LET'S TALK ABOUT SEX: YOUNG ADULT DATING RELATIONSHIPS AND DEPRESSION AS RELATED TO PARENTAL RELATIONAL FACTORS

by

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ABSTRACT

COURTNEY PAIGE CAMP. Let's talk about sex: young adult dating relationships and depression as related to parental relational factors (Under the direction of DR. RICHARD TEDESCHI)

Recent research has shown that adolescents who engage in sexual intercourse exhibit more depressive symptoms, including suicidal ideation and intent, than do adolescents who do not engage in sexual intercourse. Research has also shown that individuals' attachment with their caretakers in their childhood has far-reaching effects, even as they enter into adult romantic relationships and sexual initiation, as differing attachments to caretakers is associated with different motives and emotional responses to sexual intercourse. The current study sought to integrate the findings of these fields of research, determining whether individuals' retrospective identification of their attachment to primary caretakers was associated with their report of depression after sexual initiation. Participants were administered five scales, including a demographics questionnaire, the Retrospective Attachment Scale, the Retrospective Romantic Partner Attachment Scale, the depression items of the Depression Anxiety Stress Scale, and the Center for Epidemiologic Studies Depression Scale-Revised. No significant association was found between sexual activity and depression, and furthermore, there was no moderating effect of attachment to either primary caretaker or first sexual partner on the association between sexual activity and depression. Results of the current study and ideas for future research are discussed.

DEDICATION

My grandfather was Superman. He could drive anything, run anything, fix anything. Construction was a breeze. He was made for engineering. Take a car apart, and I bet he could put it back together. He could dig up a burst sewage pipe and then go patch a roof. His strength built houses and led our family. On December 3, 2015, he died unexpectedly, never able to witness his greatest dream: my graduation with my Master's Degree. He knew I would finish the degree, though, and if anything, he was more eager than I. He would always ask how my final requirement, my thesis, was going. I would tell him of my most recent revisions or a communication I had received from my professors. "I don't know how you stand it," he'd say, "I couldn't." But I knew the truth. I know how I stood it.

I came by it naturally. I got my strength—and maybe my stubbornness—from him.

And so I dedicate this thesis to a person who won't be there at the defense, who won't sit in the stands as I graduate, but in whose memory I will live my life and with whose strength I will always find a way.

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There are so many without whom this thesis would not exist. It has been a long road to get here, and I could not have done it, save for the love and support of those around me. It should go without saying that I first want to thank God. His peace and love have opened doors and guided me through the longest of nights.

I want to thank my family. Thank you, Dad, for being there for me even when I didn't see you. Thank you for supporting me as I pursued a Master's Degree. Thank you for mentoring me as I start out in the same field as you, but stepping aside when I get too close to walking in your shadow. Thank you, Mom, for being my best friend, for holding me when things went wrong and reminding me that anything worth having is worth fighting for. Thank you for being there for me from the smallest splinter to the biggest graduation celebration. Thank you, Anthony, for bringing such light to my life. Thank you for being there for me and for helping me to laugh at the everyday, the hardship, and the downright ridiculous. I love you so much. Thank you, Nanny, for showing me that true strength is not shown when everything is going well, but when everything falls apart and you still refuse to quit. And thank you, Schnitzel, the miniature dachshund who has comforted me when life made me stressed, curled at my leg when writing prevented me from playing, made me laugh when all I could summon were tears, and brought a simple joy to my life for the entirety of yours. Thank you all for every hug, every encouragement, and every prayer. Everyone deserves such love.

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LIST OF ABBREVIATIONS

CESD-R	Center for Epidemiologic Studies Depression Scale-Revised
DASS-21	Depression Anxiety Stress Scale
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition
RAS	Retrospective Attachment Scale
RRPAS	Retrospective Romantic Partner Attachment Scale
STD	Sexually transmitted disease
STI	Sexually transmitted infection

CHAPTER 1: INTRODUCTION

From Romeo and Juliet to Justin Bieber and Selena Gomez, adolescent romantic relationships have captured the hearts and attention of societies throughout the ages. Parents report looking on in distaste as their adolescents choose romantic partners who do not represent the parents' particular ingroups (i.e., religion, ethnicity, socioeconomic status, etc.), instead opting for partners with other qualities (i.e., physical attractiveness, humor, and creativity) when making decisions about romantic relationships (Dubbs, Buunk & Taniguchi, 2013). Peers encourage adolescents to "go all the way" with partners (van de Bongardt, de Graaf, Reitz & Deković, 2014). The adolescents themselves try to find a way through the confusion created as their hormones rage, their parents redirect them from their romantic partners, and their friends encourage them to have sex with romantic partners (van de Bongardt et al., 2014). Despite the multifaceted nature of the difficulties faced by adolescents entering romantic relationships, only recently have scientists begun to look into the inner workings of these interactions (Collins, Welsh, & Furman, 2009). The current study seeks to determine the role of parents in adolescents' romantic relationships, and specifically, their emotional wellness after initiating sexual activity. The study focuses on sexual initiation in adolescence, which is influenced by several interacting pieces of adolescents' lives, including biological (Helfinstein & Poldrack, 2012), psychosocial (Kinsman, Romer, Furstenberg & Schwarz, 1998), and familial factors (Pick & Palos, 1995; Kirby & Lepore, 2007).

Specifically, the current study seeks to elaborate upon previous research showing higher numbers of depressive symptoms in sexually active adolescents (those who have engaged in sexual intercourse) than in adolescents who have not engaged in sexual intercourse, exploring the possibility that this correlation may be moderated by adolescents' attachments with their own parents and, consequently, their attachments with their romantic partners (Rector, Johnson & Noyes, 2003; Hallfors et al., 2004). The findings of this study may thereby connect adolescents' family experiences with current relationships and psychological functioning, adding to an ever-growing field of research to understand and assist those in the midst of adolescence. In order to truly understand the decisions, actions, and consequences undergone by adolescents, it is important to first understand the roots from which these individuals emerged: childhood. Therefore, the discussion of adolescents' environments is begun by exploring their early relationships with primary caretakers.

1.1 Childhood Through Adolescence

Parents are influential figures in the development and life course of their children (Bowlby, 1988; Bucx, van Wel & Knijn, 2012). From a young age, children are thought to develop specific attachment styles with their caretakers (Ainsworth & Bell, 1970; Bowlby, 1982). These attachment styles are based upon the responsiveness and ability of parents to meet their children's needs. There are three main attachment styles, known as *secure, ambivalent (also known as anxious-ambivalent),* and *avoidant (also known as anxious-avoidant)* (Ainsworth & Bell, 1970; Bowlby, 1982; Levine & Heller, 2010). They are often identified using a test known as the Strange Situation task (Ainsworth & Bell), in which a child and its attachment figure (typically its mother) are separated and

the child is observed for behavior during the absence and reunion. Children's behaviors during the mother's absence, as well as their ability to re-engage with and be soothed by the mother upon her return, classifies children's attachment styles (Ainsworth & Bell, 1970).

