical intimacy is valued in our relationship.	3.12	0.81	3.16	0.84	3.10	0.90
32. Physical intimacy is important to our relationship.	3.11	0.85	3.13	0.83	3.08	0.93
33. Physical intimacy is not important to our relationship.*	3.08	0.88	3.17	0.84	3.05	0.92
34. Romance is important in my relationship.	3.08	0.80	3.13	0.84	3.14	0.85
35. Romance is valuable for my relationship.	3.09	0.81	3.15	0.80	3.13	0.81
36. Romance is unimportant in my relationship.*	3.20	0.84	3.18	0.93	3.15	0.97
37. My relationship does not value romance.*	3.10	0.85	3.09	0.91	3.12	0.88
38. Conflict occurs frequently in my relationship.*	2.57	1.11	2.46	1.14	2.52	1.11
39. My partner and I do not argue.	1.75	1.16	1.68	1.14	1.77	1.22
40. My partner and I argue.*	1.93	1.15	1.88	1.11	1.94	1.19
41. Conflict does not occur in my relationship.	1.67	1.10	1.60	1.04	1.61	1.16

42. My partner and I agree on most things.	2.80	0.93	2.87	0.97	2.81	0.91
43. My partner and I disagree on most things.*	2.92	0.90	2.84	0.98	2.92	0.88

Note. *Items are reverse scored.

Table 4

Summary of Exploratory Factor Analysis Results for Young Love Commitment Scale Using Maximum Likelihood Estimation with Robust Standard Errors (MLR) Method (N=501)

Item	Factor 1	Factor 2	Factor 3
1	**0.83**	0.02	-0.08
2	**0.86**	0.13	-0.10
3	**0.74**	0.17	-0.00
4	**0.97**	-0.01	-0.09
5	**0.46**	**0.36**	-0.07
6	-0.01	-0.02	**0.98**
7	**0.41**	0.18	-0.03
8	-0.02	-0.01	**0.64**
9	**0.64**	0.11	0.17
10	**0.59**	0.11	0.16
11	**0.59**	-0.20	0.07
12	**0.57**	0.12	0.08
13	0.24	**0.67**	0.10
14	0.13	**0.82**	-0.05
15	**0.83**	-0.01	0.05
16	**0.69**	-0.02	0.07
17	**-0.88**	0.01	0.00
18	-0.02	0.00	**0.97**
19	-0.03	0.04	**0.89**

Note. Factor loadings over .32 appear in bold.

Table 5

Standardized Loadings for EFA-Driven Confirmatory Model of the Young Love Commitment Scale Using a MLR Estimation Method (N=305)

	Factor		
Item	Future	Love Acts	Stability
1	0.82 (0.02)		
3	0.88 (0.02)		
4	0.86 (0.02)		
7	0.50 (0.05)		
10	0.74 (0.03)		
11	0.42 (0.05)		
12	0.72 (0.04)		
16	0.72 (0.04)		
6		0.95 (0.02)	
8		0.59 (0.06)	
18		0.98 (0.01)	
19		0.85 (0.04)	
5			0.72 (0.04)
13			0.85 (0.03)
14			0.83 (0.03)
Cronbach's α	0.89	0.95	0.83

Note. *Robust CFI* = 0.93; *RMSEA* = 0.07; *SRMR* = 0.05. *SBS* $\chi^2(87) = 226.64$; $p<.001$. Standardized correlation between Future and Love Acts, $r = 0.40$; for Love Acts and Stability, $r = 0.36$, and for Future and Stability, $r = 0.91$.

Table 6

Standardized Loadings for Second Confirmatory Model of the Young Love Commitment Scale Using a MLR Estimation Method (N=305)

	Factor	
Item	Future	Love Acts
1	0.82	
3	0.87	
4	0.87	
5	0.69	
10	0.75	
13	0.78	
16	0.73	
6		0.95
18		0.98
19		0.85
Cronbach's α	0.91	0.95

Note. *Robust CFI* = 0.97; *RMSEA* = 0.06; *SRMR* = 0.04. *SBS* $\chi^2(34) = 67.34$; $p<.001$.

Standardized correlation between Future and Love Acts, $r = 0.39$.

Table 7

Fit Indices for Confirmatory Models of the Young Love Commitment Scale

Model	*SBS* χ^2	*df*	*p*	*Robust CFI*	*RMSEA*	$\Delta\chi^2$	Δdf	*p* for $\Delta\chi^2$
3 Factor	226.64	87	<.001	0.93	0.07			
2 Factor	67.34	34	<.001	0.97	0.06	163.30	53	<.001

Note. *SBS* χ^2 = Satorra-Bentler scaled chi-square; *CFI* = comparative fit index, *RMSEA* = root mean square error of approximation.

Table 8

Summary of Exploratory Factor Analysis Results for Young Love Satisfaction Scale Using a MLR Estimation Method (N=501)

	Factor Loadings	
Item	Factor 1	Factor 2
1	**0.69**	0.09
2	**0.75**	-0.06
3	**0.81**	0.15
4	**0.72**	0.21
5	**0.70**	0.13
6	**0.80**	0.14
7	**0.80**	-0.02
8	**0.79**	-0.12
9	**0.80**	0.14
10	**0.72**	0.13
11	**0.79**	0.12
12	**0.76**	0.17
13	0.03	**0.79**
14	-0.19	**0.69**
15	0.30	**0.61**
16	0.14	**0.68**
17	0.28	**0.62**
18	0.08	**0.72**

19	-0.16	**-0.68**
20	-0.03	**-0.54**
21	**0.80**	0.01
22	**0.83**	0.04
23	**0.77**	0.20
24	**0.68**	0.25
25	**0.79**	0.13
26	**0.78**	0.12

Note. Factor loadings over .32 appear in bold.

Table 9

Standardized Loadings for Theory-Driven Confirmatory Model of the Young Love Satisfaction Scale Using a MLR Estimation Method (N=305)

	Factor			
Item	Positive Attitudes (PA)	Negative Attitudes (NA)	Fears/Doubts (FD)	Happiness (HA)
1	0.83 (0.03)			
2	0.62 (0.06)			
3	0.90 (0.02)			
4	0.88 (0.03)			
5	0.85 (0.02)			
6	0.93 (0.01)			
7		0.79 (0.04)		
8		0.76 (0.03)		
9		0.88 (0.03)		
10		0.83 (0.03)		
11		0.90 (0.02		
12		0.89 (0.02)		
13			0.77 (0.03)	
14			0.54 (0.05)	
15			0.88 (0.02)	
16			0.70 (0.05)	
17			0.84 (0.03)	

18			0.78 (0.03)	
19			-0.68 (0.04)	
20			-0.53 (0.06)	
21				0.83 (0.03)
22				0.87 (0.03)
23				0.88 (0.03)
24				0.83 (0.03)
25				0.90 (0.02)
26				0.89 (0.02)
Cronbach's α	0.93	0.93	0.55	0.94

Note. *Robust CFI* = 0.95; *RMSEA* = 0.06; *SRMR* = 0.04. *SBS* $\chi^2(293) = 572.16$; $p<.001$.

Correlation between PA and NA, $r = 0.99$; PA and FD, $r = 0.83$; PA and HA, $r = 0.97$; NA and FD, $r = 0.85$; NA and HA, $r = 0.99$; and FD and HA, $r = 0.81$.

Table 10

Standardized Loadings for EFA-Driven Confirmatory Model of the Young Love Satisfaction Scale Using a MLR Estimation Method (N=305)

	Factor	
Item	Attitudes	Fears/Doubts
1	0.81 (0.03)	
3	0.89 (0.02)	
4	0.87 (0.03)	
6	0.92 (0.01)	
9	0.88 (0.03)	
10	0.83 (0.03)	
11	0.90 (0.02)	
12	0.89 (0.02)	
22	0.86 (0.03)	
23	0.88 (0.03)	
25	0.86 (0.03)	
26	0.90 (0.01)	
13		0.75 (0.03)
15		0.89 (0.02)
16		0.70 (0.05)
17		0.84 (0.03)
18		0.77 (0.03)
Cronbach's α	0.97	0.89

Note. *Robust CFI* = 0.96; *RMSEA* = 0.06; *SRMR* = 0.03. *SBS* $\chi^2(118) = 250.68$; $p<.001$.

Correlation between two factors, $r = 0.85$.

Table 11

Standardized Loadings for a One-Factor Confirmatory Model of the Young Love Satisfaction Scale Using a MLR Estimation Method (N=305)

Item	Factor
1	0.80 (0.03)
3	0.90 (0.02)
4	0.87 (0.03)
10	0.82 (0.03)
11	0.91 (0.02)
12	0.89 (0.02)
15	0.80 (0.03)
17	0.76 (0.03)
22	0.86 (0.03)
23	0.88 (0.03)
25	0.85 (0.03)
Cronbach's α	0.97

Note. Robust CFI = 0.97; *RMSEA* = 0.06; *SRMR* = 0.02. *SBS* $\chi^2(44) = 91.61$; $p<.001$.

Table 12

Fit Indices for Confirmatory Models of the Young Love Satisfaction Scale

Model	*SBS* χ^2	*df*	*p*	*Robust CFI*	*RMSEA*	$\Delta\chi^2$	Δdf	*p* for $\Delta\chi^2$
Four Factor	572.16	293	<.001	0.95	0.06			
Two Factor	250.68	118	<.001	0.96	0.06	318.99	175	<.001
One Factor	91.61	44	<.001	0.97	0.06	159.52	74	<.001

Note. *SBS* χ^2 = Satorra-Bentler scaled chi-square; *CFI* = comparative fit index, *RMSEA* = root mean square error of approximation.

Table 13

Summary of Exploratory Factor Analysis Results for the Young Love Adjustment Scale Using a MLR Estimation Method (N=501)

	Factor Loadings				
Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
1	**0.66**	-0.02	0.08	0.06	0.01
2	**0.48**	**0.33**	0.06	-0.03	-0.03
3	**0.50**	**0.34**	0.00	-0.01	-0.02
4	**0.58**	0.06	0.08	0.16	-0.02
5	**0.59**	0.18	0.00	-0.05	-0.00
6	**0.98**	-0.11	-0.02	-0.02	-0.01
7	**1.00**	-0.21	0.01	0.00	0.04
8	**0.80**	0.01	-0.08	0.01	0.03
9	**0.88**	-0.07	-0.05	0.01	0.02
10	**0.55**	0.24	0.05	-0.05	-0.00
11	**0.64**	0.12	0.01	0.07	-0.10
12	**0.58**	0.13	-0.02	0.13	-0.06
13	0.21	**0.59**	-0.05	-0.08	-0.09
14	0.12	**0.44**	-0.13	-0.05	-0.16
15	**0.35**	**0.47**	0.03	-0.07	-0.05
16	0.08	**0.55**	-0.01	-0.08	-0.13
17	**0.68**	-0.02	-0.01	0.06	0.01
18	0.01	-0.02	**0.85**	-0.03	-0.06

19	0.04	-0.03	**0.78**	-0.08	-0.01
20	-0.04	0.02	**0.89**	0.03	0.02
21	-0.03	0.09	**0.77**	0.02	0.04
22	0.01	-0.03	**0.89**	-0.00	-0.01
23	**0.80**	-0.06	0.01	-0.09	0.12
24	**0.88**	0.02	0.00	-0.06	0.03
25	**0.85**	0.04	-0.01	-0.07	0.05
26	**0.80**	0.04	-0.03	-0.05	0.09
27	**0.58**	0.28	0.03	-0.08	-0.01
28	0.25	**0.35**	-0.02	-0.05	-0.02
29	0.15	-0.06	0.00	-0.01	**0.89**
30	-0.02	0.15	-0.02	0.00	**0.63**
31	0.03	0.09	-0.03	0.01	**0.89**
32	0.05	0.02	-0.00	-0.03	**0.83**
33	-0.02	0.14	0.01	0.01	**0.74**
34	-0.08	**0.70**	0.02	0.04	0.25
35	-0.10	**0.69**	0.05	0.07	0.26
36	-0.11	**0.55**	0.01	-0.04	0.17
37	0.06	**0.57**	-0.02	0.01	0.23
38	0.27	0.09	0.04	**0.60**	-0.04
39	-0.06	-0.05	-0.0	**0.85**	0.00
40	-0.08	-0.01	-0.03	**0.90**	0.01
41	0.04	-0.12	-0.01	**0.71**	0.01

42	**0.40**	0.14	0.04	0.28	0.04
43	0.20	0.31	0.01	**0.38**	-0.02

Note. Factor loadings over .32 appear in bold.

Table 14

Exploratory Factor Analysis Factor Correlations for the Young Love Adjustment Scale (N=305)

	Factors				
	1	2	3	4	5
1	1				
2	0.67	1			
3	0.25	0.24	1		
4	0.42	0.14	0.02	1	
5	0.23	0.42	0.18	0.14	1

Table 15

Standardized Loadings for Theory-Driven Confirmatory Model of the Young Love Adjustment Scale Using a MLR Estimation Method (N=305)

	Factor							
Item	1	2	3	4	5	6	7	8
1	0.86							
2	0.85							
3	0.70							
4	0.81							
5	0.79							
6		0.91						
7		0.87						
8		0.82						
9		0.87						
10		0.74						
11			0.84					
12			0.81					
13			0.50					
14			0.48					
15			0.72					
16			0.46					
17			0.71					
18				0.83				

19	0.70				
20	0.91				
21	0.74				
22	0.86				
23		0.83			
24		0.91			
25		0.93			
26		0.91			
27		0.83			
28		0.48			
29			0.91		
30			0.80		
31			0.88		
32			0.85		
33			0.77		
34				0.88	
35				0.83	
36				0.46	
37				0.73	
38					0.85
39					0.70
40					0.72
41					0.57

42								0.71
43								0.77
α	0.90	0.92	0.84	0.90	0.92	0.93	0.81	0.87

Note. *Robust CFI* = 0.87; *RMSEA* = 0.06; *SRMR* = 0.07. *SBS* $\chi^2(832) = 1876.36$; $p<.001$.

Correlation between factors ranged from 0.20 and 0.94. α = Cronbach's α.

Table 16

Standardized Loadings for Alternative Theory-Driven Confirmatory Model of the Young Love Adjustment Scale Using a MLR Estimation Method (N=305)

	Factor					
Item	Communication	Respect	Emotional Support	Trust	Romance	Intimacy
1	0.86					
2	0.84					
4	0.83					
6		0.91				
7		0.87				
9		0.88				
23			0.84			
25			0.92			
26			0.92			
11				0.90		
12				0.86		
15				0.68		
34					0.88	
35					0.83	
37					0.72	
29						0.93
30						0.78
32						0.85

Cronbach's α	0.88	0.92	0.77	0.84	0.84	0.89

Note. *Robust CFI* = 0.96; *RMSEA* = 0.06; *SRMR* = 0.05. *SBS* $\chi^2(120) = 235.09$; $p<.001$.

Correlations between two factors ranged from r =0.22 and r=0.92.

Table 17

Fit Indices for Confirmatory Models of the Young Love Adjustment Scale

Model	*SBS* χ^2	*df*	*p*	*Robust CFI*	*RMSEA*	$\Delta\chi^2$	Δdf	*p* for $\Delta\chi^2$
8 Factor	1876.36	832	<.001	0.87	0.06			
6 Factor	235.09	120	<.001	0.96	0.06	1645.73	712	<.001

Note. *SBS* χ^2 = Satorra-Bentler scaled chi-square; *CFI* = comparative fit index, *RMSEA* = root mean square error of approximation.

