Adolescent Dating and Disordered Eating: The Role of Romantic Relationship Quality and Previous Sexual Experience

by

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B.Sc., University of Northern British Columbia, 2009

Thesis submitted in partial fulfillment of
the requirements for the degree of

Master of Arts

in the

Department of Psychology

Faculty of Arts and Social Sciences

SIMON FRASER UNIVERSITY

Fall 2011

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Abstract

Although adolescent dating has been associated with mental health problems, little is known about the association between dating and eating disorders. This study addressed the hypothesis that previous sexual experience and the quality of adolescents' romantic relationships play a role in the association between dating and symptoms of eating disorders and depression. Participants included 75 girls, aged 12-19 (25 with an eating disorder, 25 with a depressive disorder, and 25 healthy controls). Study variables were assessed via questionnaires. Results indicated that involvement in a current, serious romantic relationship was associated with bulimic symptoms, particularly among girls who were sexually inexperienced. In addition, greater positive qualities of current relationships and greater negative qualities of previous relationships were associated with greater eating disorder symptoms. Future longitudinal studies should examine whether quality of romantic relationships and sexual experience represent risk factors for eating disorder symptoms among girls who are dating.

Keywords: eating disorder; depression; adolescent; dating; romantic relationship; sexual experience

This work is dedicated to Annmarie, Lorne, and Erica

Acknowledgements

First and foremost, I would like to thank my senior supervisor, Dr. Shannon Zaitsoff, for her expertise and guidance throughout the completion of my thesis. I would also like to thank my secondary supervisor, Dr. Robert Ley, whose support has been invaluable throughout my graduate training. Thanks is also due to Dr. Schonert-Reichl and Dr. Rachel Fouladi who were hugely supportive in their comments and feedback during my thesis defence.

I would also like to give special thanks to my loved ones for their ongoing support throughout this process and throughout my education. To my mother, father, and sister, your unconditional love and encouragement mean the world to me, and my achievements would not have been possible without you. To Leigh, you have been a source of strength, courage, and repose for me; thank you for being there to share my laughs, tears, and accomplishments.

Finally, I would like to thank the youth who participated in this study for volunteering their time to further the literature on eating disorders. Funding for this study was provided by the Canadian Institutes of Health Research through a Frederick Banting and Charles Best Canada Graduate Scholarship, Master Award.

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List of Acronyms

ED	Eating Disorder
DD	Depressive Disorder
EDI	Eating Disorder Inventory-2
EDI-DT	Eating Disorder Inventory-2 Drive for Thinness Subscale
EDI-B	Eating Disorder Inventory-2 Bulimia Subscale
EDI-BD	Eating Disorder Inventory-2 Body Dissatisfaction Subscale
BDI	Beck Depression Inventory – II
NRI	Network of Relationships Inventory
RSE	Rosenberg Self-Esteem Scale

1. Introduction

Dating is a normative part of adolescence. By age sixteen, 88 percent of teens have had a romantic relationship (Feiring, 1996). Dating also serves a number of important developmental functions during adolescence (Collins, 2003). For instance, dating allows teens to experience intimacy, explore their emerging autonomy, gain insight into their own physical and sexual attractiveness (a topic which is very salient for youth; Halpern, Udry, Campbell, & Suchindran, 1999), and prepare themselves for adult romantic relationships.

Despite these positive aspects of dating, accumulating evidence suggests that dating may also be detrimental to adolescents' well being. For instance, dating during adolescence has been linked to poor academic achievement (Quatman, Sampson, Robinson, & Watson, 2001), problem behavior (Neemann, Hubbard, & Masten, 1995), substance use (Halpern, Kaestle, & Hallfors, 2007), low self-esteem (Simmons, Burgeson, Carlton-Ford, & Blyth, 1987), and depressive symptoms (Quatman et al., 2001; Joyner & Udry, 2000). Furthermore, research suggests that the negative effects of dating may be particularly strong for girls (e.g., Natsuaki, Biehl, & Ge, 2009).

The association between dating and depressive symptoms has been cited in numerous studies (for a review see Davila, 2008). In contrast, relatively little is known about the association between adolescent dating and eating disorder symptoms. This is an important gap in the literature for several reasons. First, depression and eating disorders are highly comorbid conditions (e.g., Polivy & Herman, 2002) and share many risk factors (Green et al., 2009). Thus, because dating is associated with depressive symptoms, one might expect that it would also be associated with eating disorder symptoms. Second, to the extent that dating leads adolescent girls to feel concerned about their bodies and their weight, dating may represent a significant risk factor for dieting and disordered eating.

A second important gap in the literature on adolescent dating is that, despite accumulating evidence suggesting that dating is often associated with mental health problems such as depression, little is known about *under what circumstances* or *for whom* this is the case. In other words, it is likely that dating is associated with mental health problems under some circumstances and not others, and research is needed to elucidate these circumstances. The present study aims to address this need.

The following sections of this introduction will outline (a) the literature on adolescent dating and depressive symptoms, (b) the literature on adolescent dating and eating disorder symptoms, (c) various hypotheses regarding the potential *circumstances* under which adolescent dating may be associated with symptoms of depression and eating disorders, and (d) a discussion of *sexual experience* and *romantic relationship quality* as potential "circumstances" which may influence the association between adolescent dating and symptoms of depression and eating disorders.

1.1. Dating and Depressive Symptoms

As mentioned above, most of the research on adolescent dating and mental health problems has focused on depressive symptoms, and in the past two decades, this literature has grown rapidly. Overall, studies indicate that among both boys and girls, and among both younger and older adolescents, dating activities such as having a current romantic partner (Davila, Steinberg, Kachadourian, Cobb, & Fincham, 2004), going out on dates more frequently (Quatman et al., 2001), and engaging in more romantic activities such as flirting and kissing (Steinberg & Davila, 2008; Compian, Gowen, & Hayward, 2004) are associated with elevated levels of depressive symptoms. Longitudinal studies confirm that some dating activities lead to increases in depressive symptoms over time (Davila et al., 2004; Davila, Stroud, Starr, Miller, Yoneda, & Hershenberg, 2009). Furthermore, studies indicate that dating is particularly detrimental for the mental health of girls (Joyner & Udry, 2000; Natsuaki et al., 2009).

Despite accumulating evidence that adolescent dating is associated with depressive symptoms, more research is needed to better understand this association. For example, research is needed to elucidate the circumstances under which adolescent

dating is associated with depressive symptoms. Research is also needed to rule out potential confounds. For example, it is possible that an adolescent's dating history is associated with increases in depressive symptoms *not* because of anything inherent in the dating relationship (e.g., conflict, sexual activity, etc.) but because of the frequent breakups that characterize adolescent dating. Finally, more research is needed to determine whether or not dating is associated with other mental health problems that are related to depression—such as disordered eating.

1.2. Adolescent Dating and Disordered Eating

Eating disorders are a serious problem among adolescent girls. Anorexia and bulimia nervosa affect approximately 5 percent of adolescent girls (Golden et al., 2003) and can lead to several negative health outcomes including malnutrition, osteoporosis, liver failure, and death (Polivy & Herman, 2002). Given these health risks, it is important to understand the potential risk factors for disordered eating. One of these potential risk factors is adolescent dating.

In comparison to the literature on adolescent dating and depressive symptoms, relatively little attention has been paid to the association between dating and disordered eating. This gap in the literature is surprising given the fact that dating and disordered eating share a common factor—namely, the importance of one's appearance. Adolescent girls believe that their attractiveness to boys (Nichter & Vuckovic, 1994) and their success in dating relationships (Paxton et al., 1991) depends on their thinness. This belief has a basis in reality; studies show that heavier girls are less likely to date than slimmer girls, even when these "heavier" girls are not obese (Halpern et al., 1999). Thus, to the extent that dating leads to concerns about one's body or weight, dating may represent a significant risk factor for the development of body dissatisfaction, dieting, and disordered eating.

Presently, most of the published studies which have explored the association between dating and eating disorder symptoms have yielded statistically significant findings. For instance, girls who report that they have started dating, and girls who engage in more frequent dating activities (e.g., holding hands, kissing, having a steady

boyfriend), are more likely to report elevated levels of body dissatisfaction (Compian et al., 2004), dieting, and disordered eating (Cauffman & Steinberg, 1996; Gralen, Levine, Smolak, & Murnen, 1990). Interestingly, among early adolescent girls (i.e., 12-13 years old), even platonic involvement with boys, such as going to the mall with a mixed-gender group, is related to dieting and disordered eating, especially among girls who have experienced menarche (Cauffman & Steinberg, 1996).

Other studies indicate that dating is related to *some* eating disorder symptoms but not others. Levine, Smolak, Moodey, Shuman, and Hessen (1994) found that girls who recently experienced the onset of dating reported higher levels of weight management strategies and disordered eating but *not* higher levels of shape dissatisfaction. Furthermore, Paxton, Norris, Wertheim, Durkin, and Anderson (2005) found that "heterosocial involvement" (i.e., activities ranging from not going out in the company of boys, to going out with a group of boys and girls, to having a special boyfriend) was not associated with *any* of the eating disorder symptoms measured. Surprisingly, this study also did not support a relationship between dating and depressive symptoms, a finding that has been quite robust in the literature.

In one of the few longitudinal studies to investigate the association between dating and eating disorder symptoms, Smolak, Levine, and Gralen (1993) found that, although dating was not *independently* associated with body dissatisfaction, dieting, or disordered eating, dating *was* associated with all of these eating disorder symptoms when it was initiated during the same 12-month period as menarche. In other words, when girls experienced the onset of dating and menarche concurrently, they experienced an increased risk for disordered eating. Furthermore, this effect seemed to endure over time (Smolak, Levine, & Gralen, 1993) and has been reported in other studies as well (Levine et al., 1994; Cauffman & Steinberg, 1996). To explain this finding, researchers hypothesize that experiencing multiple developmental challenges (e.g., dating and puberty) simultaneously leads to increased levels of stress and consequently an increased vulnerability to psychological problems.

A review of the literature resulted in only one study that focused on the association between dating and disordered eating in a clinical sample of adolescents. Ruuska, Kaltiala-Heino, Koivisto, and Rantanen (2003) compared adolescent girls with

anorexia nervosa to girls with bulimia nervosa on measures of dating, attitudes toward dating, and attitudes toward sexuality. Results showed that, in comparison to girls with anorexia, girls with bulimia were more interested in dating, engaged in more dating activities, and had more positive views toward sexuality. This study did not include a healthy control group, however, so it is unclear whether or not girls with an eating disorder engage in more dating activities than healthy adolescents. The findings of this study do suggest, however, that dating may be more strongly related to symptoms of bulimia than to symptoms of anorexia.

In summary, the limited research that has been conducted to date supports a link between dating and eating disorder symptoms. This link may be especially strong for girls with bulimia (Ruuska et al., 2003) and for girls who experience the onset of dating and menarche concurrently (Smolak et al., 1993; Levine et al., 1994; Cauffman & Steinberg, 1996). However, there are at least four major gaps in this research. First, most of this research has been conducted on young (i.e., ages 10 to 14), healthy adolescent girls. Little is known about the relationship between dating and disordered eating among older adolescent girls or among girls who demonstrate clinical levels of eating disorder symptoms. Second, most of the studies in this literature measured girls' dating *history* (i.e., whether or not they have *started* dating) or girls' frequency of dating activities (e.g., kissing) within the past year. Little is known about the effect of having a current romantic partner or about whether *casual* versus more *serious* dating relationships have a differential effect on eating disorder symptoms. Third, most studies to date have used a composite measure of eating disorder symptoms. Little is known about whether or not dating is differentially associated with various eating disorder symptoms (e.g., body dissatisfaction, bulimic symptoms, anorexic symptoms, etc.).n Finally, a fourth limitation in the literature is that few studies to date have investigated *the circumstances* under which dating is associated with symptoms of eating disorders. In other words, *for whom* is adolescent dating associated with eating disorder symptoms, and *what features* of dating relationships are associated with eating disorder symptoms? These questions are explored below.

1.3. Under What Circumstances is Adolescent Dating Associated with Eating Disorder and Depressive Symptoms?

As mentioned at the outset of this introduction, the finding that dating is linked with mental health problems is fairly counterintuitive. To the extent that dating is developmentally appropriate for adolescents and provides a source of social support, adolescents who date should experience a variety of psychosocial benefits. Indeed, this seems to be true among adults, for whom involvement in a romantic relationship is associated with a decreased risk for depression (e.g., Umberson & Williams, 1999).

To understand *why* adolescent dating is associated with mental health problems, research is needed to elucidate *the circumstances* under which this association exists. Currently, there is very little research available to address this question, but some hypotheses have been proposed. One hypothesis is that, in contrast to adults, some teens may not have sufficient coping resources to deal with the emotional challenges involved in dating relationships (Davila, 2008). Another hypothesis is that some teens may become distracted by their dating relationships to the detriment of other important life domains, and the resulting imbalance makes youth vulnerable to mental health problems (Joyner & Udry, 2000).

Another possibility is that adolescents' previous *sexual experience* may play a role in determining whether or not dating is harmful to teens. To the extent that adolescents are sexually inexperienced and feel pressured within their dating relationship to engage in sexual intercourse, teens may feel stressed and concerned about their bodies, increasing their risk for mental health problems like depression and disordered eating. A second, unexplored hypothesis is that the *quality of adolescent dating relationships* may put teens at risk for developing mental health problems. To the extent that adolescent relationships are characterized by negative qualities (e.g., conflict and criticism) and lack positive qualities (e.g., support and companionship), adolescents may feel emotionally stressed and badly about themselves, increasing their vulnerability for depression and disordered eating. These two hypotheses regarding sexual experience and quality of romantic relationships are a focus of this study and will be discussed in turn.

