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Does Empathic Accuracy Mediate the Relationships Between Individual Psychological Characteristics and Adolescent Romantic Relationship Functioning?

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DOES EMPATHIC ACCURACY MEDIATE THE RELATIONSHIPS BETWEEN
INDIVIDUAL PSYCHOLOGICAL CHARACTERISTICS AND ADOLESCENT
ROMANTIC RELATIONSHIP FUNCTIONING?

by

Charles George Bentley

A dissertation submitted in partial fulfillment
of the requirements for the degree

of

DOCTOR OF PHILOSOPHY

in

Psychology

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2010

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ABSTRACT

Does Empathic Accuracy Mediate the Relationships Between Individual
Psychological Characteristics and Adolescent Romantic
Relationship Functioning?

by

Charles George Bentley, Doctor of Philosophy

Utah State University, 2010

Major Professor: Renee V. Galliher, Ph.D.
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This study investigated empathic accuracy in adolescent romantic relationships. The project examined the relationships between psychological characteristics and relationship outcomes (i.e., satisfaction and aggression) to determine if the relationships were mediated by empathic accuracy. Participants were 92 heterosexual couples aged 14-18 years old who lived in rural areas in Utah and Arizona. Couple members completed surveys assessing attitudes and behaviors in their relationships and a video-recall procedure in which partners rated their own and their partner's behaviors during problem-solving discussion.

Empathic accuracy was generally not related to psychological characteristics or outcomes. It became apparent that there were limitations with the methodology used to measure empathic accuracy. Due to the very strong correlations between participants'

ratings of themselves and their ratings of their partners, ratings of self and partner were collapsed for each interaction variable to capture interpretations/biases employed by the participants in evaluating aspects of their interactions. The global video-recall ratings were then analyzed to determine if they mediated the relationships between psychological characteristics and outcomes. Rejection sensitivity emerged as an important psychological characteristic, and interpretations of conflict and sarcasm mediated the relationship between rejection sensitivity and outcomes of aggression and satisfaction.

(141 pages)

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Charles George Bentley

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CHAPTER I

INTRODUCTION

During the last decades, adolescent romantic relationships have been the subject of an increasing body of scientific literature (Florsheim, 2003; Furman, Brown, & Feiring, 1999; Furman & Wehner, 1994; Shulman & Collins, 1997). These relationships have been given specific attention because they comprise a unique point in the developmental trajectory (Furman, 1999), exhibiting qualitatively different characteristics from earlier and subsequent phases. As such, it is beneficial to study adolescent romantic relationships independently, as opposed to generalizing information acquired from adult romantic relationships or marriage research.

A substantial literature is developing examining predictors and correlates of negative or problematic relationship characteristics in adolescence. One particularly problematic interpersonal problem is aggression. The high prevalence of dating aggression and violence between young couples (21-45% of dating couples report experiencing aggression within their romantic relationships; Arias, Samios, & O'Leary, 1987; Lewis & Fremouv, 2001) is of particular concern both immediately, and over time, as patterns of interaction developed in early romantic relationships may persist into future relationships. Alternatively, relationship satisfaction is also an important aspect of relationship functioning. Indeed, positive and satisfying relationships provide a protective factor against psychological distress (Horowitz, White, & Howell-White, 1996; Umberson, Chen, House, & Hopkins, 1996). It is clearly important to learn more about aggression and satisfaction in the context of adolescent romantic relationships because

both aspects may influence current and future relationship functioning, either in a positive or negative manner. Information gained in this area could likely contribute to identifying appropriate treatments or interventions either individually or in an educational setting.

With the advent of formal operational thinking during adolescence, a range of psychological phenomena become more salient (Gladstone & Kaslow, 1995; Joiner & Wagner, 1995; Orobio de Castro, Veerman, Koops, Bosch, & Monshouwer, 2002). For example, internalizing, the tendency to experience negative emotion within one's self as with anxiety and depression, or externalizing, the tendency to display negative emotion through acting out disruptively and/or aggressively (Dodge, 1993), and rejection sensitivity, the degree to which an individual is preoccupied with being rejected in a social relationship or interaction (Downey, Bonica, & Rincón, 1999) may manifest or further develop. These characteristics may negatively affect many aspects of individual development and each variable has been associated with problematic relationship behaviors, such as aggression and other negative relationship characteristics (Dodge; Downey, Feldman, & Ayduck, 2000; Holtzworth-Munroe, Bates, Smutzler, & Sandin, 1997).

The current study will further explore links between important relationship characteristics (aggression and relationship satisfaction) and individual internalizing and externalizing symptoms and reports of rejection sensitivity. Associations between measures of individual psychological functioning and relationship functioning are well established, and empathic accuracy is introduced in this study as a potential mediating

mechanism for explaining those links. Empathic accuracy is defined as the ability to correctly identify the emotional and/or cognitive states of another individual (Ickes, 1993) and is an important feature of effective communication and relationship maintenance. The goal of communication is generally to understand and to be understood by other people, and the ability to effectively communicate likely enhances one's satisfaction with his or her relationships (Emmers-Sommer, 2004). On the other hand, the inability to understand and be understood may sometimes contribute to interpersonal problems (Coughlin & Golish, 2002). As with the psychological characteristics discussed above, empathic accuracy or related aspects of communication have also been associated with relationship aggression and relationship satisfaction. However, the role of empathic accuracy, as related to psychological characteristics and aspects of relationship functioning such as satisfaction and/or aggression has not yet been fully explored. Based on the following review of literature, it is hypothesized that empathic accuracy may serve as a mediating pathway in the relationship between the psychological characteristics, internalizing and externalizing symptoms and rejection sensitivity, and relationship functioning. Assessment of the mediating function of empathic accuracy may help explain an important mechanism by which negative and positive aspects of relationship functioning emerge. Empathic accuracy is of particular importance because it likely provides a powerful point of intervention in the development of relationship skills and/or styles, in the context of the well-established associations between psychological functioning and both relationship satisfaction and aggression. For example, empathy training during adolescence might decrease the occurrence of aggression in romantic

relationships at that developmental stage, and in subsequent phases of life.

In summary, the purpose of this study was to determine if empathic accuracy mediates the relationships among psychological characteristics (internalizing symptoms, externalizing symptoms, and rejection sensitivity) and relationship outcomes (satisfaction and several forms of aggression) in adolescent romantic relationships to gain insight into areas of effective intervention to facilitate high functioning romantic relationships.

CHAPTER II

REVIEW OF LITERATURE

The following section will establish the importance of adolescent romantic relationships as an area of scientific inquiry, introduce the variables of interest for the study, and develop hypotheses about the role played by empathic accuracy in relation to adolescent individual psychological adjustment and romantic relationship functioning.

Importance of Romantic Relationships

Interpersonal relationships are a prominent feature in most individuals' lives. Indeed, the phrase, "well-adjusted" can be characterized largely by one's ability to create and maintain social relationships (Green, Hayes, & Dickinson, 2002; Umberson et al., 1996). The intensity of features such as proximity seeking, duration, intimacy, and efforts aimed at acquiring partners often set romantic relationships apart from other relational contexts (Furman et al., 1999; Shulman & Collins, 1997). Romantic relationships have been found to serve protective psychological functions (Horowitz et al., 1996) such as decreasing the likelihood of the occurrence of depression and substance abuse. It is no wonder that cultural norms, and even biological drives that motivate individuals towards mate selection and sexual reproduction (Fisher, 2000), direct us towards romantic partnerships.

Importance of Romantic Relationships in Adolescence

Adolescent romantic relationships deserve specific emphasis not only because they serve the functions mentioned above, but they are also posited as a crucial stage in the development of abilities and skills relevant to future romantic relationships (Furman & Wehner, 1994). Maladaptive attitudes and behavioral patterns developed in early romantic relationships may be carried forward into future relationships, impacting relationship success across the lifespan.

Attachment theory is fundamentally helpful in explaining the transmission of relational styles and tendencies over the course of development. Based on the early ethological and evolutionary work of Bowlby (1982) and Harlow (1959), attachment theorists (Main & Easton, 1981) suggested that attachment styles emerge from infants' interactions with their primary caregivers (typically parents). In this reciprocal relationship, the caregivers' behavior is influenced by the infant as well, establishing an ongoing dynamic process of development. Main initially identified three primary styles of attachment; secure, anxious-ambivalent, and avoidant (for review see Main, 2000). According to attachment theory, an infant who experiences consistent, nurturing, and warm attention from the caregiver will likely develop a secure attachment style characterized by success in establishing and maintaining subsequent interpersonal relationships (Brennan, Wu, & Loev, 1998). An implication is that the individual who develops secure attachment may have the capacity to provide the same support and reassurance to eventual romantic partners and offspring. In contrast, avoidant or anxious attachment styles, rooted in inconsistent or aversive parent-child interactions, are

hypothesized to predict greater difficulty in establishing and maintaining relationships across the lifespan.

During adolescence, attachment style is implicated in the development of peer relationships, with evidence providing support for continuity of relationship quality from relationships with caregivers to later peer relationships (Collins & Sroufe, 1999; Scharfe & Bartholomew, 1995). Based on the attachment theory construct of the internal working model (Hazan & Shaver, 1987), Furman and Wehner (1994) suggested that individuals develop “views” that impact their perceptions of relationships, their behaviors, and their expectations for those relationships. Views are posited to influence future relationships, and may in a sense act as self-fulfilling prophecies; the expected relationship qualities may manifest themselves in new relationships. Thus, views that are specific to romantic relationships are formed, in part, from previous experiences in other relationship contexts (e.g., family and peer), initial experiences in early romantic relationships, and ideas about romantic relationships gained from the media and larger culture. Understanding adolescents’ experiences, beliefs, and attitudes in early romantic relationships is important because the behavioral patterns and attitudes that are developed in initial romantic encounters are expected to significantly impact the quality of later romantic relationships and marriage. Knowledge regarding early development of romantic relationships may help guide interventions that might prevent adolescents from carrying maladaptive behaviors and attitudes forward into adult relationships.

Variables of Interest

Relationship Functioning

Relationship satisfaction, the degree to which a couple member is pleased to be in his or her present relationship and desires to maintain the relationship, is an important aspect to study, as it may have multiple and significant positive effects on romantic relationships and well-being (Horowitz et al., 1996; Umberson et al., 1996). Relationship characteristics thought to contribute to satisfaction in both adolescents and adults include commitment, conformity to established gender roles, communication, socioeconomic status, mutual attractiveness, status among peers, companionship, and passion (Hendrick, Hendrick, & Alder, 1988; Levesque, 1993; Russel, Wells, Weisfeld, & Weisfeld, 1992).

Inversely, relationship dissatisfaction is important, as it may predict aggression and/or relationship dissolution (e.g., Overbeek, Vollebergh, Engels, & Meeus, 2003). Additionally, La Greca and Harrison (2005) suggested that adolescent romantic relationships that are characterized by negative interactions that are disturbing or unsatisfying to at least one of the couple members are associated with higher degrees of depressive symptoms and psychological distress in general. Interestingly, Levesque (1993) suggested that adolescent romantic relationship satisfaction may be less affected by negative characteristics, such as conflict and affective disturbances between couple members, than satisfaction in adult couples.

Aggression is also a particularly salient characteristic, as it is highly prevalent (21-45% of dating couples report experiencing aggression within their romantic relationships; Arias et al., 1987; Lewis & Fremouv, 2001), and because it may result in

severe consequences such as injury, psychological distress, and relationship dissatisfaction or dissolution. Aggression can manifest in several different ways, including physical aggression (e.g., hitting, pushing, and kicking), threat (e.g., compromising another's sense of safety or security), emotional aggression (e.g., coercion, manipulation, and browbeating), sexual aggression (e.g., sexual coercion and sexual force such as rape), and relational aggression (e.g., hostility and passive aggressiveness). There is some evidence suggesting that adolescents are less affected by the presence of aggressive behavior in their relationships (Capaldi & Crosby, 1997; Gray & Foshee, 1997; Levesque, 1993). However, the potential for tolerance of this learned behavior to persist into future relationships suggests that aggression is, nevertheless, an important issue among adolescent couples.

Individual Psychological Functioning

Psychological characteristics present in individual couple members, such as internalizing, externalizing, and rejection sensitivity, may enhance or detract from their experience in their relationships. The following sections will use the terms internalizing and externalizing to explain relevant psychological characteristics. These terms were popularized by Achenbach (1978) to describe and measure the manifestation of psychological disorders in children and adolescents. Though internalizing and externalizing are not specifically referenced by the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychological Association [APA], 2000), the DSM-IV-TR will be cited throughout these sections in respect to specific symptoms, related psychological consequences, and prevalence data. Indeed, the symptom reports

used by Achenbach (1991) to measure and conceptualize internalizing and externalizing are consistent with DSM-IV-TR criteria for depression, anxiety, and conduct disorder (i.e., anxious/depressed, withdrawn/depressed, somatic complaints, social problems, thought problems, attention problems, rule-breaking behavior, and aggressive behavior).

Internalizing, the tendency to experience negative emotion in an intrapersonal manner such as with anxiety (e.g., physiological arousal, “fight or flight response” and preoccupation and/or apprehension of future states or events) and depression (mood disturbance characterized by sadness, hopelessness, rumination, and numerous debilitating physiological symptoms; Dodge, 1993), is associated with a host of negative outcomes including reduced functioning across academic, occupational, and interpersonal contexts (APA, 2000). The reduction in functioning may be as severe as total withdrawal from each of the contexts mentioned. These symptoms and behaviors are also related to an increase in the occurrence of aggression, from relational aggression to physical and sexual abuse, in romantic relationships (Holtzworth-Munroe et al., 1997). Lifetime prevalence rates for mood and anxiety disorders range from extremely uncommon (e.g., less than 1% rate for obsessive compulsive disorder) to as high as 25% (depression for females; APA, 2000). Given the relatively common occurrence of internalizing symptoms, and the potential for reduced functioning and/or aggressive behavior, it is clear that they are an important area of study in the area of adolescent romantic relationships.

Externalizing, the tendency to display negative emotion through acting out disruptively and/or aggressively (Dodge, 1993), has also been related to several negative

characteristics affecting social, occupational, and academic functioning. Diagnosable disorders that are considered to be externalizing include conduct disorder, attention deficit and hyperactivity disorder, oppositional defiant disorder, intermittent explosive disorder and antisocial personality disorder (APA, 2000). Dodge correlated externalizing behaviors and an increased occurrence of aggression, spanning in severity from verbally aggressive behavior to acts of physical violence. Lifetime prevalence rates for externalizing disorders span from less than 1% to approximately 10% (APA). As previously mentioned, adolescents may be less affected by the presence of aggressive behavior (i.e., externalizing behavior) in their relationships (Capaldi & Crosby, 1997; Gray & Foshee, 1997; Levesque, 1993). However, the potential for harm and for engaging in a less than ideal developmental trajectory suggest the importance for the inclusion of externalizing disorders in this study.

It is important to note that the prevalence rates cited for internalizing and externalizing disorders are limited to the percentage of those who meet criteria for full diagnosis. Relevant behaviors may occur with undiagnosed and/or subclinical manifestations (Haavisto et al., 2004). Consequently, clinically or scientifically relevant internalizing and externalizing behaviors may be far more prevalent than indicated by the DSM-IV-TR (APA, 2000).

Rejection sensitivity, the degree to which an individual is preoccupied with and/or reacts to perceptions of being rejected in a social relationship or interaction (Downey et al., 1999) is a relatively common psychological characteristic that may negatively affect intimate relationships. Rejection sensitivity may cause individuals to withhold their

expressions or personal interests, suppressing communication of their needs, opinions, or desires so that the relationship is not stressed or threatened by dissent. In contrast, rejection sensitivity may increase aggressive, controlling behavior as a means to preserve the relationship. Downey and colleagues (2000) and Downey, Irwin, Ramsay, and Ayduck (2004a) noted that rejection sensitivity is associated with an increase in the occurrence of aggressive behaviors in romantic couples. Whether an individual responds to rejection sensitivity via aggressive behavior or passivity, the results are likely to have a negative impact on his or her relationship.

Empathic Accuracy

Empathic accuracy, the ability to infer the thoughts and feelings of other people, has been the subject of numerous scientific studies for over 15 years (Ickes, 1993). Several aspects have been investigated, including measurement, validity, reliability, gender differences, related relationship dynamics, and related characteristics (Graham & Ickes, 1997). All published studies reviewed herein that have investigated empathic accuracy at this time have used adult and emerging adult subjects. One recent article examined empathic accuracy in adolescent romantic couples, suggesting that the construct can be successfully applied in adolescence (Haugen, Welsh, & McNulty, 2008), and relating empathic accuracy to relationship satisfaction.

Empathic accuracy is distinguished from understanding trait-like tendencies and/or characteristics of other people (Ickes, 1993). Instead, it refers to inferences made about transient internal states that occur “in the moment.” There are thought to be numerous skills that facilitate the process of being empathically accurate. These skills include

cognitive processes, emotional competence, and observational attention (Ickes, Stinson, Bisonette, & Garcia, 1990). The ability to exercise empathic accuracy varies between individuals and within individuals across specific circumstances (Marongoni, Garcia, Ickes, & Teng, 1995; Thomas, Fletcher, & Lange, 1997).

Initially, attempts to measure empathic accuracy utilized only individual questionnaire measures (Ickes & Simpson, 1997; Ickes & Tooke, 1988). However, these methods were ultimately abandoned (Ickes et al., 1990) in favor of video-recall procedures that recorded dyadic interactions and then included assessments by both participants, recording perceptions of their own, and the other participant's thoughts and feelings that occurred at specific points during the interaction (Ickes, 1993). Participants' perceptions of their own and their partners' thoughts and feelings are typically augmented by the ratings of outside observers (Ickes). Empathic accuracy is the aggregated ratings from this procedure, ranging from 0 (completely inaccurate) and 100 (completely accurate). The methods used in this study for measuring empathic accuracy departed somewhat from the methods used by Ickes and subsequent researchers. Specifically, a video recall procedure was administered in which couple members provide subjective ratings of their own and their partners' behaviors during 20-second segments of the conversations. The behavioral dimensions used to measure empathic accuracy included positive and negative dimensions of connection, conflict, sarcasm and putting down. The ratings were provided on a Likert-type scale ranging from 0 (not at all) to 4 (very much). Partner's ratings of him or herself were subtracted from the target couple member's ratings of his or her partners' behaviors. Accordingly, positive difference scores indicate

that the target couple member saw more of the behavior in the partner than the partner viewed him or herself. Scores of 0 indicate that couple members agreed about the level of behavior or feelings. Negative scores indicate that the target couple member perceived less of the behavior or feeling than the partner reported.

Gender differences in empathic accuracy seem intuitively likely, but in fact, may not be supported. Some studies (e.g., Graham & Ickes, 1997) predicted that empathic accuracy would be greater in females than in males based on socialized gender roles. However, many published articles (e.g., Graham & Ickes) that investigated gender and empathic accuracy found no significant differences between male and female subjects. However, there may also be gender role effects that influence the motivational aspects of empathic accuracy. It may be characteristic of men who are invested in the traditional patriarchal gender role to adopt a reticent attitude toward communicating emotional information about themselves, particularly when the content reveals vulnerability (Snell, Miller, Belk, & Garcia-Falconi, 1989; Turner, 1994). Similarly, they may be uncomfortable or resentful towards a partner whose capacity for empathic accuracy allows them to detect or perceive emotions or attitudes that they are attempting to conceal. Their partners may learn to suppress empathic communication, or may receive less than positive feedback regarding the sharing of such information.