Children with secure attachments have a secure base from which to explore their world and to which they feel they can return without fear of persecution or condemnation (Bowlby, 1988). This base is usually a caretaker, and represents a place to which one feels one can run and always be met with a receptive, helpful, and responsive hand (Bowlby, 1988). With just the mother present, securely attached children often explore their surroundings, playing with toys and investigating the room. However, as they do so, they often return to or otherwise make contact with their mother, using her as a safe base. When the stranger enters the room while their mother is present, securely attached children are friendly and may engage with the stranger. However, when their mother leaves, they are very distressed. Securely attached children are easily soothed by their mothers when they return to the room (Bowlby, 1988; Ainsworth & Bell, 1970). Children with an ambivalent attachment style face some difficulty, as they feel they are met by irresponsive, unhelpful, or otherwise inappropriately responsive parents. These children desire a close relationship with their parents, and so become very sensitive to the slightest separation, becoming inconsolable when they cannot access their parents. However, because their attempts to gain attention are often not met with appropriate responses, there is often anger intermingled with their attempts. During the Strange Situation task, ambivalently attached children often show fear and avoidance of the stranger who enters the room. When the mother leaves, the children are distraught, but when she returns,

ambivalently attached children are often difficult to soothe, reaching towards her but sometimes pressing against her at the same time in order to push her away (Cicchetti & Carlson, 1989; Ainsworth & Bell, 1970; McLeod, 2015). Children with an avoidant attachment style experience their parents to be cold, irresponsive, and inaccessible. As a form of self-soothing, children with avoidant attachment styles outwardly deny their own needs. This is shown when they are separated from their parents, as children with an avoidant attachment style do not display extreme distress, instead appearing outwardly calm. When their parents return, they often avoid contact (Cicchetti & Carlson, 1989; Catlett, 2014). Each attachment style has been found to have corresponding behaviors and trajectories, with securely attached children being found to have more optimal outcomes while insecurely (ambivalently or avoidantly) are found to have sub-optimal long-term outcomes. Differential outcomes become apparent when studying adult relationships, as the patterns of responsiveness experienced throughout childhood with parents are often expected and perceived in relationships with both romantic and platonic partners (Feeney & Noller, 1990; Hazan & Shaver, 1987). Securely attached individuals, for instance, report greater trust of others whereas avoidantly attached individuals report less trust and closeness to others. Observing romantic relationships specifically, attachment influences become even more salient. Of the three attachment styles, secure attachment is marked by the longest lasting romantic relationships and the lowest reported levels of self-conscious anxiety. Avoidant attachment is marked by individuals who claim to have been in love the least, who are least likely to currently be in love, and who report they do not experience intense feelings of love. Ambivalent attachment is reported by individuals who also seek commitment in relationships, depend heavily upon

partners, and report obsessive rumination regarding their partners (Feeney & Noller, 1990). Considering the differential findings associated with each attachment style within romantic relationships, it should be noted that attachment styles can be pervasive influences from childhood and beyond.

Another theory of development was described by Erikson in 1968. It stated that, throughout life, individuals face various dichotomous conflicts which, when successfully navigated, endow the individual with strengths to face the next developmental stage (Erikson, 1968). Children rely on their caretakers, and so their response to many obstacles they face involve their relationships with parents and caregivers. Attachment theory states that, as the children grow older, they must determine whether they are capable of exploring the world and still having a safe base to which they may return (usually parents or caretakers) (Bowlby, 1988). In adolescence, Erikson posited, individuals face the psychological conflict of Identity vs. Role Confusion. During this time, adolescents attempt to find their place in the world by setting their own goals, defining their own values, and identifying the roles they wish to fill, often individuating from their family systems. Even within the Identity vs. Role Confusion phase, Marcia (1967) suggested that individuals face two substages: crisis and commitment. Adolescents must first seek, analyze, and identify possible identity choices as a part of an identity crisis. Then, having overcome and decided upon a course of action, adolescents progress to a committed phase of identity development in which they pursue their chosen identities. Emerging from a time when parents and caregivers made the decisions and controlled behaviors, individuals entering adolescence may find it to be a trying and confusing part of life as they seek to both become members of society and maintain a

feeling of continuity regarding who they are (Marcia, 1967). Their decisions may reflect a confusion and indecision consistent with this, and may even present a dissent from their parents.

Not yet understanding their role, adolescents often engage in an exploratory period in which they seek an identity that will define them throughout life. This self-examination in one's social, familial, and environmental context can be particularly strenuous for the individual's ego strength, resulting in a particular difficulty in coping with stress. Additionally, adolescents engaged in the exploratory period report confusion, unhappiness, agitation, and sporadic bouts of grandiosity interwoven with periods of self-doubt (Kidwell, Dunham, Bacho, Pastorino & Portes, 1995). G. Stanley Hall (1904) identified adolescence as a time of "sturm und drang," or "storm and stress," indicating that the passage through this part of life is often fraught with obstacles and difficulties. However, researchers now consider adolescence to be a time in which the adolescent's relationship with their parents can remain strong, even though it may struggle through storm and conflict (Hair, Moore, Garrett, Ling & Cleveland, 2008). Indeed, the configuration of the relationship is often tested, challenging the parents to allow the adolescent more freedom to develop autonomy. Still, even with the increased autonomy and decreased direct parental monitoring, parents continue to show an important impact on adolescents' behaviors, even above peers (Petersen, Leffert & Graham, 1995; Rink, Tricker & Harvey, 2007; van de Bongardt et al., 2014).

Some of parents' impact may be seen, even outside of the context of the parent-child relationship, when adolescents progress into romantic partnerships. These early experiences provide good interpersonal experience for adolescents, as they show an

increasing ability to maintain relationships, even in the face of adversity, and find themselves more capable of selecting mates with whom they are able to carry on a long-term relationship (Connolly & McIsaac, 2011). The Developmental-Contextual Theory, suggests that individuals are influenced by their context when entering the adolescent dating scene. According to this theory, individuals are influenced by their family, peers, and cultural norms, garnering from these contexts the significance of love and dating, the role one is to fill in a romantic relationship, and the age at which one should begin dating (Connolly & McIsaac, 2011). Again, this theory underscores the importance of adolescents' relationships with others—especially family and caretakers—in the establishment of romantic relationships. Expanding upon their experiences with caretakers, adolescents progress to these relationships which are unlike any other they have ever before experienced with family or peers.

Noting that platonic and dating relationships share, to some extent, a certain closeness and interaction type, researchers have suggested that the expectation of sexual activity is one indicator which characterizes romantic relationships but not platonic ones (Collins et al., 2009). Sex or sexual activity can have multiple meanings (Peterson & Muehlenhard, 2007), but the current study focuses primarily on other research in which the terms have been assigned a specific definition (Rector, Johnson & Noyes, 2003; Hallfors et al., 2004). Therefore, for the purposes of this study, sex is discussed as sexual intercourse, as occurs when a penis enters a vagina (Bersamin, Fisher, Walker, Hill & Grube, 2007). Similarly "sexual initiation" is used to denote the onset of sexual intercourse.

1.2 Adolescent Relationships and Sex

In adolescence, dating is a normal sign of healthy development (Collins, 2003). These relationships are typically defined by a heightened intensity compared to platonic relationships, and often involve displays of affection and expectation of imminent or future engagement in sexual intercourse (Collins et al., 2009). They are increasingly prevalent with age, as 36% of 13-year-olds, 53% of 15-year-olds, and 70% of 17-year-olds have reportedly engaged in a romantic relationship during the past 18 months (Carver, Joyner & Udry, 2003).