1.3.1. Sexual Experience

One potential circumstance under which adolescent dating may be associated with eating disorder and depressive symptoms is when adolescents lack sexual experience. Sexual activity is a normative part of adolescent development. Research indicates that nearly two-thirds of adolescents have engaged in sexual intercourse by their senior year of high school (Eaton et al., 2006). While many adolescents will engage in sexual intercourse with casual partners at some point during their youth (Feldman, Turner, & Araujo, 1999), most adolescents (65 percent) make their sexual debut within the context of a romantic relationship (Grello, Dickson, Welsh, & Wintersteen, 2000).

Research indicates that adolescent girls often feel pressured to make their sexual debut before they are ready. In a qualitative study examining the factors that influence sexual debut in adolescent girls, coercion from one's romantic partner (e.g., "I did it to keep him happy") was cited as one of the main reasons that girls make the transition to sexual intercourse (Skinner, Smith, Fenwick, Fyfe, & Hendriks, 2008). Although sexual coercion from one's romantic partner may be stressful and aversive for any adolescent, it is likely to be particularly stressful for girls who are sexually inexperienced (i.e., have not yet engaged in sexual intercourse). For sexually inexperienced girls, pressure to engage in sexual intercourse for the first time may raise concerns about their sexual performance and about the effect that losing their virginity may have on their relationships, reputation, and self-esteem. It may also raise concerns about their body image, which, in conjunction with the aforementioned stressors, may set the stage for dieting and disordered eating.

Currently, there is little if any empirical evidence available to address the hypothesis that a lack of sexual experience within the context of a dating relationship may be associated with eating disorder or depressive symptoms. This lack of research is somewhat surprising given the fact that researchers and theorists have been interested in sexual experience as a potential etiological factor for eating disorders for decades. For example, in the psychodynamic tradition, theorists have speculated that anorexia nervosa might be caused by the rejection of the Oedipus complex (Vaz-Leal & Salcedo-Salcedo, 1991). More recently, theorists have suggested that disordered eating, particularly dietary restriction, may represent an attempt to avoid sexual maturation (i.e.,

puberty) in order to maintain a child-like appearance. By doing so, girls can avoid the stressors that come with being a mature woman—including the stressor of developing intimate, sexual relationships (Polivy, Herman, Mills, & Wheeler, 2003).

A number of researchers have investigated the association between sexual activity and eating disorder symptoms. Overall, this research indicates that girls who engage in more sexual activity, particularly at a young age, are more likely to exhibit body image disturbances (Valle, Røysamb, Sundby, & Klepp, 2009; Hollander, 2010), dieting, and bulimic-type eating pathology (Cauffman & Steinberg, 1996; Kaltiala-Heino, Rimpelä, Rissanen, & Rantanen, 2001). However, these girls are actually *less* likely to exhibit symptoms of anorexia. Studies have shown that, in comparison to healthy girls and girls with bulimia, girls with anorexia tend to have lower interests in sexual activity and generally avoid it (Wiederman, Pryor, & Morgan, 1996; Vaz-Leal & Salcedo-Salcedo, 1991).

The aforementioned studies investigated sexual activity but did not investigate *the context* within which sexual activity occurs. Recent research is beginning to highlight the importance of context when studying dating and sexual activity in adolescents. For example, Grello and her colleagues (Grello, Welsh, Harper, & Dickson, 2003; Grello, Welsh, & Harper, 2006) have shown that sexual intercourse which occurs *casually* (e.g., between friends) is associated with depressive symptoms among adolescents whereas sexual intercourse which occurs in the context of a *stable romantic relationship* is not.

A review of the literature on eating disorders revealed only one study that explored dating and sexual activity in context. In a longitudinal study of more than 5,400 healthy adolescent females, Halpern and colleagues (Halpern, King, Oslak, & Udry, 2005) examined (a) whether or not involvement in a dating relationship was associated with increased dieting over time, and (b) whether or not the sexual status of the dating relationship was relevant to this association. Results showed that, in comparison to girls who were involved in a *sexual* dating relationship and girls who were not currently dating, girls who were currently involved in a *nonsexual* dating relationship were more likely to report increased dieting over time (Halpern et al., 2005). Interestingly, this finding could not be explained by age, relationship duration, or profession of love within a relationship. The authors hypothesized that girls who have not yet engaged in sexual

intercourse with their current dating partner may believe that their relationship has not yet been "secured." In turn, these girls may attempt to secure their relationship by increasing their attractiveness through dieting and weight loss.

The study by Halpern and colleagues (2005) had some limitations. First, because participants were not asked to elaborate on the extent of their dieting, it is not clear whether or not the dieting was pathological. Second, participants were asked to report on the sexual status of their *current* dating relationship only and were not asked to report on their previous sexual experience in general. Thus, the study by Halpern and colleagues (2005) cannot address the hypothesis proposed in the present study—that a lack of sexual experience in the context of a dating relationship may be associated with depression and disordered eating.

In summary, there is a fairly large literature describing the association between eating disorder symptoms and sexual activity. Overall, this research indicates that increased sexual activity among adolescents is associated with increased body image disturbances (Valle et al., 2009; Hollander, 2010), dieting, and bulimic-type eating pathology (Cauffman & Steinberg, 1996; Kaltiala-Heino et al., 2001). However, to date, there is no empirical evidence available to address the hypothesis that girls who are sexually *inexperienced* and currently involved in a dating relationship may be at risk for the development of eating disorder symptoms and depression.

1.3.2. Romantic Relationship Quality

A second potential circumstance under which dating may be associated with eating disorder and depressive symptoms is when the *quality* of adolescents' dating relationships is poor. Establishing and maintaining a strong romantic relationship requires a number of interpersonal skills (e.g., romantic intimacy and closeness, the ability to tolerate jealousy, etc.) which adolescents are just beginning to develop. To the extent that adolescents lack these interpersonal skills, the quality of their dating relationships may suffer. Indeed, research has indicated that, in comparison to adult romantic relationships, adolescent romantic relationships are characterized by high levels of emotionality (Larson, Clore, & Wood, 1999; Welsh, Grello, & Harper, 2003),

involve a greater number of conflicts (Shulman & Kipnis, 2001), and tend to be of relatively short duration (Furman & Shaffer, 2003).

Researchers have not yet investigated whether or not the quality of adolescent dating relationships is associated with eating disorder symptoms. However, findings from other areas of research support this line of inquiry. For example, studies show that negative qualities of adolescent dating relationships (e.g., conflict and exclusion) are associated with symptoms of depression (La Greca & Harrison, 2005). Similarly, a lack of positive qualities such as intimacy and authenticity (i.e., being oneself) within adolescent dating relationships is associated with an increased risk for depression longitudinally (Williams, Connolly, & Segal, 2001; Shulman, Walsh, Weisman, & Schelyer, 2009). Qualities of adolescent dating relationships are also linked with other mental health outcomes. For example, a sense of security within adolescent dating relationships has been associated with lower levels of externalizing behavior over time (van Dulmen, Goncy, Haydon, & Collins, 2008).

Although research has yet to examine the association between romantic relationship quality and disordered eating among adolescents, this topic has been investigated among adults. Weller and Dziegielewski (2004) found that women who receive lower levels of support from their romantic partner report higher levels of appearance anxiety and body image disturbance. Similarly, Skomorovsky, Matheson, and Anisman (2006) found that higher levels of physical and psychological aggression within romantic relationships is associated with dieting and bulimic symptoms among female undergraduates.

Research has also shown that qualities of adolescent *friendships* are associated with eating disorder symptoms. For example, Shutz and Paxton (2007) found that negative qualities of friendships (such as conflict and alienation) are positively correlated with body dissatisfaction, dietary restraint, and bulimic symptoms. Similarly, Gerner and Wilson (2005) found that lower levels of positive qualities in friendships (such as acceptance, support, and intimacy) are correlated with body image concerns. Given the association between adolescent friendship quality and eating disorder symptoms, it seems likely that the quality of *romantic* relationships may also be associated with eating

disorder symptoms. This is particularly true since dating relationships tend to involve ones body (i.e., through sexual activity) and are linked with physical attractiveness.

Interestingly, although adolescents *perceive* their dating relationships as being positive in nature (i.e., as having more intimacy, support, and companionship than their other relationships), studies show that in reality, adolescent dating relationships are characterized by a greater frequency of negative interactions (Hand & Furman, 2009; Kuttler & La Greca, 2004). Thus, more research attention should be devoted to the quality of adolescent romantic relationships and how this influences mental health problems like eating disorder symptoms.

In summary, little is known about the association between the quality of adolescents' romantic relationships and disordered eating. However, research in other areas supports this line of inquiry by showing that (a) the quality of *adult* romantic relationships is associated with eating disorder symptoms; (b) the quality of adolescent *friendships* is associated with eating disorder symptoms; and (c) the quality of adolescent dating relationships is linked with *other* mental health problems such as depression and externalizing behaviors. This study aims to explore the association between adolescent romantic relationship quality and eating disorder symptoms in hopes of achieving a better understanding of the circumstances under which dating is associated with mental health problems.

1.4. The Present Study

The purpose of the present study was to extend the literature on the association between adolescent dating and eating disorder symptoms. Because most of the existing research on this topic focuses on healthy adolescents, this study investigated the effects of dating using a clinical sample of adolescents with an eating disorder. To address another gap in the literature, this study investigated whether or not (a) sexual experience, or (b) quality of adolescent romantic relationships, might play a role in the association between dating and eating disorder symptoms. Lastly, given the association between disordered eating and depressive symptoms, as well as the fact that depressive symptoms have been studied more thoroughly in the adolescent dating literature, this

study included a focus on depressive symptoms and utilized a clinical sample of adolescent girls with a depressive disorder as a psychiatric comparison group. My hypotheses were as follows:

1. Compared to healthy girls, girls with an eating disorder or depressive disorder will report greater involvement in dating.
2. Collapsing across diagnostic groups (i.e., eating disorder, depressed, and healthy controls), girls who report greater involvement in dating will endorse elevated symptoms of eating disorders and depression.
3. Collapsing across diagnostic groups, there will be an interaction between current dating involvement and sexual experience such that girls who are *sexually inexperienced* and *currently dating* will report greater symptoms of eating disorders and depression than girls who are (a) sexually experienced and currently dating, (b) sexually experienced and not currently dating, or (c) sexually inexperienced and not currently dating.
4. Collapsing across diagnostic groups, greater negative qualities and fewer positive qualities of dating relationships will be associated with greater symptoms of eating disorders and depression.

2. Methods

2.1. Participants

Data for this study was collected as part of a larger project on adolescent peer relationships. Participants included 75 females aged 12 to 18 (*M* = 15.35, *SD* = 1.75). Twenty-five participants met Diagnostic and Statistical Manual of Mental Disorders – IV – TR (DSM-IV-TR; American Psychiatric Association, 2000) criteria for an eating disorder; 25 met DSM-IV-TR criteria for a depressive disorder; and 25 reported no psychiatric history.

Among the participants who were diagnosed with an eating disorder, nine (36%) met criteria for anorexia nervosa, four (16%) met criteria for bulimia nervosa, and twelve (48%) met criteria for eating disorder not otherwise specified. Fourteen (56%) of the participants with an eating disorder also met DSM-IV-TR diagnostic criteria for a depressive disorder (major depressive disorder or dysthymia). Among the participants with a depressive disorder, 20 (80%) met criteria for major depressive disorder, four (16%) met criteria for dysthymia, and one (4%) had a Beck Depression Inventory—21-Item Version (BDI-II) score in the moderate range (but was missing diagnostic data). Participants were not excluded if they had comorbid diagnoses.

In terms of ethnicity, 47 participants (62.7%) were Caucasian; 14 (18.7%) were African American; five (6.7%) were Hispanic; two (2.7%) were Asian/Pacific; and seven (9.3%) were of a different ethnicity. Because most of the individuals who present for eating disorder treatment are female (American Psychiatric Association, 2000), males were excluded from this study.

2.2. Procedure

Participants were recruited from community health agencies in Windsor, Ontario, (including the Teen Health Centre and Bulimia and Anorexia Nervosa Association) as well as from the Department of Child and Adolescent Psychiatry at the University of Chicago Hospitals (U of C) in Chicago, IL, USA. Recruitment in Windsor and Chicago occurred concurrently. Participants in the eating disorder (ED) group and depressed (DD) group were seeking outpatient psychological treatment, and participants in the control group were recruited from an adolescent community centre (i.e., were either volunteering at the centre or were participating in a social group for teens). Participants in the control group were excluded if they had a serious mental health problem.

Written consent and assent were obtained from participants and from their parent or guardian. Participants in the eating disorder group and DD group completed a semi-structured diagnostic interview as well as questionnaires assessing dating behavior, eating disorder symptoms, depressive symptoms, and self-esteem. Participants in the healthy control group completed the questionnaires as well as a screening measure for mental health problems. Control participants who indicated symptoms in the screening measure were given follow-up questions to determine the severity of their problems. One participant met diagnostic criteria for an eating disorder and was included in the eating disorder group, and three participants reported subdiagnostic mental health problems and were excluded. All diagnoses were made by research assessors using the Schedule for Affective Disorders and Schizophrenia for school aged children (K-SADS; Kaufman et al., 1997) and were reviewed by a psychologist. All procedures were approved by institutional review boards at each of the mental health clinics.

2.3. Measures

Demographic Information. Participants' age, height, weight, ethnicity, parental education level, and parental marital status (i.e., married, divorced, remarried, etc.) were assessed in a demographic questionnaire. BMI z-scores were calculated using age, weight, and height measurements and were based on Centers for Disease Control and

Prevention (CDC) 2000 data (Kuczmarski et al., 2000). To assess pubertal status, participants reported the age at which they experienced menarche.