Table 18

Subscale Correlations for the Young Love Scales (N=305)

	1	2	3	4	5	6	7	8	9
1. CO: Future	1								
2. CO: Love Acts	.40**	1							
3. Satisfaction	.94**	.35**	1						
4. AD: Communication	.83**	.34**	.87**	1					
5. AD: Respect	.78**	.32**	.83**	.84**	1				
6. AD: Emotional Support	.79**	.34**	.85**	.86**	.92**	1			
7. AD: Trust	.77**	.33**	.83**	.84**	.86**	.85**	1		
8. AD: Romance	.50**	.33**	.54**	.56**	.55**	.56**	.51**	1	
9. AD: Intimacy	.33**	.32**	.37**	.25**	.33**	.34**	.22*	.63**	1

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

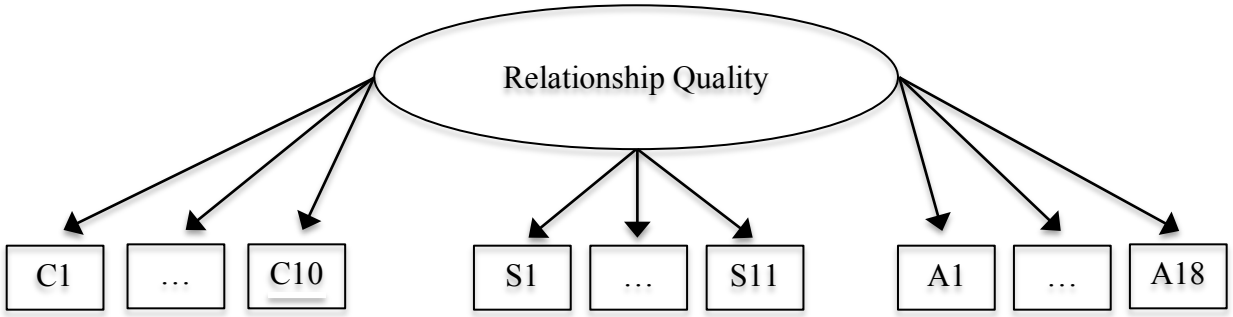
Table 19

Fit Indices for Structural Models (Figure1) of the Young Love Scales (N=303)

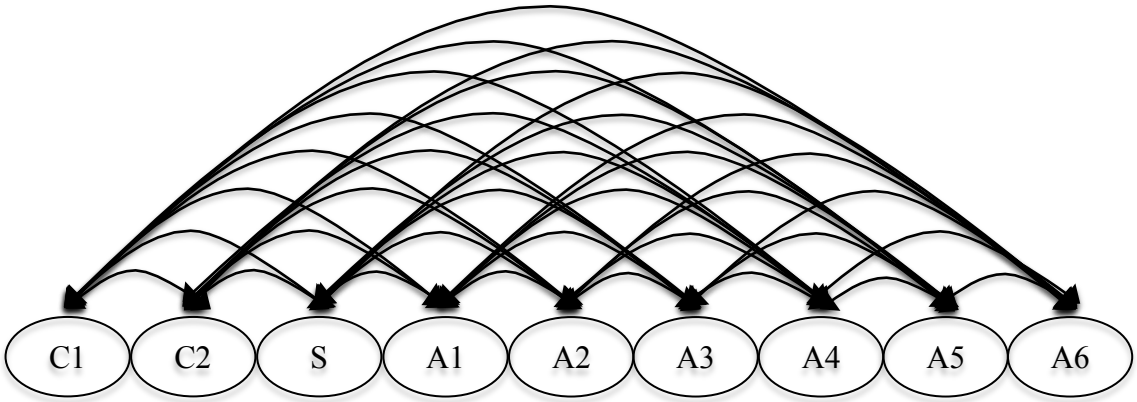
Model	*SBS* χ^2	*df*	*p*	*Robust CFI*	*RMSEA*	$\Delta\chi^2$	Δdf	*p* for $\Delta\chi^2$
Model 1	3215.16	702	<.001	0.69	0.11			
Model 2	1687.21	666	<.001	0.88	0.07	761.18	36	<.001
Model 3	1884.40	693	<.001	0.86	0.08	257.93	9	<.001

Note. *SBS* χ^2 = Satorra-Bentler scaled chi-square; *CFI* = comparative fit index, *RMSEA* = root mean square error of approximation. Model 3 was compared to Model 1.

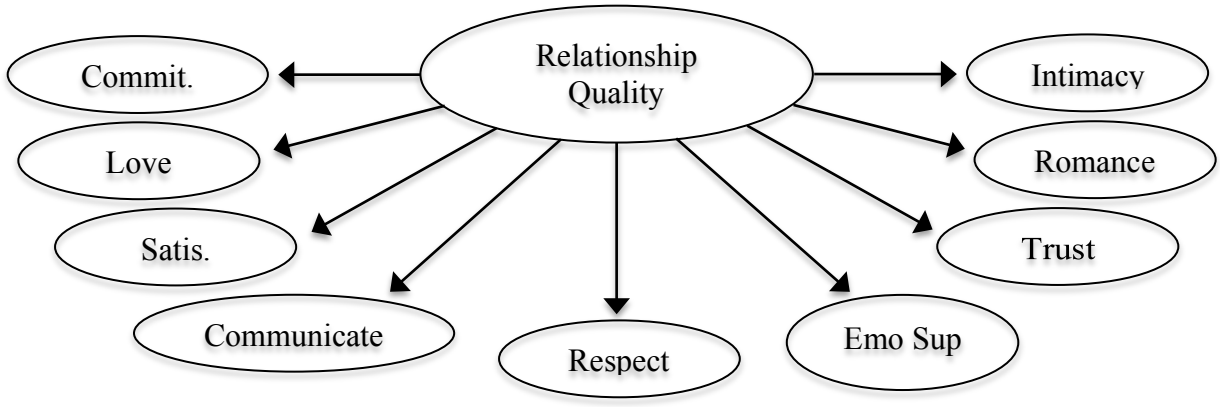
FIGURES



Model 1: all items load onto one factor



Model 2: all factors are correlated



Model 3: factors load onto one second-order factor

Figure 1

Models 1, 2, and 3

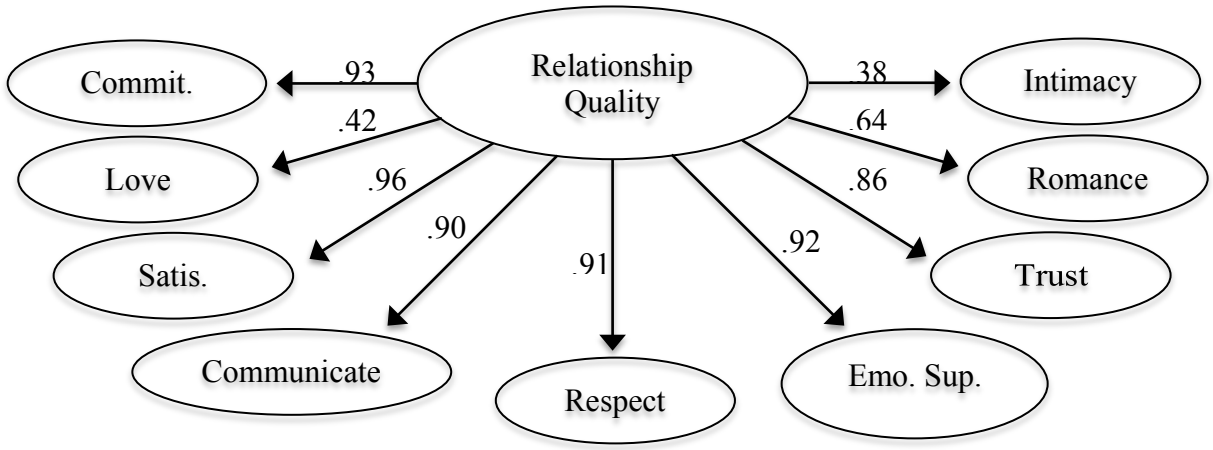


Figure 2

Factor Loadings for Second Order Factor Model (N=303)

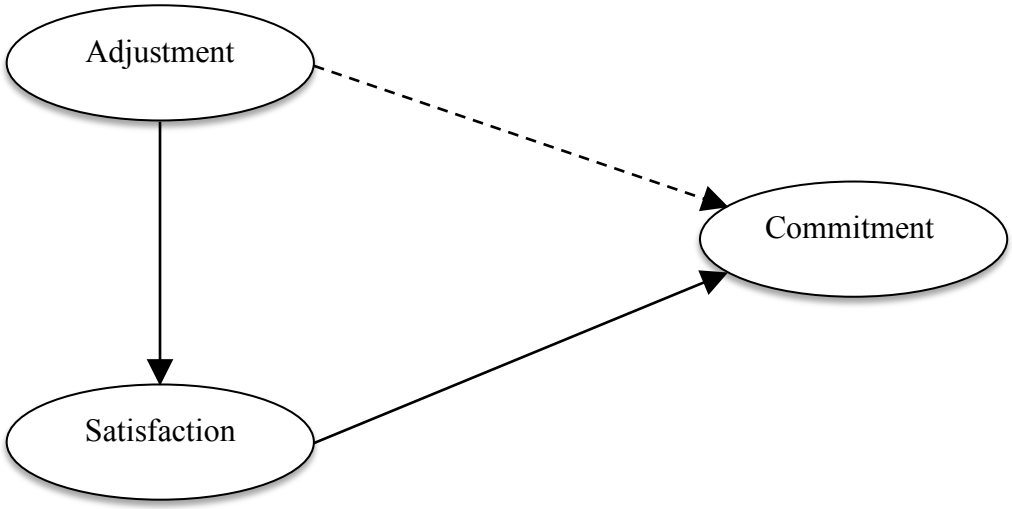


Figure 3

Mediation Model (N=303)

REFERENCES

Acker, M. & Davis, M.H. (1992). Intimacy, passion, and commitment in adult romantic relationships: A test of the triangular theory of love. *Journal of Social and Personal Relationships*, *9*, 21-50.

Ackerman, J.M., Griskevicius, V., & Li, N.P. (2011). Let's get serious: Communicating commitment in romantic relationships. *Journal of Personality and Social Psychology, 100*(6), 1079-1094.

Agnew, C.R., van Lange, P.A.M., Rusbult, C.E., & Langston, C.A. (1998). Cognitive interdependence: Commitment and the mental representation of close relationships. *Journal of Personality and Social Psychology, 74*(4), 939-954.

Arnett, J.J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties, *American Psychologist*, *55*(5), 469-480.

Arnett, J.J. (2004). *Emerging adulthood: The winding road from the late teens through the twenties*. New York: Oxford University Press.

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.

Barnes, M.L. & Sternberg, R.J. (1997). A hierarchical model of love and its prediction of satisfaction in close relationships. In R.J. Sternberg & M. Hojjat (Eds.), *Satisfaction in Close Relationships* (79-101). New York: The Guilford Press.

Barry, C.N., Madsen, S.D., Nelson, L.J., Carroll, J.S., & Badger, S. (2009). Friendship and

romantic relationship qualities in emerging adulthood: Differential associations with identity development and achieved adulthood criteria. *Journal of Adult Development, 16,* 209-222. doi: 10.1007/s10804-009-9067-x

Baumeister, R.F., & Leary, M.R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*(3), 497-529.

Bentler, P.M., & Dudgeon, P. (1996). Covariance structure analysis: Statistical practice, theory, and directions. *Annual Review of Psychology*, *47*, 563-592.

Berscheid, E., & Reis, H.T. (1998). Attraction and close relationships. In D.T. Gilbert, S.T. Fiske, & G. Lindzey (Eds.), *The Handbook of Social Psychology* (4th edition, 193-281). New York: McGraw-Hill.

Berscheid, E., Snyder, M., & Omoto, A.M. (1989). The Relationship Closeness Inventory: Assessing the closeness of interpersonal relationships. *Journal of Personality and Social Psychology, 57*(5), 792-807.

Bradbury, T.N., Fincham, F.D., & Beach, S.R.H. (2000). Research on the nature and determinants of marital satisfaction: A decade in review.

Cann, A., Norman, M.A., Welbourne, J.L., & Calhoun, L.G. (2008). Attachment styles, conflict styles and humour styles: Interrelationships and associations with relationship satisfaction. *European Journal of Personality*, *22*, 131-146.

Carver, K., Joyner, K., & Udry, J.R. (2003). National estimates of adolescent romantic relationships. In P. Florsheim (Ed.), *Adolescent romantic relations and sexual behavior: Theory, research, and practical implications.* Mahwah, NJ: Erlbaum.

Cattell, R.B. (1966). The scree test for the number of factors. *Multivariate Behavioral*

Research, *1*, 245-276.

Chou, C.P., Bentler, P.M., & Satorra, A. (1991). Scaled test statistics and robust standard errors for non-normal data in covariance structure analysis: A Monte Carlo study. *British Journal of Mathematical and Statistical Psychology, 44*, 347-357.

Cohen, P. (1985). Locke Marital Adjustment Scale and the Dyadic Adjustment Scale. *American Journal of Family Therapy*, *13*(3), 66-71.

Cole, D. (1987). Utility of confirmatory factor analysis in test validation research. *Journal of Consulting and Clinical Psychology*, *55*(4), 584-594.

Collins, W.A. (2003). More than myth: The developmental significance of romantic relationships during adolescence. *Journal of Research on Adolescence*, *13*(1), 1-24.

Collins, W.A., Welsh, D.P., & Furman, W. (2009). Adolescent romantic relationships. *Annual Review of Psychology, 60,* 631-652.

Connolly, J., Craig, W., Goldberg, A., & Pepler, D. (2004). Mixed-gender groups, dating, and romantic relationships in early adolescence. *Journal of Research on Adolescence*, *14,* 185-207.

Crowne, D.P. & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology*, *24*(4), 349-354.

Curran, P.J., West, S.G., & Finch, J.F. (1996). The robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. *Psychological Methods, 1*(1), 16-29. doi:10.1.1.382.6856

Demir, M. (2009). Close relationships and happiness among emerging adults. *Journal of Happiness Studies, 11*, 293-313. doi: 10.1007/s10902-009-9141-x

Diamond, L.M., Savin-Williams, R.C., & Dubé, E.M. (1999). Sex, dating, passionate

friendships, and romance: Intimate peer relations among lesbian, gay, and bisexual adolescents. In W. Furman, B.B., Brown, & C. Feiring (Eds.), *The Development of Romantic Relationships in Adolescence* (175-210). New York: Cambridge University Press.

Eidelson, R.J., & Epstein, N. (1982). Cognition and relationship maladjustment: Development of a measure of dysfunctional relationship beliefs. *Journal of Consulting and Clinical Psychology, 50*(5), 715-720.

Erbert, L.A. & Duck, S.W. (1997). Rethinking satisfaction in personal relationships from a dialectical perspective. In R.J. Sternberg & M. Hojjat (Eds.), *Satisfaction in Close Relationships* (190-216). New York: The Guilford Press.

Fincham, F.D., Beach, R.H., & Kemp-Fincham, S.I. (1997). Marital quality: A new theoretical perspective. In R.J. Sternberg & M. Hojjat (Eds.), *Satisfaction in Close Relationships* (275-304). New York: The Guilford Press.

Fincham, F.D., & Bradbury, T.N. (1987). The assessment of marital quality: A reevalutation. *Journal of Marriage and Family*, *49*(4), 797-809.

Fincham, F.D., & Cui, M. (2002). Emerging adulthood and romantic relationships: An introduction. In F.D. Fincham & M. Cui (Eds.), *Romantic relationships in emerging adulthood* (pp. 3-12). New York: Cambridge University Press.

Fletcher, G.J.O., Simpson, J.A., & Thomas, G. (2000). The measurement of Percieved Relationship Quality Components: A confirmatory factor analytic approach. *Personality and Social Psychology Bulletin, 26*(3), 340-354.

Floyd, F.J., & Stein, T.S. (2002). Sexual orientation identity formation among gay, lesbian, and

bisexual youths: Multiple patterns of milestone. *Journal of Research on Adolescence, 12,* 167-191.

Fraley, R.C., & Davis, K.E. (1997). Attachment formation and transfer in young adults' close friendships and romantic relationships. *Personal Relationships, 4*(2), 131-144.

Funk, J.L., & Rogge, R.D. (2007). Testing the ruler with Item Response Theory: Increasing precision of measurement for relationship satisfaction with the Couples Satisfaction Index. *Journal of Family Psychology, 21*(4), 572-583.

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.

Gottman, J.M. (1982). Temporal form: Toward a new language for describing relationships. *Journal of Marriage and the Family, 44*, 943-962.

Gottman, J.M. (1990). How marriages change. In G.R. Patterson (Ed.), *Depression and aggression in family interaction* (pp. 75-101). Hillsdale, NJ: Erlbaum.

Gottman, J.M. & Silver, N. (1999). *The seven principles of making marriage work.* New York: Three Rivers Press.

Hayton, J.C., Allen, D.G., & Scarpello, V. (2004). Factor retention decisions in exploratory factor analysis: A tutorial on parallel analysis. *Organizational Research Methods, 7*(2), 191-205.

Hendrick, S.S. (1981). Self-disclosure and marital satisfaction. *Journal of Personality and Social Psychology, 40,* 1150-1159.

Hendrick, S.S. (1988). A generic measure of relationship satisfaction. *Journal of Marriage and the Family, 50,* 93-98.