Adolescents who are in an exclusive romantic relationship are more likely to have sex earlier than those who are not in such a relationship (United States Department of Health and Human Services, 2015). Adolescents are increasingly choosing to engage in intercourse earlier and with a greater number of partners (Nakkab, 1997). Though sex before age fifteen is statistically normative, it is not without its risks: "From a strictly developmental perspective, young adolescents are generally less well equipped cognitively, emotionally, and socially to manage the challenge of minimizing risk when they engage in intercourse" (Carver et al., 2003; Nakkab, 1997, p. 24). Indeed, the effects of earlier sexual activity are multifaceted and, in many cases, persist across time.

1.2.1 Physical Risks.

Sexual intercourse carries inherent physical risks, among them, unintended pregnancy and sexually-transmitted disease infection. With a recent upswing in the age of marriage, there has been an increase in the number of sexual partners in adolescence and young adulthood, behaviors associated with increased risk of sexually-transmitted diseases and unintended pregnancies (Matkins, 2013). Sexually transmitted diseases can have persistent and severe deleterious effects on an adolescent

(e.g., infertility, risk of ectopic pregnancies, cervical cancer, and death), contributing to the general risks associated with adolescent sexual activity (Gewirtzman, Bobrick, Conner, & Tyring, 2011; Matkins, 2013).

1.2.2 Psychological Correlates. Because adolescents engage in relationships in the context of developing an identity and separating from what they have known to cleave to the unknown of their imminent adult existence, these relationships are often full of extreme emotions, both highs and lows (Larson, Clore & Wood, 1999). An adolescent's sexual initiation is an event which can have psychological correlates, such as self-confidence, love, and security, or humiliation, shame, and guilt (Birnbaum, 2007). In fact, research has recently focused upon a possible relationship between adolescent sexual activity and depressive symptoms (Rector, Johnson & Noyes, 2003; Hallfors et al., 2004).

1.3 Depression

Thus far, depression has been denoted by such terms as "depressive symptoms." However, it is important to note what depression clinically means, and how it will be used in the context of the current study. The American Psychiatric Association (APA) recognizes multiple depressive disorders in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5; American Psychiatric Association, 2013). Each represents an individual set of symptoms and behaviors, but the general consensus is that depressive symptoms consist of sad, despondent, or irritable mood and related loss of physical motivation and cognitive changes (American Psychiatric Association, 2013). Adolescents with a diagnosis of a depressive disorder are about seven times more likely than those without depression to report current or lifetime suicidal ideation, lifetime incidence of having a plan of how they would commit suicide, and lifetime incidence of

having attempted suicide (Lewinsohn, Rohde & Seeley, 1996). Among children and adolescents with a depressive disorder diagnosis, over half will attempt suicide at some time, and at least seven percent will eventually die by suicide (National Alliance on Mental Illness [NAMI], 2010). Recently, research has shown a link between adolescent sexual activity and depressive symptom onset, with those having sex in adolescence exhibiting more depressive symptoms and reporting more suicidal attempts than those who have not had sex (Rector, Johnson & Noyes, 2003; Hallfors et al., 2004).

Evidence for the association between sexual intercourse and depressive symptoms or clinical depression has been mixed, as some findings indicate that sexual activity in adolescence leads to increased depressive symptoms (Rector, Johnson & Noyes, 2003; Hallfors et al., 2004), while others suggest that such early sexual activity and depression may both be explained by other biological, social, and psychological causes (Meier, 2007). Longitudinal research has shown that depression at baseline does not predict sexual experimentation, but adolescents experience a significant increase in depression after sexual initiation, indicating validity in the former findings that sexual activity in adolescence leads to increased depressive symptoms (Hallfors et al., 2005). There is evidence that sexual activity and depression are related (Rector, Johnson & Noyes, 2003; Hallfors et al., 2004), and there is even research to support neurochemical and biological changes as a correlate of sexual activity (Bush, 2010). There is not, however, a linear relationship between sexual activity and depression. That is to say, not all who have sex in adolescence become depressed. Multiple researchers and authors have noted the importance of considering a biopsychosocial model when discussing this phenomenon (Hallfors et al., 2005; Meier, 2007). This conceptualization would consider that

biological, psychological, and social factors might work together to determine whether an adolescent will experience depressive symptoms after sexual intercourse. When considered this way, sexual initiation and depression are more likely to co-occur in the presence of other factors. Researchers are currently exploring how sexual activity may be understood within the context of early familial relationships—how their early lives with parents and family members impact their future responses to sexual activity. The current study seeks to examine the link between attachment and depression after sexual initiation.

1.4 Adolescent Sexual Activity and Depression—and Attachment.

The Romantic Attachment Theory posits that, beginning in adolescence, individuals seek to gain from romantic partners what they had with parents when they were younger, a relationship marked by much the same responsiveness they anticipated from their parents (Hazan & Shaver, 1987; Ainsworth & Bell, 1970). As with parents, the attachment between an individual and a romantic partner can be either secure, ambivalent, or avoidant, meaning the individual can either feel they may turn to their partner in times of need or for some reason feel they cannot or should not seek comfort from a romantic partner (Connolly & McIsaac, 2011; Feeney & Noller, 1990). This theory was established when researchers noted that some individuals in romantic relationships often feel safer and more at ease when their partner is present (secure), but other individuals seemed to worry that their partners did not love them (ambivalent) or, alternatively, individuals seemed to avoid romantic relationships and closeness in general (avoidant) (Hazan & Shaver, 1987; Feeney & Noller, 1990).The latter two categories were most often found in those who had experienced difficulty in securely attaching to their primary caregiver when they were younger. Therefore, it was posited that a baby's

attachment has a ripple effect which extends far beyond childhood and into the romantic relationships of adolescence and adulthood (Hazan & Shaver, 1987; Feeney & Noller, 1990), echoing the words of Bowlby (1979, p. 129), the founder of attachment theory, when he noted "attachment behavior [characterizes] human beings from the cradle to the grave."

Early in development, children with secure attachments to their caregivers explore the world without fear of punishment, and feel confident in their ability to return to an accepting, responsive base when situations go awry. Consequently, they develop a sense of independence and self-confidence which allows them to trust the world with which they interact, knowing they can always depend on those around them (Davis, Shaver & Vernon, 2004). In adulthood, these individuals enter friendships and romantic relationships, confident that their relationship partners will be reliable, responsive, and helpful (Welch & Houser, 2010; Davis, Shaver & Vernon, 2004). As children, they were able to explore their world, and as adolescents and adults, they are more likely to feel self-confident when facing distressing situations, minimizing their need to seek others for support and validation (Davis, Shaver & Vernon, 2004). Perhaps due to the trust they have with relationship partners, those with secure relationship attachment styles have been found to be least likely to engage in sexual relationships outside of committed relationships, more likely to participate in long-term committed relationships, and more likely to experience sexual intercourse more frequently (Tracy, Shaver, Albino & Cooper, 2003). They also report enjoying sexual intercourse and feeling more confident about their sexual performance than their insecurely attached counterparts (Schachner & Shaver, 2004; Tracy, Shaver, Albino & Cooper, 2003; Tracy et al., 2003). Adolescents

with secure attachments to their partners engage in more serious and supportive romantic relationships than their insecurely attached peers. Presumed to have also had more secure attachments with their caretakers, they report the most positive feelings associated with sexual activity, feeling the most competent about their own abilities, and having the most sex drive of all three attachment styles (Tracy et al., 2003).