Kiddie - Schedule for Affective Disorders and Schizophrenia - Present Version (M-KSADS-P; Chambers et al., 1985). The KSADS-P was used to diagnose current Axis-I DSM-IV-TR disorders. The KSADS-P is a semi-structured interview with high inter-rater reliability (Ambrosini, 2000) and good predictive and concurrent validity with adolescents (Lewinsohn, Rohde, Klein, Seely, 1999; Rao, Ryan, Birmaher, 1995).

Eating Disorders Inventory-2 (EDI; Garner, 1991). The EDI was used to assess cognitive, emotional, and behavioral symptoms of eating disorders. The EDI is a 91-item questionnaire with high test-retest reliability (r = .75 to .94; Thiel & Paul, 2006) and good internal consistency (Cronbach's α = .73 to 93; Thiel & Paul, 2006). It has been used extensively with adolescents (e.g., Cotrufo, Gnisci, & Caputo, 2005). Three subscales of the EDI were used in this study: Drive for Thinness (DT), Bulimia (B), and Body Dissatisfaction (BD). The EDI is displayed in Appendix C.

Beck Depression Inventory – 21-item version (BDI; Beck & Steer, 1987). The BDI is a self-report questionnaire which assess cognitive, emotional, and behavioral symptoms of depression. It has been used extensively with adolescents and has good internal consistency and test-retest reliability (Steer & Beck, 1988; Strober, Gree, & Carlson, 1981). The BDI is displayed in Appendix C.

Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965). The RSE is a 10-item self-report questionnaire used to assess global feelings of self-esteem. It has high test-retest reliability (Blascovich & Tomaka, 1993) and strong construct, convergent, and discriminant validity (Rosenberg, 1979; Robins, Hendin, & Trzesniewski, 2001; Wylie, 1989). Participants were asked to make their responses on a 5-point Likert scale ranging from 1 ("Not at all descriptive of me") to 5 ("Very descriptive of me").

Dating Involvement and Sexual Experience. As part of the demographic questionnaire, participants answered several questions pertaining to their dating behavior (Kuttler & La Greca, 2004). Participants were asked to indicate their *current dating involvement* using the following eight categories: (a) not dating now, (b) dating or seeing one person casually, (c) dating or seeing more than one person casually, (d)

mostly going out with one person and dating a few others, (e) have an exclusive relationship with someone (only seeing each other, but not yet planning to get engaged, married, or live together), (f) have a very serious relationship with one person (planning to get engaged, married, or live together), (g) engaged or living with someone, or (h) married. Based on their responses, participants were then grouped into one of the following three categories: not currently dating (A above), casually dating (B to D above), and seriously dating (E to H above). These categories have been validated by Kuttler and La Greca (2004) who found that girls who are seriously dating can be differentiated from other girls in terms of the length of their current romantic relationship (i.e., longer) and the greater likelihood that they have engaged in sexual intercourse and professed love within their current relationship.

Because current dating involvement may not necessarily represent an adolescent's *usual* dating involvement, participants were also asked to describe their *usual dating involvement* according to the following four responses: (a) have never dated, (b) rarely date, (c) date casually, without an exclusive commitment, or (d) involved in an exclusive relationship with someone. These categories have been validated by Kuttler and La Greca (2004) who found that girls who have never dated or rarely date tend to report fewer previous boyfriends and are less likely to have a current romantic partner.

Participants were also asked at what age they went on their first date and how many romantic partners they have had. To assess sexual experience, participants were asked to indicate whether or not they had ever engaged in sexual intercourse (yes or no).

The Network of Relationships Inventory-Revised (NRI; Furman & Buhrmester, 1985). The NRI was used to assess various qualities of adolescents' romantic relationships. The NRI is a 42-item self-report questionnaire assessing eight positive relationship qualities (support, reliable alliance, admiration, affection, nurturance, intimacy, companionship, and instrumental aid) and five negative relationship qualities (dominance, criticism, relative power, antagonism, and conflict). Each quality is measured using three items (e.g., "How often do you disagree and quarrel with each other?"). On most scales, responses are made on a 5-point Likert scale ranging from 1

("little or none") to 5 ("the most"). The one exception to this is the relative power scale for which responses are made on a 5-point scale ranging from 1 ("S/he always does") to 5 ("I always do"). The scale for relative power differs from the scale for other qualities because relative power is a measure of which romantic partner holds power and makes decisions within the relationship. Low scores on this subscale indicate that one's romantic partner holds power within the relationship whereas high values on this subscale indicate that *the participant* holds power within the relationship. The NRI is displayed in Appendix C.

The NRI has four factors. The Social Support Factor is the average of scores on all of the individual NRI positive quality subscales (i.e., companionship, instrumental aid, intimacy, nurturance, affection, admiration, reliable alliance, satisfaction, and support). The Negative Interchange Factor is the average of scores on all of the individual NRI negative quality subscales (i.e., conflict, antagonism, criticism, and dominance), excluding relative power.

Participants were asked to complete the NRI according to the qualities of their current romantic relationship if applicable. Participants who were not currently in a romantic relationship were asked to complete the NRI according to their most recent romantic relationship or their closest opposite-sex friend (for participants who have never had a romantic relationship). The NRI has been used extensively with children and adolescents to assess relationship qualities (e.g., La Greca & Harrison, 2005) and has good internal consistency (e.g., Furman & Buhrmester, 1992) and test-retest reliability (Furman & Buhrmester, 1992).

3. Results

3.1. Data Analytic Plan

Descriptive statistics were collected for all study variables. To determine whether the eating disorder group should be maintained as a single group or divided into diagnostic subgroups (e.g., anorexia and bulimia), preliminary between-group analyses were performed within the eating disorder group to investigate whether there were any significant differences between diagnostic subgroups.

For between group analyses (Hypotheses 1, 2, and 4), Analyses of Variance (ANOVAs) were used. For between-group analyses that involved covariates, Analyses of Covariance (ANCOVAs) were used. For between-group analyses that involved multiple dependent variables, Multivariate Analyses of Variance (MANOVAs) were used. The alpha level was set at $p \leq .05$. Analyses which revealed p values between .05 and .10 were considered to be "approaching significance". For analyses demonstrating significant results ($p \leq .05$), post-hoc analyses were performed using Tukey's Honestly Significant Difference (HSD) test or the Bonferroni correction.

For analyses examining the association between two categorical variables (Hypothesis 1), Pearson Chi-Square analyses were used. For chi-square analyses demonstrating significant results, standardized residuals were inspected to determine which cell frequencies were significantly larger or smaller than expected cell frequencies.

For analyses which examined the association between continuous variables (Hypotheses 2 and 3), Pearson Product-Moment Correlations were used. Partial correlations were used for correlations which involved covariates.

3.2. Descriptive Statistics and Main Analyses

3.2.1. Descriptive Statistics for Demographic and Dating Variables

The following descriptive statistics on demographic and dating variables are based on the entire sample (i.e., collapsing across groups, $N = 75$). The majority of participants had parents who were married ($n = 48$, 64.0%) and who had at least some post-secondary education (for fathers, $n = 47$, 68.1%; for mothers, $n = 51$, 69.8%). Most participants had experienced menarche ($n = 71$, 95.9%) and reported a heterosexual dating preference ($n = 71$, 97.3%). In terms of ethnicity, most participants ($n = 47$, 62.7%) were Caucasian, 18.7 percent ($n = 14$) were African American, and 18.7 percent ($n = 14$) were identified as "other."

In regards to the *dating variables*, descriptive statistics showed that the mean *number of previous romantic partners* was 3.81 ($SD = 4.22$) and the mean *age at first date* was 13.52 years ($SD = 2.25$). These two dating variables (i.e., number of previous romantic partners and age at first date) were not associated with demographic variables (i.e., age, menarche, parents' level of education, parental relationship status, body mass index, or ethnicity; $p > .15$) with the exception of a correlation between age at first date and adolescents' current age ($r = .62$, $p \leq .001$).

In regards to *current dating involvement*, 40 participants (54.1%) reported that they were not currently dating, 22 participants (29.7%) were currently dating casually, and 12 participants (16.2%) were currently involved in serious romantic relationships. These three groups did not differ in terms of demographic variables ($p > .10$).

In terms of their *usual dating involvement*, 20 participants (27.8%) reported that they had never dated, 16 participants (22.2%) reported rarely dating, 24 participants (33.3%) date casually, and 12 participants (16.7%) reported usual involvement in an exclusive romantic relationship. These four groups did not differ in terms of menarche, mother's level of education, or body mass index ($p > .10$). They did, however, differ in terms of age ($F(3, 68) = 5.84$, $p \leq .001$, $\eta^2 = .21$), ethnicity ($\chi^2(6, n = 72) = 14.27$, $p \leq .05$, $V_C = .32$), and father's level of education ($F(3, 62) = 3.20$, $p \leq .05$, $\eta^2 = .13$). In terms of age, post-hoc analyses revealed that girls who had never dated were significantly

younger (*M* = 14.57, *SD* = 1.66) than girls in the other three usual dating involvement groups ($p \leq .05$; Table 1). In terms of ethnicity, among girls who identified their ethnicity as "other", a significant standardized residual ($z = 2.1$) was observed for those who indicated that they are usually involved in an exclusive romantic relationship. Thus, significantly more girls than expected in the "other" ethnic group indicated that they are usually involved in an exclusive romantic relationship (Table 2). Finally, in terms of father's level of education, post-hoc analyses revealed that participants who reported never having dated had fathers with significantly more education than girls who reported that they are usually involved in an exclusive romantic relationship ($p \leq .05$).

3.2.2. Preliminary Analyses to Determine Grouping Variables

Because of the heterogeneity of the eating disorder group, (i.e., diagnoses of anorexia versus bulimia, comorbid depressive disorder diagnoses), some between group analyses were performed within this group to determine whether or not these subgroups differed in terms of demographic variables, dating variables, and symptom variables (and consequently, whether or not they should be treated as a single eating disorder group).

Participants who met full or subthreshold diagnostic criteria for anorexia nervosa ($n = 17$, 14.8%) did not differ from those who met full or subthreshold diagnostic criteria for bulimia nervosa ($n = 8$, 7.0%) in terms of demographic variables (i.e., age, ethnicity, or menarche), dating variables (i.e., current dating involvement, usual dating involvement, number of romantic partners, or age at first date), sexual history, or the majority of symptom severity variables (i.e., depressive symptoms, self-esteem, EDI-drive for thinness, EDI-body dissatisfaction, or depressive symptoms) (all *p*s > .15). As expected, these two groups did differ in terms of EDI-bulimia scores ($t(23) = 4.93$, $p \leq .001$, $r = .72$) with individuals who met full or subthreshold diagnostic criteria for bulimia displaying greater EDI-bulimia scores. Individuals with comorbid eating disorder and depressive disorder diagnoses ($n = 14$, 12.2%) did not differ from individuals with an eating disorder-only diagnosis ($n = 11$, 9.6%) in terms demographic variables, dating variables, sexual history, or eating disorder symptoms ($p > .10$). As expected, these individuals did differ in terms of depressive symptoms ($t(23) = 3.64$, $p \leq .005$, $r = .60$) and self-esteem ($t(22) = -3.02$, $p \leq .01$, $r = .54$) with individuals who had comorbid eating

disorder and depressive disorder diagnoses displaying greater symptoms of depression and lower self-esteem than individuals with an eating disorder-only diagnosis.

Given that the subgroups (e.g., bulimia versus anorexia, comorbid depression versus eating disorder-only diagnosis) of participants in the eating disorder group differed only on expected variables (i.e., bulimic symptoms, depressive symptoms, self-esteem), the decision was made to maintain these participants in a single eating disorder group. Importantly, the above analyses should be interpreted with caution because the relatively small sample size (N = 25) yielded somewhat low power (approximately 65%).

3.2.3. Selecting Covariates

Self-esteem was selected as a covariate for ANCOVAs and partial correlations on symptom variables (i.e., eating disorder and depressive symptoms). This decision was made based on previous research which indicates that self-esteem is a very robust predictor of these symptoms (Joiner, Schmidt, & Wonderlich, 1997; Dunn & Ondercin, 1981; Grant & Fodor, 1986; DuBois, Felner, Brand, & George, 1999). Age was included as a covariate on analyses involving age at first date (Hypotheses 1 and 2) because these two variables (i.e., current age and age at first date) were correlated (see descriptive statistics above). Variables which differed across groups (e.g., age, which differed across usual dating involvement groups; see descriptive statistics above) were *not* necessarily selected as covariates based on the argument made by Miller and Chapman (2001)[1].

[1] Miller and Chapman (2001) argue that when using ANCOVA, variables which differ across groups should not be selected as covariates for the purpose of drawing a conclusion about what the association between the dependent and independent variables would look like *if groups did not differ in terms of the covariate.* According to Miller and Chapman (2001), such a conclusion is faulty and represents a common mistake within psychopathology research.

3.2.4. Hypothesis 1: Descriptive Statistics for Diagnostic Groups

Hypothesis 1 states that, compared to healthy girls, girls with an eating disorder or depressive disorder will report greater involvement in dating. As expected, diagnostic groups differed in terms of BMI z-scores ($F(2, 69) = 12.30$, $p \leq .001$, $\eta^2 = .26$), self-esteem ($F(2, 70) = 11.62$, $p \leq .001$, $\eta^2 = .25$), depressive symptoms ($F(2, 72) = 14.80$, $p \leq .001$, $\eta^2 = .29$), and eating disorder symptoms (Pillai's Trace $F(6, 142) = 5.62$, $p < .001$, $\eta_p^2 = .19$). Descriptive statistics and post-hoc analyses for these variables are presented in Table 3. Diagnostic groups did *not* differ in terms of demographic variables ($p > .15$) with the exception of ethnicity ($\chi^2(4, n = 75) = 13.94$, $p \leq .01$, $V_C = .31$). Among African American girls, standardized residuals were observed for individuals in the eating disorder ($z = -2.2$) and depressed ($z = 2.5$) groups. Thus, among African American girls, a large proportion of girls were in the depressed group and a small proportion of girls were in the eating disorder group (Table 4).