Intuitively, one would also expect that empathic accuracy would be greater in closer relationships. Indeed, research supports this assumption (Ickes & Simpson, 1997; Marongoni et al., 1995), suggesting that empathic accuracy is associated with closer proximity, more disclosure, and greater temporal exposure (Simpson, Ickes, & Oriña,

2001). Additionally, empathic accuracy is related to greater motivation to understand close relationships (Klein & Hodges, 2001). However, some exceptions have been found. For instance, empathic accuracy has been observed to decrease over time in close relationships such as marriages (Thomas et al., 1997). It is theorized that the decrease in empathic accuracy over time in close relationships occurs because of a decrease in the motivation to accurately understand the partner's perspective (Simpson et al., 2001). Thus, as the security of a specific relationship becomes well established, the incentive to be empathically accurate in that relationship decreases. Another exception is thought to occur in close relationships where one partner perceives that the other may be withholding potentially harmful information (Simpson, Ickes, & Grich, 1999; Simpson, Oriña, & Ickes, 2003). In these circumstances, it is posited that one might purposefully or subconsciously misperceive the thoughts, feelings, and behaviors of his or her partner in order to avoid a painful reality. Empathic accuracy may also be affected by psychological processes such as denial (and perhaps other ego defense mechanisms such as dissociation). Denial, the systematic refusal to recognize specific characteristics, information, or other aspects of the self or personal circumstance may create an interesting "wrinkle" in the process or exchange of empathic accuracy. In this scenario, a partner who is empathically accurate may not be recognized as such by his or her partner (and possibly others) who is actively engaged in denial. Based on these examples, motivation is thought to be an important aspect that enhances or decreases empathic accuracy.

In general, the word empathy implies motivation toward a positive interaction or

relationship outcome. However, among some individuals, for example persons with antisocial personality characteristics, a greater ability to infer other peoples' thoughts and feelings may be applied toward a more self-centered purpose such as manipulation or coercion (Eisenman, 1980; Rogers, Duncan, Lynett, & Sewell, 1994). Individuals with these personality characteristics may use a similar or identical skill set as employed in empathic accuracy, although without the altruistic or prosocial orientation that is characterized by the word empathy.

The ability to be empathically accurate is thought to be a relatively stable characteristic in specific relationships. One study (Thomas et al., 1997) found stable ratings of empathic accuracy in marriage relationships across a 1-year time period ($r = .40$). Empathic accuracy for individuals across relationships is also thought to be somewhat stable (Marangoni et al., 1995; Thomas et al.). Research in clinical training (Barone et al., 2005) found that individuals who practiced perspective-taking were found to gain in their ability to be accurate across different scenarios and subjects. Other individual characteristics have been demonstrated to enhance empathic accuracy. Interestingly, anxiety is associated with greater accuracy, and is thought to increase one's motivation to comprehend a threatening environment, circumstance, or relationship (Simpson et al., 1999). Unfortunately, high anxiety and empathic accuracy together predicted a reduction in the closeness of relationships (Hodges & Klein, 2001), and may be associated with relationship dissolution.

High measures of empathic accuracy have been correlated with greater relationship satisfaction (Simpson et al., 2003). However, there is a paucity of research

that examines the relationship between empathic accuracy and negative characteristics such as aggressive behaviors, a topic that will be further addressed in a subsequent section. The following section will explore the relationship between the psychological characteristics mentioned above and empathic accuracy, between the psychological characteristics and aggression and relationship satisfaction, and between empathic accuracy and aggression and relationship satisfaction. Given the strength of the empirical support for those links and the theoretical role played by empathic accuracy in relationship development, it is posited that empathic accuracy may mediate the relationship between the psychological characteristics and the related characteristics.

Studies have not been conducted that examine cultural differences in empathic accuracy. However, processes that are involved in being empathically accurate (e.g., perspective taking, prosocial behavior, empathic responding, and moral reasoning) have been studied with regard to cultural differences (e.g., Brewer & Gardner, 1996; Markus & Kitayama, 1991; Trommsdorff, Friedlmeier, & Mayer, 2007; Wu & Keysar, 2007). In general, cultures that are characterized by relatively collectivistic interpersonal orientations demonstrate social norms that prize empathy related behaviors. In contrast, individualistic cultural influence, as exemplified by Westernized industrialized regions, is generally associated with lesser value for being empathetic. In general, these cultural tendencies likely reflect motivational differences reflected by attitudes toward empathy as well as the importance of empathy in regards to survival and/or success specific to culture and region. Studies also suggest that empathy is impacted by exchanges within culture versus exchanges across cultures, such that individuals are more likely to exercise greater

degrees of empathetic behavior in the context of their own culture (Nelson & Baumgarte, 2004; Triandis, Bontempo, Villareal, Asai, & Lucca, 1988).

Psychological Characteristics and Empathic Accuracy

Psychological characteristics such as internalizing, the tendency to experience negative emotion within one's self as with anxiety and depression, externalizing, the tendency to display negative emotion through acting out disruptively and/or aggressively (Dodge, 1993), and rejection sensitivity, the degree to which an individual is preoccupied with being rejected in a social relationship or interaction (Downey et al., 1999) may affect individuals' abilities to exercise empathic accuracy. At the present time, there are few studies that have examined the relationship between psychological characteristics and empathic accuracy. However, related areas such as attribution, the cognitive process of identifying the source of psychologically relevant stimuli (Peterson, Maier, & Seligman, 1993), have been associated with internalizing, externalizing, and rejection sensitivity, and share many features with the processes involved in empathic accuracy. Although the construct of attribution may be somewhat different from empathic accuracy, their similarities warrant comparison. Because of the paucity of research specifically linking empathic attribution to psychological characteristics, the literature examining the links between psychological characteristics and attributional style will be evaluated to form hypotheses about the relationship between the psychological characteristics of interest and empathic accuracy.

Internalizing and Empathic Accuracy

According to several theorists (e.g., Amin, Foa, & Coles, 1998; Martin & Penn, 2001; Peterson et al., 1993), internalizing symptoms such as depression and anxiety are characterized by a specific attributional style. Attribution is thought to be a cognitive process that influences the manner in which individuals receive and interpret information from their environments. According to this theory, a depressed and/or anxious individual, through the process of learned helplessness (Peterson & Seligman, 1981a), is likely to develop a pessimistic attributional style that is global—influencing nearly all incoming information, internal—implying personal blame for external stimulus, and stable—displaying consistency over time (Peterson & Seligman, 1981b). This depressogenic attributional style is often compared to the cognitive distortions or biases described by Beck (Peterson et al., 1993), in that it impairs one's ability to accurately interpret information. Specifically, negative biases associated with attribution errors distort and lead to unnecessarily negative interpretations during information processing. Two meta-analyses (Gladstone & Kaslow, 1995; Joiner & Wagner, 1995) reviewed 28 studies (7,500 subjects), and concluded that there is a strong relationship between pessimistic attributional style and internalizing symptomology in children and adolescents. These cognitive and stylistic characteristics of depressed and/or anxious individuals strongly suggest that depression and anxiety may be associated with impaired ability to accurately perceive relationship partners' intentions, attitudes, and behaviors.

A potential exception to the hypothesis that depression is associated with distorted or inaccurate appraisal of others' behaviors and intentions is the construct of depressive

realism. Depressive realism posits that, because depressed individuals do not have an optimistic attributional style or cognitive bias, they construct a more accurate portrayal of reality in some circumstances (Alloy & Abramson, 1979). The subject is mired in controversy and inconsistent research findings (e.g., Johnson & D'Iorio, 1998; Kapçi & Cramer, 1998; O'Carroll, 1998). On the other hand, depression as an impediment to accurate inference has been consistently and widely supported across a wide body of research. Consequently, it is considered herein that depressive symptoms and other internalizing behaviors will be associated with inaccurate appraisal of the intentions and emotional states of relationship partners.

Externalizing and Empathic Accuracy

Kenneth Dodge developed a theory of social information processing that has been widely used to explain externalizing behavior (Crick & Dodge, 1994; Dodge, Pettit, McClaskey, & Brown, 1986). Dodge's theory posits that a socially appropriate reaction to social stimuli follows a specific process. This process includes information encoding, accurate coding, identification of an interaction goal, creation of response alternatives, consideration of the response alternatives, and finally, engaging the selected response. A deviance at any point in the sequence of processing may lead to aggressive behavior. Patterns in the representation of social cues provide a specific manner of interrupting social information processing (Dodge, 1980; Dodge et al.). For example, attribution biases may systematically interfere with processing, resulting in the predictable selection of inappropriate social reactions. Dodge observed that aggressive children frequently exhibit a tendency to interpret innocuous or ambivalent social cues from their peers as if

they represent hostile intent. This tendency is termed the hostile attribution bias, which is then incorporated into an internal working model (Dishion, French, & Patterson, 1995; Dodge, 1993). Hostile attribution bias is defined as a cognitive process that occurs when information from another person is appraised (Dodge, 1980; Dodge et al.), and that prevents an accurate representation of social stimulus. This definition is consistent with the process explained by empathic accuracy. Consequently, incorporating a hostile attribution bias may comprise a specific manner of being empathically inaccurate. A recent meta-analysis (Orobio de Castro et al., 2002) included 41 studies (6,017 subjects) that examined the association between the hostile attribution bias and externalizing symptoms including aggression. Orobio de Castro and colleagues concluded that there was robust empirical support for the relationship between attribution and aggression. This conclusion reiterated that of two previous meta-analyses on the same topic (Akhtar & Bradley, 1991; Dodge, 1993).

Rejection Sensitivity and Empathic Accuracy

Rejection sensitivity represents a cognitive and affective process in which an individual expects and is highly attuned to cues of rejection (Downey & Feldman, 1996). The preoccupation with rejection is evidenced by heightened physiological arousal when exposed to interpersonal stimuli that portray the potential for rejection (Downey, Mougios, London, Ayduck, & Shoda, 2004b; Pietrzak, Downey, & Auduck, 2005). In fact, highly rejection sensitive individuals encode ambiguous interpersonal stimuli as rejecting, and are primed to react in a manner that responds to or defends against being rejected (Ayduck, Downey, & Kim, 2001; Ayduck, Downey, Testa, Yen, & Shoda, 1999;

Downey et al., 2000; Downey, Freitas, Michaelis, & Khouri, 1998). While the studies referred to above used emerging adult and adult samples, rejection sensitivity has also been documented specifically in adolescent populations (Bentley, 2006; Downey et al., 1999; Downey, Khouri, & Feldman, 1997; Harper, Dickson, & Welch, 2006; Purdie & Downey, 2000). The manner in which rejection sensitivity is thought to influence cognitive and emotional (physiological) processes is likely to also impair the processes involved in being empathically accurate.

As with other systematic biases discussed, including pessimistic attributional style (Peterson et al., 1993) and hostile attribution bias (Dodge, 1993), rejection sensitivity describes a disturbance in the cognitive and emotional ability to accurately construct a perspective of an interaction that is consistent with the partner's intention. Indeed, Downey and colleagues (2004a) summarized previous work (Levy, Ayduk, & Downey, 2001) by describing the process as follows: "Individuals who anxiously expect rejection have a tendency to readily perceive it in other people's behavior and then react to it in ways that undermine their relationships; their behavior thus leads to the feared characteristics" (p. 668). In this way, it can be directly related to the ability to infer the thoughts and feelings of other people (Ickes, 1993), or more precisely, empathic inaccuracy. Indeed, it is likely that an individual who measures high in rejection sensitivity would be less able to infer the thoughts and feelings of another person, as they would likely over-attend to and exaggerate all cues that could be construed as rejecting (Levy et al.).

Psychological Characteristics and Relationship Characteristics

The following section will summarize the literature examining the relationships between the psychological characteristics of interest in this study (internalizing, externalizing, and rejection sensitivity) and the romantic relationship experiences of aggression and relationship satisfaction. Interestingly, aggressive behavior in the context of romantic relationships is not necessarily related to lower levels of satisfaction (e.g., Capaldi & Crosby, 1997; Gray & Foshee, 1997). These findings may reflect the relatively rare occurrence of severe consequences of aggression, such as significant physical injury. However, other researchers have reported that decreased relationship satisfaction is correlated with relational aggression (Linder, Crick, & Collins, 2002), sexual abuse, emotional or psychological abuse, and physical abuse (e.g., Katz, Kuffel, & Coblenz, 2002). Female partners are generally more likely to indicate dissatisfaction in relationships characterized by mutual aggression or victimization (Foshee, 1996; Katz et al.). This phenomenon may reflect the likelihood that, when there is significant injury involved, females may experience greater injury resulting from male perpetration.

Predicting Romantic Relationship Aggression and Relationship Satisfaction from Individual Internalizing Symptoms

Much of the literature that examines the association between aggression and internalizing behaviors in romantic relationships focuses on male perpetration and uses emerging adult and adult subjects. Exceptions will be noted. A widely cited meta-analysis (Holtzworth-Munroe et al., 1997) concluded that perpetrators of physically aggressive

behaviors in intimate relationships often report a greater degree of psychopathology than partners who are not aggressive in their relationships. Several studies have used the Millon Clinical Multi-Axial Inventory (MCMI) and the MCMI-II (Barnett & Hamberger, 1992; Dutton, Starzomski, & Ryan, 1996; Hamberger & Hastings, 1991; Hastings & Hamberger, 1988; Murphy, Meyer, & O'Leary, 1993) to examine the relationship between violence perpetration and internalizing symptoms. These studies all found elevated reports of symptoms of mood disorders among perpetrators of domestic violence compared to partners who did not report perpetration. Other studies have used the Beck Depression Inventory (BDI; Maiuro, Cahn, Vitaliano, & Wagner, 1988; Pan, Neidig, & O'Leary, 1994; Vivian & Malone, 1997) to examine the association between depression and physically aggressive behavior. These studies found significant differences between perpetrators of physical aggression in their relationships and nonabusive partners regarding BDI scores, with the perpetrators more frequently scoring above the clinical cutoff for depression.

More recently, a meta-analysis (Stith, Smith, Penn, Ward, & Tritt, 2004) summarized 85 studies predicting aggressive behavior in romantic relationships. Composite effect sizes were calculated for 16 perpetration risk factors identified in the included studies. A moderate effect size was found for the association between perpetration of physical abuse and depression. Another recent study (Stuart, Moore, Gordon, Ramsey, & Kahler, 2006) examined perpetration of aggression and depression in female populations. Stuart and colleagues used a sample of women who had been arrested for domestic violence and found higher reported rates of posttraumatic stress

disorder (PTSD), generalized anxiety disorder, depression, and panic disorder than in nonviolent populations.

Depression has also been consistently associated with reduced relationship satisfaction among dating and married couples (e.g., Beach & Finchman, 1998; Beach & O'Leary, 1993a, 1993b; Remen & Chambless, 2001; Stith et al., 2004). Several aspects related to depression, including emotional reactivity to stressors (Tolpin, Cohen, Gunthert, & Farrehi, 2006), cognitive distortions and biases (Beck, 1976), and social withdrawal (Spirito, Francis, Overholzer, & Frank, 1996), may contribute to the experience of relationship dissatisfaction. Indeed, depression is characterized by numerous symptoms and associated features (i.e., anhedonia, diet and weight disturbances, sleep disturbances, psychomotor agitation, fatigue, impaired concentration, suicidal ideation, excessive guilt and/or hopelessness, and depressed mood), many of which potentially burden interpersonal relationships (APA, 2000). Longitudinal studies (e.g., Beach & O'Leary, 1993a, 1993b; Overbeek et al., 2003) indicated that depression is not only likely to negatively affect one's satisfaction with his or her romantic relationship. The conditions associated with dissatisfaction are also likely to reinforce the experience of depression. Overbeek and colleagues suggested that the mutually reinforcing relationship between depression and relationship dissatisfaction may continue across successive relationships as well.

As with depression, anxiety, including social anxiety, dating anxiety, and other anxiety disorders such as panic attack, post traumatic stress disorder, and agoraphobia, has been associated with reduced measures of relationship quality and satisfaction among

adolescents and adults (e.g., Feeney, Noller, & Roberts, 1998; Glickman & La Greca, 2004; Gottman, 1994; La Greca & Harrison, 2005; La Greca & Lopez, 1998; Sanford & Rowatt, 2004). It theorized that anxiety may contribute to avoidance of relationships in adolescence, such that the requisite interpersonal skills for romantic relationships are not acquired (La Greca & Prinstein, 1999), that it may reduce individual capacity to resolve conflict (Bradbury, Cohan, & Karney, 1998; Gottman, 1994), that it may contribute to other affective disorders such as depression (Davies & Windle, 2001), and that anxious individuals may withdraw from their partners to avoid anxiety provoking stimuli (Carver, Joyner, & Udry, 2003). In fact, Gottman (1991) considered these anxiety related interpersonal deficits to contribute largely to adult relationship dissolution and divorce.

It is important to note that some researchers suggest that internalizing symptoms can be associated with relationship satisfaction in some circumstances (e.g., Cramer, 2004; Finch, Okun, Pool, & Ruehlman, 1999; Sanford & Rowatt, 2004). For example, in couples where individuals are able to communicate their distress in an effective manner, the presence and expression of psychopathology may elicit increased support seeking and support giving behaviors that may increase the experience of relationship satisfaction. However, it appears that a preponderance of the literature addresses internalizing symptoms as negatively affecting relationships.

*Predicting Romantic Relationship Aggression
and Relationship Satisfaction from Individual
Externalizing Symptoms*

Externalizing behaviors are negative behaviors that are manifested towards the external environment (Liu, 2004). They include disruptive, hyperactive, and aggressive

behaviors (Liu), which are by definition, potentially aggressive. Consistent with this assumption, children and adolescents who demonstrate externalizing symptoms generally engage in higher rates of aggressive behaviors than their peers across multiple contexts (e.g., school, peers, family; Dodge, 1993). Additionally, the presence of an externalizing disorder during childhood is associated with an increased likelihood of future aggressive and delinquent behaviors (Farrington, 1997), and an increased likelihood of later participation in crime, violent crime, and incarceration (Farrington, 2001).

Externalizing symptoms, particularly aggressive behavior, are also often associated with decreased relationship satisfaction (e.g., Fincham, Bradbury, Arias, Byrne, & Karney, 1997). The negative consequences of acting out, such as termination of employment, legal problems, and incarceration, are similarly deleterious for romantic relationships as they are for the individual (Haynie, Giordano, Manning, & Longmore, 2005). Furthermore, aggressive individuals are likely to aggress across multiple contexts of their lives (Cummings, Iannotti, & Zahn-Waxler, 1989; Tuvblad, Eley, Lichtenstein, 2005). An individual who acts aggressively towards his or her peers is increasingly likely to aggress in other relationships, including romantic partnerships.

*Predicting Romantic Relationship Aggression
and Relationship Satisfaction from Individual
Rejection Sensitivity*

Correlations between aggression and rejection sensitivity have been documented for both male and female couple members. For males in a college-aged sample, high measures of rejection sensitivity, especially when the subjects' investment in their relationships was high, were related to higher frequency of aggressive behaviors directed

towards the romantic partner, relative to non-rejection sensitive individuals (Downey et al., 2000). Adolescent and college-aged females who endorsed high levels of rejection sensitivity, particularly when they also reported low self-regulatory abilities, also demonstrated a higher incidence of aggressive behaviors than nonrejection sensitive individuals (Downey et al., 2004a; Purdie & Downey, 2000). Other researchers have also found support for an association between sensitivity to rejection and aggressive behavior directed at the perceived rejecter among children, adolescents, and adults (e.g., Buckley, Winkel, & Leary, 2004; Gilbert, Irons, Olsen, Gilbert, & McEwan, 2006).