Children with an ambivalent attachment style often have an inconsistent environment which may or may not greet them with the responsiveness and assistance they need. Continuing to seek the desired response, these children vigilantly monitor the situation for any indication of impending separation, and react vehemently against any suggestion of it. When such separations inevitably occur, ambivalently attached children express extreme distress, almost inconsolable even when the caretaker returns because there is a frustration which emerges when a child's repeated attempts to gain comfort or security are met with negligible or inappropriate responses (Cicchetti & Carlson, 1989). As they get older, these children remain highly sensitive to indications of trouble or change in the environment, detecting even trace amounts of change in others' faces (Fraley, Niedenthal, Marks, Brumbaugh & Vicary, 2006). In romantic relationships, these individuals worry that their partners are not invested, that they are going to leave, or that they are otherwise not content in the relationship. They may engage in activating strategies, techniques used in order to re-engage a partner when one feels another slipping away, such as seeking continuous contact with the partner and staying with a partner despite multiple "red flags" for fear of being unable to find someone else and remaining alone (Levine & Heller, 2010). Often, these individuals are known colloquially as "clingy," and may unintentionally push their partners away, only serving to reinforce

their tendency to draw conclusions that others will leave them (Levine & Heller, 2010; Davis, Shaver & Vernon, 2004). Adolescents and adults who experienced an ambivalent attachment with their parents when they were children have been found to use sex to reassure them of the good standing of their relationship, to believe that refusal of sex will result in their partners rejecting them, and to not enjoy sex as much due to worry during the act—resulting in lower sexual and general relationship satisfaction (Davis et al., 2004; Impett & Peplau, 2002). Perhaps in order to reduce their anxiety, these individuals have been found to be more likely to use drugs or alcohol when engaging in sexual intercourse (Tracy et al., 2003). They reported having been in love more often than adolescents with avoidant or secure attachment styles, but reported the fewest passionate feelings regarding sex, citing an overwhelming sense of fear of rejection (Tracy et al., 2003).

Children with avoidant attachment styles often experience an environment in which their attempts to gain a response from caregivers are met with anger and rejection. These children are likely met with disdain and withdrawal when they exhibit negative affect, especially displays of distress. Learning quickly that they must comfort and provide for themselves, depending on nobody, these children do not outwardly display the extreme distress seen in ambivalently attached children when separated from their parents. Instead, when separated from caregivers to whom they are avoidantly attached, children often seem to hardly notice the absence. Upon re-entry of the attachment figure, the child does not seek comfort, but instead actively avoids engagement with the individual (Davis et al., 2004). In order to have their basic needs met, these children often rely upon “compulsive self-reliance,” a term developed by Bowlby (1982) to describe

these children's desertion of support-seeking activities. Growing up, individuals with an avoidant attachment style tend to identify intimacy as a loss of independence, and often do not actively seek romantic relationships. When they do engage in such relationships, they are less willing to self-disclose, do not often seek reassurance, and are less emotionally responsive to their partners (Levine & Heller, 2010; Davis et al., 2004). Adolescents with avoidant relationship attachment styles typically avoid sex, but when they do engage in intercourse, they typically use it for the purpose of losing their virginity or impressing their peers (Schachner & Shaver, 2004; Davis et al., 2004). Like ambivalently attached individuals, those with avoidant attachments are more likely to use drugs or alcohol when engaging in sexual intercourse, perhaps due to their higher rate of experience of erotophobia, the fear of sexual intercourse (Schachner & Shaver, 2004; Tracy et al., 2003). Adolescents and adults with an avoidant attachment style report lower levels of passion and steeper decreases in passion over the course of a sexual relationship (Davis et al., 2004). These findings indicate those with avoidant attachment experience less enjoyment of intimate partner relationships (Schachner & Shaver, 2004). Adolescents with avoidant relationship attachment styles express the fewest positive feelings associated with sexual activity, and they report regarding sex as much less important than do any other individuals (Tracy et al., 2003).

As can be seen in participants with avoidant and ambivalent attachment to their partners, sexual activity in adolescence is not always a positive experience. Indeed, research has recently focused upon a possible relationship between adolescent sexual activity and depressive symptoms (Rector, Johnson & Noyes, 2003; Hallfors et al., 2004). Studies within the field of attachment have found that one's relationship with his or her

parents as a child may have long-term and impactful implications on his or her romantic relationships in adolescence and adulthood (Levine & Heller, 2010). Especially pertinent to the current study is the association between attachment style and experience of sex in adolescence and adulthood.

1.5 The Model of the Current Study

In a stage of life in which individuals are establishing their identities, some engage in sexual activity and emerge stronger and more self-confident, whereas others struggle through the experience and emerge with feelings of inadequacy, embarrassment, regret, and depression. Attachment style with one's parents and partner has been found to be a significant predictor of one's response to first sexual experience, as those who are securely attached to parents have more supportive and secure relationships, feel more competent about their sexual prowess, and report more positive feelings about sexual activity. Those with insecure attachment styles, though, report significantly fewer positive feelings, a permeating fear of rejection, and lack of self-confidence after early sexual experiences.

In the current study, it is hypothesized that adolescents who have engaged in sexual intercourse will exhibit more depressive symptoms and/or a history of depression, as previously found by Sabia & Rees (2008), Hallfors et al. (2005), and Jamieson and Wade (2011). It is further hypothesized that attachment to first sexual partner will be highly associated with retrospective reports of attachment to caretakers, as attachment has been found to be consistent throughout phases of development, and it is theorized that individuals with each caretaker attachment style enter into romantic relationships seeking much the same characteristics in a mate (Feeney & Noller, 1990). The current study seeks

to add to the existing research by hypothesizing that the variance in level of depressive symptoms among participants will be partially explained by an interaction between history of parent-child attachment and romantic partner attachment and first sexual activity, such that sexually active participants with avoidant or ambivalent attachments with their caretakers and romantic partners will experience greater levels of depressive symptoms after sexual activity than those with secure attachments.

CHAPTER 2: METHODS

2.1 Participants

Participants were 299 unmarried psychology undergraduate students (225 females and 74 males) without children, 18 to 20 years of age (M = 19.02, SD = 0.81), recruited through the SONA Psychology Department research pool at the University of North Carolina at Charlotte. Participants were compensated one half hour of research credit towards class requirement for an estimated half hour of study participation. Responses of individuals reporting a history of rape or sexual coercion on a demographic questionnaire were excluded from all further analyses (N_{rape}=36).

2.2 Procedures

Participants were first prompted to give consent to participating in the study (Appendix A). After acknowledging their confidentiality rights, participants were administered four questionnaires, assessing demographics, retrospective caretaker-child attachment, romantic relationship attachment, and endorsement of depressive symptoms.

After they completed all scales, the participants were directed to a debriefing statement (Appendix G), which provided them with contact information for helpful resources outside of the research setting.

2.3 Materials

2.3.1 Demographics. Participants were administered a survey of demographics (Appendix B). Designed specifically for the needs of this study, this questionnaire

contains 7 questions assessing participants' biological sex, current age, history of depression, history of rape or sexual coercion, context of participants' first sexual intercourse (whether in a committed relationship or not), and age at sexual initiation.