3.2.5. Hypothesis 1: Main Analyses

Results of chi-square and ANOVA analyses indicated that diagnostic groups did not differ in terms of current dating involvement ($\chi^2(4, n = 74) = 7.63$, $p > .10$, $V_C = .23$), usual dating involvement ($\chi^2(8, n = 73) = 11.58$, $p > .10$, $V_C = .26$), or number of romantic partners ($F(2, 69) = 0.90$, $p > .10$, $\eta^2 = .03$). Results of an ANCOVA (controlling for age) on age at first date was also not significant ($F(2, 48) = 2.68$, $p > .05$, $\eta_p^2 = .10$). Thus, contrary to Hypothesis 1 which stated that girls with an eating disorder or depressive disorder will report greater involvement in dating than healthy girls, diagnostic groups did not differ on any of the dating variables.

It should be noted, however, that the ANCOVA on age at first date approached significance ($p = .08$), revealing an unexpected pattern. Descriptively, girls in the control group reported a younger age at first date ($M = 12.50$, $SD = 2.54$) than girls in the eating disorder ($M = 13.50$, $SD = 1.24$) and depressed ($M = 14.15$, $SD = 2.70$) groups.

3.2.6. Hypothesis 2: Descriptive Statistics

Hypothesis 2 states that, collapsing across diagnostic groups, girls who report more involvement in dating will demonstrate greater symptoms of eating disorders and

depression than girls who report less involvement in dating. Descriptive statistics for the dating variables are described above under the subheading *Descriptive Statistics*.

3.2.7. Hypothesis 2: Main Analyses

The association between *current dating involvement* and eating disorder and depressive symptoms was investigated using MANCOVA (on the three EDI subscales) and ANCOVA (on depressive symptoms). Because Hypothesis 3 postulates an interaction between current dating involvement and sexual experience, factorial analyses (i.e., including both current dating involvement and sexual experience as factors) were performed, and results for the main effect of current dating involvement are reported in the current section. Results from the interaction between current dating involvement and sexual experience are described in the section below titled *Hypothesis 3: Main Analyses*.

Results of a MANCOVA (controlling for self-esteem, using current dating involvement and sexual experience as factors) on EDI scores (i.e., drive for thinness, bulimia, and body dissatisfaction) using Pillai's Trace revealed a significant main effect of current dating involvement on the three EDI subscales ($F(6, 128) = 3.46$, $p \leq .005$, $\eta_p^2 = .14$). Examining the main effect of current dating involvement on the EDI subscales individually, results revealed that, controlling for self-esteem, current dating involvement was not associated with EDI-drive for thinness scores ($F(2, 65) = 1.09$, $p > .10$, $\eta_p^2 = .03$) or EDI-body dissatisfaction ($F(2, 65) = .02$, $p > .10$, $\eta_p^2 = .00$) but was associated with EDI-bulimia scores ($F(2, 65) = 10.17$, $p \leq .001$, $\eta_p^2 = .24$). However, for this analysis, the homogeneity of variance assumption was violated ($p \leq .001$). To correct this violation, EDI-bulimia scores were transformed using a square root transformation. An ANCOVA (controlling for self-esteem[2], including current dating involvement and sexual experience as factors) on the transformed EDI-bulimia scores revealed homogeneous variances ($p > .10$) and a main effect of current dating involvement ($F(2, 65) = 8.02$, $p \leq .001$, $\eta_p^2 = .20$). Post-hoc analyses on the transformed EDI-bulimia

[2] Self-esteem was maintained as a covariate because a significant correlation between self-esteem and transformed bulimia scores was observed ($r = -.37$, $p \leq .001$).

scores revealed that girls who were currently involved in a serious romantic relationship reported significantly higher EDI-bulimia scores than girls who were not currently dating ($p \leq .001$) and girls who were currently involved in a casual relationship ($p \leq .01$). Adjusted means for the non-transformed EDI-bulimia scores are displayed in Table 6.

Results of an ANCOVA (controlling for self-esteem) revealed that *current dating involvement* was not associated with depressive symptoms ($F(2, 68) = .18$, $p > .10$, $\eta_p^2 = .005$).

The association between *usual dating involvement* and eating disorder and depressive symptoms was investigated using a MANCOVA (controlling for self-esteem) using Pillai's Trace. This analysis revealed a significant effect of usual dating involvement ($F(3, 64) = 12.07$, $p \leq .001$, $\eta_p^2 = .36$). Examining the EDI subscales individually, results showed that usual dating involvement was not associated with EDI-drive for thinness ($F(3, 66) = .70$, $p > .10$, $\eta_p^2 = .03$) or body dissatisfaction ($F(3, 66) = .44$, $p > .10$, $\eta_p^2 = .02$) but was associated with EDI-bulimia ($F(3, 66) = 3.19$, $p \leq .05$, $\eta_p^2 = .13$). However, the homogeneity of variances assumption was violated for the EDI-bulimia scores ($p \leq .001$). To correct for this violation, EDI-bulimia scores were transformed using a square-root transformation. Results of an ANCOVA (controlling for self-esteem) on the transformed EDI-bulimia scores revealed homogenous variances ($p > .10$) and a significant effect of usual dating involvement ($F(3, 66) = 4.02$, $p \leq .05$, $\eta_p^2 = .15$). Post-hoc analyses on the transformed EDI-bulimia scores revealed that adolescents who reported that they usually date casually endorsed significantly greater bulimic symptoms than adolescents who have never dated ($p < .05$). The difference between the never dated group and adolescents who reported that they usually are involved in an exclusive romantic relationship approached significance ($p = .08$), showing higher EDI-bulimia scores for girls who are usually involved in an exclusive relationship. Adjusted means for the non-transformed EDI-bulimia scores are displayed in Table 7.

An ANCOVA (controlling for self-esteem) on depressive symptoms revealed non-significant results ($F(3, 66) = .27$, $p > .10$, $\eta_p^2 = .01$).

Finally, the association between continuous dating variables (i.e*., age at first date* and *number of previous romantic partners*) and symptoms of eating disorders and depression was assessed using partial correlations. Results of partial correlations (controlling for age and self-esteem) revealed that age at first date was not significantly correlated with EDI or BDI scores ($p > .15$, see Table 8). Similarly, partial correlations (controlling for self-esteem) indicated that number of previous romantic partners was not significantly correlated with EDI or BDI scores ($p > .05$, see Table 8). However, it should be noted that the partial correlation between number of previous romantic partners and EDI-bulimia scores approached significance ($r = .22$, $p = .07$).

3.2.8. Hypothesis 2: Summary

To reiterate, Hypothesis 2 states that, collapsing across diagnostic groups, girls who report more involvement in dating will demonstrate greater symptoms of eating disorders and depression than girls who report less involvement in dating. Results of Hypothesis 2 analyses revealed that current dating involvement and usual dating involvement were associated with EDI-bulimia scores (but not scores on other symptom variables). Adolescents who indicated that they either (a) were currently involved in a serious romantic relationship (Table 6), or (b) usually date casually (Table 7), reported greater EDI-bulimia scores. None of the other dating variables (i.e., age at first date and number of previous romantic partners) were associated with any of the symptom variables (i.e., EDI or BDI scores).

3.2.9. Hypothesis 3: Descriptive Statistics

Hypothesis 3 states that, collapsing across diagnostic groups, there will be an interaction between current dating involvement and symptom variables such that, in comparison to girls who are sexually experienced and are currently dating as well as girls who are sexually inexperienced and are not currently dating, girls who are sexually inexperienced and are currently dating will report greater symptoms of eating disorders and depression. Descriptive statistics for current dating involvement are described in the section above titled *Descriptive Statistics*. Descriptive statistics for sexual experience are as follows. Collapsing across diagnostic groups, 29 participants (39.2%) reported having had sex, and 45 participants (60.8%) reported never having had sex. These two groups

of participants did not differ in terms of demographic variables ($p > .05$) with the exception of age ($t(72) = 5.02$, $p \leq .001$, $r = .51$). Sexually inexperienced adolescents (i.e., those who reported never having engaged in intercourse) were significantly younger ($M = 15.07$, $SD = 1.64$) than sexually experienced adolescents (i.e., those who reported having engaged in intercourse; $M = 16.90$, $SD = 1.34$). Table 1 displays the mean ages for sexually experienced and inexperienced adolescents.

3.2.10. Hypothesis 3: Main Analyses

Results of a MANCOVA (controlling for self-esteem) using Pillai's Trace revealed a significant interaction between sexual experience and current dating involvement on the EDI subscales ($F(6, 128) = 2.63$, $p \leq .05$, $\eta_p^2 = .11$). Examining the interaction on each of the EDI subscales individually, results show that there was no significant interaction on EDI-drive for thinness ($F(2, 65) = .10$, $p > .10$, $\eta_p^2 = .003$) or body dissatisfaction ($F(2, 65) = .31$, $p > .10$, $\eta_p^2 = .009$). There was a significant interaction on EDI-bulimia scores ($F(2, 65) = 7.19$, $p \leq .005$, $\eta_p^2 = .18$). However, the homogeneity of variances assumption was violated for EDI-bulimia scores ($p \leq .001$). To correct this violation, EDI-bulimia scores were transformed using a square root transformation. An ANCOVA (controlling for self-esteem) on the transformed EDI-bulimia scores revealed homogenous variances ($p > .10$) and an interaction which approached significance ($F(2, 65) = 2.79$, $p = .069$, $\eta_p^2 = .08$). Figure 1 displays the interaction between sexual experience and current dating involvement on the non-transformed EDI-bulimia scores, showing that girls who indicated that they were sexually inexperienced and currently involved in a serious romantic relationship reported the greatest EDI-bulimia scores. Table 9 displays the adjusted means for the non-transformed EDI-bulimia scores.

An ANCOVA (controlling for self-esteem) on BDI scores revealed that there was no significant interaction between sexual experience and current dating involvement on depressive symptoms ($F(2, 65) = .52$, $p > .10$, $\eta_p^2 = .02$).

As displayed in Table 9, the adjusted mean for the non-transformed EDI-bulimia scores for the five girls in this sample who were sexually inexperienced and currently involved in a serious romantic relationship is 10.20 ($SD = 5.36$). This score is in the clinical range (Garner, 1990). Descriptive statistics were gathered to explore the

characteristics of these five girls. Results showed that the mean age of these five girls was 15.22 years (*SD* = 1.09). Three of these girls were in the eating disorder group, two with a diagnosis of bulimia nervosa-binge purge type and comorbid major depressive disorder, and one with subthreshold symptoms of bulimia (without comorbid depression). The other two participants were in the control group. In terms of their scores on the EDI-bulimia scale, the three girls in the eating disorder group had a mean EDI-bulimia score of 14.0 (*SD* = 1.00). This is higher (descriptively) than the mean EDI-bulimia score in the eating disorder group (*M* = 4.92, *SD* = 5.08, *n* = 25) and is also higher than the mean EDI-bulimia score among participants who met full or subthreshold diagnostic criteria for bulimia (*M* = 10.13, *SD* = 4.02, *n* = 8). The two girls in the control group had a mean EDI-bulimia score of 4.50 (*SD* = 2.12) which is higher than the mean EDI-bulimia score in the control group (*M* = 1.28, *SD* = 1.84, *n* = 25).

3.2.11. Hypothesis 4: Descriptive Statistics

Hypothesis 4 relates to the quality of adolescent dating relationships. It states that, collapsing across diagnostic groups, greater negative qualities and fewer positive qualities of dating relationships will be associated with greater symptoms of eating disorders and depression. For this hypothesis, the quality of *current* dating relationships was the primary focus. However, all participants completed the NRI, whether they were currently dating or not. Participants who were not currently dating but had dated in the past were asked to complete the NRI according to their most recent romantic relationship. Participants who had never dated were asked to complete the NRI according to their closest male friend. These three groups (i.e., current daters, previous daters, and never dated) were separated for analyses for this hypothesis so that the quality of *current* romantic relationships could be isolated. However, the quality of *previous* romantic relationships and *platonic* opposite-sex relationships was also investigated.

Descriptive statistics revealed that, collapsing across diagnostic groups, 34 participants (47.2%) were current daters, 19 participants (26.4%) were previous daters, and 19 participants (26.4%) had never dated. These three groups did not differ in terms of demographic variables, self-esteem (all *p*s > .15), father's level of education, or diagnosis (both *p*s > .05). These groups did, however, differ in terms of age ($F(2, 69) =$

7.68, $p \leq .001$, $\eta^2 = .18$). Girls in the never dated group were significantly younger than previous daters ($p \leq .001$) and current daters ($p \leq .05$; Table 1).

Within the current daters, previous daters, and never dated groups, respectively, the mean score for the NRI social support factor was 3.56 (*SD* = .78), 3.12 (*SD* = .26), and 2.61 (*SD* = .94). The mean score for the NRI negative interchange factor in these respective groups was 1.66 (*SD* = .48), 1.89 (*SD* = .15), and 1.58 (*SD* = .13). Within each of these three groups, scores on the NRI factors were not associated with age (all *p*s > .15), parents' level of education, or self-esteem (all *p*s > .05). There was one exception to this; within the never dated group, scores on the NRI social support factor were significantly negatively correlated with father's level of education ($r = -.69$, $p \leq .01$). Table 10 displays the results for the correlation analyses between the NRI factors and age, parents' level of education, and self-esteem.