Hendrick, S.S., Dicke, A., & Hendrick, C. (1998). The relationship assessment scale. *Journal of Social and Personal Relationship, 15*, 137-142.

Hendrick, C. & Hendrick, S.S. (1989). Research on love: Does it measure up? *Journal of Personality and Social Psychology*, *56*, 784-794.

Hendrick, S.S. & Hendrick, C. (1997). Love and satisfaction. In R.J. Sternberg & M. Hojjat (Eds.), *Satisfaction in Close Relationships* (56-78). New York: The Guilford Press.

Hu, L.T., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*(1), 1-55.

Huston, T.L. & Burgess, R.L. (1979). Social exchange in developing relationships: An overview. In R.L. Burgess & T.L. Huston (Eds.), *Social exchange in developing relationships* (pp. 3-28). San Diego, CA: Academic Press.

Johnson, S.M. (2004). *The practice of emotionally focused couple therapy* (2nd ed). New York: Brunner-Routledge.

Kaestle, C.E., & Halpern, C.T. (2007). What's love got to do with it? Sexual behaviors of opposite-sex couples through emerging adulthood. *Perspectives on Sexual and Reproductive Health, 39*(3), 134-140.

Kaiser, H.F. (1958). The varimax criterion for analytic rotation in factor analysis. *Psychometrika*, *23*, 187-200.

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* (1), 3-34.

Kelley, H.H. & Thibaut, J.W. (1978). *Interpersonal relations: A theory of interdependence.* New York: Wiley.

Le, B. & Agnew, C.R. (2003). Commitment and its theorized determinants: A meta-analysis of

the investment model. *Personal Relationships*, *10*, 37-57.

Levesque, R.J.R. (1993). The romantic experience of adolescences in satisfying love relationships. *Journal of Youth and Adolescence, 22*, 219-251.

Levinger, G. (1965). Marital cohesiveness and dissolution: An integrative review. *Journal of Marriage and the Family*, *27*, 19-28.

Lewandowski, G.W., & Bizzoco, N.M. (2007). Addition through subtraction: Growth following the dissolution of a low quality relationship. *Journal of Positive Psychology, 2*, 40-54.

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: Research-based theories* (pp. 268-294). New York: Free Press.

Locke, H.J. (1959). *Predicting adjustment in marriage: A comparison of divorced and happily married group.* New York: Holt.

Locke, H.J. & Wallace, K.M. (1959). Short marital adjustment and prediction tests: Their reliability and validity. *Marriage and Family Living, 21*, 251-255.

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.

Muthén, L.K., & Muthén, B.O. (1998-2011). Mplus User's Guide. Sixth Edition. Los Angeles, CA: Muthén & Muthén.

Norton, R. (1983). Measuring marital quality: A critical look at the dependent variable. *Journal of Marriage and the Family, 45,* 141-151.

Park, S.S. & Rosén, L.A. (2013). The Marital Scales: Measurement of intent, attitudes, and

aspects regarding marital relationships. *Journal of Divorce and Remarriage, 54*:4, 295-312. doi: 10.1080/10502556.2013.780491

Reis, H.T. (2001). Relationship experiences and emotional well-bring. In C.D. Ryff & B.H. Singer (Eds.), *Emotion, Social Relationships and Health* (57-95). New York: Oxford University Press.

Reis, H.T., Collins, W.A., & Berscheid, E. (2000). Relationships in human behavior and development. *Psychological Bulletin*, *126*, 844-872.

Rodrigues, A.E., Hall, J.H., & Fincham, F.D. (2006). What predicts divorce and relaitonship dissolution? In M.A. Fine & J.H. Harvey (Eds.), *Handbook of divorce and relationship dissolution* (pp. 85-112). Mahwah, NJ: Erlbaum.

Rubin, Z., Hill, C.T., Peplau, L.A., & Dunkel-Schetter, C. (1980). Self-disclosure in dating couples: Causal direction and self-expression versus boredom. *Journal of Social and Personal Relationships, 10,* 243-254.

Rusbult, C.E. (1980). Commitment and satisfaction in romantic associations: A test of the Investment Model. *Journal of Experimental Social Psychology, 16*, 172-186.

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.

Sabatelli, R.M. (1988). Measurement issues in marital research: A review and critique of contemporary survey instruments. *Journal of Marriage and Family*, *500*(4), 891-915.

Schackelford, T.K., & Buss, D.M. (1997). Marital satisfaction in evolutionary psychology perspectives. In R.J. Sternberg & M. Hojjat (Eds.), *Satisfaction in Close Relationships* (7- 25). New York: The Guilford Press.

Schaefer, M.T., & Olson, D.H. (1981). Assessing intimacy: The PAIR inventory. *Journal of Marital and Family Therapy, 7,* 47-60.

Schumm, W.A., Nichols, C.W., Schectman, K.L., & Grinsby, C.C. (1983). Characteristics of responses to the Kansas Marital Satisfaction Scale by a sample of 84 married mothers. *Psychological Reports*, *53*, 567-572.

Shulman, S., Davila, J., & Shachar-Shapira, L. (2011). Assessing romantic competence among older adolescents. *Journal of Adolescence*, *34*, 397-406.

Shulman, S., & Scharf, M. (2000). Adolescent romantic behaviors and perceptions: Age-related differences and links with family and peer relationships. *Journal of Research on Adolescence, 10,* 99-118.

Simpson, J.A. (1987). The dissolution of romantic relationships: Factors involved in relationship stability and emotional distress. *Journal of Personality and Social Psychology, 53*, 683-692.

Snyder, D.K. (1981). *Marital satisfaction inventory.* Lose Angeles: Western Psychological Association.

Spanier, G.B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and Family, 38*(1), 15-28.

Spanier, G.B., & Cole, C.L. (1976). Toward clarification and investigation of marital adjustment. *International Journal of Sociology and the Family*, *6*, 121-146.

Spanier, G.B. & Lewis, R.A. (1980). Marital quality: A review of the seventies. *Journal of Marriage and Family*, *42*(4), 825-839.

Stanley, S.M., & Markman, H.J. (1992). Assessing commitment in personal relationship. *Journal of Marriage and Family, 54*(3), 595-608.

Sternberg, R.J. (1986). A triangular theory of love, *Psychological Review*, *93*, 119-135.

Sternberg, R.J. (1987). Liking versus loving: A comparative evaluation of theories. *Psychological Bulletin*, *102*, 331-345.

Sternberg, R.J. (1997). Construct validation of a triangular love scale. *European Journal of Social Psychology, 27*, 313-335.

Stuart, R.B. (1969). Operant-interpersonal treatment for marital discord. *Journal of Consulting and Clinical Psychology, 33*, 675-682.

Tabachnick, B.G., & Fidell, L.S. (2001). *Using multivariate statistics* (4th ed.). New York: Harper & Row.

Thibaut, J.W., & Kelley, H.H. (1959). *The social psychology of groups*. New York: Wiley.

Thompson, L. & Walker, A.J. (1982). The dyad as a the unit of analysis: Conceptual and methodological issues. *Journal of Marriage and the Family, 44*, 889-900.

Waterman, A.S. (1982). Identity development from adolescence to adulthood: An extension of theory and a review of research. *Developmental Psychology*, *18*(3), 341-358.

Weis, R.L., & Cerreto, M.C. (1980). The Marital Status Inventory: Development of a measure of dissolution potential. *American Journal of Family Therapy, 8*, 80-85.

Whisman, M.A. (1997). Satisfaction in close relationships: Challenges for the 21st century. In R.J. Sternberg & M. Hojjat (Eds.), *Satisfaction in Close Relationships* (385-410). New York: The Guilford Press.

Worthington, R.L. & Whittaker, T.A. (2006). Scale development research: A content analysis and recommendations for best practices. *The Counseling Psychologist*, *34*, 806-838.

APPENDICES

Appendix A

The Young Love Scale Items

0-4 Likert scale: 0=Strongly Disagree, 1= Disagree, 2=Neutral, 3=Agree, 4=Strongly Agree.

* indicates reverse-scoring.

Young Love Commitment Scale Items

1) I would like to continue my relationship.
2) I would like to end this relationship.*
3) I expect to end this relationship.*
4) I hope to continue this relationship.
5) I have considered ending my relationship.*
6) I have told my partner, 'I love you'.
7) I have not considered ending my relationship.
8) I have not told my partner, 'I love you'.*
9) I can date my partner for the long-term.
10) I cannot date my partner for the long-term.*
11) I cannot end this relationship.
12) I could end this relationship.*
13) This is a stable relationship.
14) This is an unstable relationship.*
15) I will do what I can to continue this relationship.
16) I do not care if this relationship ends.*

17) It is important that this relationship continues.*

18) My partner and I have both said, ‘I love you.’

19) My partner and I have not said, ‘I love you.’*

Young Love Satisfaction Scale Items

1) My relationship is beneficial.

2) My relationship is important.

3) I am satisfied with my relationship.

4) I feel personally fulfilled by my relationship.

5) My relationship satisfies me.

6) My relationship fulfills me.

7) My relationship is not beneficial.*

8) My relationship is unimportant.*

9) I feel unfulfilled by my relationship.*

10) My relationship is unsatisfactory. *

11) My relationship does not fulfill me.*

12) I feel dissatisfied by my relationship.*

13) I have fears about my relationship.*

14) I do not have fears about my relationship.

15) My relationship causes me to doubt.*

16) My relationship does not cause me to doubt.

17) I have doubts about my relationship.*

18) I do not have doubts about my relationship.

19) I feel cautious about my relationship.

20) I do not feel cautious about this relationship.*

21) My relationship makes me happy.

22) My relationship does not make me happy.*

23) I am content with my relationship.

24) I feel discontent in my relationship.*

25) This relationship is a happy situation.

26) This relationship is an unhappy situation.*

Young Love Adjustment Scale Items

1) My partner and I communicate well in this relationship.

2) My partner and I value communication.

3) In this relationship, communication is not valued.*

4) My partner and I do not communicate well.*

5) In this relationship, communication is valued.

6) My partner respects me.

7) I feel respected by my partner.

8) My partner does not respect me.*

9) I do not feel respected by my partner.*

10) Respect is important to this relationship.

11) I trust my partner completely.

12) I have a hard time trusting my partner.*

13) Staying faithful is important to this relationship.

14) It is difficult to stay faithful to my partner.*

15) Trust is important to our relationship.

16) Trust is not necessary in our relationship.*

17) I feel that my partner trusts me.

18) Financial stability is important to our relationship.

19) Financial stability is not important to our relationship.*

20) Our relationship values financial stability.

21) Our relationship does not value financial stability.*

22) Financial stability is necessary for our relationship.

23) My partner emotionally supports me.

24) I do not feel emotionally supported by my partner.*

25) I feel emotionally supported by my partner.

26) My partner does not emotionally support me.*

27) Emotionally supporting each other is valued.

28) Emotional support it not important in this relationship.*

29) We value physical intimacy.

30) Physical intimacy is not valuable in our relationship.*

31) Physical intimacy is valued in our relationship.

32) Physical intimacy is important to our relationship.

33) Physical intimacy is not important to our relationship.*

34) Romance is important in my relationship.

35) Romance is valuable for my relationship.

36) Romance is unimportant in my relationship.*

37) My relationship does not value romance.*

38) Conflict occurs frequently in my relationship.*

39) My partner and I do not argue.

40) My partner and I argue.*

41) Conflict does not occur in my relationship.

42) My partner and I agree on most things.

43) My partner and I disagree on most things.*

Appendix B

Screening Survey and Demographic Questions

Screening Survey

Please respond to the following items to determine your eligibility for participating in this study.

1) What is your current relationship status? (check all that apply)
    a. Single
    b. Dating
    c. Dating in an exclusive relationship
    d. Living with my partner
    e. Married
    f. Separated
    g. Divorced
    h. Widowed
2) Are you currently in a romantic relationship?

    If yes, then directed to next question and then to the survey. (Please think about this relationship as you respond to these surveys.) If no, then directed to question 3.
3) Have you ever been in a romantic relationship?

    If yes, then directed to next question. If no, then directed out of the survey.
4) Were you in a romantic relationship in the last two years?

    If yes, then directed to next question and then to the survey. (Please think about this relationship as you respond to these surveys). If no, then directed out of the survey.

Demographic Questions

1) What is your age? (in years) _____

2) What is your gender?

    a. Female

    b. Male

3) What is your year in school?

    a. Freshman

    b. Sophomore

    c. Junior

    d. Senior

    e. Fifth year and above

4) What race/ethnicity do you identify with the most? (Please check all that apply)

    a. African American/Black

    b. Alaska Native

    c. American Indian/Native American

    d. Asian

    e. Caucasian/White

    f. Hawaiian/Pacific Islander

    g. Latino or Hispanic

    h. Middle Eastern

    i. Other (Please specify: _____)

5) What is your sexual orientation? (Please choose one)

    a. Heterosexual

    b. Gay/Lesbian

    c. Bisexual

d. Other (please specify: _____)

We asked you to think about a relationship as you responded to these surveys.

6) When was this relationship?

   a. It is now

   b. It was sometime in the last two years

7) When thinking about this relationship, do/did you think it will/would last?

   a. Yes

   b. No

8) When thinking about this relationship, does/did your partner think it will/would last?

   a. Yes

   b. No

9) The relationship was:

   a. An opposite-sex relationship (partners were opposite sex)

   b. A same-sex relationship (partners were same sex)

10) This relationship was:

   a. A closed relationship (we dated each other exclusively)

   b. An open one (we dated other people)

11) If this relationship ended, how did it end?

   a. Very poorly

   b. Poorly

   c. Neutral

   d. Okay

   e. We still talk

12) How long did the relationship last or how long has it been since you started dating in this current relationship? (in months)

    a. _____

13) Did your facebook status change?

    a. Yes

    b. No

14) Are your parents divorced?

    a. Yes

    b. No

15) If so, how old were you when your parents divorced?

    a. __ years old

    b. Don't know

16) What is the highest level of education completed by your mother?

    a. Elementary school

    b. Some high school

    c. High school

    d. Some college

    e. Two year degree

    f. Four year degree

    g. Graduate degree

    h. Don't Know

17) What is your mother's occupation? _____

Don't Know_____

18) What is the highest level of education completed by your father?

a. Elementary school
b. Some high school
c. High school
d. Some college
e. Two year degree
f. Four year degree
g. Graduate degree
h. Don't Know

19) What is your father's occupation? _____

Don't Know_____

Appendix C

The Young Love Scales

0-4 Likert scale: 0=Strongly Disagree, 1= Disagree, 2=Neutral, 3=Agree, 4=Strongly Agree.

* indicates reverse-scoring.

Young Love Commitment Scale

1. I would like to continue my relationship.
2. My partner and I have not said, 'I love you.'*
3. This is a stable relationship.
4. I do not care if this relationship ends.*
5. I expect to end this relationship.*
6. My partner and I have both said, 'I love you.'
7. I have considered ending my relationship.*
8. I cannot date my partner for the long-term.*
9. I have told my partner, 'I love you'.
10. I hope to continue this relationship.

Young Love Satisfaction Scale

1. My relationship is beneficial.
2. I feel dissatisfied by my relationship.*
3. This relationship is a happy situation.
4. My relationship is unsatisfactory.*
5. I have doubts about my relationship.*
6. I feel personally fulfilled by my relationship.
7. I am content with my relationship.

8. My relationship causes me to doubt.*
9. My relationship does not make me happy.*
10. I am satisfied with my relationship.
11. My relationship does not fulfill me.*

Young Love Adjustment Scale

1. My partner and I communicate well in this relationship.
2. My partner respects me.
3. I have a hard time trusting my partner.*
4. I feel emotionally supported by my partner.
5. Physical intimacy is important to our relationship.
6. Romance is important in my relationship.
7. My partner and I do not communicate well.*
8. I feel respected by my partner.
9. Romance is valuable for my relationship.
10. Physical intimacy is not valuable in our relationship.*
11. My partner emotionally supports me.
12. I do not feel respected by my partner.*
13. My partner and I value communication.
14. My relationship does not value romance.*
15. I trust my partner completely.
16. We value physical intimacy.
17. My partner does not emotionally support me.*
18. Trust is important to our relationship.

Appendix D

Manuscript for Journal Submission

An Exploratory Theory of Young Love

Stacey S. Park and Lee A. Rosén

Colorado State University

Author Note

Correspondence concerning this article, as well as, access to a free copy of the young love scales should be addressed to Lee A. Rosén, Department of Psychology, Colorado State University, Fort Collins, CO 80526. Contact: lee.rosen@colostate.edu.