High rejection sensitivity has often been correlated with feelings of dissatisfaction in romantic relationships in adolescence and emerging adulthood (e.g., Downey et al., 1999; Downey & Feldman, 1996). Behaviorally, rejection sensitivity may result in either attempts to control ones' partner or yielding or giving-in to avoid conflict that may be perceived as a threat to the relationship. Either way, Downey and colleagues (1998) noted that rejection sensitivity often functions as a self-fulfilling prophecy, such that the expectation of being rejected often resulted in the reality of being rejected by a romantic partner. In a previous study using this data set (Bentley, 2006), adolescent males reported higher levels of rejection sensitivity than did their girlfriends. The study concluded that males may experience rejection as a result of violating perceived gender roles that require them to maintain an image of patriarchal authority.

Empathic Accuracy and Relationship Characteristics

The following section will summarize literature examining the relationships

between empathic accuracy and the selected characteristic variables, aggression, and relationship satisfaction. The majority of the literature cited refers to the processes that enhance one's ability to empathize, as opposed to measures of the degree of empathic accuracy.

Empathic Accuracy and Aggression

Empathy and the social skills, cognitive processes, and/or “intelligence” that facilitate the ability to be empathetic have been negatively correlated with aggressive behaviors, including physical, coercive, and relational aggression in several studies (e.g., Kaukianen et al., 1999; Richardson, Hammock, Smith, Gardner, & Signo, 1994). This relationship between empathy and aggression is supported by a widely cited meta-analysis (Miller & Eisenberg, 1988), and is seen across numerous relationship types, including romantic relationships, and across a wide range of ages, from children to adults. In fact, interventions that strive to increase the ability to empathize have been widely developed and used to reduce aggressive behaviors with children, adolescents, and adults. These interventions have been applied in schools, in individual settings, and the legal system (Jolliffe & Farrington, 2004; Miller & Eisenberg).

Empathic Accuracy and Satisfaction

The negative correlation between empathy and aggressive behavior (Kaukianen et al., 1999; Miller & Eisenberg, 1988; Richardson et al., 1994) also relates to dissatisfaction, as relationships that are absent of problematically aggressive behaviors are more likely to be characterized by partner satisfaction (e.g., Ellis & Malamuth, 2000;

Fincham et al., 1997). Over the past 20 years, several studies (e.g., Cramer, 2003; Davis & Oathout, 1987; Franzio, Davis, & Young, 1985; Meeks, Hendrick, & Hendrick, 1998) have found that romantic relationships in emerging adulthood, and adulthood in which both partners were competent in the domain of empathy were characterized by high measures of relationship satisfaction. In contrast, individuals in couples in which one or both partners demonstrated impaired ability to empathize within the context of their relationship generally endorsed lower ratings for satisfaction. Marital and couples communication and conflict resolution literature also generally supports the premise that an impaired ability to take another's perspective leads to greater discord in the relationship (Christensen & Shenk, 1991; Sessa, 1996).

Empathic Accuracy as a Mediating Variable in the Relationship Between Psychological Characteristics and Related Characteristics

As previously mentioned, empathic accuracy is an individual's ability to infer the thoughts and feelings of another person, and is facilitated by skills such as observation, cognitive processes, and emotional competence. One's ability to be empathically accurate likely affects communication in romantic relationships such that, in most circumstances, being highly empathically accurate may benefit the relationship in general. In contrast, being empathically inaccurate, with few exceptions, may create or maintain problems in relationships. Empathic accuracy may be a particularly useful construct in understanding the relationship between psychological characteristics and aggression or relationship satisfaction because the skills that facilitate empathic accuracy are vulnerable to being

compromised by psychological characteristics. For example, depressed individuals and aggressive individuals often employ systematic cognitive and emotional biases (i.e., pessimistic and hostile intent attributions). Clearly, these biases, which are core features of problems in these domains of individual psychological functioning, have the potential to disturb the processes involved in being empathically accurate. When these processes are interfered with, and individual abilities to be empathically accurate are decreased, communication in relationships also becomes compromised. The resulting potential for misunderstanding and conflict that arises may leave individuals at a greater risk for engaging in aggressive behaviors toward their partner, and for becoming dissatisfied with the conditions of their relationship. Thus, empathic accuracy can be seen to mediate the relationship between psychological characteristics and aggression and relationship satisfaction. Consequently, skills training and psychoeducation that enhance or facilitate empathic accuracy may provide a unique opportunity to intervene in aggressive or unsatisfactory relationships.

The review of literature provides evidence that there is a negative association between the psychological characteristics included in the current study (externalizing, internalizing, and rejection sensitivity) and empathic accuracy. Positive relationships between the psychological characteristics examined in the current study—internalizing symptoms, externalizing symptoms, and rejection sensitivity—and aggressive behavior and negative relationships between the same psychological characteristics and relationship satisfaction are also described. Finally, empathic accuracy is noted to have a negative correlation with aggression and a positive association with relationship

satisfaction.

The current study tests the theoretically based hypothesis that impairments in empathic accuracy provide one mediating link between individual psychological characteristics and relationship quality. Those who report greater internalizing or externalizing symptoms and who endorse higher levels of rejection sensitivity are expected to demonstrate impaired ability to understand their partners' intentions and emotional states. This impaired capacity to empathize with their romantic partners is, in turn, expected to be associated with reduced relationship functioning, in the form of more frequent aggressive perpetration and poorer relationship satisfaction. This mediational model is shown in Figure 1 (Baron & Kenny, 1986; Judd & Kenny, 1981).

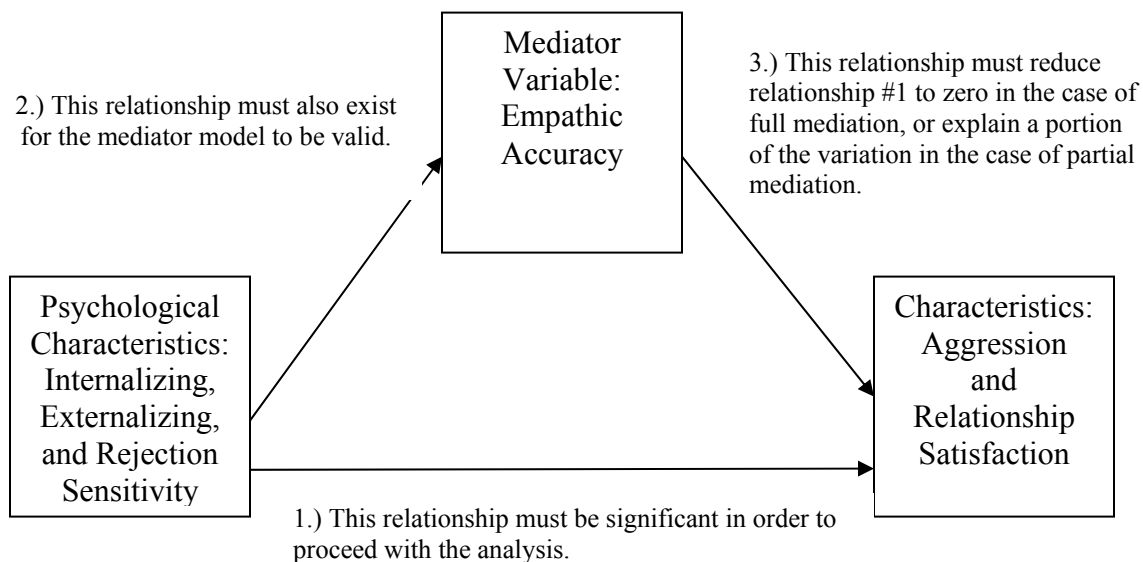


Figure 1. Mediation model illustrating empathic accuracy as a mediating variable between psychological characteristics and related characteristics.

Summary and Objectives

The preceding literature review has illustrated several relationships that have been well supported in previous literature. First, romantic relationships are an important aspect of peoples' lives, ideally providing support and partnership. Adolescent romantic relationships are a particularly important research topic, as many aspects have not been adequately studied in this population, and because developmentally, they are a crucial context in which individuals learn and acquire relationship skills and characteristics that will likely carry forward into future relationships.

Given the theoretical links between adolescent and adult romantic relationship qualities (Collins & Shroufe, 1999; Furman & Wehner, 1994), perhaps few aspects of adolescent romantic relationships are as important to study as relationship quality characteristics. As stated above, relationship satisfaction is of particular importance, as it conveys the positive and protective potential linked to romantic relationship involvement. Inversely, dissatisfaction is also important as it relates to problematic behavior and relationship dissolution. Among problematic behaviors, aggression is especially relevant. Indeed, the presence of aggression may lead to physical and psychological injury and relationship dissolution independent of satisfaction. There are several individual psychological characteristics that may impact the characteristics mentioned above. Relevant to this study, internalizing, externalizing, and rejection sensitivity have been associated negatively with satisfaction and positively with the incidence of aggression between couple members. These characteristics are quite common, at least in subclinical form.

Empathic accuracy (or inaccuracy) may be related to both aggression and satisfaction, such that poor empathic accuracy in one or both couple members increases the likelihood of aggression and dissatisfaction. Empathic accuracy is also associated with internalizing, externalizing, and rejection sensitivity. More specifically, the presence to these psychological characteristics may impair an individual's ability to infer the thoughts and feelings of their partner via cognitive biases and other mechanisms. Thus, empathic accuracy may mediate the relationship between the psychological characteristics and relationship characteristics of interest. Specifically, the presence of the psychological characteristics may decrease individual abilities to be empathically accurate. Consequently, the reduced ability to infer the thoughts and feelings of one's partner may contribute to dissatisfaction with the relationship and an increased vulnerability for the relationship to experience aggressive behavior. This study tests the hypothesized relationships using a mediational model. If empathic accuracy does, in fact, mediate the relationship between psychological characteristics and related characteristics, it may be a particularly relevant and effective point of intervention to address aggression and dissatisfaction in adolescent romantic relationships and those that follow.

CHAPTER III

METHODS

Design

The design for the proposed study is correlational, examining the associations among measures of individual psychological characteristics, empathic accuracy, relationship satisfaction, and aggressive behaviors in dating relationships. Observational and self-report data were collected from both partners of 92 heterosexual, rural, middle-adolescent romantic couples. Data for this project were collected between 2002 and 2004 as part of a larger study funded by a Utah State University New Faculty Grant and by B/START grant number 1 R03 MH064689-01A1 from the National Institute of Mental Health, both awarded to Renee V. Galliher, Ph.D.

Participants

Participants were 92 heterosexual adolescent couples. In order to obtain an ethnically diverse sample, two separate recruitment strategies were used. First target adolescents were recruited from rural high schools located in Cache Valley, Utah. Students were randomly selected for telephone recruitment from school directories obtained from the schools. Interested target adolescents were sent a packet of information describing the study via US mail (see Appendix A). Follow-up phone calls were made one week after the packet was sent to confirm eligibility and willingness of both partners and to schedule a data collection session. Second, as part of the larger study examining

cultural differences in adolescent romantic relationship processes, Native American target adolescents and their partners were recruited from a public high school located near the border of a large southwestern American Indian reservation. School personnel assisted in the recruitment and scheduling of couples recruited through the high school.

Participating couple members were between 14 and 18 years of age, inclusive, and couples were required to have dated exclusively for at least one month to ensure some degree of mutual relationship experience. The average couples' length of relationship was 55 weeks, and ranged from about a month to 6 years. Seventy-five percent of the couples had been dating for less than a year and a half. Individuals under the age of 18 were required to have written parental consent in addition to providing written assent, while those who were 18 provided only their own signature (see Appendix A for consent form). Each couple member was compensated for participation with \$30 (\$60 per couple).

The ethnic origins for girlfriends were 61% White, 2% African American, 1% Asian, 16% Latino/Hispanic, and 20% Native American. The average age of the girlfriends was 16.55 years. Twenty six percent of girlfriends reported that they were in ninth or tenth grade, 67% of the girlfriends were in eleventh or twelfth grade, and 6% were no longer in high school. The religious affiliation endorsed by girlfriends was 61% Mormon (LDS), 17% Baptist, 10% Catholic, and 12% other, which most frequently indicated a traditional Native American religion. Forty-three percent of the female adolescents were employed. Sixty-three percent of girlfriends' parents were married to each other, 18% had divorced or separated parents, and 8% of the girlfriends' parents had

never married; the remaining 11% were unspecified.

The boyfriends' ethnic origins were 57% White, 21% Latino/Hispanic, 21% Native American, and 1% African American. The average age of boyfriends was 17.10 years. Fifteen percent of boyfriends reported that they were in ninth or tenth grade, 65% of the boyfriends were in eleventh or twelfth grade, and 20% were no longer in high school. The religious affiliation of the boyfriends was 59% Mormon, 13% Catholic, 23% specified no religious affiliation, and 5% were Baptist. Forty-eight percent of the boyfriends were employed. Seventy-one percent of the boyfriends' parents were married to each other, 12% were divorced, 7% had never married, and 10% were unspecified

Age discrepancies between couple members were as follows: in approximately 3% of couples boyfriends were 3 years older, in approximately 14% of couples boyfriends were 2 years older, approximately 76% of the couples ages were within 1 year of each other, and approximately 1% of females were 3 years older than their partners.

Ethnicity between couple members was as follows: 76 couples were both White, 10 couples were Hispanic and White, 2 couples were Native-American and White, 1 couple was Hispanic and Native-American, 1 couple was African-American and Hispanic, 1 couple was African-American and White, and 1 couple was Asian and White.

Approximately 50% of both boyfriends' and girlfriends' parents had completed high school or less. Approximately 30% of parents had a college degree or graduate degree; the remainder had completed some college or technical school. Roughly 60% participants' mothers worked as homemakers, in unskilled labor (e.g., factory work), or in the service industry (e.g., store clerk, housekeeper, daycare), while the rest were in

skilled labor or professional positions. About 25% of fathers were business owners or professionals, about 30% were in skilled craftsman positions, and the remainder were in unskilled labor, service industry, or were unemployed.

Measures

The measures relevant to the current study were administered as part of a battery of questionnaires used in the larger study. Measures for this study are described below and copies of all noncopyrighted measures are provided in Appendix B.

Demographic Information

Participants completed a demographic information form that assessed age, gender, race, religiosity, educational history and aspirations, employment, parents' marital status, and parents' occupations.

Youth Self-Report

The Youth Self-Report (YSR; Achenbach, 1991) is a 113-item self-report questionnaire used to measure problematic behaviors in adolescents. Subjects rate the degree to which they believe that the characteristics or behaviors included in the questionnaire apply to them over the past 6 months. Items are answered on a 3-point Likert-type scale (0 = not at all true, 1 = sometimes true, 2 = very true). Ratings measure three general areas of behavior and attitudes (internalizing problems, externalizing problems, and total problems) and eight more specific behaviors (anxious/depressed, withdrawn/depressed, somatic complaints, social problems, thought problems, attention

problems, rule-breaking behavior, and aggressive behavior). Question examples include: “I cry a lot” and “I am self-conscious or easily embarrassed.” For the current study, the broadband internalizing and externalizing scores were used. Although raw scores are transformed in to t scores for clinical purposes, Achenbach recommended that researchers use the raw scores to maximize variability.

The test-retest reliability of the YSR was .91 for 15-18 year olds over 1 week (Achenbach, 1991). Over 6 months, the test-retest reliability was .69. The YSR was able to discriminate significantly between demographically matched referred and nonreferred youth samples (Achenbach). The referred youths scored significantly higher ($p < .05$) on 95 of the 103 problem items (alphas ranging from .63 to .94). The YSR is not included in the Appendix, as it is copyrighted.

Rejection Sensitivity

The 36-item rejection Sensitivity Questionnaire (Downey & Feldman, 1996) was developed to measure the degree to which individuals expect to be rejected by others, how they interpret ambiguous interpersonal cues, and if they overreact to cues of rejection (Brookings, Zembar, & Hochstetler, 2003). A series of interpersonal scenarios are presented and respondents provide two responses for each. Example scenarios include: “You ask your boyfriend or girlfriend if he/she really loves you,” “You ask a friend if you can borrow something of his or hers.” Responses were assessed via two 6-point Likert-type scales. First, respondents were asked how anxious or concerned they would be about the scenario (1 = very unconcerned to 6 = very concerned) to assess the degree of anxiety and concern about the characteristic (Downey & Feldman). Second,

respondents estimated how likely the characteristic of the scenario would be (e.g., I would expect that my boyfriend/girlfriend would want to meet my parents; 1 = very unlikely, 6 = very likely) to assess expectations of acceptance or rejection (Downey & Feldman). The scale score is calculated by reverse scoring the characteristic scenario values, multiplying them by the anxiety/concern responses, and summing across items. Downey and Feldman found the internal and test-retest reliability to be acceptable ($\alpha = .83$). Construct validity was supported by findings that highly rejection sensitive individuals' (as measured by the instrument) partners reported less criticism than would be expected by their rejection sensitive partners. Brookings and colleagues supported these conclusions with similar findings. Analyses specific to the data collected for this study yielded a Cronbach's alpha of .84 for both girlfriends and boyfriends.

Conflict in Adolescent Dating Relationships Inventory

Psychologically and physically aggressive behavior between couple members was measured using the Conflict in Adolescent Dating Relationships Inventory (CADRI; Wolfe et al., 2001), a questionnaire developed specifically for use with adolescent populations. The CADRI includes 60 items and yields five subscale scores and a total aggression score. Following are subscale categories and example questions for each: Physical abuse: "I kicked, hit, or punched him or her;" threatening behavior: "I threatened to hurt him or her;" sexual abuse: "I kissed him or her when he or she didn't want me to;" relational aggression: "I said things to his or her friends to turn them against him or her;" emotional and verbal abuse: "I did something to try to make him or her jealous." Items are endorsed on a 4-point scale, in which 1 = never and 4 = often. Wolfe

and colleagues used factor analysis to confirm the scales measured by the questionnaire. Test-retest reliability was acceptable ($r = .68 - .75$). Additionally, partner agreement was found to be reasonably strong. Construct validity was supported by comparing couples' scores to observer ratings of a lab interaction. Male reports were significantly correlated with observer ratings ($r = .43 - .44$). Cronbach's alpha for each subscale are as follows: sexual abuse .85, threatening behavior .83, emotional abuse .85, relational aggression .86, physical abuse .82, total .80 for girlfriends, and sexual abuse .94, threatening behavior .94, emotional abuse .95, relational aggression .94, physical abuse .93, total .93 for boyfriends.

Levesque Romantic Experiences Questionnaire

Levesque (1993) developed the 113-item Levesque Romantic Experience Questionnaire (LREQ) to measure a number of qualities in romantic relationships. The present study used the Relationship Satisfaction scale to ascertain the degree to which couple members perceive their relationships as satisfying (or not). Example items are as follows; "In general, I am satisfied with our relationship," "I often wish I hadn't gotten into this relationship (reverse scored)." The original 6-point scale was modified to a 5-point scale for computer administration in this study (1 = strongly disagree, 5 = strongly agree). Scale scores are calculated as the mean across the five relationship satisfaction items. Levesque found the reliability of the instrument to be high ($\alpha = .88$). The alpha calculated for the satisfaction subscale for this particular data was .70 for girls and .79 for boys.