To determine whether the NRI factors were associated with *nominal* demographic variables (e.g., ethnicity), analyses were performed by collapsing across the three dating groups (i.e., current daters, previous daters, and never dated) rather than within each of these groups separately. This was to avoid the loss of power associated with conducting between-group analyses with small sample sizes. Collapsing across the three dating groups, the NRI factors were not associated with menarche or diagnosis. However, the NRI social support factor was associated with parental marital status ($F(2, 61) = 4.50$, $p \leq .05$, $\eta^2 = .13$) and ethnicity ($F(2, 68) = 5.48$, $p \leq .01$, $\eta^2 = .14$). Girls of parents who were divorced or separated reported significantly higher scores on the NRI social support factor (*M* = 3.67, *SD* = 1.01) than girls of parents who were married (*M* = 3.02, *SD* = .95; *p* = .055). In regards to ethnicity, girls who identified their ethnicity as "other" reported significantly higher scores on the NRI social support factor (*M* = 3.84, *SD* = 1.18) than girls who identified themselves as Caucasian (*M* = 2.94, *SD* = .89, $p \leq .01$)

3.2.12. Hypothesis 4: Data Analytic Plan

Given the large number of individual NRI subscales (i.e., 12), the relatively large number of symptom variables (i.e., 4), and 3 groups of participants (i.e., current daters, previous daters, and never dated), 144 correlations would be required in order to

investigate the associations between all NRI subscales and symptom variables in each of these groups. Thus, the following data analytic plan was developed.

Step 1: For all three groups (i.e., current daters, previous daters, and never dated), partial correlations (controlling for self-esteem) were performed to investigate the associations between the NRI *factors* (i.e., social support factor and negative interchange factor) and symptom variables (i.e., EDI and BDI scores). Because the NRI factors represent composite scores (i.e., are comprised of scores on individual NRI subscales), and because symptom variables may be correlated with some of the individual NRI subscales but not others, a relatively liberal alpha level was set ($p \leq .10$) to permit exploration of the individual NRI subscales where appropriate.

Step 2: Where partial correlations in Step 1 were statistically significant, additional partial correlations (controlling for self-esteem) were performed within that group of participants (i.e., current daters, previous, or never dated) to investigate the associations between (a) the individual NRI subscales corresponding to the relevant NRI factor, and (b) symptom variables. For example, if a significant partial correlation was observed in Step 1 between the NRI social support factor and EDI-drive for thinness scores among the current daters group, additional partial correlations would be performed in Step 2 within the current daters group to investigate the association between (a) the individual NRI positive quality subscales (i.e., companionship, instrumental aid, intimacy, etc.), and (b) EDI-drive for thinness scores.

If a significant partial correlation was observed in Step 1 between the NRI negative interchange factor and one of the symptom variables, partial correlations were performed in Step 2 between the relevant symptom variable and the individual NRI negative quality subscales comprising the negative interchange factor (i.e., conflict, criticism, dominance, antagonism) *as well as* the NRI relative power subscale. As mentioned in the Methods section, the relative power subscale is not included in the calculation of the NRI negative interchange factor because the response scale for the relative power subscale differs from the other NRI subscales. However, because relative power is considered to be one of the NRI negative qualities, it was investigated when the NRI negative interchange factor displayed a significant correlation with a symptom variable.

Partial correlations were inappropriate for the relative power subscale because a linear association was not expected between relative power and symptom variables. It was expected that low and high scores on the relative power subscale would be associated with symptom variables whereas moderate scores would not. Therefore, responses on the relative power subscale were divided into three groups (i.e., low, medium, and high) on the 33rd and 66th percentiles, and ANCOVA (controlling for self-esteem) was used to investigate the association between relative power and symptom variables.

3.2.13. Hypothesis 4: Main Analyses

Table 11 displays results for Step 1—for the partial correlations (controlling for self-esteem) between the NRI factors and symptom variables for all three groups of participants (i.e., current daters, previous daters, and never dated). Results revealed that among the current daters, there was a significant positive correlation between the NRI social support factor and EDI-drive for thinness scores ($r = .38$, $p \leq .05$) and a significant positive correlation between the NRI social support factor and EDI-bulimia ($r = .32$, $p \leq .10$). Among the previous daters, there was a significant positive correlation between the NRI negative interchange factor and EDI-bulimia ($r = .49$, $p \leq .05$). No other correlations were significant.

In regards to Step 2, Table 12 displays results for the partial correlations (controlling for self-esteem) between (a) EDI-drive for thinness and EDI-bulimia, and (b) the individual NRI positive quality subscales, among current daters. Results revealed significant (and approaching significant) partial correlations between (a) EDI-drive for thinness and/or EDI-bulimia, and (b) companionship, instrumental aid, intimacy, affection, admiration, and support.

Table 13 displays the remaining results for Step 2, including the partial correlations (controlling for self-esteem) between (a) EDI-bulimia, and (b) the individual NRI negative quality subscales, among previous daters. Results revealed a significant correlation between (a) EDI-bulimia, and (b) antagonism ($r = .58$, $p \leq .05$) and criticism ($r = .56$, $p \leq .05$). The partial correlation between EDI-bulimia and conflict approached significance ($r = .48$, $p \leq .10$). There was no association between EDI-bulimia and

dominance (r = -.07, p > .10) or between EDI-bulimia and relative power (F(2, 14) = .77, p > .10, η_p^2 = .10).

3.2.14. Hypothesis 4: Summary

To reiterate, Hypothesis 4 stated that, collapsing across diagnostic groups, greater negative qualities and fewer positive qualities of romantic relationships will be associated with greater symptoms of eating disorders and depression. In addition to qualities of current romantic relationships, qualities of previous romantic relationships and platonic opposite-sex relationships were investigated. Results are summarized in Tables 11, 12, and 13. These results reveal that among *current daters*, a counterintuitive pattern emerged—after controlling for self-esteem, greater positive qualities (particularly intimacy and support) of current romantic relationships were associated with *greater* EDI scores (i.e., drive for thinness and bulimia). Among *previous daters*, an expected pattern emerged—after controlling for self-esteem, greater negative qualities (i.e., antagonism and criticism) of previous romantic relationships were associated with greater EDI-bulimia scores. Finally, among girls who have *never dated*, qualities of platonic opposite-sex relationships were not associated with any eating disorder or depressive symptoms.

4. Discussion

Overall, the results of this study provide partial support for an association between adolescent dating and eating disorder symptoms. Although adolescents with an eating disorder diagnosis were no more likely than healthy adolescents to report dating involvement, a strong association between dating involvement and symptoms of bulimia was observed (after collapsing across diagnostic groups). More specifically, adolescents who reported that (a) they usually date, or (b) they are currently involved in a serious romantic relationship, endorsed elevated symptoms of bulimia. The latter finding was particularly true among girls who were sexually inexperienced. In addition, after collapsing across diagnostic groups, elevated symptoms of bulimia and/or drive for thinness were endorsed by girls who reported (a) high levels of *positive* qualities within their *current* romantic relationships, or (b) high levels of *negative* qualities within their *previous* romantic relationships. Symptoms of depression and body dissatisfaction were not associated with either (a) dating involvement or (b) qualities of romantic relationships, a finding which was inconsistent with previous research.

The finding that dating involvement was not elevated in the eating disorder and depressed groups was somewhat surprising in light of previous findings. Studies on healthy adolescents have shown that dating is consistently associated with depressive symptoms (see Davila, 2008, for a review) and also associated with eating disorder symptoms, albeit somewhat less consistently (e.g., Gralen et al., 1990; Paxton et al., 2005; Cauffman & Steinberg, 1996; Smolak et al., 1993; Compian et al., 2004). To date, studies have not yet investigated dating within clinical populations of adolescents with an eating disorder or depressive disorder. However, the present study suggests that findings within healthy populations may not generalize to clinical populations. In other words, although previous research indicates that adolescent dating is associated with *subclinical* levels of eating disorder and depressive symptoms, it may not be associated with *clinical* levels of these symptoms. On the other hand, failure to observe significant

group differences in dating involvement may be accounted for by a lack of power; in some of these analyses, power to detect a medium effect size was less than 50 percent.

Another possible explanation for the non-significant group differences in dating involvement relates to the heterogeneity of the clinical groups. These groups were comprised of individuals with a variety of diagnoses including anorexia nervosa, bulimia nervosa, major depressive disorder, and dysthymia, and some of these diagnoses were comorbid. It is possible that dating is associated with some of these diagnoses and not others—a hypothesis which is consistent with the findings of Ruuska and colleagues (2003) who showed that dating involvement was more prevalent among adolescents with bulimia than those with anorexia.

Indeed, the present study supports an association between adolescent dating and symptoms of bulimia. Specifically, after collapsing across diagnostic groups, elevated symptoms of bulimia were endorsed by girls who reported that they (a) usually date, or (b) are currently involved in a serious romantic relationship. The strength of these associations was considerable (as demonstrated by large effect sizes). In fact, among girls who were sexually inexperienced, current involvement in a serious romantic relationship was associated with *clinical* levels of bulimia. Among these girls, 60 percent met full or subthreshold diagnostic criteria for bulimia, representing 37.5 percent of the participants in this sample who were bulimic. In short, this study provides evidence that dating is indeed associated with symptoms of bulimia, but due perhaps to the small proportion of participants with bulimia in the eating disorder group (32 percent), differences between the eating disorder and control groups did not emerge.

In regards to the *type* of dating involvement that was associated with bulimia, both *casual* and *serious* dating involvement were associated with bulimia when adolescents were reporting on their *usual* dating involvement. When adolescents were reporting on their *current* dating involvement, involvement in a *serious*—but not casual—romantic relationship was associated with symptoms of bulimia. When considered in conjunction with the findings of Hypothesis 4 (which showed that various positive qualities of romantic relationships are associated with bulimia and drive for thinness), this study reveals a pattern whereby current involvement in a *serious*, *intimate, supportive* romantic relationship is associated with certain eating disorder symptoms.

More specifically, adolescents who (a) share their feelings and secrets with their romantic partner, or (b) depend on their romantic partner for emotional support, tend to endorse elevated symptoms of bulimia and/or drive for thinness—and the strength of these effects was considerable.

The above finding that positive qualities of romantic relationships are associated with certain eating disorder symptoms may seem fairly counterintuitive. To the extent that positive qualities of romantic relationships (such as intimacy and support) enhance psychological wellbeing, these positive qualities should represent *protective* factors against disordered eating. Indeed, research has shown that *a lack* of positive qualities in adolescent romantic relationships leads to increases in depressive symptoms and externalizing behaviors over time (Williams et al., 2001; Shulman et al., 2009; van Dulmen et al., 2008). However, it is possible that involvement in a committed, highly intimate romantic relationship may actually be a marker of interpersonal problems for adolescents at home or at school. That is, adolescents who are having difficulties at home or at school may seek out intimate, supportive relationships with romantic partners because they lack intimacy and support from family members and friends. Consistent with this idea, Markiewicz, Lawford, Doyle, and Haggart (2006) showed that, in comparison to adolescents who are securely attached to their mothers, adolescents who are *insecurely* attached to their mothers are less likely to turn to their mothers for support and are *more* likely to turn to their romantic partners for support. Thus, adolescents in serious, intimate romantic relationships may experience increases in eating disorder symptoms *not* because of the quality of their romantic relationship but because of the difficulties they are experiencing at home. Indeed, previous research shows that adolescents who experience difficulties in their family relationships tend to report elevated symptoms of eating disorders (e.g., Cunha, Relvas, & Soares, 2009; Karwautz et al., 2003; Ratti, Humphrey, & Lyons, 1996; McEwen & Flouri, 2009).

It is also possible that the association between positive romantic relationship qualities and eating disorder symptoms is direct. In other words, adolescents may experience increased eating disorder symptoms as a result of highly positive qualities in their romantic relationships, and the reason may be that adolescents are simply developmentally unprepared for “intensely positive” romantic relationships. At this age, high levels of romantic commitment and intimacy may be associated with a number of

risk factors for mental health problems including increased sexual activity and conflict with parents. In addition, adolescents in serious romantic relationships may become preoccupied with their romantic partner to the exclusion of other important life domains such as academic achievement and relationships with family members and friends (Joyner & Udry, 2000). With their lack of experience in romantic relationships, adolescents may not yet be skilled at achieving a balance between emotional closeness and independence. They may have a tendency to become infatuated with their romantic partner to the point of enmeshment and as a result, may be vulnerable for mental health problems. Indeed, a number of popular theories in psychology, such as family systems theory (Bowen, 1978) and attachment theory (Bowlby, 1977), emphasize the importance of establishing a balance between interpersonal dependence and autonomy and suggest that an *imbalance* can often result in psychopathology.

Adolescents may be developmentally unprepared *not only* for the intimacy and closeness of serious romantic relationships but also for the sexual pressures that often characterize serious, intimate romantic relationships. Although sexual activity is a normative part of adolescence, research shows that adolescent girls often feel pressured to engage in sexual intercourse before they are ready (Skinner et al., 2008). Within the context of a serious romantic relationship, girls may believe that if they do not engage in sexual intercourse with their partner, he or she will leave them, and this may create intense feelings of stress and worry. Due perhaps to their lack of dating experience, adolescents may believe that their current romantic partner is “the one” and may believe that they will never find love with another. In this way, the thought of losing one’s romantic partner may be unbearable, especially if the relationship is characterized by “intensely positive” qualities.