From a dissertation submitted to the Academic Faculty of Colorado State University in partial fulfillment of the requirements for the degree of Ph.D. in Counseling Psychology.

Abstract

Research on romantic relationships in emerging adulthood is essential to better understanding the trajectory of romantic relationships in adults, and the identity development of emerging adults. Measures of romantic relationship quality demonstrate flaws in a few ways: some are based on an atheoretical structure, which limits interpretation of the measure, some define relationship quality as multiple constructs (e.g., satisfaction and commitment) simultaneously, and some are limited to couples in marital relationships. Three studies were conducted to develop and validate the Young Love Scales, three measures of relationship commitment, satisfaction and adjustment, to examine the theoretical structure of these constructs, and then to examine a mediation model where adjustment (daily behaviors) predicts one's commitment to the relationship, but satisfaction fully mediates this link. Overall, this suggests that individuals' actions in the relationship must add to a sense of satisfaction in order for them to feel that the relationship should continue. These results have implications for couple therapy interventions, and for better understanding the trajectory of romantic relationships in emerging adults.

Keywords: romantic relationships, emerging adults, quality, satisfaction, commitment, adjustment, Young Love Scales

An Exploratory Theory of Young Love

Relationships are an individual's social connection to others, an association in which individuals influence each other's thoughts, feelings, and behaviors (Reis, 2001). Researchers have been examining the individual's universal need to belong (Baumeister & Leary, 1995) for decades, with particular attention on romantic relationship quality and its subsequent influence on psychological and physical outcomes. Research has also focused on the development of romantic relationship in young adults, and the formation of these relationships is seen as a crucial developmental task. The average age for the first "serious" or meaningful same-sex relationship is 18 years old (Floyd & Stein, 2002). 70% of adolescents report having experienced a romantic relationship by the age of 18 (Carver, Joyner, & Udry, 2003) and the average duration of romantic relationships for 17- and 18-year olds is 12 months or longer (Shulman & Scharf, 2000). Among individuals who identify as a sexual minority, 93% of boys and 85% of girls in adolescence report having had same-sex activity (Diamond et al., 1999). Thus, young adults have likely had meaningful, romantic experiences with same-sex or opposite-sex partners during their late adolescent years, if not currently.

Emerging adulthood refers to a period of development consisting of the late teens through the twenties, a time of transition between adolescence and adulthood (Arnett, 2000). While there are many essential characteristics that describe the transition (for a full description, see Arnett, 2000; Arnett, 2004), it is also when emerging adults begin to develop important romantic attachments, start to commit to long-term relationships, learn how to end abusive or unhealthy relationships, and examine their options for romantic partners (Arnett, 2000; Fincham & Cui, 2010; Fraley & Davis, 1997; Kaestle & Halpern, 2007; Lewandowski & Bizzoco, 2007); a period of "young love." This is a marked difference from adolescence because early- and

middle-adolescents tend to experience romantic encounters and dating in groups (Arnett, 2000; Connolly, Craig, Goldberg, & Pepler, 2004). Romantic relationships in emerging adulthood also have significant implications for individual well-being and adjustment. Identity development for emerging adults tends to be correlated to positive relationship qualities from romantic relationships, but not from friendships (Barry, Madsen, Nelson, Carroll & Badger, 2009). When compared to relationships with friends or parents, romantic relationships appear to have a greater effect on one's happiness (Demir, 2010).

Defining Romantic Relationship Quality

Research indicates that relationship quality can be described as the degree of positive, beneficial romantic experiences as compared to the degree of negative, potentially harmful experiences in a relationship (Collins, 2003; Collins, Welsh & Furman, 2009). As an abstract concept, quality incorporates the notion that the benefits outweigh the costs of a relationship. However, the field examining romantic relationships has struggled to find a cohesive definition of relationship quality, most research has relied on studying marital relationships, and most measures of this concept are atheoretical in origin. As an example, Spanier and Lewis (1980) define marital quality as the subjective evaluation of the relationship on various dimensions, implying that marital quality involves examining different aspects of the relationship. Alternatively, marital quality has also been defined as the global evaluation of the relationship (Fincham & Bradbury, 1987; Sabatelli, 1988), implying that perceptions of different specific aspects in the relationship are less important than the overall global judgment. There is no one unified theory that clearly defines marital quality or relationship quality.

Through Sabatelli's (1988) review and critique of measures used in marital research, it was clear that measures fell in one of two categories: first, those that examined quality,

satisfaction, and adjustment, and second, those that examined commitment and factors leading to marital dissolution. Researchers have regularly critiqued measures of satisfaction, quality, and adjustment for assessing overlapping constructs that may be separate (e.g., general feelings about the relationship versus attitudes about different domains within the relationship), for measuring objective and subjective attitudes simultaneously, for being atheoretical in origin, and for confusing both the individual and dyad as simultaneous units of analysis (Fincham, Beach, & Kemp-Fincham, 1997; Fincham & Bradbury, 1987; Fletcher, Simpson, & Thomas, 2000; Funk & Rogge, 2007; Karney & Bradbury, 1995; Sabatelli, 1988; Whisman, 1997). Measures of commitment and factors leading to dissolution have historically been based more on theories of romantic relationships (e.g., interdependence theory; Kelley & Thibaut, 1978; Thibaut & Kelley, 1959). However, this area of research is still in need of further development as it is infrequently examined in the romantic relationships literature (Sabatelli, 1988).

Quality has referred to both subjective and objective characteristics of marital relationships – what others refer to as the global evaluation of the relationship (satisfaction) and the evaluation of the relationship in different domains (adjustment; (Fincham & Bradbury, 1987; Fletcher, Simpson & Thomas, 2000; Sabatelli, 1988; Spanier & Lewis, 1980; Whisman, 1997). Based on a review of the literature, there appear to be conceptual distinctions among defining ongoing, specific characteristics of marital relationships (adjustment), the general evaluation of the relationship (satisfaction), and the stability of the relationship (commitment). *Adjustment* is an attitude of the daily behaviors in the relationships, in domains such as emotional intimacy, trust, physical or sexual intimacy, etc (Erbert & Duck, 1997; Hendrick & Hendrick, 1997; Locke, 1951; Sabatelli, 1988; Spanier, 1976; Spanier & Cole, 1976; Thompson & Walker, 1982; Whisman, 1997). *Satisfaction* is the general subjective feeling, as good or bad, as positive or

negative, towards the relationship (Bradbury, Fincham, & Beach, 2000; Erbert & Duck, 1997; Hendrick & Hendrick, 1997; Huston & Vangelisti, 1991; Le & Agnew, 2003; Sabatelli, 1988; Whisman, 1997). This is the more affective attitude towards the relationship. *Commitment* to the relationship is the intent, or the desire, motivation, and cognitions related to staying in or maintaining the relationship (Ackerman, Griskevicius, & Li, 2011; Arriaga & Agnew, 2001; Le & Agnew, 2003; Kelley & Thibaut, 1978; Rusbult, 1980; Sabatelli, 1988; Stanley & Markman, 1992). It appears to be a cognitive attitude about the long-term stability of the relationship.

Recent research by Fletcher, Simpson, and Thomas (2000) suggests that romantic relationship quality is best understood as a hierarchical second-order construct consisting of six first-order factors: satisfaction, commitment, trust, closeness/intimacy, passion, and love. Theoretically, this model postulates that individuals tend to evaluate their romantic partners relatively consistently across constructs but can also vary considerably depending on the domain (Fletcher et al., 2000). This hierarchical model also proved to be significantly better than a model that allowed these constructs to correlate without a second-order factor (Fletcher et al., 2000), though fit statistics for both models were comparable. While theoretically helpful to better understand relationship quality as a construct, there continues to be concerns with Fletcher, Simpson, and Thomas' (2000) research. Other researchers in relationship quality use the words satisfaction and quality synonymously; indicating that both constructs refer to one's overall feeling about his or her romantic relationship (Erbert & Duck, 1997; Huston & Vangelisti, 1991; Sabatelli, 1988; Whisman, 1997). The proposed hierarchical structure is problematic then if a general feeling of satisfaction is being measured at both levels (at the first-order and second-order factor levels). Second, several constructs are missing from the six-factor model of relationship quality, such as, quality of alternatives for potential romantic partners (e.g.,

Rusbult, 1983) or adjustment as a measure of daily behaviors (e.g., Hendrick & Hendrick, 1997; Sabatelli, 1988). The proposed hierarchical model of relationship quality could be missing crucial information about other domains related to romantic relationships. Third, Fletcher et al.'s (2000) line of research reflects the lack of existing measures in assessing quality in romantic relationships. Essentially, the researchers make their own inventory (using a small-number of highly face-valid items) because of the lack of appropriate measures in the field that could be used without the risk of measuring overlapping constructs within one measure.

An Exploratory Theory of Young Love

How then are adjustment, satisfaction, and commitment related to relationship quality? Similarly to the work done by Fletcher, Simpson, and Thomas (2000), there are three possible models that were explored. First, there is the theoretical possibility that all of the items under these three constructs are distinct and subsumed under the idea of relationship quality. Second, the first-order factors are distinct, yet correlated to one another. Last, the first-order factors load onto a second-order factor of overall relationship quality. While Fletcher and colleagues examine a fourth potential model that there these components are distinct and uncorrelated, they found that this model had a poor fit. Additionally, most of the theories on relationships (e.g., Sternberg, 1986) assume that the constructs should be correlated. We expected that the second model where all first-order factors were correlated would produce the best model fit. Though Fletcher and colleagues (2000) found that a hierarchical model produced the best fit, we hypothesized it would be the second model given how the items were written to reflect constructs all at one-level of analysis.

We also proposed a mediation model, where it was expected that one's daily behaviors in specific areas of the relationship (adjustment) would predict one's future orientation about the

relationship (commitment). However, this relationship would be mediated by one's general sense of satisfaction with the relationship. This model was hypothesized based on a combination of theories on romantic relationship quality in the literature (for a full review of these theoretical perspectives, read Karney & Bradbury, 1995). Social exchange theory posits that people will maintain relationships where essentially the benefits of staying in it outweigh the costs of being in it (Kelley & Thibaut, 1978). Also based on this theory is Rusbult's (1980) Investment Model. Within these theories, commitment is assumed to be central to the future of the couple. Highly committed individuals are more likely to stay in the relationship because they feel satisfied with their current partner; they have weighed the costs, the benefits, and they do not perceive high-quality alternatives. Therefore, commitment is a measureable outcome of whether or not a person will choose to stay or to leave, and the decision is influenced by satisfaction with the cost-benefit ratio. Given that "adjustment" consists of individuals' evaluation of their attitudes about specific domains in their relationship, it is likely that this will predict both commitment and satisfaction. However, attitudes about specific parts of the relationship are essentially meaningless unless they contribute to a sense of satisfaction, which then impacts a person's decision to stay in or to leave the relationship.

This hypothesized mediation model is also consistent with Gottman's model of couples therapy. The very premise of the Gottman model is that one's perception about the quality of the relationship is influenced by the positive and negative interactional behaviors between the couple (Gottman, 1982; Gottman, 1990). Furthermore, marital conflict is directly related to intense negative affect directed towards the partner and attempts to repair the relationship tend to fail because of the display of intense negative affect via criticism, stonewalling, defensiveness or contempt towards each other (Gottman & Silver, 1999). Therefore, individuals' perceptions of

daily behaviors, specifically within communication, impact their emotional state, which in turn impacts their perception of quality.

Current Study

The current study focuses on young love and relationship quality for early emerging adults; specifically, this study examines current relationships that individuals in transition from adolescence to adulthood (from 18-20 years of age) may have and also examined previous relationships that individuals had in late adolescence (from 16-18 years of age). The present research examined an exploratory theory of young love through three studies. Study 1 outlined the development of new measures for understanding adjustment, satisfaction, and commitment in romantic relationships. Study 2 provided validation for the factor structure that emerged from Study 1, and also examined the theoretical nature of the measures. Study 3 examined a mediation model that was hypothesized from examining the current literature and other theories on romantic relationship quality.

Study 1

Construction of the Young Love Scales

The development of these three relationship scales for adjustment, satisfaction, and commitment followed the process outlined by Worthington and Whitaker (2006). Items were written to reflect the constructs defined by the literature, and to be analogous measures to the previously written Marital Scales (Park & Rosén, 2013). Experts in the subject area then examined the items for their readability and quality. Items were piloted, then administered in randomized order to two separate samples for the purpose of exploring the factor structure of the items and then to validate the observed factor structure.

Young Love Adjustment Scale. 43 items were created to assess for daily behavioral functioning in multiple domains like communication, passion, intimacy, trust, love, romance, finances, conflict, and respect (Fletcher, Simpson & Thomas, 2000; Hendrick & Hendrick, 1997; Sabatelli, 1988). Items are also analogous to the Aspects of Marriage Scale (Park & Rosén, 2013).

Young Love Satisfaction Scale. 26 items were generated to assess general satisfaction and dissatisfaction in one's relationship (Bradbury, Fincham, & Beach, 2000; Erbert & Duck, 1997; Hendrick & Hendrick, 1997; Huston & Vangelisti, 1991; Le & Agnew, 2003; Sabatelli, 1988; Whisman, 1997). Based on the literature, items incorporated positive and negative feelings about the relationship, reflecting one's affective attachment to the relationship. Items assessing for fears and doubts were also incorporated in order to be similar to the General Attitudes towards Marriage Scale from the Marital Scales (Park & Rosén, 2013).

Young Love Commitment Scale. 19 items were written based on the literature to assess commitment to the relationship. Items were written to form a three factor structure – future orientation about the relationship, attachment to one's partner, and maintenance behaviors like ignoring alternative partner choices – proposed by empirical findings (Agnew, van Lange, Rusbult, & Langston, 1998; Arriaga & Agnew, 2001; Rusbult, 1980; Sabatelli, 1988; Stanley & Markman, 1992). These items are also based on the Intent to Marry Scale from the Marital Scales (Park & Rosén, 2013).

Pilot study. Constructed items were administered to three department faculty professors who are considered subject matter experts. These professors were provided with definitions for each construct. They were asked to match each item to a construct, and to rate how highly the item appeared to represent the construct. Of the 88 items, the raters demonstrated some

disagreement on 19 of the items. There were only two items where all three raters assigned a different construct to an item and those two items were not retained after the factor analyses. The constructed items were also administered to five advanced doctoral students for feedback on item readability, clarity and redundancy. Any items that appeared to have a question about its readability or clarity were rewritten. Of the 88 sample items for the Young Love Scales, none were rewritten.

Procedure

The current study required the recruitment of a minimum of several hundred participants, over the course of two separate samples. One sample was used to examine the factor structure of the items in Study 1. The second sample was randomly split into two; half of the sample was used to validate the proposed factor structure of the Young Love Scales in Study 2, and the other half of the second sample was used to examine the theoretical structure of the measures in Study 3.

Individuals were recruited from the psychology department pool, consisting of psychology students taking introductory college courses. Students were given course research credit for their participation. They were initially screened through the department website for either current involvement in a romantic relationship, or prior involvement sometime in the last two years. They were directed to an external link in which they were given information about informed consent, including details on the purpose of the study, the possible risks involved, and the possible benefits of the study. Participants were guaranteed their anonymity and confidentiality; no questions or requests for identifying information was made during the study.

After indicating consent, participants were directed to a screening survey, which included questions on their current relationship status, and if single, whether or not they had been in a

romantic relationship sometime in the last two years. They were asked to think of one specific relationship as they answered the survey questions. Participants from both samples were then administered the Young Love Scales items in randomized order. Individuals from the second sample were also administered additional measures (see below) for the purpose of exploring the relationship between marital attitudes and relationship attitudes, and for establishing measurement validity. All participants were then asked to complete items regarding demographic information, such as their age, gender, sexual orientation, and ratings of their relationship. Participants were then directed to a debriefing form. All procedural components and study materials were submitted to and approved by the University Institutional Review Board.

Method

Participants

514 students at a large university in the western US were recruited to respond to questions regarding their current or past romantic relationship. All of the participants volunteered to participate in the study for course credit in an introductory psychology course. Thirteen individuals were removed from the study for various reasons, including one individual who responded to the items while thinking of two intimate relationships, one who had never been in a relationship, and nine individuals who were missing more than 10% of their survey responses or had stopped responding altogether. 174 individuals identified as male, 319 as female, 1 as transgender and 1 as unknown (6 missing). The average age of the participants was 19.68 (SD = 2.31). 78.8% of the sample self-identified as Caucasian/White, 12.6% as Latino or Hispanic, 3% as African-American or Black, 1.4% as Asian American, 1% as Middle Eastern, 1% as Hawaiian or Pacific Islander, and 1.2% as biracial. 95.2% of the participants identified as

heterosexual, or sexually interested in the opposite sex. 36.7% were not currently in a relationship, 11.8% identified their current status as dating, 31.9% as dating exclusively, 1.8% as cohabitating, and 1.8% indicated they were married.