2.3.2 Attachment to Primary Caretaker. Participants were administered the Retrospective Attachment Scale (RAS; Appendix C) to assess their retrospective perceptions of their relationships with their caretakers throughout participants' childhood. Based upon The Love Quiz published by Hazan and Shaver in 1987, the RAS is one item which encourages participants to categorize themselves into one of three statements, based upon the three attachment styles identified by Ainsworth and Bell (1970). Initially, The Love Quiz was used to assess individuals' attachments with their romantic partners, but since its inception, the questionnaire has been modified to assess other relationships' attachment (Tracy et al., 2003). Research has indicated a consistency in the frequency of attachment styles, as Hazan and Shaver's (1987) results found nearly identical frequencies of each attachment style to those findings identified by Ainsworth and Bell in the 1970 Strange Situation study (Feeney & Noller, 1990). Findings from this measure have shown a significant correlation between individuals' reports of their attachments with parents and of their attachments with romantic partners, indicating consistency of attachment styles across caretaker-child and romantic relationships (Feeney & Noller, 1990). Therefore, it is expected that the modification of the Hazan and Shaver (1987) Love Quiz to the RAS will accurately assess for individuals retrospective reports of caretaker-child attachment.

2.3.3 Attachment to First Sexual Partner. Participants were administered the Retrospective Romantic Partner Attachment Scale (RRPAS; Appendix D; adapted from

The Love Quiz by Hazan & Shaver, 1987) to assess their attachment style to their first sexual partner. The scale has been modified to have one item, encouraging the participant to characterize him or herself into a relationship attachment style description.

2.3.4 Depression. Participants were administered the Center for Epidemiologic Studies Depression Scale-Revised (CESD-R; Appendix E; Eaton, Muntaner, Smith, Tien & Ybarra, 2004) and the seven depression-related items of the 21-item version of Depression Anxiety Stress Scale (DASS; Appendix F; Lovibond & Lovibond, 1995) to assess current depressive symptoms. The 20-item CESD-R assesses participants' reported depressive symptoms, including sleep difficulties, appetite changes, and emotional distress using a range of answer options ("Not at all or less than one day a week" to "Nearly every day for two weeks"). Summing the results of the Likert scale of each answer choice, ranging from 0 to 4, results in a total score from 0 to 80. Though this questionnaire assesses only current depressive symptoms, it is expected that history of depression, as recorded in the demographics questionnaire on a timeline on which participants are asked to identify times in their lives at which they were depressed, will account for a large portion of those who may have had depressive symptoms but do not currently endorse them.

The seven-item depression subscale of the DASS-21 was used for the current study to assess participants' reported feelings of depression, including lack of motivation, anhedonia, hopelessness, feelings of worthlessness, and thoughts that life is meaningless using a range of answer options ("Did not apply to me at all-NEVER" to "Applied to me very much, or most of the time-ALMOST ALWAYS"). Summing the results of the Likert scale of each answer choice, ranging from 0 to 3, and multiplying it by two, results

in a total score from 0 to 42, with higher scores indicating greater experience of depression.

CHAPTER 3: RESULTS

Analyses were conducted in three phases. In Phase 1, I tested whether those who have engaged in sexual intercourse report more depressive symptoms. In Phase 2, I tested whether attachment style to first sexual partner was associated with retrospective reports of attachment to caretakers. In Phase 3, I tested whether attachment to primary caretaker moderated the association between sexual activity and depression, such that sexually active participants with insecure attachments with their caretakers would experience greater levels of depressive symptoms after initial sexual activity than those with secure attachments. I furthermore tested whether insecure attachment to first sexual partner predicted greater depressive symptoms. Because two measures of depression were used, Phase 1 and 3 analyses were conducted twice: once using the CESD-R and once using the DASS-21 Depression Subscale. A demographic questionnaire was administered, and results reported (Table 1). Participants were asked whether they had engaged in sexual intercourse in the past ($N_{had\ sex}$=181 [$N_{had\ sex}$ x $_{female}$=141, $N_{had\ sex}$ x $_{male}$=40], $N_{no\ sex}$=82 [$N_{no\ sex}$ x $_{female}$=51, $N_{no\ sex}$ x $_{male}$=31]), asked to identify themselves among three types of attachment to their closest primary caretaker ($N_{avoidant}$=26, N_{secure}=230, $N_{ambivalent}$=7), asked to identify themselves among three types of attachment to their first sexual partner ($N_{avoidant}$=30, N_{secure}=114, $N_{ambivalent}$=37), and asked whether they had ever been raped or sexually coerced (N_{rape}=36). Responses of individuals reporting a history of rape or

sexual coercion on a demographic questionnaire were excluded from all further analyses. Analyses were conducted using IBM SPSS, Version 23.

3.1 Analyses

Hypothesis 1: Adolescents who have engaged in sexual intercourse will exhibit more depressive symptoms compared to adolescents who have not engaged in sexual intercourse.

To test this hypothesis, I conducted independent samples t-tests comparing depressive symptoms in those who had (N=181) and had not had sex (N=82). Results examining depressive symptoms using the DASS-21 Depression Subscale suggested that sexual experience was unrelated to depressive symptoms, $t(135)=-1.50$, $p = 0.14$ (M_{hadsex} =6.22, SD_{hadsex}=7.51, M_{nosex} =7.90, SD_{nosex}=8.84). Similarly, results testing depressive symptoms using the CESD-R also suggested that sexual experience was unrelated to depressive symptoms, $t(135)=-1.46$, $p = 0.15$ (M_{hadsex} =10.9, SD_{hadsex}=10.1, M_{nosex} =13.1, SD_{nosex}=11.9). Thus, Hypothesis 1 was not supported.

Hypothesis 2: Attachment style to romantic partner will be associated with retrospective reports of attachment to caretakers.

To test this hypothesis, I conducted a 3 x 3 Chi-Square test, comparing the distribution of participants across the three attachment styles to primary caretaker (ambivalent, secure, and avoidant) and the distribution of participants across the three attachment styles to first sexual partner (ambivalent, secure, and avoidant) for participants reporting they had engaged in sexual activity. The analysis had estimated power to detect a medium effect (phi^2 = 9%) of 0.99 with $p = 0.05$, 2-tailed. The results suggest no significant pattern of attachment style continuity, χ^2 (4, N = 181) = 6.12,

p=0.19, phi^2 = 0.03 (Table 2), even among only those who engaged in their first sexual encounter in the context of a committed relationship, χ^2 (4, N = 128) = 7.30, p=0.12, phi^2=0.04. Thus, Hypothesis 2 was not supported.

> *Hypothesis 3a: Attachment to primary caretaker will moderate the association between sexual activity and depression, such that sexually active participants with insecure attachments with their caretakers will experience greater levels of current depressive symptoms after initial sexual activity than those with secure attachments.*

To test this hypothesis, I performed two 2 (sexual history vs no sexual history) X 3 (secure vs avoidant vs ambivalent) ANOVAs. In the first analysis, the dependent variable was measured using the CESD-R. The power for these analyses to detect an effect of moderate size (eta^2 =0.06) was quite high (>0.99). Due to unequal sample sizes across groups, estimated marginal means are reported for the main effects (see Figure 1). The analysis revealed a nonsignificant interaction effect, F(2, 257) = 2.88, p =0.058, *partial* eta^2 = 0.022, p=0.06, SS=600.4, MS=300.2, (Table 3), a nonsignificant main effect for sexual activity (Table 4), F(1, 257) = 2.40, p = 0.12, *partial* eta^2 =0.002, and a significant main effect for attachment type to primary caretaker (Table 5), F(2, 257) = 3.85, p=0.022, *partial* eta^2 = 0.04. The CESD-R Total is higher in those reporting avoidant (M = 14.38, SE = 2.63, 95% Confidence Interval (CI) [12.27, 20.80]) and ambivalent (M=20.43, SE=5.05, 95% CI [13.22, 28.53]) attachments to caregivers than in those reporting secure attachments (M = 10.79, SE = 0.65, 95% CI [9.62, 12.49]).