Due to sexual pressures, involvement in a serious romantic relationship may also be particularly stressful for girls *who are currently abstinent* or have not yet made the transition to sexual intercourse. These girls may be worried about what their romantic partner will think of their body or what effect losing their virginity will have on their reputation, relationships, and self-esteem. Indeed, the present study showed an interaction between sexual experience and current dating involvement such that, among girls who are sexually inexperienced, current involvement in a serious romantic relationship was associated with clinical symptoms of bulimia. There are a number of

possible explanations for why these girls may engage in bulimic behavior. For instance, they may be attempting to lose weight and increase their attractiveness in order to either (a) bolster their sexual confidence, or (b) maintain their romantic partner's interest. On the other hand, these girls may be engaging in bulimic behaviors in an attempt to *avoid* sexual maturation in order to maintain a more child-like figure and escape the sexual expectations of their partner.

The observed interaction between sexual experience and current dating involvement suggests that, among adolescents who are involved in a serious romantic relationship, *a lack* of sexual experience may actually be a risk factor for symptoms of bulimia. This finding is inconsistent with a wealth of previous research showing that in general, sexual activity during adolescence is associated with mental health problems—including bulimic symptoms (Cauffman & Steinberg, 1996; Kaltiala-Heino et al., 2001). However, as mentioned in the Introduction of this thesis, recent research is highlighting the importance of studying *the context* within which sexual activity—and perhaps inactivity—occurs (Grello et al., 2003; Grello et al., 2006). The present study supports the notion that context is important when studying dating and sexual activity.

The interaction between sexual and experience and current dating involvement should be interpreted with caution due to very small sample sizes in some ANCOVA cells (e.g., only five participants were sexually inexperienced and currently involved in a serious romantic relationship). Furthermore, this interaction should *not* be interpreted as indicating that adolescents should gain sexual experience in order to protect themselves from eating disorder symptoms. If anything, this finding should be interpreted as indicating that the transition to sexual intercourse may be very stressful for adolescent girls, and they should not make this transition until they are ready.

Adolescents who are sexually inexperienced and currently involved in a serious romantic relationship may endorse elevated bulimic symptoms *not only* because of their lack of sexual experience but *also because of their relatively young age.* Not surprisingly, among the girls in this sample who were involved in a serious romantic relationship, girls who were sexually *inexperienced* were approximately 1.5 years younger than girls who were sexually *experienced*. According to the developmental appropriateness hypothesis (Welsh et al., 2003; Williams, Connolly, & Cribbie, 2008),

dating may be most detrimental to the psychological wellbeing of *young* adolescents because at this age, teens are particularly developmentally unprepared for romantic relationships. These teens may be especially likely to experience stress in romantic relationships, to become infatuated with or emotionally dependent on their partner, to fear losing their partner, or to be negatively affected by the sexual expectations within the relationship.

In regards to the previously mentioned finding that positive romantic relationship qualities are associated with symptoms of bulimia and drive for thinness, it is interesting that this association emerged for *current* romantic relationships only. Positive qualities of *previous* romantic relationships were *not* associated with eating disorder symptoms. It is possible that the effect of "intensely positive" romantic relationship qualities on eating disorder symptoms fades over time. However, it is equally possible that adolescents demonstrate a reporting bias; they may be reluctant to endorse positive qualities of previous romantic relationships because they would like to believe that they are "better off" without their previous romantic partner.

Although *positive* qualities of *current* romantic relationships were associated with drive for thinness and bulimia, it was only *negative* qualities of *previous* romantic relationships that were associated with bulimia. Specifically, elevated symptoms of bulimia were *strongly* associated with (a) being criticized by one's previous romantic partner, (b) being annoyed by one's previous partner, and to a lesser extent (c) arguing with one's previous romantic partner. This finding was in line with Hypothesis 4. It is also consistent with previous research in other areas showing that (a) negative qualities of adolescent dating relationships are associated with increased symptoms of *depression* (La Greca & Harrison, 2005), (b) negative qualities of *adult* romantic relationships are associated with eating disorder symptoms (Weller & Dziegielewski, 2004; Skomorovsky et al., 2006), and (c) negative qualities of adolescent *friendships* are associated with eating disorder symptoms (Shutz & Paxton, 2007).

Interestingly, this study showed that symptoms of bulimia were associated with negative qualities of *previous* but not *current* romantic relationships. Interpreting this finding, perhaps the effects of negative romantic relationship qualities are latent, such that the stress and emotional hardships associated with negative relationship qualities

need to build up over time before manifesting in psychopathology. Indeed, adolescents with a history of romantic relationships characterized by negative qualities may have endured multiple breakups, an experience which can be extremely detrimental to the emotional wellbeing of adolescents (Monroe, Rohde, Seeley, & Lewinsohn, 1999). Alternatively, it is possible that a reporting bias is again at play; adolescents may be reluctant to report negative qualities of *current* romantic relationships because they would like to believe that their current romantic relationship is strong. Whatever the case may be, negative qualities of romantic relationships, whether previous or current, may be a marker of interpersonal difficulties in adolescents' lives in general. These adolescents may have an insecure attachment style or may be experiencing conflicts at home, and it may be *these* difficulties (rather than the negative qualities in their romantic relationship) which account for their increased mental health symptoms. Indeed, studies have shown that girls who experience negative qualities in their romantic relationships also tend to experience negative qualities in their relationships with their mother and father (e.g, Scharf & Mayseless, 2008).

In contrast to all of the statistically significant findings described above, this study also yielded some interesting *non-significant* findings. First, depression and body dissatisfaction were not associated with any of the dating variables, including qualities of romantic relationships. This finding was surprising, particularly in regards to depression because the literature reveals a fairly robust association between depressive symptoms and dating in adolescence (see Davila, 2008, for a review). However, as mentioned previously, the findings from healthy populations may not generalize to clinical populations. Clinical and subclinical depressive symptoms may be qualitatively distinct and may demonstrate differential associations with dating.

A second unexpected non-significant finding in this study was that qualities of *platonic* relationships with boys were *not* associated with symptoms of eating disorders or depression. In previous studies, qualities of adolescents' friendships have been associated with eating disorder symptoms (Shutz & Paxton, 2007; Gerner & Wilson, 2005). However, these studies focused primarily on *same-sex* friendships whereas the current study focused on *opposite-sex* friendships. Thus, it may be the case that among adolescent girls, qualities of opposite-sex friendships may not be as impactful on girls' psychological wellbeing as qualities of same-sex friendships and romantic relationships.

In many ways, it is difficult to compare the present findings to previous studies. Not only have previous studies been conducted on healthy populations, they have also utilized differing ways of measuring dating and eating disorder symptoms. For example, while the present study measured different eating disorder symptoms individually, most studies have used a global index of eating pathology. Similarly, while the present study focused on current and usual "involvement with romantic partners," previous studies have measured dating by asking participants whether they have started dating or how often they engage in various romantic activities like kissing. Given the differing measurement methods that were used, conclusions regarding whether or not the findings of the present study are consistent with previous research are difficult to draw.

4.1. Summary

Overall, the present study supports an association between adolescent dating and some eating disorder symptoms. In particular, elevated symptoms of bulimia and/or drive for thinness were reported by girls who were currently involved in a serious, intimate, supportive romantic relationship. Interestingly, the size of the effects observed in this study were quite strong, even after controlling for self-esteem—a robust predictor of eating disorder and depressive symptoms (Joiner, Schmidt, & Wonderlich, 1997; Dunn & Ondercin, 1981; Grant & Fodor, 1986; DuBois, Felner, Brand, & George, 1999).

The findings of this study also suggest that adolescent dating is a multifaceted activity, and its association with mental health problems cannot be fully understood without considering the characteristics of the dating relationship and the romantic partners involved. In particular, this study showed that current involvement in a *serious* but not *casual* romantic relationship was associated symptoms of bulimia, and this was especially true among adolescents who were young and sexually inexperienced.

Finally, when considered in light of previous findings on healthy populations, this study suggests that the association between adolescent dating and symptoms of eating disorders and depression may differ between healthy and clinical populations. In other words, the assumption that findings from healthy populations will apply to clinical populations may be faulty. In order to determine whether or not adolescent dating is

associated with a diagnosis of an eating disorder or depression, researchers should conduct studies on clinical samples.

4.2. Limitations

This study has some limitations. First, it is cross-sectional in nature, preventing conclusions regarding causation. Thus, while most of the interpretations that are presented in this study assume that eating disorder symptoms were the result of dating involvement, it is equally possible that dating involvement was the result of eating disorder symptoms. For example, while it is possible that bulimic symptoms were the *result* of serious romantic relationships, it is equally possible that bulimic symptoms led adolescents to *seek out* serious romantic relationships in an attempt to gain social support or peer approval.

Second, caution must be used when interpreting the results for Hypotheses 2 and 3. For these analyses, the assumption of homogeneity of variances was violated, and this violation is considered problematic when sample sizes are unequal (as they were in this study). However, since a transformation of the bulimia scores corrected this violation and still yielded results that were significant (or approaching significance), this finding is likely to be reliable.

A third limitation of this study is that the sample sizes for some of the analyses were fairly small, yielding inadequate power (i.e., < 80 percent). In fact, in some cases, power was less than 50 percent (e.g., the between-group analyses for Hypothesis 1). Furthermore, given the relatively small sample sizes within each diagnostic group (n = 25) and the resulting lack of power, analyses were conducted by collapsing across diagnostic groups (i.e., eating disordered, depressed, and controls,) rather than conducted within each diagnostic group separately. Conducting analyses within each diagnostic group separately would have yielded interesting information regarding whether or not dating involvement is differentially associated with eating disorder and depressive symptoms across adolescents with an eating disorder, depressive disorder, or no psychiatric problems.

Because most of the analyses were conducted by collapsing across diagnostic groups, it is unclear which population these results generalize to. Because participants from all three samples were recruited using similar methods, and because symptoms of eating disorders and depression are typically found within both healthy and clinical populations, it may be argued that these results can generalize to all three populations. However, as mentioned several times throughout this discussion, findings from healthy populations may not generalize to clinical populations. Therefore, results of the present study should be generalized to these populations with caution.

There are some additional issues regarding the generalizability of this study's findings. First, this sample included only adolescent females and therefore may not generalize to males. Second, because the adolescents in this sample were primarily Caucasian, results may not generalize to adolescents of different ethnicities. This is an important point because the prevalence of eating disorder symptoms tends to be higher among Caucasian females than females of other ethnicities (e.g., Abrams, Allen, & Gray, 1993; Sanchez-Johnsen et al., 2004). Furthermore, beliefs and practices regarding dating also differ across cultures. For example, a study conducted in Texas showed that Caucasian adolescents are more likely than adolescents of other ethnicities to report involvement in serious romantic relationships (Crissey, 2005). Also, while North Americans tend to value romantic love highly and tend to experience it as intensely preoccupying, African American girls may take a more pragmatic approach to dating because they have learned, often from their mothers, that romantic relationships are often characterized by hardships (Carothers, 1990; Milbrath, Ohlson, & Eyre, 2009). In light of cultural differences in eating disorder symptoms and dating practices, results of this study should be generalized to adolescents of non-Caucasian ethnicities with caution.

4.3. Strengths

Despite its limitations, this study had a number of strengths. Namely, it was the first study to examine the association between adolescent dating and depressive symptoms using a clinical sample of depressed adolescents, and the first study to examine the association between adolescent dating and eating disorder symptoms using

a clinical sample *and a control group*. Second, analyses on eating disorder and depressive symptoms controlled for self-esteem, a robust predictor of these symptoms (Joiner, Schmidt, & Wonderlich, 1997; Dunn & Ondercin, 1981; Grant & Fodor, 1986; DuBois, Felner, Brand, & George, 1999). Finally, this study builds on the literature on adolescent dating by exploring a number of variables which have never been investigated in regards to eating disorder symptoms. These variables included *current* dating involvement, *type* of dating involvement (i.e., serious or casual), previous sexual experience, and the quality of romantic relationships.

4.4. Implications and Future Research

In terms of clinical implications, this study suggests that adolescent dating may be involved in the etiology and/or maintenance of eating disorder symptoms, particularly bulimia. Therefore, therapists treating adolescents with bulimic symptoms should consider exploring issues regarding dating and sexual activity with their eating disorder patients. Dating and sex are salient topics for teens. Problems in these areas are likely to be at the forefront of teens' minds, and therefore, an opportunity to discuss this with one's therapist may bolster the therapeutic alliance and enhance treatment outcome. Therapists may explore the seriousness and quality of the romantic relationship and what type of impact this is having on the adolescent. Therapists may also explore the adolescent's sexual history as girls who have not yet had sexual intercourse may be particularly likely to be experiencing stress within their romantic relationship. In short, contrary to the popular view that therapy with adolescents with an eating disorder should focus primarily on family relationships, a focus on romantic relationships may also be warranted.

Although the argument was made that adolescent girls who are involved in a serious romantic relationship may become enmeshed with their romantic partner, it is extremely important to acknowledge that this will not be the case for all adolescents. Not all girls who date will become emotionally dependent on and infatuated with their romantic partner. Dating should not be regarded as an activity that will inevitably lead to psychopathology. On the contrary, dating may be developmentally appropriate under a number of circumstances, and many teens will display resilience to the potentially

negative effects of dating. However, adolescents who date should be monitored for mental health problems. Parents and therapists should be cognizant of the fact that dating relationships—even seemingly positive ones—may increase teens' risk for disordered eating.

This study highlights a number of interesting avenues for future research. These include (a) utilizing a longitudinal design to determine whether or not dating involvement represents a risk factor for the development of eating disorder symptoms, (b) a comparison of dating involvement in adolescents with bulimia versus anorexia, (c) an examination of dating involvement among males and among cultural and sexual minorities, (d) an examination of potential moderators such as age and attachment style, and finally, (e) qualitative research examining adolescents' perceptions of their dating relationships, including a focus on resilience.