Measures

Young Love Scale Items. 88 items were written in the process described above to assess adjustment, satisfaction, and commitment to the relationship.

Screening survey. Participants were first taken to a screening survey, which assessed participants' dating status. Participants were then asked to indicate if they are in a current relationship, or have been in one sometime in the last two years. If participants met the exclusion criteria, they were directed to the survey, and asked to think about one particular relationship as they respond to the surveys.

Demographic questions. Participants were asked to report their age, gender, ethnicity, and sexual orientation. They were also asked about their current dating status, previous relationships, and duration of those relationships.

Results

Exploratory Factor Analysis (EFA)

Given the dearth of theory-driven measures of romantic relationship quality, and exploratory factor analysis (EFA) was used to investigate latent constructs for commitment, satisfaction, and adjustment, concepts that have been previously unexamined, or have only been incorporated in research via atheoretical means. Mplus (Version 6.11) for windows (Muthén & Muthén, 1998-2011) was used to calculate all latent models. Because of the nonnormality present in the dataset, a maximum likelihood estimation with robust standard errors (MLR) method was used. This method is uniquely advantageous because it can address both missing

data (using full information maximum likelihood) and non-normal data. Factors were retained based on eigenvalue (if greater than 1; Kaiser, 1958) and by visual examination of the scree plot (Cattell, 1966).

Analyses revealed five factors for the Adjustment scale, two factors for the Satisfaction scale, and three factors for the Commitment scale. Factors with more then three variables were retained, and items were assessed for a minimum standardized factor loading of 0.32 (Tabachnick & Fidell, 2001). For the Adjustment analysis, some items loaded strongly onto two of the five suggested factors. No clear theme emerged from the items under the first two factors (see Table 13). The third factor that emerged from the EFA grouped together items about finances, the fourth grouped items on conflict, and the fifth was comprised of items on physical intimacy. The Satisfaction items demonstrated strong factor loadings on independent factors. All of the items written to reflect satisfaction with the relationship, dissatisfaction with the relationship, and happiness with the relationship fell onto one factor, while all of the items to reflect fears and doubts loaded onto another factor. As for the Commitment items, all items loaded strongly onto one of three factors, with the exception of one item that had a factor loading of 0.46 and 0.36 on two separate factors. Themes that emerged from the factors suggested the items were grouping on ideas about having a future orientation for the relationship, thinking it was a stable relationship, and making declarations of love towards one's partner.

Study 2

The purpose of this study was to build on the findings of the first study and pare down items for each factor to produce the Young Love Scales. Confirmatory factor analysis was used to assess for the best model fit for the Young Love Scales. Reliability and validity analyses were

also conducted on the newly constructed scales to provide further information on the psychometric properties of the new scales.

Method

Participants

At a large university in the western United States, 635 students were recruited to participate in a study on love. All students volunteered in exchange for course credit in an introductory psychology course. Of the 635 responses, 27 were removed from the data analyses. A few individuals indicated they had never been in a romantic relationship and were thinking of their "ideal" relationship. Other responses were removed where more than 10% of the data was missing, or where participants had stopped responding altogether. The remaining sample of 608 was then randomly split into two separate samples for Study 2 ($N = 305$), and Study 3 ($N = 303$). For this sample, 84 individuals identified as male, and 213 as female (8 missing), and the average age of the participants was 19.02 ($SD = 2.33$). 81.6% of the sample identified as Caucasian/White, 11.8% as Latino/Hispanic, 2.3% as Asian, 1.3% as African American or Black, 1% as Hawaiian or Pacific Islander, 0.3% as American Indian/Native American, 0.3% as Middle Eastern, and 0.3% identified as biracial. 92.1% identified as heterosexual. 36.7% were not currently in a relationship, 12.8% indicated they were dating, while 40.3% reported they were dating exclusively, 3.6% of the sample indicated they were cohabitating, and 1.3% reported they were married.

Measures

Young Love Scales. 88 potential items for the Young Love Scales were administered to the participants. 43 items examined one's daily behavioral functioning in the relationship, 26

items explored one's sense of satisfaction with the relationship, and 19 items assessed general commitment to the relationship.

Perceived Relationship Quality Components Inventory (PRQC; Fletcher, Simpson, & Thomas, 2000). The PRQC consists of 18 items, and was designed to be highly face valid assessment of six commonly assessed markers of relationship quality: satisfaction, commitment, intimacy, trust, passion, and love. Fletcher and colleagues reported alphas ranging from 0.74 to 0.96 for two separate samples. Cronbach's alpha for this sample for satisfaction was 0.98, commitment was 0.98, intimacy was 0.89, trust was 0.93, passion was 0.81, love was 0.93, and overall was a 0.96 for this sample.

Relationship Assessment Scale (RAS; Hendrick, 1988). The RAS consists of seven items designed to measure the latent construct of relationship satisfaction, with higher scores demonstrating greater satisfaction. Hendrick reported an inter-item correlation of 0.49 and Cronbach's alpha of 0.86 for the sample. For this sample, Cronbach's alpha was 0.92.

Marital Scales – Intent to Marry Scale (IMS; Park & Rosén, 2013). The IMS is a unifactorial, three-item measure to examine one's intent to marry. The Young Love Commitment Scale is meant to be analogous to the IMS, with the focus on one's commitment towards his or her own relationship. The IMS is administered on a seven-point Likert scale, and Cronbach's alpha for this sample was 0.91.

Marital Scales – General Attitudes Towards Marriage Scale (GAMS; Park & Rosén, 2013). Similarly to the IMS, the GAMS is also meant to be comparable to the Young Love Satisfaction Scale, with the emphasis on one's own romantic relationship as opposed to attitudes towards all marital relationships. The GAMS consists of ten items, and three factors:

positive attitudes, negative attitudes, and fears and doubts. Cronbach's alpha for this sample was 0.83 for positive attitudes, 0.73 for negative attitudes and 0.79 for fears/doubts.

Marital Scales – Aspects of Marriage Scale (AMS; Park & Rosén, 2013). The AMS consists of 23 items divided in two six factors for romance, respect, trust, finances, meaning, and physical intimacy. Items are rated on a seven-point Likert scale, and are designed to assess one's attitudes towards different aspects of everyday living in a marital relationship. The Young Love Adjustment scale was also created to represent the AMS, with the focus being on one's own romantic relationship instead of general marital relationships. Cronbach's alpha for this sample was 0.79 for romance, 0.96 for respect, 0.89 for trust, 0.50 for finances, 0.89 for meaning, and 0.78 for physical intimacy.

Relationship Belief Inventory (RBI; Eidelson & Epstein, 1982). The RBI measures five types of dysfunctional relationship beliefs (disagreement is destructive, mindreading is expected, partners cannot change, sexual perfectionism, and the sexes are different). The RBI consists of 40 items, rated on a 6-point Likert scale, and respondents are asked to rate the extent to which they believe a statement to be true. Sample items include: "I do not expect my partner to sense all my moods" and "My partner does not seem capable of behaving other than s/he does now." Eidelson and Epstein (1982) reported a Cronbach alpha ranging from 0.72 to 0.81. For this sample, Cronbach's alpha for the full scale was 0.86, 0.83 for disagreement is destructive, 0.73 for mindreading is expected, 0.74 for partners cannot change, 0.72 for sexual perfectionism, and 0.67 for the sexes are different.

Results

Confirmatory Factor Analysis (CFA)

CFA was completed using Mplus (Version 6.11) for windows (Muthén & Muthén, 1998-2011). A maximum likelihood estimation with robust standard errors (MLR) method was used to account for missing data and a non-normal distribution in the data. Model fit was assessed using Hu and Bentler's (1999) recommendations: a Comparative Fit Index (CFI) greater than or equal to 0.95 and a standardized root mean squared residual (SRMR) less than or equal to 0.08. A non-significant chi-square will be also be used to assess for good model fit to the data, though it is sensitive to large samples (Cole, 1987).

Initially, analysis of the Adjustment Scale started with a theory-driven focus, examining the proposed eight-factor structure. Model fit was less than optimal with very high factor correlations among some of the factors. Based on the results of the EFA, the Young Love Adjustment Scale was pared down to six factors producing excellent fit (see Table 1). The six factors are called: Communication, Respect, Emotional Support, Trust, Romance, and Intimacy. The simpler model produced a significant change in chi-square and appears to present a better fit than the hypothesized solution (see Table 2).

A theory-driven and an EFA-driven model were explored for the Young Love Satisfaction Scale (see Table 3). The theory-driven model was based solely on how the items were written to reflect unique factors. Though fit appeared good, correlations among the factors were very high, ranging from 0.81 to 0.99, and a more parsimonious model was pursued. The EFA-driven model also showed good fit and themes emerged from the two factors to represent attitudes towards the relationship, and fears/doubts. Correlations between the factors remained high, so a one-factor model that collapsed both factors was examined. This model provided

excellent fit, and also demonstrated a significant change in chi-square when compared to the two-factor model (see Table 4). The one factor is simply referred to as Satisfaction.

Similarly to the other Young Love Scales, three factors for the Young Love Commitment Scale were examined based on the results of the EFA. Fit appeared good, with a Robust CFI of 0.95 and a RMSEA of 0.07. Factor loadings were also high, ranging from 0.42 to 0.98. Themes also emerged from the items, and seemed to fall under future orientation for the relationship, love, and attitudes about stability of the relationship. However, the correlation between future orientation and stability was very high and one of the items appeared to have loaded on both factors, so a two-factor model was explored (see Table 5). The two-factor model showed excellent fit and also demonstrated a significant improvement in chi-square when compared to the three-factor model (see Table 6). Items for the first factor appears to group around the idea of having a future orientation for the relationship, and was named Future Orientation. As for the second factor, items were based on whether or not raters had professed their love to their partner was called, Love.

Reliability Analyses

Cronbach's coefficient alpha (α), a test of inter-items correlations was used to examine the internal consistency of the newly constructed Young Love Scales. George and Mallery (2003) indicate that a Cronbach's alpha above .7 is considered acceptable, an α above .8 is considered good, and an α above .9 is considered excellent. Results showed alphas for the Adjustment scale fell from the acceptable to excellent range (see Table 1), ranging from 0.77 to 0.92. Table 3 shows that alpha for the Satisfaction scale also fell in the excellent range. Results demonstrated alphas of 0.91 and 0.95 for the Commitment factors, both falling in the excellent range (see Table 5).

Validity Analyses

A Pearson correlation coefficient was computed to determine if the newly constructed Young Love Scales showed good construct validity. Correlations among the new scales were examined first. Satisfaction and Adjustment were highly correlated ($r = 0.86$, $p < .001$), as well as Commitment and Adjustment ($r = 0.76$, $p < .001$). Commitment and Satisfaction had a correlation of 0.83 ($p < .001$), which is higher than expected given that the scales are designed to measure separate constructs. Factor correlations are reported in Table 7, with correlations ranging from 0.22 to 0.94, and all were significant at the $p < .05$ level. These results generally show variable construct validity for the new Young Love Scales, an issue which should be further explored.

Correlations among the new scales and the PRQC was also examined. It was expected that the Young Love Scales should be highly correlated to the PRQC as they are measuring similar constructs. The Adjustment scale and the PRQC were highly correlated ($r = 0.81$, $p < .001$), as well as the Satisfaction scale and the PRQC ($r = 0.78$, $p < .001$), and the Commitment Scale and the PRQC ($r = 0.77$, $p < .001$).

The Marital Scales and the RBI provided discriminant validity for the Young Love Scales. While these scales measure attitudes about relationships, they are theoretically dissimilar in that the Marital Scales examine attitudes about general marital relationships while the Young Love Scales are designed to measure attitudes about a one's current or very recent romantic relationship. The Intent to Marry Scale demonstrated low correlations with the Young Love Adjustment ($r = 0.32$, $p < .001$), Satisfaction ($r = 0.36$, $p < .001$), and Commitment ($r = 0.36$, $p < .001$) scales. Similarly, the General Attitudes towards Marriage Scale also showed low to moderate correlations with the Adjustment ($r = 0.39$, $p < .001$), Satisfaction ($r = 0.43$, $p < .001$),

and Commitment ($r = 0.40$, $p < .001$) scales. Correlations between the Young Love Scales and the Aspects of Marriage Scale fell in the low range (Adjustment and AMS: $r = 0.32$, $p < .001$; Satisfaction and AMS: $r = 0.24$, $p < .001$; and Commitment and AMS: $r = 0.28$; $p < .001$).

Similarly, the RBI is a measure on dysfunctional beliefs about relationships in general and should only be moderately correlated to a measure on one's own relationship. Correlations among the Young Love Scales and the RBI fell in the moderate range (Adjustment and RBI, $r = 0.55$; Satisfaction and RBI, $r = 0.50$; and Commitment and RBI, $r = 0.40$; all with a p-value of less than .001).

Study 3

This study provided a second sample to assess the psychometric properties of the newly developed Young Love Scales, and also examined first- and second-order factor models to assess for what would produce the best fit. The last purpose of this study was to examine a mediation model for the newly developed scales.

Method

Participants

303 students attending a large Midwestern university participated in this study. The mean age for the participants in this sample was 18.96 ($SD = 1.44$). 55 identified as male, 237 as female, and 2 as transgender (9 missing). 79.9% of Sample 3 identified as White/Caucasian, 10.6% as Latino or Hispanic, 3.6% as Asian, 1.3% as African American/Black, 1.3% as Hawaiian/Pacific Islander, 1% as biracial, 0.7% as Middle Eastern, and 0.3% as American Indian/Native American. 94.4% identified as heterosexual. 39.9% of the sample indicated that they were single, 17.5% of the sample was dating, 34.3% were dating exclusively, 1.3% were cohabitating at the time of the survey, and 1.8% indicated they were married.

Measures

Young Love Adjustment Scale. Six factors with three items each comprise the Young Love Satisfaction scale. This scale was created to assess for daily behavioral functioning in multiple domains like communication, passion, intimacy, trust, love, romance, finances, conflict, and respect (Fletcher, Simpson & Thomas, 2000; Hendrick & Hendrick, 1997; Sabatelli, 1988). For Communication, this sample had a Cronbach's alpha of 0.85, 0.85 for Respect, 0.89 for Emotional Support, 0.80 for Trust, 0.88 for Romance, and 0.85 for Physical Intimacy.

Young Love Satisfaction Scale. This scale is a unifactorial assessment of one's general satisfaction with a romantic relationship. It consists of 11 items designed to examine general satisfaction and dissatisfaction in one's relationship (Bradbury, Fincham, & Beach, 2000; Erbert & Duck, 1997; Hendrick & Hendrick, 1997; Huston & Vangelisti, 1991; Le & Agnew, 2003; Sabatelli, 1988; Whisman, 1997), in addition to positive and negative feelings about the relationship, such as fears and doubts (Park & Rosén, 2013). Cronbach's alpha for this sample was 0.96.

Young Love Commitment Scale. This scale consists of 10 items that explores one's general sense of commitment to a relationship. Seven items fall on a factor that represents future orientation about the relationship, and three items assess for declarations of love, or what the literature would refer to as maintenance behaviors in the relationship (Agnew, van Lange, Rusbult, & Langston, 1998; Arriaga & Agnew, 2001; Rusbult, 1980; Sabatelli, 1988; Stanley & Markman, 1992). For both the Future Orientation and Love factors, Cronbach's alpha for this sample was 0.93.

Results

Measurement Models

All structural equation models were completed using Mplus (Version 6.11) for windows (Muthén & Muthén, 1998-2011). Similarly to the first two studies, robust measures of fit (see Bentler & Dudgeon, 1996; Chou, Bentler, & Sattora, 1991; Curran, West, & Finch, 1996) were used to account for the non-normality present in the dataset. Model fit was assessed using Hu and Bentler's (1999) recommendations: a Comparative Fit Index (CFI) greater than or equal to 0.95 and a standardized root mean squared residual (SRMR) less than or equal to 0.08.