Video Recall Procedure: Empathic Accuracy

A video-recall procedure that recorded dyadic interactions and then included assessments by both participants, recording perceptions of their own and their partner's thoughts and feelings that occurred at specific points during the interaction was used (Haugen et al., 2008). During the first hour of the session, couples were digitally recorded while having three brief conversations adapted from previous work with adolescent couples (Capaldi & Clark, 1998; Capaldi & Crosby, 1997). For the first 5-minute warm-up conversation, participants were instructed to plan a party, discussing the location of the party, planned activities, who to invite, what to provide their guests, and whether or not adults would be invited. For the remaining two 8-minute conversations, each couple member selected items from a common issues checklist completed prior to recording. The checklist (see Appendix C) included 21 common dating issues (Capaldi & Clark; Capaldi & Crosby). Each participant was instructed to identify two or three issues, including alternate selections in case they were not able to converse on the first topic for the entire eight minutes. If there were not enough that applied, or if they did not want to select from the provided topics, individuals could provide their own issues. The participants were instructed to discuss each issue and come up with a solution, or solutions, for it.

Next, a video recall procedure was administered in which couple members provided subjective ratings of their own and their partners' behaviors during the conversations. Each couple member watched the two issues conversations twice; once to rate his or her own behavior and a second time to rate the partner's behavior. The

conversations were divided into twenty, 20-second segments. The computer automatically played a segment, stopped the video for the couple member to provide ratings, and then resumed the video for the next 20-second segment. Following each segment, participants responded to seven statements on the computer, asking them to rate either their own or their partners' thoughts or behavior on seven dimensions. Behaviors were adapted from previous research using the video recall method (Galliher, Rostosky, Welsh, & Kawaguchi, 1999; Welsh, Galliher, Kawaguchi, & Rostosky, 1999) and were selected to capture both positive and negative aspects of the interactions (i.e., connecting behaviors, conflictual behaviors, frustration, and putting the partner down), aspects related to the negotiation of interpersonal power (i.e., giving in to the partner, trying to persuade the partner), and skillfulness in problem solving (i.e., feeling uncomfortable). For example, in response to the statement "I was feeling very connected (or close) to my partner," the participant would click on the radial button that most closely fit his or her experience during that segment. The ratings were provided on a Likert-type scale ranging from 0 (not at all) to 4 (very much).

The behavioral dimensions thought to be most vulnerable to misinterpretation due to limited empathic accuracy, were the positive and negative dimensions of connection, conflict, sarcasm and putting down; those with poorer empathic accuracy were expected to view their partners as less connected, more conflictual, more sarcastic, and more likely to put them down than their partners viewed themselves. The capacity to infer the partner's thoughts and feelings were captured with difference scores, such that each couple member's perception of his or her behavior on each dimension was subtracted

from his or her partner's perceptions of the behavior. The direction of the difference score denotes the nature of the disagreement. Specifically, the partner's ratings of him or herself were subtracted from the target couple member's ratings of his or her partner's behaviors. Thus, positive difference scores indicate that the target couple member saw more of the behavior in the partner than the partner viewed him or herself. Scores of zero indicate that couple members agreed about the level of behavior or feelings. Negative scores indicate that the target couple member perceived less of the behavior or feeling than the partner reported. Difference scores were calculated for each of the 40 segments separately and then an average empathic accuracy score was calculated across segments. Difference scores for connection, conflict, sarcasm, and putting down were calculated separately and used as mediators in separate analyses.

Procedures

Data collection for this project took place as part of a larger study examining relationship processes in adolescent romantic relationships. The data collection procedure took approximately three hours. Couples who were recruited via phone solicitation in Cache Valley came to the Dating Couples Lab on the USU campus. Data collection in the public high school took place in conference rooms set aside by the school personnel. Participating couples were provided beverages and snacks throughout the session to maintain their concentration and interest. Couples were first videotaped engaging in a problem-solving conversation (one hour). Second, couple members alternated between the video recall procedure and completing a collection of questionnaire measurements

administered on another laptop computer. While one couple member engaged in the video recall, the other completed the questionnaire. The video recall procedure and questionnaire portions of the study took place in separate rooms to ensure privacy and confidentiality. Both the video recall and the questionnaire took approximately one hour to complete, for a total of two hours that each participant engaged in providing responses. To avoid order effect, couples alternated the gender order in which the recall and the questionnaire were administered with each session.

CHAPTER IV

RESULTS

Overall Analytic Plan

Preliminary analyses included means and standard deviations and intercorrelations among all study variables. Proposed primary analyses followed guidelines for testing mediation outlined by Baron and Kenny (1986). According to Baron and Kenny, three conditions must be met in order to demonstrate a mediating relationship. First, there must be a significant direct relationship between the independent variable (e.g., rejection sensitivity) and the dependent variable (e.g., aggression or relationship satisfaction). Second, there must be a direct relationship between the independent variable and the potential mediator (i.e., ratings of connection, giving in, conflict, or sarcasm). Finally, when the mediator is added in to the model with the independent variable, the mediator must be significant and the effect of the independent variable must be reduced to nonsignificance. If the mediator is significant and the effect of the independent variable is reduced, but still significant, a conclusion of partial mediation can be made.

Descriptive Statistics

Means and Standard Deviations

Tables 1, 2, and 3 provide a summary of means and standard deviations for predictor variables, empathic accuracy variables, and relationship outcome variables.

Table 1

Means and Standard Deviations for Psychological Variables

Variable	Male		Female		Possible range
	Mean	<i>SD</i>	Mean	<i>SD</i>	
Internalizing	47.200	8.643	52.256	9.918	32-96
Externalizing	43.833	6.512	44.311	7.094	31-93
Rejection sensitivity	9.536	2.138	8.548	2.650	1-18

Table 2

Means and Standard Deviations for Empathic Accuracy Variables

Variable	Male		Female		Possible range
	Mean	<i>SD</i>	Mean	<i>SD</i>	
Conflict	.1425	1.133	-.0102	1.013	-4 -4
Connectedness	.1415	.974	-.1553	.838	-4 -4
Sarcasm	.0597	.931	-.1711	.843	-4 -4
Putting down	-.0615	.550	.1779	.622	-4 -4

Table 3

Means and Standard Deviations for Outcome Variables

Variable	Male		Female		Possible range
	Mean	<i>SD</i>	Mean	<i>SD</i>	
Physical abuse	1.196	.545	1.278	.615	1-4
Threatening behavior	1.227	.581	1.217	.468	1-4
Sexual abuse	1.419	.649	1.241	.428	1-4
Emotional abuse	1.685	.663	1.826	.623	1-4
Relational aggression	1.238	.633	1.122	.426	1-4
Total aggression	1.369	.526	1.337	.383	1-4
Relationship satisfaction	3.489	.951	3.656	.655	1-5

Correlations, *t* tests, and ANOVAs were conducted to examine possible effects of age, ethnicity, and mixed ethnicity among couples. These procedures did not result in any significant findings among the variables of interest.

Bivariate Correlations

Six correlation matrices were created. First, associations among all of the psychological characteristic variables and outcome variables were examined separately for both boyfriends and girlfriends (see Tables 4 and 5). Second, relationships among the psychological characteristic variables and empathic accuracy variables were examined for both boyfriends and girlfriends (see Tables 6 and 7). Finally, the associations between empathic accuracy variables and outcome variables were analyzed for boyfriends and girlfriends (see Tables 8 and 9).

The first criterion for the proposed mediation model was met for several variable combinations. There were significant correlations between all psychological measures and at least some forms of dating aggression or relationship satisfaction for both girlfriends and boyfriends. Specifically, for girlfriends, rejection sensitivity was negatively related to relationship satisfaction and positively to relational aggression, while internalizing symptoms were positively related to both relational aggression and the total aggression measure. For boyfriends, rejection sensitivity was positively correlated to both emotional abuse and the total aggression measure, and externalizing symptoms were related to relational aggression.

The second criterion for the mediation model was not satisfied. None of the psychological measures were significantly related to any of the empathic accuracy

Table 4

*Correlations Between Psychological Measures and Relationship Outcomes for**Girlfriends*

Variables	Relationship satisfaction	Physical abuse	Threatening behavior	Sexual abuse	Relational aggression	Emotional abuse	Total aggression
Internalizing	-.011	.023	-.084	.196	.224*	-.040	.248*
Externalizing	.018	-.086	-.048	-.003	.069	-.097	.082
Rejection sensitivity	-.229*	.104	.092	.029	.228*	.097	.065

* $p < .05$.

Table 5

*Correlations Between Psychological Measures and Relationship Outcomes for**Boyfriends*

Variables	Relationship satisfaction	Physical abuse	Threatening behavior	Sexual abuse	Relational aggression	Emotional abuse	Total aggression
Internalizing	.058	-.055	-.021	-.058	.046	.020	.071
Externalizing	-.031	.062	.123	.046	.212*	.151	.134
Rejection sensitivity	-.188	.198	.146	.126	.195	.249*	.233*

* $p < .05$.

Table 6

*Correlations Between Psychological Measures and Empathic Accuracy Measures for**Girlfriends*

Variables	Conflict	Connection	Sarcasm	Putting down
Internalizing	-.036	.104	-.127	-.054
Externalizing	.013	-.058	-.067	.126
Rejection sensitivity	.127	-.099	.192	.089

Table 7

Correlations Between Psychological Measures and Empathic Accuracy Measures for Boyfriends

Variables	Conflict	Connection	Sarcasm	Putting down
Internalizing	.026	.127	.136	.022
Externalizing	.106	.045	.023	.129
Rejection sensitivity	.011	.082	.051	-.162

Table 8

Correlations Between Empathic Accuracy Measures and Outcome Measures for Girlfriends

Variables	Relationship satisfaction	Physical abuse	Threatening behavior	Sexual abuse	Relational aggression	Emotional abuse	Total aggression
Conflict	.002	-.140	-.228*	.019	.084	-.100	-.110
Connection	.077	-.104	-.170	.034	-.041	-.085	-.105
Sarcasm	.096	-.152	-.134	-.170	-.002	-.205	-.187
Putting down	-.160	.224*	-.016	.226*	.082	.138	.182

* $p < .05$.

Table 9

Correlations Between Empathic Accuracy Measures and Outcome Measures for Boyfriends

Variables	Relationship satisfaction	Physical abuse	Threatening behavior	Sexual abuse	Relational aggression	Emotional abuse	Total aggression
Conflict	-.010	.149	.195	-.098	.079	.025	.042
Connection	-.044	.061	.035	.121	.078	.002	.067
Sarcasm	-.178	.148	-.001	.177	.036	.082	.102
Putting down	.154	-.002	-.078	-.062	-.010	-.016	-.039

measures. Although some of the empathic accuracy variables were significantly associated with specific outcomes, the mediation procedure was aborted because all necessary conditions were not met.

In summary, the proposed mediation analyses designed to answer the original research questions did not meet initial criteria for mediation. To explore the empathic accuracy variables more carefully, bivariate correlations were calculated between ratings of self and ratings of partner for both boyfriends and girlfriends for each variable (connection, conflict, sarcasm, and putting down; please see Tables 10 and 11). Correlations between self and partner for each behavior were strong, ranging from .756 to .931, suggesting that couple members did not discriminate between their own behaviors and their partner's behaviors during their conversations. These strong correlations challenge the notion that comparing self ratings to partner's ratings assesses capacity for empathic accuracy.

Table 10

Correlations Between Ratings of Self and Ratings of Partner for Girlfriends

Variables	Female rating male connection	Female rating male conflict	Female rating male putting down	Female rating male sarcasm
Female rating female connection	.931**	-.338**	-.417**	-.076
Female rating female conflict	-.363**	.869**	.396**	.541**
Female rating female putting down	-.404**	.546**	.782**	.390**
Female rating female sarcasm	-.131	.475**	.283**	.830**

** $p < .01$.

Table 11

Correlations Between Ratings of Self and Ratings of Partner for Boyfriends

Variables	Male rating male connection	Male rating male conflict	Male rating male putting down	Male rating male sarcasm
Male rating female connection	.912**	-.394**	-.345**	-.146
Male rating female conflict	-.336**	.916**	.347**	.648**
Male rating female putting down	-.389**	.523**	.756**	.465**
Male rating female sarcasm	-.157	.681**	.402**	.845**

** $p < .01$.

The scores for the variables contributing to the empathic accuracy variables, particularly the high correlations between self and partner ratings, suggest that the method of measurement did not assess the intended construct. However, the results were interesting in that they did reflect the possibility of a systematic bias, as there was little distinction between responses for self and partner across all empathic accuracy variables. In the review of literature, the idea of biases (e.g., hostile attribution bias and depressogenic attribution) were used to illustrate phenomena that could interfere with empathic accuracy. It may be that this explanation was more accurate and robust than anticipated. In order to more completely capture the presence and function of these biases, the variables used to calculate empathic accuracy were averaged, rather than subtracted from each other, and a secondary analysis was conducted with the new measures.

Secondary Analyses

Following the limited results of the initially proposed study, a set of revised analyses were conducted. Because both boyfriends and girlfriends appeared to be rating themselves and their partners similarly and did not appear to be attempting to discriminate the behaviors of different actors in the interactions, scores for self and partner were averaged for each behavioral domain to create a score for the global interpretation of the quality of the interaction. These averaged interaction ratings were hypothesized to reflect systematic biases reflecting related psychological characteristics of individual couple members such as attribution style, rather than an empathic process. The construct of interpretation will be further explicated in the discussion section. Thus, while the calculation of the empathic accuracy variables did not appear to capture couple members efforts to take the perspectives of their partners, the averaged subjective interpretation variables did appear to capture each couple member's overall experience of the conversation tasks.

The revised analyses used couple members' overall subjective ratings of the conversations, rather than empathic accuracy measures, as mediator variables. First, preliminary descriptive analyses were performed for the new interaction variables. Second, correlations among all predictor variables and mediator variables, and mediator variables and outcome variables were calculated for both boyfriends and girlfriends. The results of these correlations warranted conducting the primary mediation regression analyses.

*Descriptive Statistics and Bivariate Correlations
for Secondary Analyses*

Table 12 provides a summary of means and standard deviations for the averaged video recall variables. First, please refer to Tables 4 and 5 to review the relationships between psychological measures and outcome measures, as these are identical to the results in the revised study. Consequently, the first step of the mediation model was met. Next, the relationships between psychological variables and the video recall ratings (step 2), and the relationships between the video recall ratings and outcome variables (step 3), were examined (please refer to Tables 13-16). Specifically for the second step, rejection sensitivity was significantly correlated with the averaged ratings for conflict and sarcasm, and externalizing was related to putting down, for girlfriends. For boyfriends, rejection sensitivity was marginally significantly associated with conflict and sarcasm ($p < .10$). The third step of mediation for girlfriends included significant relationships between conflict and relationship satisfaction (negative), between sarcasm and relationship satisfaction and sexual abuse (both negative), and between putting down and both relationship satisfaction (negative) and total aggression.

Table 12

Means and Standard Deviations for Subjective Interpretation Variables

Variable	Male		Female		Possible range
	Mean	SD	Mean	SD	
Conflict	1.359	1.02	1.238	.964	0-4
Connectedness	2.989	.755	2.820	.953	0-4
Sarcasm	0.954	.841	.797	.775	0-4
Putting down	0.243	.468	.328	.554	0-4

Table 13

Correlations Between Psychological Measures and Interpretation Measures for Girlfriends

Variables	Conflict	Connection	Sarcasm	Putting down
Internalizing	.107	-.085	-.154	.083
Externalizing	.136	-.163	-.017	.225*
Rejection sensitivity	.313**	-.123	.230*	.131

* $p < .05$.

** $p < .01$.

Table 14

Correlations Between Psychological Measures and Interpretation Measures for Boyfriends

Variables	Conflict	Connection	Sarcasm	Putting down
Internalizing	-.073	-.165	-.081	-.069
Externalizing	.087	-.012	.106	-.039
Rejection sensitivity	.176***	-.006	.190***	.099

*** $p < .10$.

Table 15

Correlations Between Video Recall Rating and Outcome Measures for Girlfriends

Variables	Relationship satisfaction	Physical abuse	Threatening behavior	Sexual abuse	Relational aggression	Emotional abuse	Total aggression
Conflict	-.342**	.192	.153	.062	.142	.161	.147
Connection	.199	-.072	.048	.040	.012	-.153	-.166
Sarcasm	-.320**	-.066	.045	-.237*	-.056	-.093	.103
Putting down	-.352**	.108	.045	-.039	.062	.102	.245*

* $p < .05$.

** $p < .01$.

Table 16

Correlations Between Video Recall Ratings and Outcome Measures for Boyfriends

Variables	Relationship satisfaction	Physical abuse	Threatening behavior	Sexual abuse	Relational aggression	Emotional abuse	Total aggression
Conflict	-.185	.281**	.327**	.196	.143	.262*	.256*
Connection	.076	-.147	-.132	.012	-.061	-.055	.016
Sarcasm	-.251*	.073	.193	.147	.010	.148	.297**
Putting down	-.213*	.104	.102	.002	.058	.151	.153

* $p < .05$.** $p < .01$.

For boyfriends, significant relationships existed between conflict and physical abuse, threatening behavior, emotional abuse, and total aggression, between sarcasm and relationship satisfaction (negative) and total aggression, and between putting down and relationship satisfaction (negative). As there were significant correlations between some of the predictor variables and outcomes, between the predictor variables and some of the mediator variables and between some of the mediator variables and outcomes, conditions for possible mediation were satisfied. Consequently, a series of hierarchical multiple regressions analyses was conducted.

Tests of Mediation Effects

A series of hierarchical linear regressions were conducted to determine if the mediator variables that were correlated with both psychological and outcome measures mediated the aforementioned relationships. To determine mediation, regression analyses were conducted in two steps. The first step examined the relationships between psychological measures and relationship quality. Step 2 included as independent

variables both the psychological measures as well as the corresponding mediator variables (i.e., averaged video recall ratings). If the mediator variable was significantly related to the outcome, and rendered the psychological variable's relationship with the outcome nonsignificant, mediation was concluded. Based on the pattern of bivariate correlations, the following sequences of variables were analyzed: girlfriends—rejection sensitivity, conflict, and relationship satisfaction; rejection sensitivity, sarcasm, and relationship satisfaction; boyfriends—rejection sensitivity, conflict, and total aggression; rejection sensitivity, conflict, and emotional aggression; rejection sensitivity, sarcasm, and total aggression. Figures 2-6 illustrate the sequence of each of the moderator model analyses that were conducted. Likewise, Tables 17-21 show the results of the regression analyses. Before proceeding, it is important to make a cautionary statement. Two issues to consider in interpreting the correlation data are (a) small effect sizes that generally characterize the regression analysis (as indicated by the R^2 and Pearson's r), and (b) potential of family wise error (inflated type 1 error) that accompanies the multitude of correlations present in this analysis that could result in false discoveries (false positives).

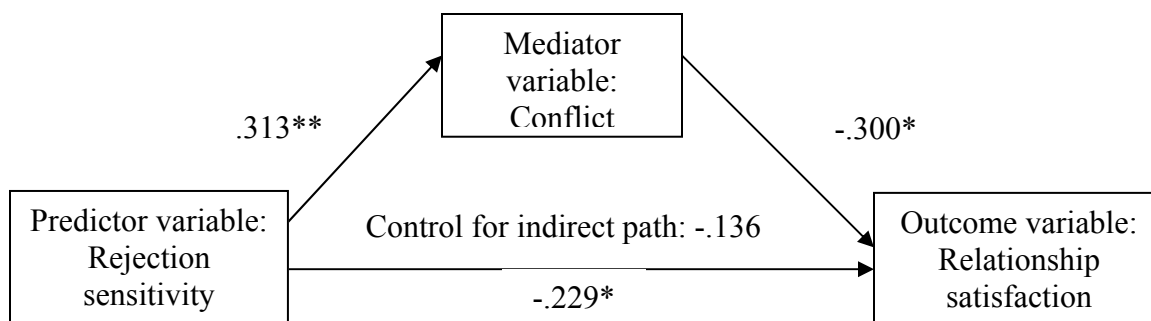


Figure 2. Mediation model illustrating conflict ratings as a mediating variable between psychological characteristics and related characteristics for girlfriends using standardized regression coefficients.