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Appendices

Appendix A.

Tables

Table 1. Mean Age of Participants Across Dating Variables (N = 72) and Sexual Experience (N = 74)

Variable	Age *M* (*SD*)	Test Statistic	Effect Size
Usual Dating Involvement		$F(3, 68) = 5.84$*	$\eta^2 = .21$
Never Dated (n = 20)	14.57_a (1.66)		
Rarely Date (n = 16)	16.07_b (1.62)		
Date Casually (n = 24)	15.92_b (1.61)		
Exclusive Relationship (n = 12)	16.84_b (1.37)		
Dating Variable for Hypothesis 4		$F(2, 69) = 7.68$*	$\eta^2 = .18$
Never Dated (n = 19)	14.58_c (1.71)		
Previous Daters (n = 19)	16.57_d (1.56)		
Current Daters (n = 34)	15.90_d (1.57)		
Sexual History		$t(72) = 5.02$*	$r = .51$
Sexually Inexperienced (n = 45)	15.07 (1.64)		
Sexually Experienced (n = 29)	16.90 (1.34)		

Note. Subscripts indicate homogenous subsets (vertically) based on Tukey's HSD post-hoc analyses.

* $p \leq .001$

Table 2. Usual Dating Involvement Across Ethnic Groups (N = 72)

	Caucasian (*n* = 47)		**African American (*n* = 13)**		**Other (*n* = 12)**	
	n	%	n	%	n	%
Never Dated (*n* = 20)	15	31.9	4	30.8	1	8.3
Rarely Date (*n* = 16)	7	14.9	6	46.2	3	15.0
Date Casually (*n* = 24)	19	40.4	2	15.4	3	25.0
Exclusive Relationship (*n* = 12)	6	12.8	1	7.7	5	41.7

Note. $\chi^2(6, n = 72) = 14.27$, $p \leq .05$, $V_C = .32$

Table 3. Descriptive and Inferential Statistics for Body Mass Index, Eating Disorder Symptoms, Depressive Symptoms, and Self-Esteem Across Diagnostic Groups (N = 75)

Variable	ED Group (n = 25)		DD Group (n = 25)		Control Group (n = 25)		F	η_p^2
	M	(*SD*)	*M*	(*SD*)	*M*	(*SD*)		
BMI_z	$-.39_a$	(1.17)	1.12_b	(.93)	.40b	(1.03)	12.30*	.26
EDI-2							5.62*	.19
EDI-DT	11.80_c	(5.16)	6.80_d	(4.72)	4.44_d	(3.27)	17.80*	.33
EDI-B	4.92_e	(5.08)	2.28_f	(2.37)	1.28_f	(1.84)	7.62*	.18
EDI-BD	14.72_g	(6.79)	11.48_h	(6.15)	7.48_h	(5.52)	8.62*	.19
BDI-II	22.72_i	(14.80)	21.08_j	(12.48)	6.76_j	(3.96)	14.80*	.29
RSE	30.00_k	(10.72)	31.88_k	(8.89)	41.42_l	(6.24)	11.62*	.25

Note. ED = Eating Disorder, DD = Depresive Disorder, BMI_z = Body Mass Index *z*-score, EDI = Eating Disorder Inventory – 2, DT = Drive for Thinness, B = Bulimia, BD = Body Dissatisfaction, BDI-II = Beck Depression Inventory II, RSE = Rosenberg Self-Esteem Scale.

Note. The *F* value for EDI is the Pillai's Trace *F* value from a MANOVA on EDI-DT, EDI-B, and EDI-BD scores.

Note. Subscripts indicate homogenous subsets (horizontally) based on Tukey's HSD post-hoc analyses.

* $p \leq .001$

Table 4. Ethnic Composition of Diagnostic Groups (N = 75)

	ED Group (*n* = 25)		DD Group (*n* = 25)		Control Group (*n* = 25)	
	n	%	*n*	%	*n*	%
Caucasian (*n* = 47)	20	80.0	12	48.0	15	60.0
African American (*n* = 14)	0	0.0	10	40.0	4	16.0
Other (*n* = 14)	5	20.0	3	12.0	6	24.0

Note. ED = Eating Disorder, DD = Depressive Disorder, Other = Asian, Hispanic, or Other.

Note. $\chi^2(4, n = 75) = 13.94, p \leq .01, V_C = .31$

Table 5. Current Dating Involvement Across Diagnostic Groups (N = 74)

	ED Group (*n* = 25)		DD Group (*n* = 25)		Control Group (*n* = 24)	
	n	%	*n*	%	*n*	%
Not Dating (*n* = 40)	13	52.0	11	44.0	16	66.7
Dating Casually (*n* = 22)	6	24.0	12	48.0	4	16.7
Serious Relationship (*n* = 12)	6	24.0	2	16.7	4	16.7

Note. ED = Eating Disorder, DD = Depressive Disorder.

Note. $\chi^2(4, n = 74) = 7.63$, $p = .11$, $V_C = .23$

Table 6. Adjusted Means for Non-Transformed EDI-Bulimia Scores Across Current Dating Involvement (N = 72)

	EDI-Bulimia (Non-transformed)		*F*	η_p^2
	M	(*SD*)		
Current Dating Involvement			10.17*	.24
Not Dating (*n* = 39)	2.03_a	(3.04)		
Dating Casually (*n* = 22)	2.73_a	(3.06)		
Serious Relationship (*n* = 11)	6.45_b	(5.28)		

Note. The F value is for the main effect of current dating involvement on EDI-bulimia scores (non-transformed) as observed in a MANCOVA (controlling for self-esteem, using sexual experience and current dating involvement as factors) on the three EDI subscales.

Note. In regards to the *transformed* EDI-bulimia scores, an ANCOVA (controlling for self-esteem, using current dating involvement and sexual experience as factors) yielded the following results: $F(2, 65) = 8.02$, $p \leq .005$, $\eta_p^2 = .20$.

Note. Subscripts indicate homogenous subsets based on Tukey's HSD post-hoc analyses on the transformed bulimia scores.

* $p \leq .001$

Table 7. Adjusted Means for Non-Transformed EDI-Bulimia Scores Across Usual Dating Involvement (N = 71)

	EDI-Bulimia (Non-transformed)		*F*	η_p^2
	M	(*SD*)		
Usual Dating Involvement			3.19*	.13
Never Dated (*n* = 20)	0.85_a	(1.35)		
Rarely Date (*n* = 15)	2.87_{ab}	(2.75)		
Date Casually (*n* = 24)	4.25_b	(4.72)		
Exclusive Relationship (*n* = 12)	3.67_{ab}	(4.33)		

Note. The F value is for the effect of usual dating involvement on EDI-bulimia scores (non-transformed) as observed in a MANCOVA (controlling for self-esteem) on the three EDI subscales.

Note. In regards to the *transformed* EDI-bulimia scores, an ANCOVA (controlling for self-esteem) revealed the following results: $F(3, 66) = 4.02$, $p \leq .05$, $\eta_p^2 = .15$.

Note. Subscripts indicate homogenous subsets based on Tukey's HSD post-hoc analyses on the *transformed* bulimia scores.

* $p \leq .05$

Table 8. Partial Correlations Between Eating Disorder and Depressive Symptoms and Age at First Date and Number of Romantic Partners (N = 70)

	EDI-DT	EDI-B	EDI-BD	BDI-II
Age at First Date	.00	- .05	.12	.09
Number of Romantic Partners	.06	.22[t]	.04	- .02

Note. Covariates included self-esteem (for partial correlations with age at first date and with number of romantic partners) and age (for partial correlations with age at first date).

Note. *N* = 50 for partial correlations with age at first date because several participants were missing data for age at first date.

[t] $p \leq .10$

Table 9. Adjusted Means for Non-Transformed EDI-Bulimia Scores By Sexual Experience and Current Dating Involvement (N = 72)

	Not Dating (*n* = 39)			**Dating Casually (*n* = 22)**			**Serious Relationship (*n* = 11)**		
	M	(*SD*)	*n*	*M*	(*SD*)	*n*	*M*	(*SD*)	*n*
Sexually Inexperienced (*n* = 44)	1.45	(1.76)	29	2.50	(3.57)	10	10.20	(5.36)	5
Sexually Experienced (*n* = 28)	3.60	(5.01)	10	2.92	(2.71)	12	3.33	(2.66)	6

Note. A 3 (current dating involvement) by 2 (sexual experience) MANCOVA (controlling for self-esteem) on the EDI subscales revealed a significant interaction on EDI-bulimia scores: $F(2, 65) = 7.19$, $p \leq .005$, $\eta_p^2 = .18$.

Note. A 3 (current dating involvement) by 2 (sexual experience) ANCOVA (controlling for self-esteem) on transformed EDI-bulimia scores revealed an interaction which approached significance: $F(2, 65) = 2.79$, $p = .07$, $\eta_p^2 = .08$.

Table 10. Correlations Between NRI Factors and Participants' Age, Parents' Level of Education, and Self-Esteem Scores Among Current Daters, Previous Daters, and the Never Dated Group

	Current Daters (*n* = 34)		**Previous Daters (*n* = 19)**		**Never Dated (*n* = 19)**	
	NRI-SS	NRI-NI	NRI-SS	NRI-NI	NRI-SS	NRI-NI
Age	.09	.12	- .06	- .11	- .04	- .04
Mother's Ed.	- .29	- .34[t]	- .39	- .47[t]	- .49[t]	- .11
Father's Ed.	- .18	- .06	- .37	- .21	- .69*	.23
RSE	.31[t]	- .04	.34	- .40	.22	- .19

Note. NRI = Network of Relationships Inventory, SS = Social Support Factor, NI = Negative Interchange Factor, RSE = Rosenberg Self-Esteem Scale.

[t] $p \leq .10$

* $p \leq .05$

Table 11. Partial Correlations Between NRI Factors and Eating Disorder and Depressive Symptoms Among Current Daters, Previous Daters, and the Never Dated Group

	Current Daters (*n* = 34)		**Previous Daters (*n* = 19)**		**Never Dated (*n* = 19)**	
	NRI-SS	NRI-NI	NRI-SS	NRI-NI	NRI-SS	NRI-NI
EDI-DT	.38**	.12	- .01	.02	- .01	- .36
EDI-B	.32*	- .04	- .12	.49**	.22	- .23
EDI-BD	.20	.03	.27	.22	.11	- .30
BDI-II	.14	.21	.24	.14	- .01	- .20

Note. NRI = Network of Relationships Inventory, SS = Social Support Factor, NI = Negative Interchange Factor, EDI = Eating Disorder Inventory – 2, DT = Drive for Thinness, B = bulimia, BD = Body Dissatisfaction, BDI-II = Beck Depression Inventory – II.

Note. All partial correlations controlled for self-esteem.

* $p \leq .10$

** $p \leq .05$

Table 12. Partial Correlations Between NRI Positive Quality Subscales and EDI-Drive for Thinness and EDI-Bulimia Scores Among Current Daters (N = 34)

	EDI-Drive for Thinness	EDI-Bulimia
Companionship	.07	.33[t]
Instrumental Aid	.18	.33[t]
Intimacy	.55***	.36*
Nurturance	.21	.27
Affection	.32[t]	.20
Admiration	.31[t]	.15
Reliable Alliance	.29	- .08
Support	.48**	.32[t]

Note. EDI = Eating Disorder Inventory – 2.

Note. All partial correlations controlled for self-esteem.

[t] $p \leq .10$

* $p \leq .05$

** $p \leq .005$

*** $p \leq .001$

Table 13. Partial Correlations Between NRI Negative Quality Subscales and EDI-Bulimia Scores Among Previous Daters (N = 19)

	EDI-Bulimia
Conflict	.48[t]
Antagonism	.58*
Criticism	.56*
Dominance	- .07

Note. EDI = Eating Disorders Inventory – 2.

Note. All partial correlations controlled for self-esteem.

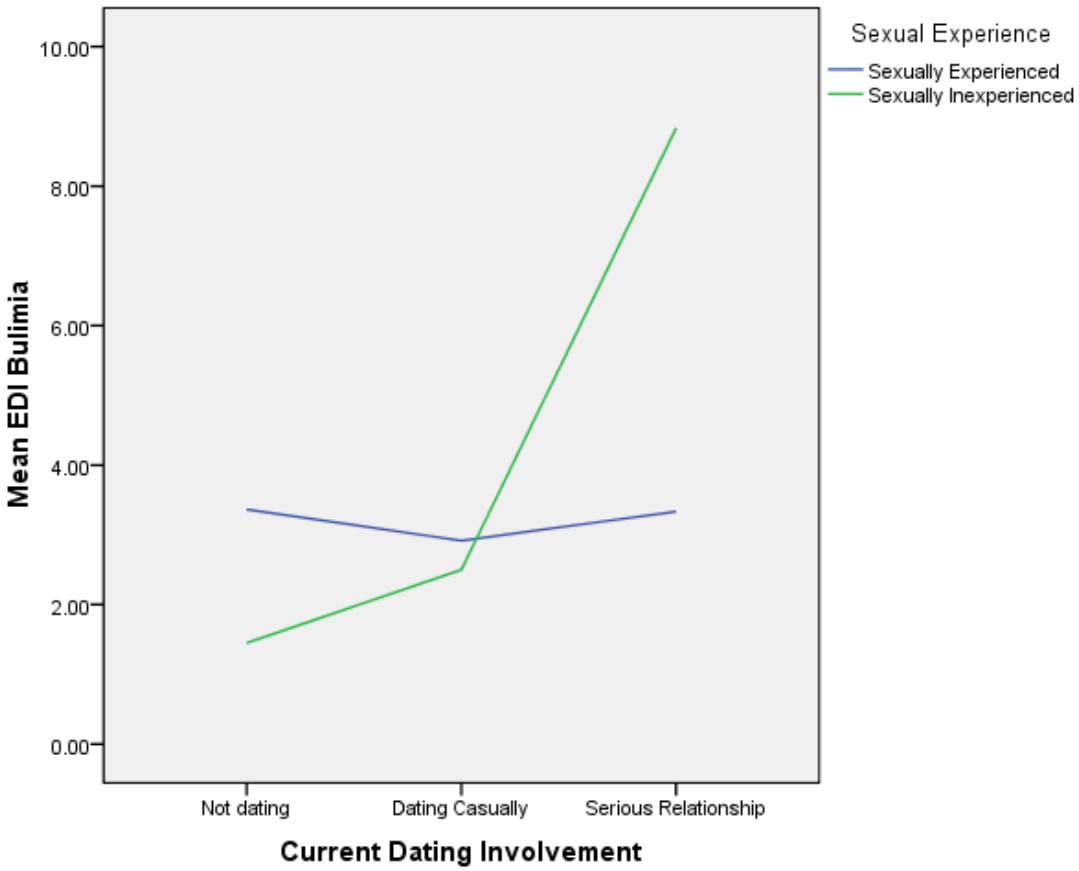
[t] $p \leq .10$

* $p \leq .05$

Appendix B.