Similar to the previous studies, missing information was addressed using full information maximum likelihood. A maximum likelihood estimation with robust standard errors (MLR) method was used in the measurement model and subsequent structural models. The Adjustment scale demonstrated good fit (*SBS* $\chi^2(120) = 394.98$, $p < .001$; *Robust CFI* = 0.89, *SRMR* = 0.06, and *RMSEA* = 0.09). Factor loadings for all six subscales were positive at above 0.60, and significant at the $p < .001$ level. Factor correlations ranged from 0.24 ($p < .05$) to 0.90 ($p < .001$). The measurement model for the Satisfaction scale also demonstrated good fit (*SBS* $\chi^2(44) = 146.89$, $p < .001$; *Robust CFI* = 0.94, *SRMR* = 0.04, and *RMSEA* = 0.09). All factor loadings for the Satisfaction scale were high, positive, and significant at the $p < .001$ level, ranging from 0.68 to 0.91. The measurement model for the Commitment scale showed good fit, (*SBS* $\chi^2(34) = 108.60$, $p < .001$; *Robust CFI* = 0.94, *SRMR* = 0.04, and *RMSEA* = 0.09). All factor loadings for the Commitment scale were high, positive, and significant at the $p < .001$ level. For the first factor, Future Orientation, factor loadings ranged from 0.71 to 0.90, and for the second factor, Love, factor loadings ranged from 0.79 and 0.98. The correlation between the two factors was in the moderate range ($r = 0.39$, $p < .001$).

Structural Models

Based on past research (e.g., Fletcher, Simpson, & Thomas, 2000), it was hypothesized that all first-order factors from the Adjustment, Satisfaction, and Commitment scales would load onto one higher-order factor (referred to as Model 3; see Figure 1). Two alternative models provided a comparison: Model 1 where there are no existing factors and all of the items load onto one factor of relationship quality, and Model 2 where there are indeed independent factors which moderately correlate to one another but do not load onto a second-order factor. All three models were calculated through Mplus.

Model 1 demonstrated poor fit (see Table 8). Factor loadings were positive and significant at the $p < .001$ level, ranging from 0.23 to 0.90. However, examination of the model also revealed large residual variances, ranging from 0.19 to 0.95. Model 2 appeared to provide a better fit than Model 1 with a *Robust CFI* value of 0.88, a reduced *RMSEA* of 0.07, and a significant change in chi-square when comparing the two models through the Satorra-Bentler scaled chi-square difference test. Factor loadings ranged from 0.61 to 0.98, and all were significant at the $p < .001$ level. Factor correlations ranged from $r = 0.23$ ($p < .01$) to $r = 0.90$ ($p < .001$). Model 3 also demonstrated improved fit when compared to Model 1, with a *Robust CFI* of 0.86, a RMSEA of 0.08, and an significant change in chi-square (see Table 8). Items' factor loadings ranged from 0.60 to 0.98. All were positive and significant at the $p < .001$ level. Commitment, satisfaction, and adjustment factors also loaded onto a higher order factor, with loadings ranging from 0.38 to 0.96 (see Figure 2).

Mediation Model

Following the steps of Baron and Kenny (1986), a mediation model was assessed using structural equation modeling in Mplus. As hypothesized it was expected that a relationship

between one's daily experience (Adjustment) and one's future orientation to the relationship (Commitment) would be mediated by one's general sense of satisfaction in the relationship (Satisfaction). The maximum likelihood (ML) estimate of 0.85 for the relationship between Adjustment and Commitment was significant ($SE = 0.02$, $p < .001$). The next step determined that there was a significant relationship between Commitment and Satisfaction ($MLE = 0.96$, $SE = 0.01$, $p < .001$), and between Satisfaction and Adjustment ($MLE = 0.90$, $SE = 0.02$, $p < .001$). The last step tested the model including the effects of Satisfaction and Adjustment on Commitment. While the relationship between Satisfaction and Adjustment ($MLE = 0.90$, $SE = 0.02$, $p < .001$), and Satisfaction and Commitment remained significant, ($MLE = 0.98$, $SE = 0.11$, $p < .001$), the relationship between Commitment and Adjustment was no longer significant ($MLE = -0.03$, $SE = 0.12$, $p = .80$). A Sattora-Bentler chi-square difference test was used to determine if there was an improvement in fit between the second ($SBS\ \chi^2(693) = 1780.71$, $p < .001$) and third step ($SBS\ \chi^2(692) = 1783.46$, $p < .001$). There was no improvement in fit ($\Delta X^2(\Delta df = 1) = 0.00$, $p = .96$), suggesting that general Satisfaction indeed mediates the relationship between Adjustment and Commitment to the relationship.

Discussion

The primary purpose of this study was to examine an exploratory theory of young love by creating measures that examined different areas of relationship quality. The Young Love Scales are also geared specifically to the emerging adult population.

The Young Love Scales were constructed using Worthington and Whitaker's (2006) recommendations. Two samples of data were collected, and one sample was split to allow for three separate samples: the first sample was used to conduct an exploratory factor analysis (EFA) on the latent structure of the scales, the second sample was used for confirmatory factor analysis

(CFA) to determine the best fit in the latent structure as well as reliability and validity analyses of the newly constructed scales, and the last sample was used for structural equation modeling to examine the potential for a higher order factor and a moderation relationship among the constructs measured by the Young Love Scales. Thus far, there is little theoretical knowledge on the constructs being measured by these scales, so it was expected that EFA would be needed to explore the latent structure of all of the constructs. Despite the scarcity of theory on relationship quality, a review of the literature revealed the constructs of commitment as a cognitive attitude towards the relationship, satisfaction as an affective attitude towards the relationship, and adjustment as an attitude about daily behaviors in the relationship. Items were constructed based on the literature that was available as well as an established measure, such as the Marital Scales. These items were given to graduate students as a review of their clarity and readability, and the items were also provided to subject matter experts to ensure that the items appeared to match the construct. Based on the "theory" work that was done with the literature and using a preexisting measure as its foundation, CFA was used to compare EFA-driven to "theory-driven" structures. Model comparisons were also used to pare down the measures to be as parsimonious as possible.

Items for the Young Love Adjustment scale were initially designed to measure daily behavioral functioning for eight factors: communication, passion, intimacy, trust, love and romance, finances, conflict, and respect (Locke, 1951; Park & Rosén, 2013; Sabatelli, 1988; Spanier, 1976; Spanier & Cole, 1976). EFA results suggested a five-factor model, with a problematic latent structure. Several items cross-loaded onto a couple of factors, and unclear themes were present with two of the factors. The EFA results were used to reduce the number of factors from eight to six and both models were compared using CFA. The eight-factor model that retained all of the items provided good fit (*CFI* = 0.87; *RMSEA* = 0.06). Factor loadings

were high and reliability fell in the good to excellent range for all eight of the factors. However, there were high factor correlations noted among the eight factors. The factor labeled Finances also appeared to be too lowly correlated to any of the other factors. Items written to reflect Finances and Conflict were both removed and the remaining six-factor model provided excellent fit and was a significant improvement when compared to the eight-factor model (*CFI* = 0.96; *RMSEA* = 0.06, $\Delta\chi^2(712) = 1645.73$, $p < .001$). Factor loadings are high and reliability ranged from acceptable to excellent for the six factors: Communication, Respect, Emotional Support, Trust, Romance, and Intimacy. There continue to be some concerns with this latent structure with high correlations observed among some of the factors (e.g., Respect and Emotional Support: $r = 0.92$, $p < .001$).

As for the Satisfaction scale, there have been numerous scales written in the literature to assess relationship satisfaction (Funk & Rogge, 2007; Norton, 1983; Hendrick, 1988; Locke & Wallace, 1959; Schumm, Nichols, Schectman, & Grinby, 1983; Snyder, 1981; Spanier, 1976). However, research on relationship satisfaction has been void of theory and many of the scales that were written have been criticized for confusing satisfaction with other related but unique constructs (Fincham, Beach, & Kemp-Fincham, 1997; Fletcher, Simpson, & Thomas, 2000). Items written for the Young Love Satisfaction scale were initially designed to assess for positive attitudes, negative attitudes, fears/doubts, and happiness. Contrary to the four factor theory-driven model, EFA results suggested a two-factor solution was ideal. In this two-factor solution, items reflecting both positive and negative attitudes towards the relationship and happiness were on one factor, and items reflecting fears and doubts were on a second factor. While CFA results showed excellent fit (*CFI* = 0.96, *RMSEA* = 0.06) and high factor loadings for the two-factor model, the correlation between the factors also remained high. A one-factor model was assessed,

as it would be a simpler measurement of satisfaction. A one-factor model allowed for items that were originally written to reflect four different aspects of satisfaction. This model had excellent fit and was a significant improvement in fit when compared to the two-factor model (*CFI* = 0.97; *RMSEA* = 0.06, $\Delta\chi^2(74) = 159.52$, $p < .001$). Factor loadings are high, and reliability excellent (Cronbach's $\alpha = 0.97$). Sample items include: "I am content with my relationship," and "I have doubts about my relationship."

The items for the Commitment scale were initially written to reflect a future orientation about the relationship (Arriaga & Agnew, 2001; Rusbult, 1980; Sabatelli, 1998), attachment to one's partner (Agnew, van Lange, Rusbult, & Langston, 1998; Arriaga & Agnew, 2001; Rusbult, 1980), and maintenance behaviors like ignoring alternative partner choices (Ackerman, Griskevicius, & Li, 2011; Le & Agnew, 2003). Initially, EFA results suggested three factors should be retained to measure Commitment. However, these three factors of having a future orientation, maintenance behaviors such as love, and attitudes about the stability of the relationship were slightly different than the three observed factors in the literature. While future orientation towards the relationship remained the same, as did maintenance behaviors such as love, the third EFA factor named stability deviated from the idea that one was attached to one's partner and could not leave the relationship for emotional reasons. Also problematic was the high factor loading for one of the stability items on another factor, and the high observed correlation between two of the factors (future orientation and stability). Thus, the stability factor was removed, and the Commitment scale was formed via two factors: Future Orientation and Love. Comparison of model fit confirmed that the two-factor approach to commitment had excellent fit (*CFI* = 0.97; *RMSEA* = 0.06) and was a significantly better fit than the three-factor approach (*CFI* = 0.93; *RMSEA* = 0.07, $\Delta\chi^2(53) = 163.30$, $p < .001$). Factor loadings are high for

each factor, and reliability also appears excellent with Cronbach's α at 0.91 and 0.95 for the Future Orientation and Love factors, respectively. Sample items include: "I expect to end this relationship," and "I have told my partner, 'I love you.'"

Adjustment and Commitment have not been examined as unique latent constructs in the literature thus far. Some might suggest that relationship satisfaction might include or overlap with constructs that are measured by adjustment and commitment (Bradbury, Fincham, & Beach, 2000; Fincham, Beach, & Kemp-Fincham, 1997; Fletcher, Simpson, & Thomas, 2000; Whisman et al., 1997). This study was designed to assess the three domains as separate and unique constructs. While latent factor structures and reliability for each of the measures appeared to provide strong evidence for the existence of three distinct measures, preliminary validity analyses suggests that further research needs to be done. As described above, Satisfaction was highly correlated to Commitment and to Adjustment ($r = 0.83$ and $r = 0.86$, respectively). The observed correlations were higher than expected given that these scales are designed to measure separate constructs and is proof of questionable construct validity. The correlation between Adjustment and Commitment was also strong ($r = 0.76$).

Further examination of subscale correlations revealed that Satisfaction was highly correlated to many of the subscales from the Adjustment and the Commitment scale with correlations ranging from 0.83 to 0.94. The only exceptions are the Romance and Intimacy subscales from the Adjustment scale ($r = 0.54$ and $r = 0.37$, respectively). Similarly strong correlations and a few moderate correlations were observed for the Future Orientation factor from the Commitment scale, and the Communication, Respect, and Emotional Support factors from the Adjustment scale. Weak to moderate correlations were observed for the Love factor from the Commitment scale, and the Romance and Intimacy subscales from the Adjustment

scale. This suggests that perhaps relationship satisfaction is measured by future orientation to the relationship, feelings of satisfaction and dissatisfaction with the relationship, communication, respect, and emotional support. However, stating that one loves his or her partner, feels romance, and values intimacy in the relationship are indeed separate constructs from relationship satisfaction.

Comparison to existing measures also provided evidence for questionable construct validity. All three scales from highly correlated to the PRQC (Fletcher, Simpson, & Thomas, 2000), which was to be expected since all of these measures assess relationship quality. However, the PRQC is a single scale, which further suggests that perhaps the Young Love Scales should not be separate measures. Evidence of discriminant validity for the Young Love Scales was shown by comparisons to other existing measures of relationship attitudes. It was expected that the Young Love Scales should only demonstrate low to moderate correlations with the Marital Scales (Park & Rosén, 2013), and the RBI (Eidelson & Epstein, 1982). The results showed low correlations between the Young Love Scales and the Marital Scales, and low to moderate correlations between the Young Love Scales and the RBI, confirming that these are distinct measures.

Overall, the three developed Young Love Scales for Commitment, Satisfaction, and Adjustment have strong psychometric properties and are reliable. However, validity for the necessity of the three scales remained as a question. This was further explored by structural equation modeling to examine how the scales conceptually related to one another.

The third study allowed us to examine whether or not these scales are indeed separate constructs, and if so, whether or not they were simply correlated or related by a higher order factor. Structural equation modeling (SEM) was used to assess for the model that best accounted

for the data. Model 1 assumed that all of the items reflected one construct and had the poorest fit. This provides some evidence for the validity of the three scales given that one would expect this model to have better fit if the constructs were overlapping. Model 2 posited that the constructs were all correlated but that they were not first-order factors. This model had better fit than the first one suggesting that there are definitely unique constructs being measured by the items. Model 3 provided the best fit for the data, and this model tested a hierarchical model. This model showed that relationship quality is a second-order factor that is being measured by commitment, satisfaction, and adjustment. This finding is similar to previous research done on the construct of relationship satisfaction (Fletcher, Simpson, & Thomas, 2000).

Additionally, a mediation model was calculated to examine the role of satisfaction on the relationship between adjustment and commitment. As expected, one's daily sense of adjustment predicted commitment to the relationship. Adjustment also predicted satisfaction for the relationship, and satisfaction predicted one's sense of commitment to the relationship. Results demonstrated that one's sense of satisfaction with the relationship fully mediates the relationship between adjustment and commitment to the relationship. In other words, one's daily sense of adjustment in the relationship is relatively meaningless to relationship commitment unless those actions contribute to a sense of satisfaction with the relationship. Thus, one's affective state and attitude towards the relationship is crucial to the strength of the relationship. These findings are consistent with behavioral theories of marital relationships, which suggest that positive behavioral experiences contribute to a sense of satisfaction with the relationship (Gottman, 1982; Stuart, 1981) and that negative affect tends to hinder communication and positive interactions (Gottman & Silver, 1999). This finding is also consistent with past research which showed that individuals reported higher relationship satisfaction and commitment to a relationship based on

their daily experiences (e.g., Hendrick, 1981), as well as aspects of the Investment Model (Rusbult, 1980) which also posited that the decision to stay in a relationship was based on one's level of satisfaction with the cost-benefit ratio of the relationship.

Limitations and Directions for Future Research

One of the strengths of the current study was its use of three distinct samples of data to conduct the analyses. However, the scales were constructed and validated based on two convenience samples of introductory psychology students. While these scales were designed to specifically examine the romantic attitudes of emerging adults, it will be important to consider the lack of generalizability to others in the population. Another study based on a random sample or another sample relevant to this population would make the measures more psychometrically sound.

Questions remain about the validity of these new measures. While the scales to appear distinct when compared to other existing measures, the high correlations observed among the three scales suggest that they may in fact be overlapping constructs. While the SEM models validated that they are separate measures, the question remains of why there was such a high degree of overlap among the scales when looking at relationship quality. This question will need to be further explored with studies that examine relationship quality as a measure of commitment, satisfaction, and adjustment but without romance, intimacy, or declarations of love as part of the measure. Future studies should also continue to develop a theory of relationship quality in emerging adults so as to better understand the development of relationships in this population. Current measures are geared more for couples in marital relationships or older couples, and do not account for the uniqueness in the emerging adult population.

Another limitation of this study would be the lack of factors that might be more unique to the emerging adult population. For example, examining the use of technology in budding romantic relationships may be helpful to better understand the development of relationships and marital-like relationships in the future. Future research should examine the use of social media and how that might impact satisfaction or commitment with one's relationship. Other questions remain about how the use of social media daily might reflect a different type of adjustment behavior as well. More research in this area is crucial to developing a theoretical model for romantic relationships in the emerging adult population.