* $p < .05$; ** $p < .01$.

Table 17

Regressions Predicting Mediation Between Rejection Sensitivity and Relationship Satisfaction by Ratings of Conflict for Girlfriends

Outcome	Predictors included	Adj. R^2	F	p	df	Beta	t	p
Step 1								
Relationship satisfaction		.042	4.889	.030	1,89			
	Rejection sensitivity					-.229	-2.211	.030
Step 2								
Relationship satisfaction		.114	6.705	.002	1,89			
	Rejection Sensitivity					-.136	-1.292	.200
	Conflict					-.300	-2.850	.005

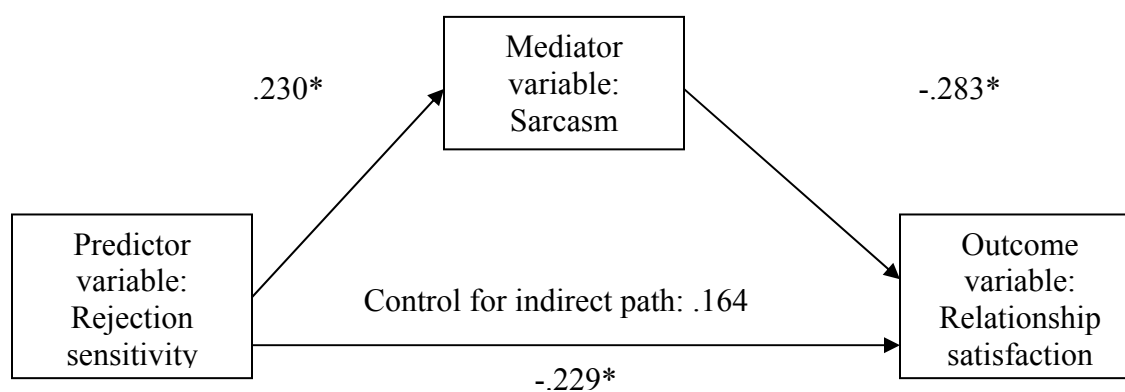


Figure 3. Mediation model illustrating sarcasm ratings as a mediating variable between rejection sensitivity and relationship satisfaction for girlfriends using standardized regression coefficients.

* $p < .05$.

Table 18

Regressions Predicting Mediation Between Rejection Sensitivity and Relationship Satisfaction by Ratings of Sarcasm for Girlfriends

Outcome	Predictors included	Adj. R^2	F	p	df	Beta	t	p
Step 1								
Relationship satisfaction		.042	4.889	.030	1,89			
	Rejection sensitivity					-.229	-2.211	.030
Step 2								
Relationship satisfaction		.108	6.402	.003	1,89			
	Rejection Sensitivity					-.164	-1.599	.113
	Sarcasm					-.283	-2.748	.007

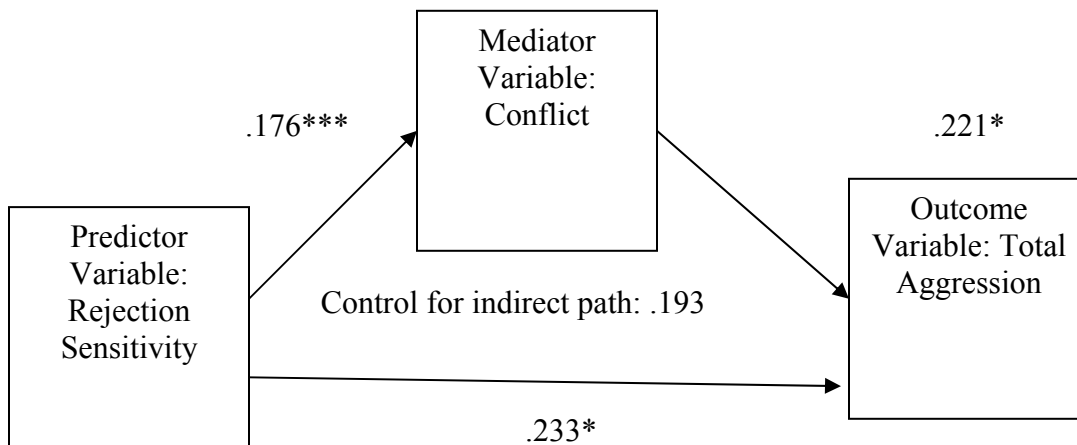


Figure 4. Mediation model illustrating conflict ratings as a mediating variable between rejection sensitivity and aggressive behavior for boyfriends using standardized regression coefficients.

* $p < .05$
 *** $p < .10$

Table 19

Regressions Predicting Mediation Between Rejection Sensitivity and Total Aggression by Conflict for Boyfriends

Outcome	Predictors included	Adj. R^2	F	p	df	Beta	t	p
Step 1								
Total aggression		.043	4.981	.028	1,89			
	Rejection sensitivity					.233	2.232	.028
Step 2								
Total aggression		.080	4.850	.010	1,89			
	Rejection sensitivity					.193	1.852	.067
	Conflict					.221	2.126	.036

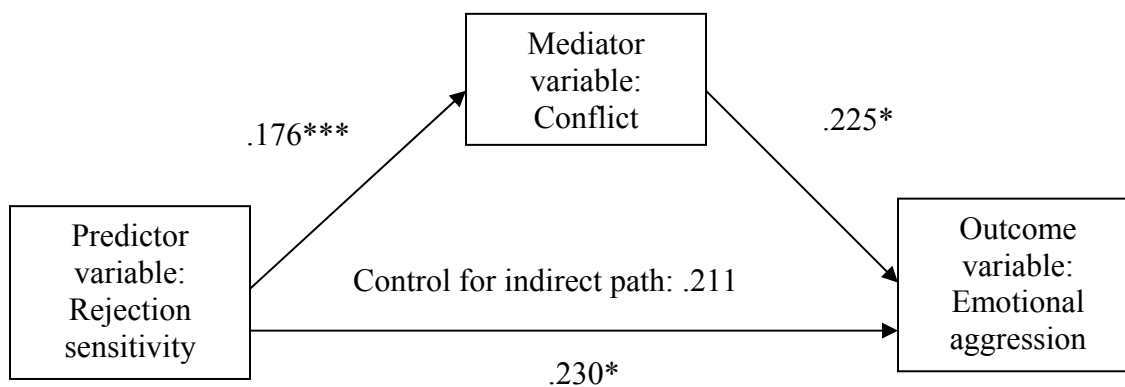


Figure 5. Mediation model illustrating sarcasm ratings as a mediating variable between rejection sensitivity and emotional aggression for boyfriends using standardized regression coefficients.

* $p < .05$

*** $p < .10$

Table 20

Regressions Predicting Mediation Between Rejection Sensitivity and Emotional Aggression by Conflict Ratings for Boyfriends

Outcome	Predictors included	Adj. R^2	F	p	df	Beta	t	p
Step 1								
Emotional aggression		.051	5.628	.020	1,89			
	Rejection sensitivity					.230	2.181	.032
Step 2								
Emotional aggression		.090	5.258	.007	1,89			
	Rejection sensitivity					.211	2.018	.047
	Conflict					.225	2.156	.034

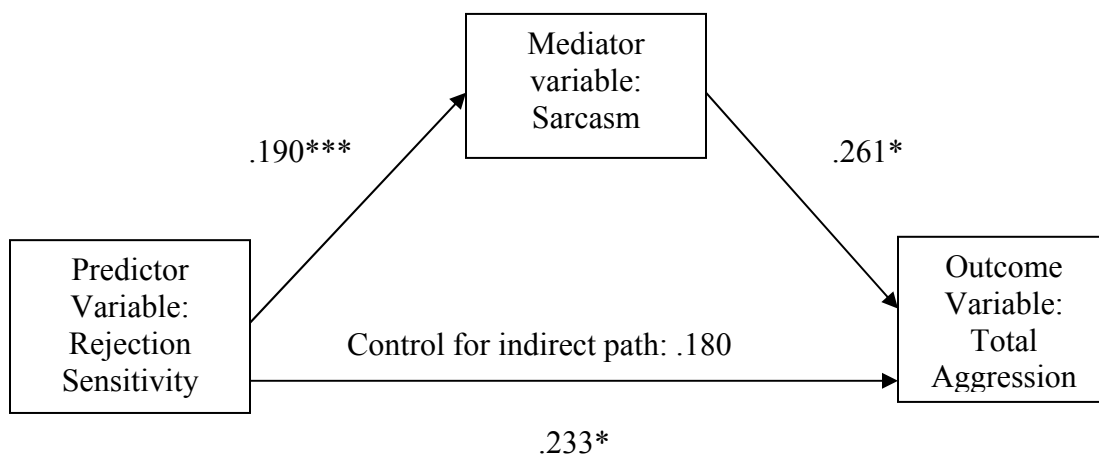


Figure 6. Mediation model illustrating sarcasm as a mediating variable between rejection sensitivity and total aggression using standardized regression coefficients.

* $p < .05$

*** $p < .10$

Table 21

Regressions Predicting Mediation Between Rejection Sensitivity and Total Aggression by Sarcasm Ratings for Boyfriends

Outcome	Predictors included	Adj. R^2	F	p	df	Beta	t	p
Step 1								
Total Aggression		.043	4.981	.028	1,89			
	Rejection sensitivity					.233	2.232	.028
Step 2								
Total Aggression		.099	5.831	.004	1,89			
	Rejection Sensitivity					.180	1.743	.085
	Sarcasm					.261	2.525	.013

For girlfriends, the relationship between rejection sensitivity and relationship satisfaction is mediated by their ratings of conflict. Thus, as rejection sensitivity increases, so does the perception of conflict in one's relationship, which in turn is linked to lower satisfaction with the relationship.

For girlfriends, the relationship between rejection sensitivity and relationship satisfaction is also mediated by sarcasm. Accordingly, as rejection sensitivity increases, the perception of sarcasm in one's relationship increases. In turn, sarcasm is directly related to decreased satisfaction with the relationship.

For boyfriends, the relationship between rejection sensitivity and the total aggression outcome is mediated by ratings of conflict. Consequently, as rejection sensitivity increases, so does the perception of conflict in one's relationship. Conflict is

then directly associated higher levels of self-reported aggression.

For boyfriends, the relationship between rejection sensitivity and emotional aggression was not mediated by conflict. There is not a relationship as predicted such that, as rejection sensitivity increases, so does the perception of conflict in ones relationship, relating then to higher self reported emotional aggression. Instead, both rejection sensitivity and subjective ratings of conflict exert independent effects on reports of emotional aggression.

Finally, for boyfriends, the relationship between rejection sensitivity and the total aggression variable is mediated by sarcasm. Thus, as rejection sensitivity increases, so does the perception of sarcasm in ones relationship. Sarcasm, in turn, is the mechanism directly associated with a decrease in total aggression experienced in the relationship.

CHAPTER V

DISCUSSION

The purpose of this study was to determine if empathic accuracy mediates the relationships between psychological characteristics (internalizing symptoms, externalizing symptoms, and rejection sensitivity) and relationship outcomes (satisfaction and several forms of aggression) in adolescent romantic relationships. Generally, the predicted mediational relationships were not supported. An examination of the method used to measure empathic accuracy revealed that partners' ratings of their own and their partners' behavior were highly intercorrelated, suggesting that individuals did not differentiate between their own and their partners' thoughts, feelings, and behaviors recorded during the video recall procedure.

Due to the limitations of the empathic accuracy assessment mentioned above, secondary analyses were conducted. Specifically, average scores for self and partner for each behavioral domain were used to create a score that reflects a global interpretation of the quality of the interaction which is theorized to reflect systematic biases related to psychological characteristics of each individual. Generally, the results of the revised study suggest that the subjective ratings of the interactions did mediate the relationship between the psychological characteristic of rejection sensitivity and satisfaction for girlfriends and between the psychological characteristic of rejection sensitivity and aggression outcomes for boyfriends. This discussion will explore possible explanations for the limitations of the empathic accuracy measure with adolescents, the concept and use of general subjective ratings of interaction, and the role that the video recall ratings

play between rejection sensitivity and related outcomes for girlfriends and boyfriends.

Issues with Measuring Empathic Accuracy Among Adolescent Subjects

Aspects of both measurement and adolescent (i.e., developmental) characteristics may explain the limitations of empathic accuracy in this study. Issues of measurement will be discussed first. Ratings of self and partner were highly correlated, suggesting that the ratings may have reflected global impressions of the interaction experience rather than specific individual perceptions of the interactions. Consequently, scores across participating couples did not reflect the expected variation. Although the video recall procedure inquired about the behaviors and experiences of self and partner, the instructions did not specifically advise participants to consider differences that may exist between themselves and their partners. Furthermore, the video recall procedure does not assure that the segments viewed and rated include moments where the quality of the interaction is particularly relevant to empathic accuracy.

Given the relative developmental immaturity of adolescence (see following discussion), it may be unlikely that adolescents are capable of rating empathic accuracy well in their own relationships. Instead, their rating may reflect other characteristics such as the value of being in a relationship in general. Thus, rating their interactions with their partners may not be the best strategy to detect empathic accuracy. Ratings of hypothetical situations or vignettes in which the adolescents are not directly involved might reduce potential distortions related to one's own experience while still addressing knowledge

and perspective regarding empathic accuracy.

Although video recall procedures have been extensively and successfully used to measure empathic accuracy in adults (Ickes, 1993), this method may be less effective with adolescent populations because qualitative and/or developmental differences exist between the different populations. One such difference is adolescent egocentrism (Elkind, 1967; Schwartz, Maynard, & Uzelak, 2008; Vartanian, 2000), a concept that posits that adolescents perceive an “imaginary audience” who share their preoccupation with their own status and appearance. Adolescent egocentrism theorists also note that adolescents create a “personal fable” in which they see themselves in a grandiose manner characterized by special status and a fantastic sense of invincibility. Elkind initially suggested that adolescent egocentrism typically dissipated during adolescent development, usually disappearing by mid-adolescence. Recent studies (Schwartz et al.; Vartanian) now view adolescent egocentrism to exist through the emerging adulthood stage of development. From this perspective, it would make sense that the expression and/or development of empathic accuracy could be either postponed or concealed by egocentrism. With this mechanism, it follows that one’s view of oneself might eclipse different experiences or perceptions of other people.

Another potential developmental explanation that might distort, confound, or hinder capacity for empathic accuracy involves some of the characteristics that motivate adolescent romantic relationships. For example, adolescents may engage in these relationships in an effort to gain interpersonal status or prestige (Roscoe, Diana, & Brooks, 1987). Consistent with this notion, Roscoe and colleagues posited that

adolescents tend to seek relatively superficial partner characteristics directed to meet peer approval. Accordingly, they may initiate and maintain relationships for purposes that are less likely to result in empathy promoting conditions such as connection and intimacy. In this scenario, the partner (as well as the relationship itself) is somewhat objectified, and there is no comparison based on relationship experience that would suggest a more meaningful interpersonal experience. Thus, any relationship that meets peer approval could be considered a good relationship, a condition that would limit ones' motivation and/or ability to accurately infer the partners' perspective.

Limitations in being able to differentiate oneself from others during adolescence may also complicate empathic accuracy during this developmental period. Bowen (1978) wrote extensively on this topic as it pertains to psychosocial development and the development of psychopathology, noting that it is a developmental task that spans through the entire adolescent and emerging adult trajectories. The concept of differentiation of self suggests that many adolescents are not completely able to distinguish between themselves and other people in any type of relationship (Jenkins, Buboltz, Schwartz, & Johnson, 2005). Thus, an adolescent individual may have difficulty realizing that their thoughts, feelings, and behaviors are often remarkably different from those around them. This relatively common phenomenon could certainly make it difficult to infer details about the quality of the experiences of other people.

The construct of moral development (Kohlberg, 1981, 1984) may also apply to the detection of empathy in adolescence, as the behaviors involved in moral behavior are consistent with and include behaviors associated with empathic accuracy (e.g.,

perspective taking). Eisenberg, Cumberland, Guthrie, Murphy, and Shepard (2005) conducted a study on moral development that suggests empathy related behaviors such as perspective taking and prosocial moral reasoning increase throughout adolescence into early adulthood. Consequently, measures of empathic accuracy that work in adult populations may not be specific and/or sensitive enough for use among adolescents. However, it is important to note that, theoretically, empathy related behaviors implied by moral development exist in adolescence.

Another issue that may explain the limited results involves characteristics of the sample. The majority of participants were members of the LDS faith. In the context of this prevailing religious culture, it is possible that social desirability for high-functioning monogamous relationships could have influenced individual ratings of relationship qualities. However, it is important to note that a widely held parenting value among many LDS communities encourages adolescent daters not to date monogamously during early adolescence, as this is considered a developmental stage during which intense, monogamous romantic relationships are developmentally inappropriate. Also involving desirability, the emergence of sexuality in adolescence (Sprecher, McKinney, & Orbuch, 1991) may establish an impetus for being in a relationship. With no previous romantic relationship experience to compare to, any relationship that carries the potential for sexual experience may be perceived in a positive light regardless of potentially negative relationship characteristics.

Given the possible limitations for empathic accuracy in adolescence, it is unknown what capacity adolescents have for this experience. Important future research

might inquire about the developmental trajectory for empathic accuracy; does it develop unevenly across adolescence, present at some times and lacking in others? This may depend on such factors as the emotional intensity of interactions, the relative importance of the relationship context, or the amount of confidence or competence the adolescent experiences in the context. Furthermore, does it vary across relationship types (e.g., family relationships, friendships, and romantic relationships)? Likely, the capacity for empathic accuracy is quite dependent on social and environmental contexts.

As an aside, it would be interesting to examine cultural differences in the development trajectory of empathic accuracy, as there is some extant research (Chung & Bemak, 2002) that documents some variation across cultures for both the cultural value for, and expression of, empathy during both adolescence and adulthood. According to this literature, collectivistic cultures are generally thought to value and exercise empathy to a greater degree than individualistic cultures. It would be interesting to examine correlations between cultural variations in empathy related behavior and both positive and negative relationship outcomes.

Using Global Impressions of the Video Recall Procedure to Measure Subjective Interpretations

Following the limited results of empathic accuracy measures in the proposed study, it was determined that couple members did not differentiate their own and their partners' experiences during the interactions. Instead, it was apparent that couple members were responding to inquiries about both their own and their partners'

interactions according to their general and global individual perceptions of each interaction. Accordingly, scores for each couple member were averaged for each behavioral domain (conflict, connection, putting down, and sarcasm) to create a score for the global interpretation of the quality of the interactions. These scores were thought to reflect subjective interpretations or biases resulting, in part, from the influence of internalizing symptoms, externalizing symptoms, and rejection sensitivity. Thus, it was theorized that they would mediate the relationships between psychological characteristics and relationship functioning.