Figures

Figure 1. Interaction Between Current Dating Involvement and Sexual Experience on EDI-Bulimia Scores (N = 74)



Note: EDI = Eating Disorder Inventory

Appendix C.

Questionnaires

Eating Disorder Inventory – 2

Eating Disorders Inventory (EDI-2)

This is a scale which measures a variety of attitudes, feelings and behaviors. Some of the items relate to food and eating. Others ask you about your feelings about yourself. THERE ARE NO RIGHT OR WRONG ANSWERS SO TRY VERY HARD TO BE COMPLETELY HONEST IN YOUR ANSWERS. Read each question and circle the number of the answer that applies best to you. Please answer each question very carefully. Thank you.

		Always	Usually	Often	Sometimes	Rarely	Never
1	I eat sweets and carbohydrates without feeling nervous	1	2	3	4	5	6
2	I think that my stomach is too big	1	2	3	4	5	6
3	I eat when I am upset	1	2	3	4	5	6
4	I stuff myself with food	1	2	3	4	5	6
5	I think about dieting	1	2	3	4	5	6
6	I think that my thighs are too large	1	2	3	4	5	6
7	I feel extremely guilty after overeating	1	2	3	4	5	6
8	I think that my stomach is just about the right size	1	2	3	4	5	6
9	I am terrified of gaining weight	1	2	3	4	5	6
10	I feel satisfied with the shape of my body	1	2	3	4	5	6
11	I exaggerate or magnify the importance of weight	1	2	3	4	5	6
12	I have gone on eating binges where I felt that I could not stop.	1	2	3	4	5	6
13	I like the shape of my buttocks	1	2	3	4	5	6
14	I am preoccupied with the desire to be thinner	1	2	3	4	5	6
15	I think about bingeing (overeating)	1	2	3	4	5	6
16	I think my hips are too large	1	2	3	4	5	6
17	I eat moderately in front of others and stuff myself when they're gone	1	2	3	4	5	6
18	If I gain a pound, I worry that I will keep gaining	1	2	3	4	5	6
19	I have the thought of trying to vomit in order to lose weight	1	2	3	4	5	6
20	I think that my thighs are just the right size	1	2	3	4	5	6
21	I think my buttocks are too large	1	2	3	4	5	6
22	I eat or drink in secrecy	1	2	3	4	5	6
23	I think that my hips are just the right size	1	2	3	4	5	6

Beck Depression Inventory—II

BDI - 2

Instructions:

This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the **one statement** in each group that best describes how you have been feeling during the **past 2 weeks, including today**. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) and Item 18 (Changes in Appetite).

1. Sadness 0 I do not feel sad. 1 I feel sad much of the time. 2 I am sad all of the time. 3 I am so sad or unhappy that I can't stand it.	**5. Guilty Feelings** 0 I don't feel particularly guilty. 1 I feel guilty over many things I have done or should have done. 2 I feel quite guilty most of the time. 3 I feel guilty all of the time.
2. Pessimism 0 I am not discouraged about my future. 1 I feel more discouraged about my future than I used to be. 2 I do not expect things to work out for me. 3 I feel my future is hopeless and it will only get worse.	**6. Punishment Feelings** 0 I don't feel I am being punished 1 I feel I may be punished. 2 I expect to be punished. 3 I feel I am being punished.
3. Past Failure 0 I do not feel like a failure. 1 I have failed more than I should have. 2 As I look back, I see a lot of failures. 3 I feel I am a total failure as a person.	**7. Self-Dislike** 0 I feel the same about myself as ever. 1 I have lost confidence in myself. 2 I am disappointed in myself. 3 I dislike myself.
4. Loss of Pleasure 0 I get as much pleasure as I ever did from the things I enjoy. 1 I don't enjoy things as much as I used to. 2 I get very little pleasure from the things I used to enjoy. 3 I can't get any pleasure from the things I used to enjoy.	**8. Self-Criticalness** 0 I don't criticize or blame myself more than usual. 1 I am more critical of myself than I used to be. 2 I criticize myself for all my faults. 3 I blame myself for everything bad that happens.

9. Suicidal Thoughts and Wishes 0 I don't have any thoughts of killing myself. 1 I have thoughts of killing myself but I would not carry them out. 4 I would like to kill myself. 2 I would kill myself if I had the chance.	**14. Worthlessness** 0 I do not feel I am worthless. 1 I don't consider myself as worthwhile and useful as I used to. 2 I feel more worthless as compared to other people. 3 I feel utterly worthless.
10. Crying 0 I don't cry any more than I used to. 1 I cry more than I used to. 2 I cry over every little thing. 3 I feel like crying, but I can't	**15. Loss of energy** 0 I have as much energy as ever. 1 I have less energy than I used to have. 2 I don't have enough energy to do very much. 3 I don't have enough energy to do anything.
11. Agitation 0 I am not more restless or wound up than usual. 1 I feel more restless or wound up than usual. 2 I am so restless and agitated that it's hard to sit still. 3 I am so restless and agitated that I have to keep moving or doing something.	**16. Changes in Sleeping Pattern** 0 I have not experienced any change in my sleeping pattern. 1a I sleep somewhat more than usual. 1b I sleep somewhat less than usual. 2a I sleep a lot more than usual. 2b I sleep a lot less than usual. 3a I sleep most of the day. 3b I wake up 1-2 hours early and can't get back to sleep.
12. Loss of interest 0 I have lost interest in other people or activities. 1 I am less interested in other people or things than before. 2 I have lost most of my interest in other people or things. 3 It's hard to get interested in anything.	**17. Irritability** 0 I am no more irritable than usual. 1 I am more irritable than usual. 2 I am much more irritable than usual. 3 I am irritable all the time.
13. Indecisiveness 0 I make decisions about as well as ever. 1 I find it more difficult to make decisions than usual. 2 I have much greater difficulty in making decisions than I used to. 3 I have trouble making any decisions.	**18. Changes in Appetite** 0 I have not experienced any change in my appetite. 1a My appetite is somewhat less than usual. 1b My appetite is somewhat greater than usual. 2a My appetite is much less than before. 2b My appetite is much greater than usual. 3a I have no appetite at all. 3b I crave food all the time.

19. Concentration Difficulty 0 I can concentrate as well as ever. 1 I can't concentrate as well as usual. 2 It's hard to keep my mind on anything for long. 3 I find I can't concentrate on anything.	**21. Loss of Interest in Sex** 0 I have not noticed any recent change in my interest in sex. 1 I am less interested in sex than I used to be. 2 I am much less interested in sex now. 3 I have lost interest in sex completely.
20. Tiredness or Fatigue 0 I am no more tired or fatigued than usual. 1 I get more tired or fatigued more easily than usual. 2 I am too tired or fatigued to do a lot of the things I used to do. 3 I am too tired or fatigued to do most of the things I used to do.	

_____ Subtotal Page 1
_____ Subtotal Page 2
_____ Subtotal Page 3
_____ Total Score

Network of Relationships Inventory—Revised

Network for Relationships Inventory—Revised

Everyone has a number of people who are important in his or her life. These questions ask about your relationships with each of the following people: your mother, your father, a sibling, a relative, a grand-parent, a same-sex friend, and an opposite-sex friend.

The first questions ask you to identify your mother figure, your father figure, a sibling, a relative, a grandparent, and two friends about whom you will be answering the questions.

1. Circle the **mother figure** you will be describing. (If you have both, choose the one you think of as your primary mother figure.)

A. Biological/Adopted Mother

B. Step-Mother (or Father's Significant Other)

C. Other _____

2. Circle the **father figure** you will be describing. (If you have both, choose the one you think of as your primary father figure.)

A. Biological/Adopted Father

B. Step-Father (or Mother's Significant Other)

C. Other _____

3. If one of your **brothers or sisters** is participating in this study also, please choose him or her. If you do not have a sibling taking part in this study, please describe your relationship with the sibling you consider to be most important/closest to you. (If several are equally important/close, just select one.) **If you do not have a sibling, leave these questions blank.**

Your Sibling's First Name _____

How old is s/he? _____ years old.

4. Now we would like you to choose a **relative** who is/was most important to you. Is this person a a) **grandmother**, b) **grandfather**, c) **aunt**, or d) **uncle**? (Please circle one.) The relative's first name is _____.

5. Now we would like you to choose a boy/girl friend whom you are dating or dated. You may choose someone you are seeing now, or someone you went out with earlier in high school. If you choose a past boy/girl friend, please answer the questions as you would have when you were in the relationship.

Boy/Girl Friend's First Name _____

How long is/was the relationship? ____ years _____ months (please fill in numbers)

Are you seeing this person now? **A.** Yes **B.** No

6. Please choose the most important **same-sex friend** you have had in high school. You may select someone who is your most important same-sex friend now, or who was your most important same-sex friend earlier in high school. **Do not choose a sibling.** If you select a person with whom you are no longer friends, please answer the questions as you would have when you were in the relationship.

Same-Sex Friend's First Name _____

How long is/was the friendship? ____ years _____ months (please fill in numbers)

Are you close friends now?

A. Yes **B.** Friends, but not as close as before **C.** No

7. Please choose the most important **other-sex friend** you have had in high school. You may select someone who is your most important other-sex friend now, or who was your most important other-sex friend earlier in high school. **Do not choose a sibling, relative, or boy/girl friend—even if she or he is or was your best friend.** If you select a person with whom you are no longer friends, just answer the questions as you would have when you were in the relationship.

Other-Sex Friend's First Name _____

How long is/was the friendship? ____ years _____ months (please fill in numbers)

Are you close friends now?

A. Yes **B.** Friends, but not as close as before **C.** No

8. Sometimes we would also like you to answer the following questions about some **extra person**. If there is a name written in the space below, please answer about this person also.

Extra Person _____

Relationship _

Now we would like you to answer the following questions about the people you have selected above. Sometimes the answers for different people may be the same but sometimes they may be different.

9. How much free time do you spend with this person?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

10. How much do you and this person get upset with or mad at each other?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

11. How much does this person teach you how to do things that you don't know?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

12. How much do you and this person get on each other's nerves?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

13. How much do you talk about everything with this person?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

14. How much do you help this person with things she/he can't do by her/himself?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

15. How much does this person like or love you?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

16. How much does this person treat you like you're admired and respected?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

17. Who tells the other person what to do more often, you or this person?

	S/he always does	S/he often does	About the same	I often do	I always do	S/he always does	S/he often does	About the same	I often do	I always do	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

18. How sure are you that this relationship will last no matter what?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

19. How much do you play around and have fun with this person?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

20. How much do you and this person disagree and quarrel?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

21. How much does this person help you figure out or fix things?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

22. How much do you and this person get annoyed with each other's behavior?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

23. How much do you share your secrets and private feelings with this person?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

24. How much do you protect and look out for this person?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

25. How much does this person really care about you?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

26. How much does this person treat you like you're good at many things?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

27. Between you and this person, who tends to be the BOSS in this relationship?

	S/he always does	S/he often does	About the same	I often do	I always do	S/he always does	S/he often does	About the same	I often do	I always do	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

28. How sure are you that your relationship will last in spite of fights?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

29. How often do you go places and do enjoyable things with this person?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

30. How much do you and this person argue with each other?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

31. How often does this person help you when you need to get something done?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

32. How much do you and this person hassle or nag one another?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

33. How much do you talk to this person about things that you don't want others to know?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

34. How much do you take care of this person?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

35. How much does this person have a strong feeling of affection (loving or liking) toward you?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

36. How much does this person like or approve of the things you do?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

37. In your relationship with this person, who tends to take charge and decide what should be done?

	S/he always does	S/he often does	About the same	I often do	I always do	S/he always does	S/he often does	About the same	I often do	I always do	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

38. How sure are you that your relationship will continue in the years to come?

	Little or None	Some-what	Very Much	Extre-mely Much	The Most	Little or None	Some-what	Very Much	Extre-mely Much	The Most	
Mother	1	2	3	4	5	1	2	3	4	5	Boy/Girl Friend
Father	1	2	3	4	5	1	2	3	4	5	Same-Sex Friend
Sibling	1	2	3	4	5	1	2	3	4	5	Other-Sex Friend
Relative	1	2	3	4	5	1	2	3	4	5	Extra Person

39. Earlier, when we asked you to choose your most important same- and other-sex friends, we said that they could not be a sibling or a relative. Now please tell us who, of all these people, is your best friend?

A. My same-sex friend.

B. My opposite-sex friend.

C. My sibling. Name _____

D. My relative. Name _____