A second 2 (sexual history vs no sexual history) X 3 (secure vs avoidant vs ambivalent) ANOVA was conducted predicting depression measured with the DASS-21

Depression Subscale (Figure 2). Again, estimated marginal means are reported for the main effects. Consistent with findings for the CESD-R, this analysis revealed a nonsignificant interaction effect, $F(2, 257) = 0.18$, $p = 0.84$, *partial eta*^{2} = 0.001, *SS*=21.5, *MS*=10.8, (Table 6), a nonsignificant main effect for sexual activity (Table 7), $F(1, 258)=2.38$, $p =0.12$, *partial eta*^{2} =0.009, and a significant main effect for attachment type to primary caretaker (Table 8), $F(2, 257) = 3.87$, $p = 0.02$, *partial eta*^{2} = 0.029. As with results for the CESD-R, depression measured using the DASS-21 Depression Subscale was higher for those reporting avoidant (*M* = 8.46, *SE* = 1.53, 95% CI [5.87, 12.33]) and ambivalent (*M*=14.00, *SE*=3.41, 95% CI [8.19, 19.81]) attachments to caregivers than in those reporting secure attachments (*M* = 6.22, *SE* = 0.51, 95% CI [5.41, 7.59]). In sum, neither set of analyses found evidence of an interaction between sexual history and attachment predicting depression, Thus, Hypothesis 3a was not supported.

Hypothesis 3b: Among those who reported having had sex, insecure attachment to sexual partners will be related to greater current depression.

I tested this hypothesis by conducting two one-way ANOVAs. The sample size (*N*= 181) provided estimated power to detect a medium effect (*eta*^{2} = 0.06) of 0.75 for both one-way ANOVAs. I first conducted a one-way ANOVA comparing the means of CESD-R Total scores across the three attachment styles to first sexual partner (avoidant, secure, and ambivalent). Results suggested that participants' attachment to first sexual partner did not predict their depression, measured using the CESD-R, $F(2, 179) = 3.02$, p=0.051, *eta*^{2} = 0.03, $M_{avoidant}$=13.2, M_{secure}=9.32, $M_{ambivalent}$=12.68.

I conducted a second one-way ANOVA comparing the means of DASS-21 Total Depression Subscale scores across attachment to first sexual partner. Results suggested that depression measured with the DASS-21 did differ by attachment style to first sexual partner, $F(2, 179) = 3.59$, $p=0.03$, $eta^2 = 0.04$. However, multiple comparison tests using the Bonferroni correction ($p=0.05$) indicated that the DASS-21 scores for those who reported avoidant ($M= 8.07$, $SD=9.76$), ambivalent ($M=7.84$, $SD=8.20$), and secure ($M=4.98$, $SD=5.95$) attachments to their first sexual partners did not significantly differ from each other. Thus, Hypothesis 3b was not supported in either analysis.

DISCUSSION

The current study set out to examine the relations among adolescent sexual activity, depressive symptoms, and attachments to primary caretaker and first sexual partner. I hypothesized that depressive symptoms would be higher in those who had engaged in sexual intercourse compared to those who had not, but this was not supported by the current data. I also expected that one's attachment style to one's primary caretaker would be associated with one's attachment style to one's first sexual partner; however again, this was not supported by the data. Finally, I hypothesized that either the attachment style to one's primary caretaker or the attachment style to one's first sexual partner would moderate the relation between depressive symptoms and engaging in sexual intercourse, such that sexually active participants with insecure attachments to their primary caregiver or to their first sexual partner would report greater depressive symptoms than those with secure attachments. However, this, too, was not supported by the data.

Previous research found that adolescents who engaged in sexual activity were more likely to exhibit depressive symptoms than those who did not engage in sexual activity (Rector, Johnson & Noyes, 2003; Hallfors et al., 2004). I hypothesized that this would be validated by the current data. However, findings of the current study showed that engaging in sexual intercourse was not significantly related to depressive symptoms. That this hypothesis was not supported by the current data may have multiple reasons, including the disparate factors between the current study and the study by Rector, Johnson & Noyes (2003). The Rector et al (2003) and Hallfors et al. (2004) studies identified individuals as "depressed" based upon participants' responses to a single item,

assessing how often during the past seven days the individual "felt depressed". In contrast, the current study used two measures to identify clinical symptoms of depression in participants. A comparison between the studies, postulating why Rectors et al. (2003) and Hallfors et al. (2004) found a difference between adolescents who had engaged in sexual activity and those who had not, and the current study did not, would be difficult. The former studies relied upon a single-item measure which, for younger adolescents with limited psychological knowledge, may have assessed for a general sense of emotional malaise in the past week, perhaps related to guilt, fear, stress, or dissatisfaction which might be related to the sexual activity. However, the current study assessed older college students enrolled in psychology classes for clinical depression symptoms, including such characteristics as changes in appetite and irritability, which would be related less to sexual activity and more to a clinical status. Furthermore, the previous study (Rector et al., 2003) as well as the Hallfors et al. (2004) study used data from teenagers across the nation, as opposed to the current study which used a sample from a state university in the southeastern United States. It may be that the population from which the current study's participants were drawn might include a more well-adjusted or at least upwardly-mobile sample than a sample from the broader United States, based simply upon their enrollment in a university. Indeed, the average scores on measures of clinical depression were low for the current sample, as the average total for the CESD-R (range of 0-80) was 11.34, and the average total for the DASS-21 Depression Subscale (range of 0-42) was 6.59. Furthermore, the sample from the current study has a higher average age than either previous study, which might provide a cushion of time for the current study's participants, a time during which depressive symptoms resulting from

sexual initiation might be alleviated or treated, a factor beyond the scope of the current study. The scales assessing depression which were used in both previous and the current study focus on current depressive symptomology, whereas the individual's first sexual experience in the current study may have been years earlier. During that time, many changes may have occurred, including new romantic and sexual partners, additional sexual experiences, changes in context, growth in cognitive, emotional, and social skills, different ways of viewing oneself and one's sexual experiences, and altered expectations. While the average age of sexual onset was not reported for either the Hallfors et al. (2004) study or the Rector et al. (2003) study, the average age for sexual onset in the current study was 16 years(range: 0-21, M_{male}=15.98, M_{female}=16.59), meaning that an average of two to four years had elapsed since first sexual encounter. It is possible, as each of the other studies was conducted on younger adolescents, that less time had elapsed. Further research might explore the relationship between age of first sex and attachment. However, the current study's general lack of insecurely attached individuals would make conclusions to this end perhaps unreliable. And in general, it is possible that individuals with depression may engage less frequently in social activities that would lead to sexual encounters.