As discussed in the review of literature, psychological characteristics (internalizing, externalizing, and rejection sensitivity) are associated with specific attributions or cognitive biases that often distort perceptions of relationship characteristics or behaviors (Amin et al., 1998; Martin & Penn, 2001; Peterson et al., 1993). Internalizing symptoms, such as depression and anxiety, are correlated with pessimistic or depressogenic interpretations of relatively ambiguous environmental stimuli. These biases are then associated with increased aggressive behavior (Barnett & Hamberger, 1992; Dutton et al., 1996; Hamberger & Hastings, 1991; Hastings & Hamberger, 1988; Maiuro et al., 1988; Murphy et al., 1993; Pan et al., 1994; Vivian & Malone, 1997) and decreased relationship satisfaction (e.g., Beach & Finchman, 1998; Beach & O'Leary, 1993a, 1993b; Remen & Chambless, 2001; Stith et al., 2004). Similarly, externalizing symptoms are associated with a hostile attribution bias where relatively neutral environmental cues are interpreted as intentional displays of malicious intent from others (Akhtar & Bradley, 1991; Dishion et al., 1995; Dodge, 1993). Hostile

attribution biases are related to both increased aggressive behavior (Farrington, 1997, 2001; Liu, 2004) and decreased relationship satisfaction (Fincham et al., 1997). Finally, rejection sensitivity suggests a bias in social information processing in which neutral interpersonal stimuli is interpreted to suggest that rejection is eminent (Ayduck et al., 1999, 2001; Downey et al., 1998, 2000). As with the other psychological characteristics, rejection sensitivity has also been associated with increased aggression (Buckley et al., 2004; Downey et al., 2000, 2004a; Gilbert et al., 2006) and decreased relationship satisfaction (Downey et al., 1998, 1999; Downey & Feldman, 1996).

In the review of the literature, the relationships between the psychological characteristics, biases, and relationship outcomes mentioned above were posited to support the construct of empathic accuracy (as a function of the biases) and suggest that it mediates the relationships between psychological characteristics and relationship functioning. Analyses did not support empathic accuracy as a mediator, and suggest that the measurement protocol did not capture the construct of empathic accuracy as intended. However, data do provide interesting information about subjective interpretation/bias as a mediator between psychological characteristics and outcomes. Although internalizing and externalizing symptoms were correlated with outcomes, they were not mediated by video recall ratings. Interestingly, subjective ratings did mediate relationships between rejection sensitivity and both relationship satisfaction and aggressive behavior measures. Consequently, the following discussion will focus on rejection sensitivity as it relates to interpretation/bias measures and relationship quality outcomes.

Rejection Sensitivity and Relationship Functioning

Overall, rejection sensitivity demonstrated more associations with relationship quality outcomes for girlfriends and boyfriends than the internalizing and externalizing variables. Among girlfriends, there were significant relationships between rejection sensitivity and both relationship satisfaction (negative) and relational aggression (positive). For boyfriends, rejection sensitivity was positively related to emotional abuse and total aggression. These findings underscore the importance of the construct of relational aggression in adolescent romantic relationships as a phenomenon that has a potentially deleterious effect on both relationship satisfaction and the occurrence of aggressive behaviors. These results also provide further evidence that rejection sensitivity is important in the context of adolescent relationships. The associations found between rejection sensitivity were generally consistent with theoretical predictions for the construct, although it was surprising that there were not significant correlations between rejection sensitivity and relationship satisfaction for boys, and stronger correlations between rejection sensitivity and aggressive behaviors for girls. These results may reflect restricted range due to the lack of severity of behaviors reported by most participants in the study.

Rejection Sensitivity and Video Recall Ratings

Video recall ratings of conflict and sarcasm were positively correlated (marginally significantly for boyfriends) with rejection sensitivity for both genders. These findings are consistent with the construct of rejection sensitivity that suggests highly rejection

sensitive individuals tend to interpret ambiguous cues as threatening to their relationships. It is interesting that perceptions of conflict and sarcasm are particularly salient to rejection sensitivity, as they are significantly correlated with the construct. Accordingly, highly rejection sensitive individuals in this sample were likely to perceive higher levels of conflict and sarcasm in their relationships. Intuitively, it makes sense that conflict would be a particularly common perception among rejection sensitive individuals, as most of the perception/bias variables might contribute to a sense of conflict. Sarcasm is interesting in that it could be consistent with either an aggressive (or passive-aggressive) behavior directed toward a rejecting partner or an attempt to mitigate or avoid perceived conflict (see discussion of sarcasm/humor in following section).

Contrary to the expected relationships among variables predicted from the rejection sensitivity literature, connection and putting down were not related to rejection sensitivity. In fact, neither variable was significantly correlated to rejection sensitivity, suggesting that perceptions of connection and putting down did not differ between highly rejection sensitive individuals and other participants in this study. These nonsignificant relationships may reflect the restricted range of responses found for the two variables in this sample (e.g., low ratings for putting down and high ratings for connection).

Hypothetically, it may be that putting down represents an overtly aggressive strategy in comparison to sarcasm that most adolescents in this study avoided in order to maintain their relationships. Similarly, perceptions of connection may be trumped by the lack of an established baseline expectation for the quality of romantic relationships among adolescents, as well as the desirability of other relationship qualities that emerge at the

adolescent stage of development such as sexuality and social status associated with dating.

Video Recall Ratings and Relationship Functioning

For girlfriends, conflict, sarcasm, and putting down were all significantly and negatively correlated with relationship satisfaction. Putting down was also positively related to the total aggression score for girlfriends, suggesting that the occurrence of demeaning communications were associated with a general increase in aggressive behavior. Oddly, sarcasm was negatively related to reports of perpetration of sexual abuse/ coercion among girlfriends. Thus, the more sarcastic communication female participants in this study perceived in their relationships, the less likely they were to perpetrate sexually coercive or abusive behavior. Intuitively, this correlation makes little sense, as sarcasm would be thought to increase the likelihood of violent or aggressive incidents. However, sarcasm appears to be a complex behavior. Some theorists posit that sarcasm overlaps with humor (e.g., Ducharme, 1994). As such, there may be instances where sarcasm can de-escalate anger and/or aggressive responses in the manner that humor can also accomplish this end (Jorgensen, 1996). It is important to note that sarcasm is also thought to increase anger and hostility (Pexman & Olineck, 2002).

Among boyfriends, the perception of conflict was significantly related to increased reports of physical abuse, threatening behavior, emotional abuse, and the total aggression measure, as perpetrated by self. Interestingly, perceptions of connection were not significantly correlated with any of the outcome measures. In other words, feeling

more or less connected in ones' relationship may not be predictive or otherwise related to variation in both being satisfied in ones' relationships, and in the occurrence of aggressive behaviors. However, it is more likely that these relationships reflect the restricted range found for these variables in this sample. Perceptions of both sarcasm and putting-down were related to decreased relationship satisfaction for boyfriends, while sarcasm was also related to higher total aggression scores. In general, the video recall ratings for boyfriends were more frequently related to aggressive behaviors than were girlfriends, while the recall ratings for girlfriends were more frequently negatively related to relationship satisfaction. Furthermore, perceptions of conflict and sarcasm were the most salient measures in regards to their association with outcomes for both genders.

Video Recall Ratings as a Mediator of the Associations Between Rejection Sensitivity and Psychological Functioning

Four of the potential mediated pathways between psychological characteristics and outcome measures demonstrated significant mediation effects. Among the video recall variables used, only conflict and sarcasm were demonstrated to mediate the relationships mentioned above. Consequently, in this study, perceptions of increased conflict and sarcastic interactions related to the psychological characteristic of rejection sensitivity were particularly important in predicting increased aggressive behavior and dissatisfaction with one's relationship.

These mediating relationships are consistent with one process predicted by the construct of rejection sensitivity; rejection sensitive individuals are likely to perceive ambiguous cues in a biased manner, thereby perceiving an exaggerated level of hostility,

ridicule, or general mal-intent. Consequently, there is a greater tendency that rejection sensitive individuals will react reciprocally in an aggressive manner. Indeed, boyfriends in this study who evidenced relatively high degrees of rejection sensitivity also tended to endorse increased perceptions of conflict and sarcasm. Furthermore, the relationship between rejection sensitivity and aggression was mediated by heightened perceptions of conflict and sarcasm among these individuals. These findings are particularly interesting because they suggest the importance of the cognitive processes (biases) as a risk factor for aggressive behavior in the context of adolescent romantic relationships. Thus, the development and dissemination of interventions that address cognitive processes relevant to the formation and maintenance of biases may be a particularly helpful tool for the prevention of aggression in adolescent romantic relationships, especially when rejection sensitive behavior is observed. Among girlfriends in this study, neither interpretations nor biases mediated the relationships between rejection sensitivity and aggressive behaviors. Rather, perceptions of conflict and sarcasm mediated the relationships between rejection sensitivity and relationship dissatisfaction. While these findings are certainly consistent with theoretical predictions of rejection sensitivity, they do not evidence an increased rate of aggressive behavior. However, relationship dissatisfaction is a problematic occurrence in its own right, and is likely to lead to eventual relationship dissolution. For rejection sensitive individuals, the ability to tolerate or challenge exaggerated perceptions of conflict and sarcasm may be a requisite skill necessary to complete developmental trajectories toward functioning in satisfactory romantic relationships culminating in marriage or domestic partnership. Similar as with

boyfriends' aggressive behaviors, interventions that correct or mitigate biases related to rejection sensitivity that result in relationship dissatisfaction, may also be important and worthy of targeting specifically with adolescent populations.

Limitations

Regarding empathic accuracy, it appears that the method of measurement generally employed to measure empathic accuracy in adults as prescribed by Ickes (1993) may not be sensitive to the phenomena in adolescent populations, although this study modified the methodology used by Ickes (e.g., not using observer ratings and calculating individual ratings differently), which may have contributed to the failure to detect empathic accuracy among the participating couples. As discussed previously, alternative measurement strategies may be more effective in detecting empathic behavior in adolescents. Additionally, it would be interesting to conduct a similar study with a population in which there is greater variability in regards to psychological characteristics and related outcome behaviors. Perhaps these qualities would be found in a more urban population where there might be a greater diversity in background and cultural characteristics that influence thoughts, behaviors, and social desirability. It would be particularly interesting to examine the construct in a clinical population. The video recall strategy may not be effective with adolescents, as the video segments are not necessarily salient to the construct of empathic accuracy, and because the teenage participants may not possess the sophistication to discern between their general impression of the interaction and their own and their partners' unique experience, particularly without

receiving specific instructions to do so. Furthermore, the conversation length and subjects of discussion may be factors that resulted in a restricted range of responses. Couple members had the option of selecting relatively innocuous conversation topics which might have been less conducive to observing empathic accuracy (although this might be difficult to accomplish for with respect to internal review boards).

Alternative measurement would have to consider that, as adolescence comprises a unique developmental period, there may be many aspects of the adolescent ability for empathic accuracy, such as adolescent egocentrism, status seeking, differentiation, and moral development, that do not resemble the behaviors eventually seen in adults. Consequently, it may be wise to precede further quantitative inquiry with qualitative studies that observe the nuances of how empathic processes occur during adolescence, and what measures are likely to detect it.

Regarding the video recall portion of this study, the relative lack of variability in behaviors reported by the sample used may not be an accurate depiction of a more general population. Characteristics of the sample used, such as the majority of subjects affiliating with the LDS/Mormon faith and the relatively rural nature of the data collection sites, might present specific conditions of social desirability and lifestyle that may not be representative of more national tendencies and qualities. Additionally, inclusion criteria for couples excluded those who had dated exclusively for less than one month. It could be that young daters who are less exclusive in their dating habits in adolescence are able to do so because they possess superior skills in the expression of empathy. It would be interesting to conduct a similar study with a different population,

such as a more urban and diverse one, in which a greater variability of positive and negative behaviors might be observed.

The importance of rejection sensitivity was reflected in this study. However, some aspects of rejection sensitivity were not examined. For example, rejection sensitivity theorists posit that, in addition to coercive and aggressive behaviors that result from the perception of eminent rejection, some individuals are likely to respond with avoidance and withdrawal as a means of self-protection. This study did not specifically use measures of avoidant behavior to evaluate outcomes. Additionally, the aggressive behaviors reported were from the perspective of perpetration only. It would be interesting to include the perspective of victimization as well.

As with the empathic accuracy portion of this study, the inquiry into subjective perception as mediating the relationships between psychological characteristics and outcomes was limited by characteristics of the sample used. A sample more representative of the general public, including a more diverse group with respect to several aspects (e.g., religiosity, population density) would likely result in a greater variability in all areas of measurement, as many of the studies cited herein did demonstrate greater variability among comparable variables.

While there was consideration of cultural issues, this study was not designed specifically to examine cultural differences in the variables of interest. It would be interesting and important to design future studies to specifically sample and observe possible variation among different cultural backgrounds and ethnicities. Consistent with cultural focus, it would also be interesting to include precise measures of socioeconomic

status to determine the impact that it has on all variables and relationships.

Future Directions for Research

An important strategy for future studies that examine aspects of empathic accuracy in adolescent populations would be to use qualitative methodologies to provide information about the manner in which the construct is manifested in this particular population. Following this line of inquiry, methods of measurement could then be designed that are sensitive to detecting empathic processes as they are expressed in adolescence.

Research that addresses the phenomenon of rejection sensitivity and related thoughts, feelings, and behaviors in adolescence should be replicated utilizing samples from different regions, particularly areas where there is likely to be greater variation regarding the characteristics of interest in the subjects, for example, urban locations. Although aggressive outcomes may be intuitively of most concern, behaviors that involve withdrawal and avoidance are also predicted by the construct of rejection sensitivity. Measures that assess these behaviors should be included in future studies, as they are likely to interfere with crucial developmental processes involved in acquiring the interpersonal skills required to initiate and maintain healthy romantic relationships.

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APPENDICES

Appendix A
Consent Form

Informed Consent/Assent Form
Interaction and Conflict in Rural Adolescent Romantic Couples

Introduction/Purpose: Professor Renee Galliher in the Department of Psychology at Utah State University is in charge of this research study. We would like you and your boyfriend/girlfriend to be in the study because we want to know about the dating relationships of teenagers your age. We want to learn how other parts of your life (like your families, attitudes, and feelings) affect your relationships and actions. About 100 couples will be in this research study.

Procedures: Your part in this study will be one three-hour session. Your session can be either in our research laboratory on the University campus (see enclosed map) or your home or your boyfriend/girlfriend's home. You and your boyfriend/girlfriend can choose if you want to come to the University or want our researchers to come to your home. The three-hour session will be divided into three parts. First, you will be videotaped having three short conversations with the person you are dating. Second, you will each watch the videotape of your conversations and answer questions about your thoughts and feelings during the tape. Finally, you will fill out some forms that will ask you questions about your attitudes, feelings, family, the way you handle conflict with your partner, your sexual behaviors, and drug and alcohol use.

Risks: There is some risk of feeling uncomfortable in this study. Some teenagers may not want to be videotaped or share personal information with the researchers. We will do everything we can to make you more comfortable. First, researchers will not be in the room while you are having your conversations. Second, you can choose not to discuss personal or difficult issues. Third, you can choose not to answer sensitive questions on the forms.

The law of Utah does require researchers to report certain information (e.g., threat of harm to self or others, abuse of a minor by an adult) to the authorities.

Benefits: We hope that you will find this study to be interesting and fun. Your information will help us learn more about teenagers' relationships. It will also help teachers, parents, counselors, and policy makers in their work with teenagers.

Explanation and Offer to Answer Questions: _____ has explained this study to you and answered your questions. If you have more questions, you can also ask the Primary Investigator, Professor Renee Galliher, at 797-3391.

Payment: When you finish this research, you and your dating partner will **each** be paid \$30. Your participation does not involve any costs.

Voluntary Nature of Participation and Right to Withdraw without Consequences: Being in this research study is entirely your choice. You can refuse to be involved or stop at any time without penalty.

Informed Consent/Assent Form
Interaction and Conflict in Rural Adolescent Romantic Couples

Confidentiality: Consistent with federal and state rules, your videotape and answers will be kept private. Only Professor Galliher and research assistants will be able to see the data. All information will be kept in locked filing cabinets in a locked room. Your answers and videotapes will only have an ID number and not your name. Your name will **not** be used in any report about this research and your specific answers will not be shared with anyone else. Data from this study, including the videotape, may be used for three years by our research team before it is destroyed. When the research has been completed, a newsletter with the general results will be sent to you.

IRB Approval Statement: The Institutional Review Board for the protection of human subjects at Utah State University has approved this research project. If you have any questions regarding IRB approval of this study, you can contact the IRB administrator at (435)797-1821.

Copy of Consent: You have been given two copies of the informed consent. Please sign both copies and keep one for your files.

Investigator Statement: I certify that the research study has been explained to the individual by me or my research staff. The individual understands the nature and purpose, the possible risks and benefits associated with participation in the study. Any questions have been answered.

Signature of PI and Student Researcher:

Renee V. Galliher, Ph.D., Principal Investigator

Charles Bentley, Student Researcher

By signing below, you agree to participate.

Youth Assent:

I understand that my parent(s)/guardian is/are aware of this research and have given permission for me to participate. I understand that it is up to me to participate even if my parents say yes. If I do not want to be in this study, I don't have to. No one will be upset if I don't want to participate or if I change my mind later and want to stop. I can ask questions that I have about this study now or later. By signing below, I agree to participate.

Signature of Participant Date

Print Name

Parent Consent:

I have read the above description of the study and I consent for my teenager to participate.

Parent's Signature/Date _____ Print name _____

When the study is completed, we would like to send you a newsletter outlining the results. Also, we will be conducting additional research on dating relationships and may wish to contact you in the future to participate in other studies. If you would like to receive a summary of the results of the study or if you are willing to be contacted for further research, please provide your name, address and phone number below.

I would like to receive a summary of the results of the study.

I would like to be contacted in the future to be asked about participating in other studies

Name: _____

Address: _____

Phone Number: _____

Appendix B
Measures

The measures used in this study included both male and female versions of each questionnaire. In the interest of space and to avoid redundancy, only one gender version of each questionnaire will be included in this index. The different versions varied only in the use of appropriate pronouns in order to apply to each gender.

Demographic Information

1. What is your gender?
 - a male
 - b female
 - c Sometimes
 - d Often
2. What is your age?
 - a [Open Ended]
3. What is your date of birth?
 - a [Open Ended]
4. Which category or categories best describe your racial background?
 - a White
 - b African American
 - c Asian
 - d Hispanic/Latino
 - e Native American
 - f Other [Open Ended]
5. What is your Religious Affiliation?
 - a LDS
 - b Catholic
 - c Protestant
 - d Jewish
 - e None
 - f Other, please specify [Open Ended]
- If you selected more than one category, with which racial background do you most identify?
6. How important is your religion to you?
 - a Very important
 - b Fairly Important
 - c Don't Know
 - d Fairly Unimportant
 - e Not Important at all
 - f Does Not Apply
7. Are you currently enrolled in school?
 - a Yes, Full Time
 - b Yes, Part Time
 - c No
8. What grade are you currently in?
 - a Not yet in high school
 - b 9th
 - c 10th
 - d 11th
 - e 12th
 - f no longer in high school
9. What is your approximate current grade point average (GPA)?
 - a 0-1.0
 - b 1.1-2.0
 - c 2.1-3.0
 - d 3.1-4.0
 - e over 4.0
10. Are you currently employed?
 - a Yes
 - b No
 - c If yes, how many hours per week?