Implications

The purpose of the current study was to create analogous measures of the Marital Scales (Park & Rosén, 2013) so that attitudes towards marital relationships could be compared to attitudes towards one's own romantic relationship. These newly developed Young Love Scales are designed for the emerging adult population, given the importance of romantic relationships in identity development for young adults (Arnett, 2000; Barry, Madsen, Nelson, Carroll & Badger, 2009). Previous measures of relationship commitment, satisfaction, and adjustment in romantic relationships have been limited to married adult couples (Locke & Wallace, 1959; Norton, 1983; Snyder, 1981; Spanier, 1976; Weiss & Ceretto, 1980), or to examining only one construct (Funk & Rogge, 2007; Hendrick, 1988; Lund, 1985). Generally measures of relationship quality are also mostly atheoretical in nature, or have also been designed to measure a first-order and second-order construct simultaneously (Fincham, Beach, & Kemp-Fincham, 1997; Fletcher, Simpson, & Thomas, 2000).

The Young Love Scales are different from other measures because they are capable of capturing a comprehensive set of attitudes towards one's own romantic relationship. The scales

are designed to examine commitment, satisfaction, and adjustment as three separate constructs. This is advantageous over other measures that have combined some of these constructs together without a theoretical basis. It is also advantageous to use the Young Love Scales over existing measures because of its broad view on different types of attitudes – most existing measures do not examine adjustment as attitudes about behavioral functioning in different domains of the relationship (e.g., trust and intimacy). The Young Love Scales appear to have strong psychometric properties, as shown through excellent fit and strong factor loadings across two separate samples. Internal reliability also appears strong across separate samples, however, validity needs to be further explored. Most of the previous existing scales are not analyzed for their psychometric properties (e.g., Locke & Wallace, 1959; Norton, 1983; Snyder, 1981; Spanier, 1976; Weiss & Ceretto, 1980).

It is especially important to examine the course of romantic relationships in the emerging adult population. Forming romantic relationships for this age group is not only a crucial developmental task where individuals learn how to initiate, evaluate, and potentially end relationships, but also because of the potential for individual growth (Fincham & Cui, 2010; Lewandowski & Bizzoco, 2007). These new measures could contribute to research that examines the trajectory of romantic relationships for emerging adults. The measures also could contribute to providing insight to individuals in couples who are struggling with making decisions about their commitment to the relationship. Interventions for these individuals might be effective if geared towards increasing their sense of satisfaction from daily behaviors, or making changes that contributes to their partner's sense of satisfaction.

Research shows that emerging adulthood is the time in which individuals establish a sense of identity about their romantic selves (Kaestle, & Halpern, 2007), which then impacts

future romantic relationships. These new measures could help further understanding about how "romantic selves" are fostered in emerging adults, and how a sense of identity might be related to an ability to be insightful about adjustment, satisfaction, or commitment to relationship. Emerging adults' sense of well-being, happiness, and adjustment to adulthood is also more impacted by romantic relationships than relationships with friends or parents (Barry, Madsen, Nelson, Carroll & Badger, 2009; Demir, 2010). Therefore, helping distressed young couples find a sense of better relationship quality via couples therapy interventions may be a route to impact not only their sense of identity, but also a sense of well-being, happiness, and general adjustment to adulthood for each individual in the relationship. Couples therapy methods focused on altering the emotional state of each individual, such as the Gottman method (Gottman, 1982; Gottman, 1992; Gottman & Silver, 1999) or emotionnally focused therapy for couples (Johnson, 2004), may be especially effective for increasing the sense of satisfaction and commitment in young relationships.

Conclusion

The Young Love Scales consists of three measures: the Young Love Commitment Scale, Young Love Satisfaction Scale, and the Young Love Adjustment Scale. The instrument was designed for the emerging adult population and is a comprehensive measure of different types of attitudes about one's own romantic relationship. The instrument was developed and validated using as sample of college students. The results of these studies indicate that the three measures have strong psychometric properties. While validity for the measures remains a question, the scales provide a way to further explore the best way to measure relationship quality. Future studies should work to continue to develop a theory about romantic relationship quality in

emerging adults, and to further understand romantic relationship quality and its impact on identity development in emerging adults.

References

Acker, M. & Davis, M.H. (1992). Intimacy, passion, and commitment in adult romantic relationships: A test of the triangular theory of love. *Journal of Social and Personal Relationships*, *9*, 21-50.

Ackerman, J.M., Griskevicius, V., & Li, N.P. (2011). Let's get serious: Communicating commitment in romantic relationships. *Journal of Personality and Social Psychology, 100*(6), 1079-1094.

Agnew, C.R., van Lange, P.A.M., Rusbult, C.E., & Langston, C.A. (1998). Cognitive interdependence: Commitment and the mental representation of close relationships. *Journal of Personality and Social Psychology, 74*(4), 939-954.

Arnett, J.J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties, *American Psychologist*, *55*(5), 469-480.

Arnett, J.J. (2004). *Emerging adulthood: The winding road from the late teens through the twenties*. New York: Oxford University Press.

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.

Barnes, M.L. & Sternberg, R.J. (1997). A hierarchical model of love and its prediction of satisfaction in close relationships. In R.J. Sternberg & M. Hojjat (Eds.), *Satisfaction in Close Relationships* (79-101). New York: The Guilford Press.

Barry, C.N., Madsen, S.D., Nelson, L.J., Carroll, J.S., & Badger, S. (2009). Friendship and

romantic relationship qualities in emerging adulthood: Differential associations with identity development and achieved adulthood criteria. *Journal of Adult Development, 16,* 209-222. doi: 10.1007/s10804-009-9067-x

Baumeister, R.F., & Leary, M.R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*(3), 497-529.

Bentler, P.M., & Dudgeon, P. (1996). Covariance structure analysis: Statistical practice, theory, and directions. *Annual Review of Psychology*, *47*, 563-592.

Berscheid, E., & Reis, H.T. (1998). Attraction and close relationships. In D.T. Gilbert, S.T. Fiske, & G. Lindzey (Eds.), *The Handbook of Social Psychology* (4th edition, 193-281). New York: McGraw-Hill.

Berscheid, E., Snyder, M., & Omoto, A.M. (1989). The Relationship Closeness Inventory: Assessing the closeness of interpersonal relationships. *Journal of Personality and Social Psychology, 57*(5), 792-807.

Bradbury, T.N., Fincham, F.D., & Beach, S.R.H. (2000). Research on the nature and determinants of marital satisfaction: A decade in review.

Cann, A., Norman, M.A., Welbourne, J.L., & Calhoun, L.G. (2008). Attachment styles, conflict styles and humour styles: Interrelationships and associations with relationship satisfaction. *European Journal of Personality*, *22*, 131-146.

Carver, K., Joyner, K., & Udry, J.R. (2003). National estimates of adolescent romantic relationships. In P. Florsheim (Ed.), *Adolescent romantic relations and sexual behavior: Theory, research, and practical implications.* Mahwah, NJ: Erlbaum.

Cattell, R.B. (1966). The scree test for the number of factors. *Multivariate Behavioral*

Research, *1*, 245-276.

Chou, C.P., Bentler, P.M., & Satorra, A. (1991). Scaled test statistics and robust standard errors for non-normal data in covariance structure analysis: A Monte Carlo study. *British Journal of Mathematical and Statistical Psychology, 44*, 347-357.

Cohen, P. (1985). Locke Marital Adjustment Scale and the Dyadic Adjustment Scale. *American Journal of Family Therapy*, *13*(3), 66-71.

Cole, D. (1987). Utility of confirmatory factor analysis in test validation research. *Journal of Consulting and Clinical Psychology*, *55*(4), 584-594.

Collins, W.A. (2003). More than myth: The developmental significance of romantic relationships during adolescence. *Journal of Research on Adolescence*, *13*(1), 1-24.

Collins, W.A., Welsh, D.P., & Furman, W. (2009). Adolescent romantic relationships. *Annual Review of Psychology, 60,* 631-652.

Connolly, J., Craig, W., Goldberg, A., & Pepler, D. (2004). Mixed-gender groups, dating, and romantic relationships in early adolescence. *Journal of Research on Adolescence*, *14,* 185-207.

Crowne, D.P. & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology*, *24*(4), 349-354.

Curran, P.J., West, S.G., & Finch, J.F. (1996). The robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. *Psychological Methods, 1*(1), 16-29. doi:10.1.1.382.6856

Demir, M. (2009). Close relationships and happiness among emerging adults. *Journal of Happiness Studies, 11*, 293-313. doi: 10.1007/s10902-009-9141-x

Diamond, L.M., Savin-Williams, R.C., & Dubé, E.M. (1999). Sex, dating, passionate

friendships, and romance: Intimate peer relations among lesbian, gay, and bisexual adolescents. In W. Furman, B.B., Brown, & C. Feiring (Eds.), *The Development of Romantic Relationships in Adolescence* (175-210). New York: Cambridge University Press.

Eidelson, R.J., & Epstein, N. (1982). Cognition and relationship maladjustment: Development of a measure of dysfunctional relationship beliefs. *Journal of Consulting and Clinical Psychology, 50*(5), 715-720.

Erbert, L.A. & Duck, S.W. (1997). Rethinking satisfaction in personal relationships from a dialectical perspective. In R.J. Sternberg & M. Hojjat (Eds.), *Satisfaction in Close Relationships* (190-216). New York: The Guilford Press.

Fincham, F.D., Beach, R.H., & Kemp-Fincham, S.I. (1997). Marital quality: A new theoretical perspective. In R.J. Sternberg & M. Hojjat (Eds.), *Satisfaction in Close Relationships* (275-304). New York: The Guilford Press.

Fincham, F.D., & Bradbury, T.N. (1987). The assessment of marital quality: A reevalutation. *Journal of Marriage and Family*, *49*(4), 797-809.

Fincham, F.D., & Cui, M. (2002). Emerging adulthood and romantic relationships: An introduction. In F.D. Fincham & M. Cui (Eds.), *Romantic relationships in emerging adulthood* (pp. 3-12). New York: Cambridge University Press.

Fletcher, G.J.O., Simpson, J.A., & Thomas, G. (2000). The measurement of Percieved Relationship Quality Components: A confirmatory factor analytic approach. *Personality and Social Psychology Bulletin, 26*(3), 340-354.

Floyd, F.J., & Stein, T.S. (2002). Sexual orientation identity formation among gay, lesbian, and

bisexual youths: Multiple patterns of milestone. *Journal of Research on Adolescence, 12,* 167-191.

Fraley, R.C., & Davis, K.E. (1997). Attachment formation and transfer in young adults' close friendships and romantic relationships. *Personal Relationships, 4*(2), 131-144.

Funk, J.L., & Rogge, R.D. (2007). Testing the ruler with Item Response Theory: Increasing precision of measurement for relationship satisfaction with the Couples Satisfaction Index. *Journal of Family Psychology, 21*(4), 572-583.

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.

Gottman, J.M. (1982). Temporal form: Toward a new language for describing relationships. *Journal of Marriage and the Family, 44*, 943-962.

Gottman, J.M. (1990). How marriages change. In G.R. Patterson (Ed.), *Depression and aggression in family interaction* (pp. 75-101). Hillsdale, NJ: Erlbaum.

Gottman, J.M. & Silver, N. (1999). *The seven principles of making marriage work.* New York: Three Rivers Press.

Hayton, J.C., Allen, D.G., & Scarpello, V. (2004). Factor retention decisions in exploratory factor analysis: A tutorial on parallel analysis. *Organizational Research Methods, 7*(2), 191-205.

Hendrick, S.S. (1981). Self-disclosure and marital satisfaction. *Journal of Personality and Social Psychology, 40,* 1150-1159.

Hendrick, S.S. (1988). A generic measure of relationship satisfaction. *Journal of Marriage and the Family, 50,* 93-98.

Hendrick, S.S., Dicke, A., & Hendrick, C. (1998). The relationship assessment scale. *Journal of Social and Personal Relationship, 15*, 137-142.

Hendrick, C. & Hendrick, S.S. (1989). Research on love: Does it measure up? *Journal of Personality and Social Psychology*, *56*, 784-794.

Hendrick, S.S. & Hendrick, C. (1997). Love and satisfaction. In R.J. Sternberg & M. Hojjat (Eds.), *Satisfaction in Close Relationships* (56-78). New York: The Guilford Press.

Hu, L.T., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*(1), 1-55.

Huston, T.L. & Burgess, R.L. (1979). Social exchange in developing relationships: An overview. In R.L. Burgess & T.L. Huston (Eds.), *Social exchange in developing relationships* (pp. 3-28). San Diego, CA: Academic Press.

Johnson, S.M. (2004). *The practice of emotionally focused couple therapy* (2nd ed). New York: Brunner-Routledge.

Kaestle, C.E., & Halpern, C.T. (2007). What's love got to do with it? Sexual behaviors of opposite-sex couples through emerging adulthood. *Perspectives on Sexual and Reproductive Health, 39*(3), 134-140.

Kaiser, H.F. (1958). The varimax criterion for analytic rotation in factor analysis. *Psychometrika*, *23*, 187-200.

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* (1), 3-34.

Kelley, H.H. & Thibaut, J.W. (1978). *Interpersonal relations: A theory of interdependence.* New York: Wiley.

Le, B. & Agnew, C.R. (2003). Commitment and its theorized determinants: A meta-analysis of

the investment model. *Personal Relationships*, *10*, 37-57.

Levesque, R.J.R. (1993). The romantic experience of adolescences in satisfying love relationships. *Journal of Youth and Adolescence, 22*, 219-251.

Levinger, G. (1965). Marital cohesiveness and dissolution: An integrative review. *Journal of Marriage and the Family*, *27*, 19-28.

Lewandowski, G.W., & Bizzoco, N.M. (2007). Addition through subtraction: Growth following the dissolution of a low quality relationship. *Journal of Positive Psychology, 2*, 40-54.

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: Research-based theories* (pp. 268-294). New York: Free Press.

Locke, H.J. (1959). *Predicting adjustment in marriage: A comparison of divorced and happily married group.* New York: Holt.

Locke, H.J. & Wallace, K.M. (1959). Short marital adjustment and prediction tests: Their reliability and validity. *Marriage and Family Living, 21*, 251-255.

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.

Muthén, L.K., & Muthén, B.O. (1998-2011). Mplus User's Guide. Sixth Edition. Los Angeles, CA: Muthén & Muthén.

Norton, R. (1983). Measuring marital quality: A critical look at the dependent variable. *Journal of Marriage and the Family, 45,* 141-151.

Park, S.S. & Rosén, L.A. (2013). The Marital Scales: Measurement of intent, attitudes, and

aspects regarding marital relationships. *Journal of Divorce and Remarriage, 54*:4, 295-312. doi: 10.1080/10502556.2013.780491

Reis, H.T. (2001). Relationship experiences and emotional well-bring. In C.D. Ryff & B.H. Singer (Eds.), *Emotion, Social Relationships and Health* (57-95). New York: Oxford University Press.

Reis, H.T., Collins, W.A., & Berscheid, E. (2000). Relationships in human behavior and development. *Psychological Bulletin*, *126*, 844-872.

Rodrigues, A.E., Hall, J.H., & Fincham, F.D. (2006). What predicts divorce and relaitonship dissolution? In M.A. Fine & J.H. Harvey (Eds.), *Handbook of divorce and relationship dissolution* (pp. 85-112). Mahwah, NJ: Erlbaum.

Rubin, Z., Hill, C.T., Peplau, L.A., & Dunkel-Schetter, C. (1980). Self-disclosure in dating couples: Causal direction and self-expression versus boredom. *Journal of Social and Personal Relationships, 10,* 243-254.

Rusbult, C.E. (1980). Commitment and satisfaction in romantic associations: A test of the Investment Model. *Journal of Experimental Social Psychology, 16*, 172-186.

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.

Sabatelli, R.M. (1988). Measurement issues in marital research: A review and critique of contemporary survey instruments. *Journal of Marriage and Family*, *500*(4), 891-915.

Schackelford, T.K., & Buss, D.M. (1997). Marital satisfaction in evolutionary psychology perspectives. In R.J. Sternberg & M. Hojjat (Eds.), *Satisfaction in Close Relationships* (7- 25). New York: The Guilford Press.

Schaefer, M.T., & Olson, D.H. (1981). Assessing intimacy: The PAIR inventory. *Journal of Marital and Family Therapy, 7,* 47-60.

Schumm, W.A., Nichols, C.W., Schectman, K.L., & Grinsby, C.C. (1983). Characteristics of responses to the Kansas Marital Satisfaction Scale by a sample of 84 married mothers. *Psychological Reports*, *53*, 567-572.