The second hypothesis was that attachment style to first romantic partner would be associated with retrospective reports of attachment to primary caretaker. Previous research found that individuals with insecure (ambivalent or avoidant) attachment styles to their parents often developed insecure attachments with romantic partners (Hazan & Shaver, 1987; Ainsworth & Bell, 1970). However, the current study did not find an association between the two types (parental and romantic) of attachment, even when only

considering those who engaged in their first sexual encounter in the context of a committed relationship. The second hypothesis was not supported by the current data, though many of the same questionnaires were used for the current study as were used for the Hazan and Shaver (1987) study. However, even the researchers of the previous study noted that security and insecurity with a romantic partner is not solely predicated on attachment to one's primary caregiver, but also depends upon a number of internal and external factors. The current study asked solely about the romantic attachment to one's first sexual partner and may have neglected a number of other important factors impacting participants' attachment styles with romantic partners. For example, one's recollection of and experiences with their first sexual partner may be influenced by the maturity of the individual as well as the relationships that they have had since then. In addition, past research focused on the romantic relationship which each participant considered the most "important," the recency or significance of which is unknown due to the nature of the study. The current study, however, focused specifically on the romantic relationship which produced the participant's first sexual encounter, which may or may not have been the most "important" had the participant been asked to classify it as such.

The final hypothesis of the current study was that attachment to primary caretaker or romantic partner would moderate the association between sexual activity and depression, such that sexually active participants with insecure attachments with their caretakers or first sexual partner would report greater levels of depressive symptoms than those with secure attachments. Previous research has indicated that compared to those with secure attachments, those with insecure attachments to their parents engaged in sexual intercourse for reasons other than intimacy, including self-assurance of

relationship stability and development of reputation with peers (Impett & Peplau, 2002; Schachner & Shaver, 2004; Davis et al., 2004). Further research found that those reporting insecure attachments were less likely than their securely attached counterparts to express positive feelings associated with sexual activity or feel competent in their sexual abilities (Tracy et al., 2003). Therefore, the current study sought to determine whether attachment to primary caretakers or first sexual partners could have a moderating effect on depressive symptoms exhibited by those who had engaged in sexual activity. However, no such effect was found. Although participants' motives for engaging in their first sexual encounter were beyond the scope of the current study, it may be that individuals with an insecure attachment to their primary caregiver or first sexual partner report more unhealthy reasons for engaging in their first sexual experience but this does not necessarily contribute to greater levels of depressive symptoms unless other risk factors are present. Furthermore, their feelings about the act in retrospect were not examined. Future research in this field may benefit from including items which assess the motivation for sexual initiation and retrospective feelings regarding first sexual encounter.

The current study was an attempt to extend the findings of previous research, in an effort to more fully understand the association of adolescent sexual activity, attachment, and depression. However, none of the hypotheses were supported by the current study. Limitations of the current study may have contributed to the lack of significant findings. For instance, the measures of both types of attachment had face validity and were measured by a single item which may have influenced the responses of participants, as responses, especially in relation to primary caretaker attachment, were

skewed towards an abundance of securely attached individuals and a dearth of avoidantly and ambivalently attached individuals. Though about half of all individuals are thought to be identified as securely attached to their primary caretaker and the other half to be divided almost evenly between ambivalent and avoidant attachment styles (Hazan & Shaver, 1987), the current findings identified the vast majority of participants as securely attached to their primary caretaker, and yielded only 7 participants who identified as ambivalently attached. Therefore, administering measures with more construct validity to a wider and perhaps more representative sample might impact the outcomes of future research.

Additionally, the current study was completed at a state university in the southeastern United States. Those who attend university may have SES or other characteristics necessary for such an academic undertaking (e.g., social and familial support, self-motivation, etc.) which might also act as protective factors against depression and which might not be characteristic of more widely sampled populations. Future research might examine the retrospective accounts of one's relationship with one's primary caretaker and one's first sexual encounter. How was sexual activity portrayed in discussions with one's primary caretaker? How important was one's relationship with one's first sexual partner in the development of the person one would later become? Why did one engage in one's first sexual encounter? Looking back, does one resent or regret one's first sexual encounter? It may be that, in gathering the qualitative data, researchers might better understand and more thoughtfully contribute to the quantitative data. Indeed, it is likely it is not the act of having sex that matters, but the maturity, context and aftermath that could impact depression

It should, therefore, not be a deterrent to future researchers that the current hypotheses were not supported. Future research should be used to better understand the ambivalence of the field as it currently stands. Gathering data from individuals of different ages, focusing on responses to different measures, casting a wider sampling net in order to gather more representative samples of attachment styles, and securing more qualitative data are only a few of the options for those seeking to further develop this growing field. Depression is a hardship faced by a multitude of young adults. Understanding its relationship with attachment and sexual activity might better provide prevention and intervention so that individuals might avoid or more easily overcome depressive symptoms.

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Table 1

Demographics Descriptive Statistics

Variable	Mean	SD	Min.	Max.	Freq.
Gender					192(F); 71(M)
Age	19.02	0.8	18	20	
Dep. History Total	1.81	2.11	0	12	
Age at First Sex	16.45	1.90	0	20	
Number of Sex Ptrs	3.43	4.04	1	29	
Committed Relationship					128(Y); 53(N)

Table 2

Results of Chi-square Test and Descriptive Statistics for Attachment Style by Relationship

	First Sexual Partner Attachment		
Primary Caretaker Attachment	Avoidant	Secure	Ambivalent
Avoidant	5 (16.7%)	7 (6.1%)	6 (16.2%)
Secure	24 (80%)	105 (92.1%)	31 (83.8%)
Ambivalent	1 (3.3%)	2 (1.8%)	0 (0.0%)

Note. $\chi^2 = 6.12$, df = 4. Numbers in parentheses indicate column percentages. $p = 0.19$

Table 3

Descriptive Statistics for CESD-R for Interaction Between Attachment to Primary Caretaker and Sexual History

	Sexual History	
Primary Caretaker Attachment	Has Had Sex	Has Not Had Sex
Avoidant	N=18	N=8
	Mean=10.94	Mean=22.13
	SD=9.08	SD=18.49
Secure	N=160	N=70
	Mean=10.36	Mean=11.76
	SD=9.38	SD=10.58
Ambivalent	N=3	N=4
	Mean=24.00	Mean=17.75
	SD=17.06	SD=11.84

Table 4

Descriptive Statistics for CESD-R and Sexual History

History of Sex	N	Mean	SD
Yes	181	10.65	9.65
No	82	13.06	11.86

Table 5

Descriptive Statistics for CESD-R and Attachment to Primary Caretaker

Attachment Style	N	Mean	SD
Avoidant	26	14.38	13.40
Secure	230	10.78	9.81
Ambivalent	7	20.43	13.35

Table 6

Descriptive Statistics for DASS-21 Depression Subscale for interaction between Attachment to Primary Caretaker and Sexual History

	Sexual History	
Primary Caretaker Attachment	Has Had Sex	Has Not Had Sex
Avoidant	N=18	N=8
	Mean=7.44	Mean=10.75
	SD=6.39	SD=10.42
Secure	N=160	N=70
	Mean=5.78	Mean=7.23
	SD=7.27	SD=8.56
Ambivalent	N=3	N=4
	Mean=14.00	Mean=14.00
	SD=10.58	SD=9.38