11. What are your plans for the future?
a Some College Courses
b College Degree (BA/BS)
c Graduate School
d Technical School
e Other (please specify) [Open Ended]
12. With whom do you live?
a Both Parents
b Father Only
c Father & Stepmother
d Father & Girlfriend
e Other Adult Relatives
f Female Friend(s)
g Non-related adults
h Mother only
i Mother & Stepfather
j Mother & Boyfriend
k Brother(s) / Sister(s)
l Boyfriend/ Girlfriend
m Male Friend(s)
13. How would you describe where you live?
a Urban (city)
b Suburban (subdivision)
c Rural (country)
14. How long have you lived at your current residence?
a [Open Ended]
15. What is you parent's marital status?
a Married to each other
b Divorced or separated from each other
c Never married to each other
d Widowed
e Other
f If divorced or separated, how long (yrs) have they been divorced? [Open Ended]
16. How far in school did your father go?
a Some high school
b High school graduate
c Technical school
d Some college
e College graduate
f Graduate school
17. How far in school did your mother go?
a Some high school
b High school graduate
c Technical school
d Some college
e College graduate
f Graduate school
18. What does your mother do for a living?
a [Open Ended]
19. What does you father do for a living?
a [Open Ended]

Rejection Sensitivity:

Each of the items below describes things high school students sometimes ask of other people. Please imagine that you are in each situation.

1. You ask someone in class if you can borrow his/her notes.
How concerned or anxious would you be over whether or not he/she would want to lend you his/her notes?
 - a. Very Unconcerned
 - b. Unconcerned
 - c. Somewhat Unconcerned
 - d. Somewhat Concerned
 - e. Concerned
 - f. Very Concerned

2. You ask someone in class if you can borrow his/her notes.
I would expect that he/she would willingly give me his/her notes.
 - a. Very Unlikely
 - b. Unlikely
 - c. Somewhat Unlikely
 - d. Somewhat Likely
 - e. Likely
 - f. Very Likely

3. You ask your boyfriend to go steady.
How concerned or anxious would you be over whether or not he also would want to go steady with you?
 - a. Very Unconcerned
 - b. Unconcerned
 - c. Somewhat Unconcerned
 - d. Somewhat Concerned
 - e. Concerned
 - f. Very Concerned

4. You ask your boyfriend to go steady.
I would expect that he would want to go steady with me.
 - a. Very Unlikely
 - b. Unlikely
 - c. Somewhat Unlikely
 - d. Somewhat Likely
 - e. Likely
 - f. Very Likely

5. You ask your parents for help in deciding what school to apply to.
How concerned or anxious would you be over whether or not your parents would want to help you?
 - a. Very Unconcerned
 - b. Unconcerned
 - c. Somewhat Unconcerned
 - d. Somewhat Concerned
 - e. Concerned
 - f. Very Concerned

6. You ask your parents for help in deciding what school to apply to.
I would expect that they would want to help me.
- Very Unlikely
 - Unlikely
 - Somewhat Unlikely
 - Somewhat Likely
 - Likely
 - Very Likely
7. You ask someone you don't know very well out on a date.
How concerned or anxious would you be over whether or not the person would want to go out with you?
- Very Unconcerned
 - Unconcerned
 - Somewhat Unconcerned
 - Somewhat Concerned
 - Concerned
 - Very Concerned
8. You ask someone you don't know very well out on a date.
I would expect that the person would want to go out on a date with me.
- Very Unlikely
 - Unlikely
 - Somewhat Unlikely
 - Somewhat Likely
 - Likely
 - Very Likely
9. Your boyfriend has plans to go out with his friends tonight, but you really want to spend that time with him, and tell him so.
How concerned or anxious would you be over whether or not your boyfriend would decide to stay with you instead?
- Very Unconcerned
 - Unconcerned
 - Somewhat Unconcerned
 - Somewhat Concerned
 - Concerned
 - Very Concerned
10. Your boyfriend has plans to go out with his friends tonight, but you really want to spend that time with him, and tell him so.
How concerned or anxious would you be over whether or not your boyfriend would decide to stay with you instead?
- Very Unconcerned
 - Unconcerned
 - Somewhat Unconcerned
 - Somewhat Concerned
 - Concerned
 - Very Concerned

11. You ask your parents for extra spending money.
How concerned or anxious would you be over whether or not your parents would give it to you?
- Very Unconcerned
 - Unconcerned
 - Somewhat Unconcerned
 - Somewhat Concerned
 - Concerned
 - Very Concerned
12. You ask your parents for extra spending money.
I would expect that my parents would not mind giving it to me.
- Very Unlikely
 - Unlikely
 - Somewhat Unlikely
 - Somewhat Likely
 - Likely
 - Very Likely
13. After class, you tell your teacher that you have been having some trouble with a section of the course and ask if he/she can help you.
How concerned or anxious would you be over whether or not your teacher would want to help you out?
- Very Unconcerned
 - Unconcerned
 - Somewhat Unconcerned
 - Somewhat Concerned
 - Concerned
 - Very Concerned
14. After class, you tell your teacher that you have been having some trouble with a section of the course and ask if he/she can help you.
I would expect that the teacher would want to help me.
- Very Unlikely
 - Unlikely
 - Somewhat Unlikely
 - Somewhat Likely
 - Likely
 - Very Likely
15. You approach a close friend to talk after doing or saying something that seriously upset him/her.
How concerned or anxious would you be over whether or not your friend would want to talk with you?
- Very Unconcerned
 - Unconcerned
 - Somewhat Unconcerned
 - Somewhat Concerned
 - Concerned
 - Very Concerned

16. You approach a close friend to talk after doing or saying something that seriously upset him/her. I would expect that he/she would want to talk with me to try to work things out.
- Very Unlikely
 - Unlikely
 - Somewhat Unlikely
 - Somewhat Likely
 - Likely
 - Very Likely
17. You ask someone in one of your classes to go out for ice cream. How concerned or anxious would you be over whether or not the person would want to go?
- Very Unconcerned
 - Unconcerned
 - Somewhat Unconcerned
 - Somewhat Concerned
 - Concerned
 - Very Concerned
18. You ask someone in one of your classes to go out for ice cream. I would expect that he/she would want to go with me.
- Very Unlikely
 - Unlikely
 - Somewhat Unlikely
 - Somewhat Likely
 - Likely
 - Very Likely
19. After graduation you can't find a job and you ask your parents if you can live at home for a while. How concerned or anxious would you be over whether or not your parents want you to stay home?
- Very Unconcerned
 - Unconcerned
 - Somewhat Unconcerned
 - Somewhat Concerned
 - Concerned
 - Very Concerned
20. After graduation you can't find a job and you ask your parents if you can live at home for a while. I would expect that I would be welcome at home.
- Very Unlikely
 - Unlikely
 - Somewhat Unlikely
 - Somewhat Likely
 - Likely
 - Very Likely
21. You ask your friend to go out for a movie. How concerned or anxious would you be over whether or not your friend would want to go with you?
- Very Unconcerned
 - Unconcerned
 - Somewhat Unconcerned
 - Somewhat Concerned

- e. Concerned
 - f. Very Concerned
22. You ask your friend to go out for a movie.
I would expect that he/she would want to go with me.
- a. Very Unlikely
 - b. Unlikely
 - c. Somewhat Unlikely
 - d. Somewhat Likely
 - e. Likely
 - f. Very Likely
23. You call your boyfriend after a bitter argument and tell him you want to see him.
How concerned or anxious would you be over whether or not your boyfriend would want to see you?
- a. Very Unconcerned
 - b. Unconcerned
 - c. Somewhat Unconcerned
 - d. Somewhat Concerned
 - e. Concerned
 - f. Very Concerned
24. You call your boyfriend after a bitter argument and tell him you want to see him.
I would expect that he would want to see me.
- a. Very Unlikely
 - b. Unlikely
 - c. Somewhat Unlikely
 - d. Somewhat Likely
 - e. Likely
 - f. Very Likely
25. You ask a friend if you can borrow something of his/hers.
How concerned or anxious would you be over whether or not your friend would loan it to you?
- a. Very Unconcerned
 - b. Unconcerned
 - c. Somewhat Unconcerned
 - d. Somewhat Concerned
 - e. Concerned
 - f. Very Concerned
26. You ask a friend if you can borrow something of his/hers.
I would expect that he/she would willingly loan me it.
- a. Very Unlikely
 - b. Unlikely
 - c. Somewhat Unlikely
 - d. Somewhat Likely
 - e. Likely
 - f. Very Likely

27. You ask your parents to come to an occasion important to you.
How concerned or anxious would you be over whether or not your parents would want to come?
- Very Unconcerned
 - Unconcerned
 - Somewhat Unconcerned
 - Somewhat Concerned
 - Concerned
 - Very Concerned
28. You ask your parents to come to an occasion important to you.
I would expect that they would want to come.
- Very Unlikely
 - Unlikely
 - Somewhat Unlikely
 - Somewhat Likely
 - Likely
 - Very Likely
29. You ask your friend to do you a big favor.
How concerned or anxious would you be over whether or not your friend would want to help you out?
- Very Unconcerned
 - Unconcerned
 - Somewhat Unconcerned
 - Somewhat Concerned
 - Concerned
 - Very Concerned
30. You ask your friend to do you a big favor.
I would expect that he/she would willingly agree to help me out.
- Very Unlikely
 - Unlikely
 - Somewhat Unlikely
 - Somewhat Likely
 - Likely
 - Very Likely
31. You ask your boyfriend if he really loves you.
How concerned or anxious would you be over whether or not your boyfriend would say yes?
- Very Unconcerned
 - Unconcerned
 - Somewhat Unconcerned
 - Somewhat Concerned
 - Concerned
 - Very Concerned
32. You ask your boyfriend if he really loves you.
I would expect that he would answer yes sincerely.
- Very Unlikely
 - Unlikely
 - Somewhat Unlikely
 - Somewhat Likely

- e. Likely
 - f. Very Likely
33. You go to a party and notice someone on the other side of the room, and then you ask them to dance.
How concerned or anxious would you be over whether or not the person would want to dance with you?
- a. Very Unconcerned
 - b. Unconcerned
 - c. Somewhat Unconcerned
 - d. Somewhat Concerned
 - e. Concerned
 - f. Very Concerned
34. You go to a party and notice someone on the other side of the room, and then you ask them to dance.
I would expect that he would want to dance.
- a. Very Unlikely
 - b. Unlikely
 - c. Somewhat Unlikely
 - d. Somewhat Likely
 - e. Likely
 - f. Very Likely
35. You ask your boyfriend to come home to meet your parents.
How concerned or anxious would you be over whether or not your boyfriend would want to meet your parents?
- a. Very Unconcerned
 - b. Unconcerned
 - c. Somewhat Unconcerned
 - d. Somewhat Concerned
 - e. Concerned
 - f. Very Concerned
36. You ask your boyfriend to come home to meet your parents.
I would expect that he would want to meet my parents.
- a. Very Unlikely
 - b. Unlikely
 - c. Somewhat Unlikely
 - d. Somewhat Likely
 - e. Likely
 - f. Very Likely

Conflict in Adolescent Dating Relationships Inventory

The following questions ask you about things that may have happened to you with your boyfriend or girlfriend while you were having an argument. Check the box that is your best estimate of how often these things have happened with your current boyfriend or girlfriend in the past year (or in your whole relationship if you have been together for less than one year). Please remember that all answers are confidential. As a guide, use the following scales:

Never: this has never happened in your relationship

Seldom: this has happened only 1-2 times in your relationship

Sometimes: this has happened about 3-5 times in your relationship

Often: this has happened 6 or more times in your relationship

1. During a conflict or argument with my boyfriend in the past year, I gave reasons for my side of the argument.
 - a Never
 - b Seldom
 - c Sometimes
 - d Often

2. He gave reasons for his side of the argument.
 - a Never
 - b Seldom
 - c Sometimes
 - d Often

3. During a conflict or argument with my boyfriend in the past year, I touched him sexually when he didn't want me to.
 - a Never
 - b Seldom
 - c Sometimes
 - d Often

4. He touched me sexually when I didn't want him to.
 - a Never
 - b Seldom
 - c Sometimes
 - d Often

5. During a conflict or argument with my boyfriend in the past year, I tried to turn his friends against him.
 - a Never
 - b Seldom
 - c Sometimes
 - d Often

6. He tried to turn my friends against me.
 - a Never
 - b Seldom
 - c Sometimes
 - d Often

7. During a conflict or argument with my boyfriend in the past year, I did something to make him feel jealous.
 - a Never
 - b Seldom
 - c Sometimes
 - d Often

8. He did something to make me feel jealous.
 - a Never
 - b Seldom
 - c Sometimes
 - d Often

9. During a conflict or argument with my boyfriend in the past year, I destroyed or threatened to destroy something he valued.
 - a Never
 - b Seldom
 - c Sometimes
 - d Often

10. He destroyed or threatened to destroy something I valued.
 - a Never
 - b Seldom
 - c Sometimes
 - d Often

11. During a conflict or argument with my boyfriend in the past year, I told him that I was partly to blame.
 - a Never
 - b Seldom
 - c Sometimes
 - d Often

12. He told me that he was partly to blame.
 - a Never
 - b Seldom
 - c Sometimes
 - d Often

13. During a conflict or argument with my boyfriend in the past year, I brought up something bad that he had done in the past.
 - a Never
 - b Seldom
 - c Sometimes
 - d Often

14. He brought up something bad that I had done in the past.
 - a Never
 - b Seldom
 - c Sometimes
 - d Often

15. During a conflict or argument with my boyfriend in the past year, I threw something at him.
 - a Never
 - b Seldom
 - c Sometimes
 - d Often

16. He threw something at me.
 - a Never
 - b Seldom
 - c Sometimes
 - d Often

17. During a conflict or argument with my boyfriend in the past year, I said things just to make him angry.
 - a Never
 - b Seldom
 - c Sometimes
 - d Often

18. He said things just to make me angry.
 - a Never
 - b Seldom
 - c Sometimes
 - d Often

19. During a conflict or argument with my boyfriend in the past year, I gave reasons why I thought he was wrong.
a Never
b Seldom
c Sometimes
d Often
20. He gave reasons why he thought I was wrong.
a Never
b Seldom
c Sometimes
d Often
21. During a conflict or argument with my boyfriend in the past year, I agreed that he was partly right.
a Never
b Seldom
c Sometimes
d Often
22. He agreed that I was partly right.
a Never
b Seldom
c Sometimes
d Often
23. During a conflict or argument with my boyfriend in the past year, I spoke to him in a hostile or mean tone of voice.
a Never
b Seldom
c Sometimes
d Often
24. He spoke to me in a mean or hostile tone of voice.
a Never
b Seldom
c Sometimes
d Often

25. During a conflict or argument with my boyfriend in the past year, I forced him to have sex when he didn't want to.
a Never
b Seldom
c Sometimes
d Often
26. He forced me to have sex when I didn't want to.
a Never
b Seldom
c Sometimes
d Often
27. During a conflict or argument with my boyfriend in the past year, I offered a solution that I thought would make us both happy.
a Never
b Seldom
c Sometimes
d Often
28. He offered a solution that he thought would make us both happy.
a Never
b Seldom
c Sometimes
d Often
29. During a conflict or argument with my boyfriend in the past year, I threatened him in an attempt to have sex with him.
a Never
b Seldom
c Sometimes
d Often
30. He threatened me in an attempt to have sex with me.
a Never
b Seldom
c Sometimes
d Often

31. During a conflict or argument with my boyfriend in the past year, I put off talking until we calmed down.
a Never
b Seldom
c Sometimes
d Often
32. He put off talking until we calmed down.
a Never
b Seldom
c Sometimes
d Often
33. During a conflict or argument with my boyfriend in the past year, I insulted him with put-downs.
a Never
b Seldom
c Sometimes
d Often
34. He insulted me with put-downs.
a Never
b Seldom
c Sometimes
d Often
35. During a conflict or argument with my boyfriend in the past year, I discussed the issue calmly.
a Never
b Seldom
c Sometimes
d Often
36. He discussed the issue calmly.
a Never
b Seldom
c Sometimes
d Often

37. During a conflict or argument with my boyfriend in the past year, I kissed him when he didn't want me to.
a Never
b Seldom
c Sometimes
d Often
38. He kissed me when I didn't want him to.
a Never
b Seldom
c Sometimes
d Often
39. During a conflict or argument with my boyfriend in the past year, I said things to his friends about him to turn them against him.
a Never
b Seldom
c Sometimes
d Often
40. He said things to my friends about me to turn them against me.
a Never
b Seldom
c Sometimes
d Often
41. During a conflict or argument with my boyfriend in the past year, I ridiculed or made fun of him in front of others.
a Never
b Seldom
c Sometimes
d Often
42. He ridiculed or made fun of me in front of others.
a Never
b Seldom
c Sometimes
d Often

43. During a conflict or argument with my boyfriend in the past year, I told him how upset I was.
a Never
b Seldom
c Sometimes
d Often
44. He told me how upset he was.
a Never
b Seldom
c Sometimes
d Often
45. During a conflict or argument with my boyfriend in the past year, I kept track of who he was with and where he was.
a Never
b Seldom
c Sometimes
d Often
46. He kept track of who I was with and where I was.
a Never
b Seldom
c Sometimes
d Often
47. During a conflict or argument with my boyfriend in the past year, I blamed him for the problem.
a Never
b Seldom
c Sometimes
d Often
48. He blamed me for the problem.
a Never
b Seldom
c Sometimes
d Often

49. During a conflict or argument with my boyfriend in the past year, I kicked, hit, or punched him.
a Never
b Seldom
c Sometimes
d Often
50. He kicked, hit, or punched me.
a Never
b Seldom
c Sometimes
d Often
51. During a conflict or argument with my boyfriend in the past year, I left the room to cool down.
a Never
b Seldom
c Sometimes
d Often
52. He left the room to cool down.
a Never
b Seldom
c Sometimes
d Often
53. During a conflict or argument with my boyfriend in the past year, I gave in, just to avoid conflict.
a Never
b Seldom
c Sometimes
d Often
54. He gave in, just to avoid conflict.
a Never
b Seldom
c Sometimes
d Often

55. During a conflict or argument with my boyfriend in the past year, I accused him of flirting with another girl.
a Never
b Seldom
c Sometimes
d Often
56. He accused me of flirting with another guy.
a Never
b Seldom
c Sometimes
d Often
57. During a conflict or argument with my boyfriend in the past year, I deliberately tried to frighten him.
a Never
b Seldom
c Sometimes
d Often
58. He deliberately tried to frighten me.
a Never
b Seldom
c Sometimes
d Often
59. During a conflict or argument with my boyfriend in the past year, I slapped him or pulled his hair.
a Never
b Seldom
c Sometimes
d Often
60. He slapped me or pulled my hair.
a Never
b Seldom
c Sometimes
d Often

Levesque Romantic Experience: Male Version

	Strongly Disagree		Moderately Agree		Strongly Agree	
1. In general, I am satisfied with our relationship.	1	2	3	4	5	6
2. Compared to other people's relationships ours is pretty good.	1	2	3	4	5	6
3. I often wish I hadn't gotten into this relationship.*	1	2	3	4	5	6
4. Our relationship has met my best expectations.	1	2	3	4	5	6
5. Our relationship is just about the best relationship I could have hoped to have with any body.	1	2	3	4	5	6
1. I am happiest when we are together.	1	2	3	4	5	6
2. I try to arrange my time so that I can be with her.	1	2	3	4	5	6
3. I really care for her.	1	2	3	4	5	6
4. She acts thoughtfully.	1	2	3	4	5	6
5. She is a great companion.	1	2	3	4	5	6
6. I like the way I feel when I am with her.	1	2	3	4	5	6
1. I get upset when she shows an interest in other boys.	1	2	3	4	5	6
2. I like it when she pays attention only to me.	1	2	3	4	5	6
3. I watch other boy's reactions to her.	1	2	3	4	5	6
4. She watches how I act with other girls.	1	2	3	4	5	6
5. Sometimes she doesn't believe that I love only her.	1	2	3	4	5	6
6. She is jealous of my relationships with other people.	1	2	3	4	5	6
1. I am happy when she succeeds.	1	2	3	4	5	6
2. I want her to be a success according to her own standards.	1	2	3	4	5	6
3. I like it when she does things on her own.	1	2	3	4	5	6
4. She makes me feel complete.	1	2	3	4	5	6
5. She helps me to become what I want to be.	1	2	3	4	5	6
6. She makes me feel emotionally stronger.	1	2	3	4	5	6
1. I never have to lie to her.	1	2	3	4	5	6
2. She listens to me when I need someone to talk to.	1	2	3	4	5	6
3. I find it easy to tell her how I feel.	1	2	3	4	5	6
4. I really listen to what she has to say.	1	2	3	4	5	6
5. She tells me about her weaknesses and strengths.	1	2	3	4	5	6
6. She finds it easy to tell me how she feels.	1	2	3	4	5	6
1. I make her really happy.	1	2	3	4	5	6
2. She's really "crazy" for me.	1	2	3	4	5	6
3. She thinks our relationship is terrific.	1	2	3	4	5	6
4. She makes me feel fantastic.	1	2	3	4	5	6
5. She makes me become "alive".	1	2	3	4	5	6
6. She makes me feel very happy.	1	2	3	4	5	6