Shulman, S., Davila, J., & Shachar-Shapira, L. (2011). Assessing romantic competence among older adolescents. *Journal of Adolescence*, *34*, 397-406.

Shulman, S., & Scharf, M. (2000). Adolescent romantic behaviors and perceptions: Age-related differences and links with family and peer relationships. *Journal of Research on Adolescence, 10,* 99-118.

Simpson, J.A. (1987). The dissolution of romantic relationships: Factors involved in relationship stability and emotional distress. *Journal of Personality and Social Psychology, 53*, 683-692.

Snyder, D.K. (1981). *Marital satisfaction inventory.* Lose Angeles: Western Psychological Association.

Spanier, G.B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and Family, 38*(1), 15-28.

Spanier, G.B., & Cole, C.L. (1976). Toward clarification and investigation of marital adjustment. *International Journal of Sociology and the Family*, *6*, 121-146.

Spanier, G.B. & Lewis, R.A. (1980). Marital quality: A review of the seventies. *Journal of Marriage and Family*, *42*(4), 825-839.

Stanley, S.M., & Markman, H.J. (1992). Assessing commitment in personal relationship. *Journal of Marriage and Family, 54*(3), 595-608.

Sternberg, R.J. (1986). A triangular theory of love, *Psychological Review*, *93*, 119-135.

Sternberg, R.J. (1987). Liking versus loving: A comparative evaluation of theories. *Psychological Bulletin*, *102*, 331-345.

Sternberg, R.J. (1997). Construct validation of a triangular love scale. *European Journal of Social Psychology, 27*, 313-335.

Stuart, R.B. (1969). Operant-interpersonal treatment for marital discord. *Journal of Consulting and Clinical Psychology, 33*, 675-682.

Tabachnick, B.G., & Fidell, L.S. (2001). *Using multivariate statistics* (4th ed.). New York: Harper & Row.

Thibaut, J.W., & Kelley, H.H. (1959). *The social psychology of groups*. New York: Wiley.

Thompson, L. & Walker, A.J. (1982). The dyad as a the unit of analysis: Conceptual and methodological issues. *Journal of Marriage and the Family, 44*, 889-900.

Waterman, A.S. (1982). Identity development from adolescence to adulthood: An extension of theory and a review of research. *Developmental Psychology*, *18*(3), 341-358.

Weis, R.L., & Cerreto, M.C. (1980). The Marital Status Inventory: Development of a measure of dissolution potential. *American Journal of Family Therapy, 8*, 80-85.

Whisman, M.A. (1997). Satisfaction in close relationships: Challenges for the 21st century. In R.J. Sternberg & M. Hojjat (Eds.), *Satisfaction in Close Relationships* (385-410). New York: The Guilford Press.

Worthington, R.L. & Whittaker, T.A. (2006). Scale development research: A content analysis and recommendations for best practices. *The Counseling Psychologist*, *34*, 806-838.

Tables

Table 1

Standardized Loadings for Alternative Theory-Driven Confirmatory Model of the Young Love Adjustment Scale Using a MLR Estimation Method (N=305)

	Factor					
Item	Communication	Respect	Emotional Support	Trust	Romance	Intimacy
1	0.86					
2	0.84					
4	0.83					
6		0.91				
7		0.87				
9		0.88				
23			0.84			
25			0.92			
26			0.92			
11				0.90		
12				0.86		
15				0.68		
34					0.88	
35					0.83	
37					0.72	
29						0.93
30						0.78

32						0.85
Cronbach's α	0.88	0.92	0.77	0.84	0.84	0.89

Note. Robust CFI = 0.96; *RMSEA* = 0.06; *SRMR* = 0.05. *SBS* $\chi^2(120) = 235.09$; $p<.001$.

Correlations between two factors ranged from r =0.22 and r=0.92.

Table 2

Fit Indices for Confirmatory Models of the Young Love Adjustment Scale

Model	*SBS* χ^2	*df*	*p*	*Robust CFI*	*RMSEA*	$\Delta\chi^2$	Δdf	*p* for $\Delta\chi^2$
8 Factor	1876.36	832	<.001	0.87	0.06			
6 Factor	235.09	120	<.001	0.96	0.06	1645.73	712	<.001

Note. *SBS* χ^2 = Satorra-Bentler scaled chi-square; *CFI* = comparative fit index, *RMSEA* = root mean square error of approximation.

Table 3

Standardized Loadings for a One-Factor Confirmatory Model of the Young Love Satisfaction Scale Using a MLR Estimation Method (N=305)

Item	Factor
1	0.80 (0.03)
3	0.90 (0.02)
4	0.87 (0.03)
10	0.82 (0.03)
11	0.91 (0.02)
12	0.89 (0.02)
15	0.80 (0.03)
17	0.76 (0.03)
22	0.86 (0.03)
23	0.88 (0.03)
25	0.85 (0.03)
Cronbach's α	0.97

Note. Robust CFI = 0.97; *RMSEA* = 0.06; *SRMR* = 0.02. *SBS* $\chi^2(44) = 91.61$; $p<.001$.

Table 4

Fit Indices for Confirmatory Models of the Young Love Satisfaction Scale

Model	*SBS* χ^2	*df*	*p*	*Robust CFI*	*RMSEA*	$\Delta\chi^2$	Δdf	*p* for $\Delta\chi^2$
Four Factor	572.16	293	<.001	0.95	0.06			
Two Factor	250.68	118	<.001	0.96	0.06	318.99	175	<.001
One Factor	91.61	44	<.001	0.97	0.06	159.52	74	<.001

Note. *SBS* χ^2 = Satorra-Bentler scaled chi-square; *CFI* = comparative fit index, *RMSEA* = root mean square error of approximation.

Table 5

Standardized Loadings for Second Confirmatory Model of the Young Love Commitment Scale Using a MLR Estimation Method (N=305)

	Factor	
Item	Future	Love Acts
1	0.82	
3	0.87	
4	0.87	
5	0.69	
10	0.75	
13	0.78	
16	0.73	
6		0.95
18		0.98
19		0.85
Cronbach's α	0.91	0.95

Note. Robust CFI = 0.97; *RMSEA* = 0.06; *SRMR* = 0.04. *SBS* $\chi^2(34) = 67.34$; $p<.001$.

Standardized correlation between Future and Love Acts, $r = 0.39$.

Table 6

Fit Indices for Confirmatory Models of the Young Love Commitment Scale

Model	*SBS* χ^2	*df*	*p*	*Robust CFI*	*RMSEA*	$\Delta\chi^2$	Δdf	*p* for $\Delta\chi^2$
3 Factor	226.64	87	<.001	0.93	0.07			
2 Factor	67.34	34	<.001	0.97	0.06	163.30	53	<.001

Note. *SBS* χ^2 = Satorra-Bentler scaled chi-square; *CFI* = comparative fit index, *RMSEA* = root mean square error of approximation.

Table 7

Subscale Correlations for the Young Love Scales (N=305)

	1	2	3	4	5	6	7	8	9
1. CO: Future	1								
2. CO: Love Acts	.40**	1							
3. Satisfaction	.94**	.35**	1						
4. AD: Communication	.83**	.34**	.87**	1					
5. AD: Respect	.78**	.32**	.83**	.84**	1				
6. AD: Emotional Support	.79**	.34**	.85**	.86**	.92**	1			
7. AD: Trust	.77**	.33**	.83**	.84**	.86**	.85**	1		
8. AD: Romance	.50**	.33**	.54**	.56**	.55**	.56**	.51**	1	
9. AD: Intimacy	.33**	.32**	.37**	.25**	.33**	.34**	.22*	.63**	1

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

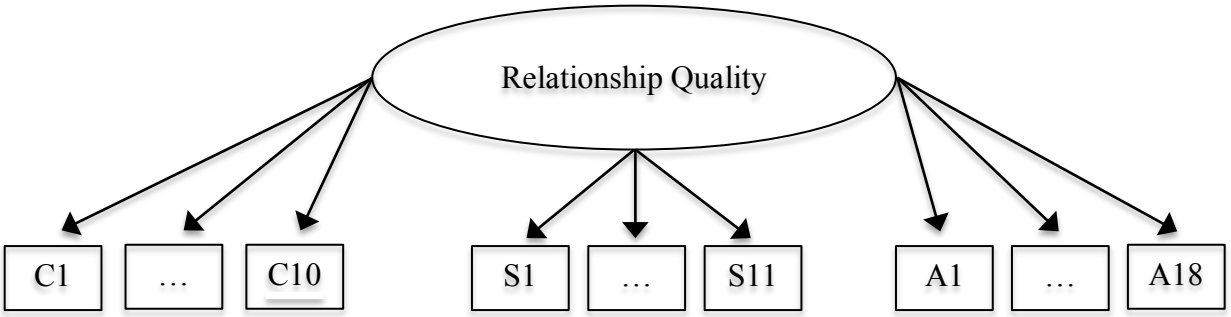
Table 8

Fit Indices for Structural Models (Figure1) of the Young Love Scales (N=303)

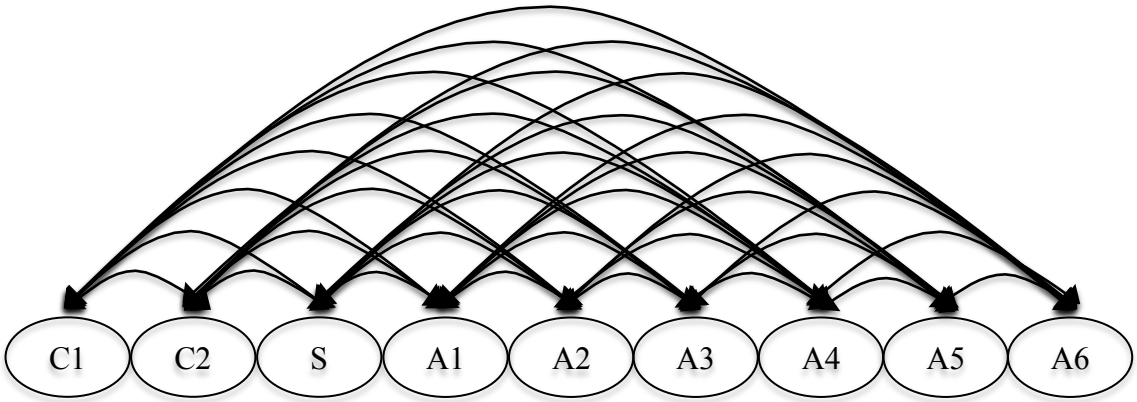
Model	*SBS* χ^2	*df*	*p*	*Robust CFI*	*RMSEA*	$\Delta\chi^2$	Δdf	*p* for $\Delta\chi^2$
Model 1	3215.16	702	<.001	0.69	0.11			
Model 2	1687.21	666	<.001	0.88	0.07	761.18	36	<.001
Model 3	1884.40	693	<.001	0.86	0.08	257.93	9	<.001

Note. *SBS* χ^2 = Satorra-Bentler scaled chi-square; *CFI* = comparative fit index, *RMSEA* = root mean square error of approximation. Model 3 was compared to Model 1.

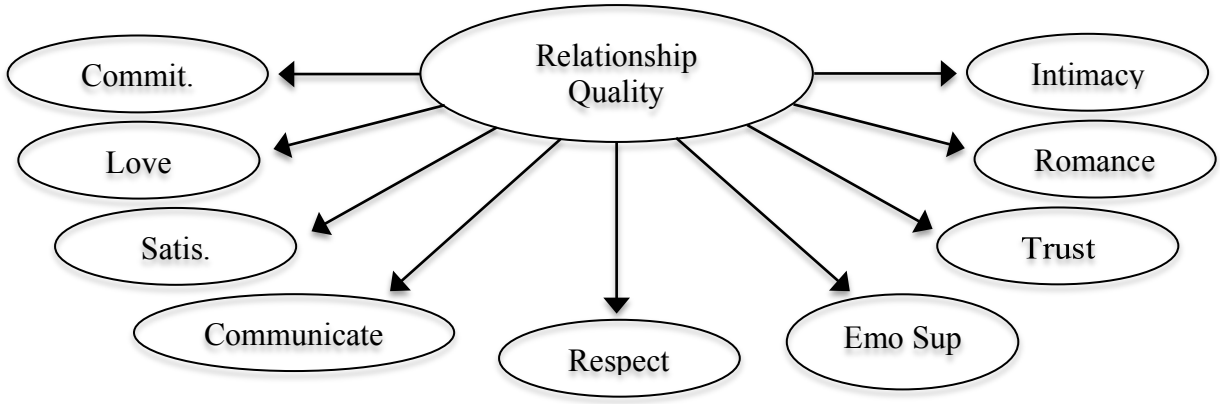
Figures



Model 1: all items load onto one factor



Model 2: all factors are correlated



Model 3: factors load onto one second-order factor

Figure 1

Models 1, 2, and 3

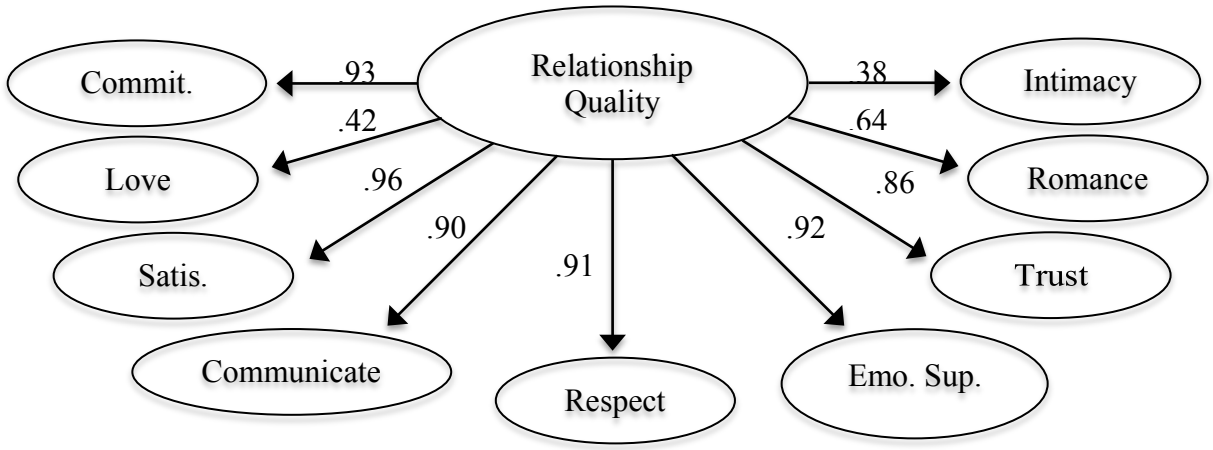


Figure 2

Factor Loadings for Second Order Factor Model (N=303)

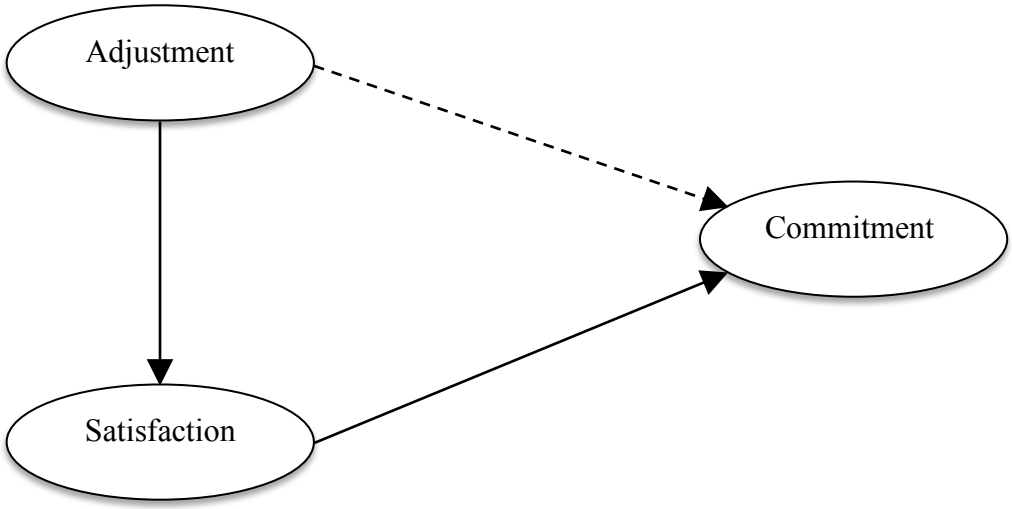


Figure 3

Mediation Model (N=303)