	Strongly Disagree		Moderately Agree		Strongly Agree	
1. I am patient with her.	1	2	3	4	5	6
2. I accept her for what she is.	1	2	3	4	5	6
3. I'm willing to forgive her for almost anything.	1	2	3	4	5	6
4. She recognizes and accepts faults in me.	1	2	3	4	5	6
5. She takes me for what I am.	1	2	3	4	5	6
1. She feels romantically excited when with me.	1	2	3	4	5	6
2. I want to look attractive for her.	1	2	3	4	5	6
3. It is easy for her to be romantic with me.	1	2	3	4	5	6
4. I get romantically excited just thinking about her.	1	2	3	4	5	6
5. I enjoy studying her body and her movements.	1	2	3	4	5	6
6. I feel romantically excited when with her.	1	2	3	4	5	6
1. I think she has good ideas.	1	2	3	4	5	6
2. I admire her persistence in getting after things that are important to her.	1	2	3	4	5	6
3. I take pride in her accomplishments.	1	2	3	4	5	6
4. She thinks my ideas are important.	1	2	3	4	5	6
5. She respects my values and beliefs, although they don't always agree with her.	1	2	3	4	5	6
6. She knows when something is bothering me.	1	2	3	4	5	6
1. I help her through difficult times.	1	2	3	4	5	6
2. I make her feel self-confident.	1	2	3	4	5	6
3. I am concerned about how she feels.	1	2	3	4	5	6
4. She helps me find solutions to my problems.	1	2	3	4	5	6
5. She comforts me when I need comforting.	1	2	3	4	5	6
6. She tries to get me in a good mood when I am angry.	1	2	3	4	5	6
1. She sometimes gets angry at me.	1	2	3	4	5	6
2. Dating can sometimes be painful for her.	1	2	3	4	5	6
3. Sometimes I really upset her.	1	2	3	4	5	6
4. I sometimes get upset because things don't go well between us.	1	2	3	4	5	6
5. She can really hurt my feelings.	1	2	3	4	5	6
6. Sometimes I don't know why I put up with the things she does or says.	1	2	3	4	5	6
1. I want to spend my life with her.	1	2	3	4	5	6
2. I will always be loyal to her.	1	2	3	4	5	6
3. I expect to always love her.	1	2	3	4	5	6
4. Her fantasy is to be married to me forever.	1	2	3	4	5	6
5. When it comes to our relationship, she is very loyal and worthy of trust.	1	2	3	4	5	6
6. She expects to be close by me forever.	1	2	3	4	5	6
7. She is willing to change for me.	1	2	3	4	5	6

	Strongly Disagree		Moderately Agree		Strongly Agree	
1. I want to be special in her life.	1	2	3	4	5	6
2. No one can love her as much as I do.	1	2	3	4	5	6
3. I treat her as very special.	1	2	3	4	5	6
4. Se is the most important person in my life.	1	2	3	4	5	6
5. I feel that she was meant for me.	1	2	3	4	5	6
6. She is the person that best understands me.	1	2	3	4	5	6
1. We were attracted to each other immediately when we first met.	1	2	3	4	5	6
2. We have the right physical "chemistry" between us.	1	2	3	4	5	6
3. We have an intense romantic relationship.	1	2	3	4	5	6
4. I feel that we were meant for each other.	1	2	3	4	5	6
5. We became involved rather quickly.	1	2	3	4	5	6
6. She fits my ideal standards of physical good looks.	1	2	3	4	5	6
1. I try to keep her uncertain about my commitment to her.	1	2	3	4	5	6
2. I think that what she does not know about me will not hurt her.	1	2	3	4	5	6
3. I have sometimes had to keep two of my girlfriends from finding out about each other.	1	2	3	4	5	6
4. I can get over love affairs pretty easily and quickly.	1	2	3	4	5	6
5. When my girlfriend becomes too dependent on me, I want to back off a little.	1	2	3	4	5	6
6. I enjoy playing the "game of love" with a number of different girls.	1	2	3	4	5	6
1. It is hard to say exactly when we went from being friends to being romantically involved.	1	2	3	4	5	6
2. Love first requires caring for a while.	1	2	3	4	5	6
3. I expect to always be friends with the people I date.	1	2	3	4	5	6
4. The best kind of love grows out of a long friendship.	1	2	3	4	5	6
5. My most satisfying dating relationships grew from good friendships.	1	2	3	4	5	6
6. Love is a deep friendship, not a mysterious, passionate emotion.	1	2	3	4	5	6
1. I consider what a person is going to become in life before I commit myself to her.	1	2	3	4	5	6
2. It is best to love someone with a similar background to mine.	1	2	3	4	5	6
3. A main consideration in choosing a girlfriend is how she fits into my family.	1	2	3	4	5	6
4. An important factor in choosing a girlfriend is how she will be as a mother.	1	2	3	4	5	6
5. Before getting very involved with someone, I try to figure out what our children would be like, if we were to have any.	1	2	3	4	5	6
6. In choosing a partner, I consider how she will fit in my future plans.	1	2	3	4	5	6

	Strongly Disagree		Moderately Agree		Strongly Agree	
1. If my girlfriend ignores me for a while, I sometimes do stupid things to get her attention back.	1	2	3	4	5	6
2. I can't relax if I suspect she is with another boy.	1	2	3	4	5	6
3. When I am in love, I have trouble concentrating on anything else.	1	2	3	4	5	6
4. When she doesn't pay attention to me, I feel sick all over.	1	2	3	4	5	6
5. Sometimes I get so excited about being in love that I can't sleep.	1	2	3	4	5	6
6. When my love affairs break up, I really get depressed.	1	2	3	4	5	6
1. I try to always help her through difficult times.	1	2	3	4	5	6
2. I would rather suffer myself than let my girlfriend suffer.	1	2	3	4	5	6
3. I can't be happy unless I put her happiness above my own.	1	2	3	4	5	6
4. I usually sacrifice my own wishes to let her get her own.	1	2	3	4	5	6
5. Whatever I own is hers to use as she chooses.	1	2	3	4	5	6
6. I would put up with a lot for her sake.	1	2	3	4	5	6

Appendix C
Issues Checklist

Common Issues in Relationships

Listed below are some issues that many dating couples disagree about. Please select one issue from the page **OR** write one in the space provided that relates to you and your partner. You will be asked to discuss this issue for eight minutes while your conversation is recorded. At the bottom, write the number of the issue you choose to discuss with your partner along with two alternate issues.

1. We never have enough money or time to do fun things on dates.
2. Sometimes I wish my partner and I could spend more time talking together.
3. My partner doesn't call or show up when s/he says s/he will.
4. My partner and I disagree over how much time we should spend with each other.
5. Sometimes my partner doesn't seem to trust me enough or sometimes I do not trust my partner enough.
6. Sometimes my partner doesn't understand me or sometimes I do not understand my partner.
7. My partner and I disagree over how much affection we should show in public.
8. My partner and I disagree over how committed we are to each other.
9. My partner and I disagree about how much time we should spend with our friends.
10. I don't like my partner's friends or my partner doesn't like mine.
11. My friends do not like my partner or my partner's friends do not like me.
12. My partner sometimes puts me down in front of others.
13. I don't always approve of how my partner dresses/acts around the opposite sex.
14. My partner has a hard time dealing with my ex-boyfriend/girlfriend.
15. My partner smokes, drinks, or does drugs more than I would like.
16. We have very different thoughts about religion, politics or other important issues.
17. My partner and I disagree about sex, sexual behaviors, or contraception.
18. My partner expects me to be interested in his/her hobbies.
19. My parents do not like us being together or feel we spend too much time together.
20. My parents do not like my partner or my partner's parents do not like me.
21. Adults at my school or church do not approve of my relationship with my partner.

Other

22. Other issue we disagree about _____.

Main Issue I'd like to discuss: _____.

First Alternate Issue:

_____.

Second Alternate Issue:

_____.

VITA

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Education

- Ph.D. 2010 Utah State University
 Combined Clinical, Counseling, and School Psychology
 Dissertation: *Does empathic accuracy mediate the relationships between individual psychological characteristics and related outcomes?*
 Chair: Renee Galliher, Ph.D.
- MS 2006 Utah State University
 Counseling Psychology
 Thesis: *Towards a more comprehensive view of the use of power between couple members in adolescent romantic relationships.*
 Chair: Renee Galliher, Ph.D.
- BS 2001 University of Colorado at Boulder
 Psychology

Clinical Experience

- 2008-2009 Extern Therapist, full time employee
 Avalon Hills Residential Eating Disorder Treatment Center
 Supervisor: David Christian, Ph.D.
 Responsibilities include: Conducting individual therapy, family therapy, group therapy (ACT, DBT, relapse prevention, interpersonal process, and didactic groups), and intake assessments, in a multidisciplinary team.
- 2007-2008 Psychology Intern, APA Accredited Pre-doctoral Internship
 Veterans Administration Hospital Salt Lake City
 Supervisors: Brett Hicken, Ph.D., Warren Thorley, Ph.D., Richard Weaver, Ph.D., Janet Madsen, Ph.D., Kim Seiber, Ph.D.
 Total Hours: 2000

Responsibilities include: Neuropsychological and personality testing and assessment, conducting individual and group (didactics, relapse prevention, and process) therapy, and intakes, in a multidisciplinary hospital and inpatient psychiatric setting.

- 2006-2007 Graduate Student Therapist, Clinical Psychology Assistantship
Avalon Hills Residential Eating Disorder Treatment Center
Supervisor: Benita Quakenbush-Roberts, Ph.D.
Total Hours: 640 (448 direct contact)
Responsibilities include: Conducting individual therapy, group therapy (DBT, relapse prevention, interpersonal process, and didactic groups), and intake assessments, in a multidisciplinary team.
- 2005-2006 Graduate Student Therapist, Counseling Psychology Assistantship
Utah State University Counseling Center
Total hours: 640 (384 direct contact)
Supervisor: Mark Nafziger, Ph.D.
Responsibilities included: Intakes, assessments, group therapy, psycho-education, individual therapy, community outreach, supervision of undergraduate peer counselors, treatment planning, and treatment coordination.
- 2005-2006 Graduate Student Therapist, Clinical Psychology Practicum
Utah State University Community Clinic
Total hours: 300 (60 direct contact)
Supervisor: Susan Crowley, Ph.D.
Responsibilities included: Intakes, assessments, and individual therapy in a university community clinic.
- 2004-2006 Graduate Student Therapist, Trauma Group
Utah State University Community Clinic
Total hours: 180 direct contact
Supervisor: Carolyn Barcus, Ed.D. & Susan Crowley, Ph.D.
Co-therapist in a weekly process and support group for female survivors of physical, emotional, and/or sexual abuse.
- 2004-2005 Graduate Student Therapist, Clinical Psychology Assistantship
Bear River Mental Health
Total hours: 900 (432 direct contact)
Supervisor: Russ Seigenberg, Ph.D.
Responsibilities included: Intakes, assessments, group therapy, psycho-education, individual therapy, crisis assessment and intervention, treatment planning, and treatment coordination in a community mental health setting.

- 2004-2007 Graduate Student Therapist, Body Image Group
Avalon Hills Residential Eating Disorder Treatment Center
Total hours: 270 direct contact
Supervisor: Mary Doty, Ph.D.
Co-therapist in a weekly body image group at a residential treatment facility for adolescent girls with eating disorders.
- 2004 Graduate Student Therapist, Summer Clinical Psychology Practicum
Utah State University Community Clinic
Total hours: 50 (5 direct contact)
Supervisor: Susan Crowley, Ph.D.
Responsibilities included: Intakes, assessments, and individual therapy in a university community clinic.
- 2003-2004 Graduate Student Therapist, Counseling Psychology Practicum
Utah State University Counseling Center
Total hours: 300 (120 direct contact)
Supervisor: LuAnn Helms, Ph.D.
Responsibilities included: Intakes, assessments, group therapy, psycho-education, and individual therapy in a university counseling center setting.
- 2002-2003 Graduate Student Therapist, School Psychology Practicum
Utah State University Community Clinic
Total hours: 300 (60 direct contact)
Supervisor: Gretchen Gimpel-Peacock, Ph.D.
Responsibilities included: Intakes, evaluations, assessments, report writing, psycho-education, behavioral parent training, co-therapy, and individual therapy with children and families.
- 2002 Graduate Student Therapist, Counseling Psychology Practicum
Utah State University Community Clinic
Total hours: 150 (15 direct contact)
Supervisor: Susan Crowley, Ph.D.
Responsibilities included: Intakes, evaluations, assessments, report writing, and individual therapy.

Research Experience

- 2001-2004 Graduate Research Assistantship
Supervisor: Renee Galliher, Ph.D.
Utah State University, Logan, UT
20 Hours/week
Investigated several aspects of adolescent romantic relationships including interpersonal power and related outcomes (e.g., aggression and

relationship satisfaction).

Responsibilities included: Set up lab, assisted with development of study, questionnaire construction, research choreography, IRB submission, travel to data research sites, coordinate graduate/undergraduate lab members' work, data collection, data entry, analysis, and dissemination of information via presentations, articles, and newsletter.

- 2002 Graduate Research Assistantship
Supervisor: Scott DeBerard, Ph.D.
Utah State University, Logan, UT
10 Hours/week
Investigated correlations between characteristics of individuals who received spinal operations and numerous health related outcomes.
Responsibilities included: Assisted with phone interview data collection.
- 2000-2001 Research Assistant
Supervisor: Bernadette Park, Ph.D.
Social Psychology Department, University of Colorado at Boulder
20 Hours/week
Investigated use of power in professional/organizational settings.
Responsibilities included: Developed individual project, performed all duties to complete project, assisted graduate student in creation of study, data collection, and data analysis.
- 1998-2000 Volunteer Research Assistant
Supervisor: Bernadette Park, Ph.D.
Social Psychology Department, University of Colorado at Boulder
20 Hours/week
Investigated use of power in professional/organizational settings.
Responsibilities included: Assisted graduate student in creation of study, data collection, and data analysis.

Teaching Experience

- 2003 Teaching Assistantship
Supervisor: Steve Lehman, Ph.D.
Utah State University, Logan, UT
10 Hours/week
Cognitive Psychology (PSYC 4200)
Responsibilities included: Office hours, grading, discussion groups, conducting lab meetings, and lecturing.
- 2002 Teaching Assistantship
Supervisor: Scott Bates, Ph.D.

Utah State University, Logan, UT
 10 Hours/week
 Introductory Psychology (PSYC 1010)
 Responsibilities included: Office hours, grading, discussion groups,
 conducting lab meetings, and lecturing.

Published Manuscripts

Bentley, C. G., Galliher, R. V., & Ferguson, T. (2007). Associations among aspects of interpersonal power and positive and negative relationship outcomes in adolescent romantic couples. *Sex Roles*.

DeBerard, M.S., LaCaille, R.A., Spielmans, G.I., Jennings, R.D., Allen, C.A., **Bentley, C.G.**, & Goodson, J.T. (2004). Pre-surgical biopsychosocial variables predict long-term lumbar discectomy outcomes in injured workers. *Psychosomatic Medicine*, *66* (1), A40.

Manuscripts under preparation

Bentley, C. G., & Galliher, R. V. (under preparation). Contextual variables that influence the distribution of power and related outcomes in adolescent romantic relationships.

Galliher, R.V., **Bentley, C. G.**, Jones, M.D., & Hatch, D.L. (under preparation). Perceptions of communication as a mediator between family-of-origin experiences and aggression in adolescent romantic relationships.

Presentations

Galliher, R. V., & **Bentley, C. G.** (2008, March). Associations among individual psychological functioning, problem solving behaviors, and relationship quality in young couples. In R. V. Galliher (Chair), *Exploring romantic or sexual experiences in adolescence: Direct or interacting influences of individual psychological functioning*. Symposium presented at the Biennial meeting of the Society for Research on Adolescence, Chicago, IL.

Galliher, R. V., Enno, A., & **Bentley, C. G.** (March, 2006). Multi-method analysis of adolescent romantic couples' problem solving interactions: Associations with relationship quality. In B. Holmes, *Romantic Relationship Quality in Adolescence: Contributing Factors and Outcomes*, Symposium presented at the Biennial Meeting of the Society for Research on Adolescence, San Francisco, CA.

- Bentley, C. G.**, Williams, K.L., & Galliher, R. V. (April, 2005). Associations among aspects of interpersonal power and positive and negative relationship outcomes in adolescent romantic couples. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Atlanta, GA.
- Williams, K.L., **Bentley, C. G.**, Hatch, D.L., Galliher, R.V. (April, 2005). Associations among individual psychological characteristics and relationship quality in adolescent romantic couples. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Atlanta, GA.
- Bentley, C. G.**, Capener, K., & Galliher, R. V. (April, 2004). Individual and relationship risk factors for negative romantic relationship outcomes among college students. Poster presented at the Biennial Meeting of the Society for Research on Human Development, Park City, UT.
- Bentley, C.G.**, Galliher, R.V., Ferguson, T.J., & Finlayson, S. (March, 2004). Gender differences in behavioral and emotional control and disparagement as predictors of relationship outcomes in late adolescent romantic relationships. In Candice Feiring (Chair), *Positive and Negative Processes Within Romantic Relationships*. Poster symposium presented at the Biennial Meeting of Society for Research on Adolescence, Baltimore, MD.
- DeBerard, M. S., Lacaille, R. A., Spielmans, G. I., Jennings, R. D., Charity, A. A., **Bentley, C. G.**, & Goodson, J. T. (March, 2004). Pre-surgical biopsychosocial variables predict long term lumbar discectomy outcomes in injured workers. Poster presented at the annual convention of American Psychosomatic Society Annual Meeting, Orlando, FL.
- Bentley, C.G.**, Jones, M.D., Galliher, R.V., & Hayashi, K. (August, 2002). Continuity of relationship quality across developmental relationships. Poster presented at the annual convention of the American Psychological Association, Chicago, IL.
- Jones, M.D., **Bentley, C.G.**, & Galliher, R.V. (August, 2002). The impact of race and community context on adolescent adjustment. Poster presented at the annual convention of the American Psychological Association, Chicago, IL.

Awards and Honors

2002-2004	Student Research Travel Award, Utah State University
2002	Student Research Travel Award, Utah State University
1997-2000	Deans list, University of Colorado at Boulder
1997	Psi Chi National Honor Society
1998	Golden Key National Honor Society