Table 7

Descriptive Statistics for DASS-21 Depression Subscale and Sexual History

History of Sex	N	Mean	SD
Yes	181	6.08	7.28
No	82	7.90	8.84

Table 8

Descriptive Statistics for DASS-21 Depression Subscale and Attachment to Primary Caretaker

Attachment Style	N	Mean	SD
Avoidant	26	8.46	7.78
Secure	230	6.21	7.69
Ambivalent	7	14.00	9.02

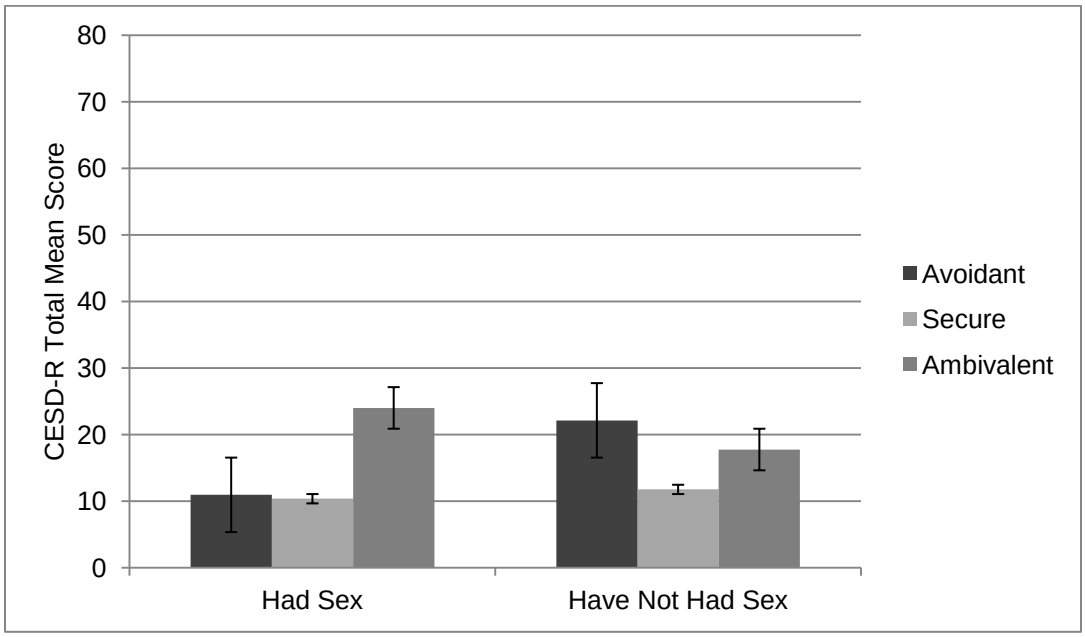


Figure 1
CESD-R Total Mean Score as Related to Sexual Activity and Attachment to Primary Caretaker

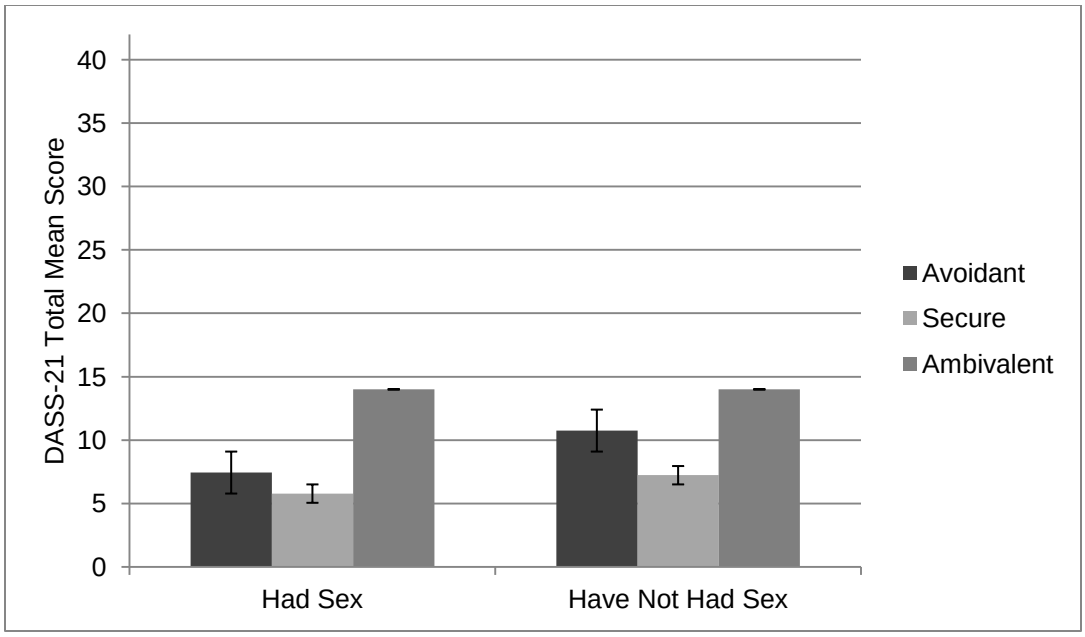


Figure 2
DASS-21 Depression Subscale Total Mean Score as Related to Sexual Activity and Attachment to Primary Caretaker

APPENDIX A: NOTICE OF CONFIDENTIALITY

Purpose

A Masters degree candidate is completing a research study regarding young adult dating relationships, depression, and parental relationship patterns. The purpose of this assessment is to add to the pool of research regarding young adult mental health and dating activity.

Investigators

If you have any questions regarding participation, please direct all inquiries to Courtney Camp (ccamp7@uncc.edu) or Dr. Rich Tedeschi (rtedesch@uncc.edu).

Eligibility

Participants must be 18-20 years old, be unmarried, have no children, and be students at UNCC.

Overall Description of Participation

The study will not ask for any information which might be used to link you to your answers, but will ask multiple questions regarding dating activities, depression, and your relationship with your parents. You will be asked about your history of a depression diagnosis or treatment. You will also be asked to complete several previously validated short questionnaires.

Length of Participation

Completion of this study will require about half an hour.

Risks and Benefits associated with Participation

By participating in this study, you will be adding to the research base surrounding young adult dating relationships and depression. No risk or harm is known to be associated with this study.

Compensation/Payment/Incentives

You will be compensated with 0.5 hours of research credit. You will receive no monetary reimbursement for your participation.

Volunteer Statement

By proceeding beyond this consent statement, you are agreeing that you are between the ages of 18 and 20 years, are unmarried, have no children, and are currently a student at UNC Charlotte. You are furthermore stating that you understand your rights as a volunteer to discontinue participation at any time without penalty.

Confidentiality

All identifying information will be de-identified and used solely for the purpose of this study. There will be no follow-up contact after you complete your participation.

Statement of Fair Treatment and Respect

UNC Charlotte wants to make sure that you are treated in a fair and respectful manner. Contact the university's Research Compliance Office (704-687-3309) if you have questions about how you are treated as a study participant.

Approval Date

The study protocol for Young Adult Dating Relationships and Depression as related to Parental Relational Factors was approved by the Internal Review Board at UNC Charlotte on October 31, 2014.

Participant Consent Statement

Participant Consent: I have read the information in this consent form. I have had the chance to ask questions about this study, and those questions have been answered to my satisfaction. I am at least 18 years of age, and I agree to participate in this research project. I understand that I may request a copy of this form from the principal investigator at any time.

APPENDIX B: DEMOGRAPHICS QUESTIONNAIRE

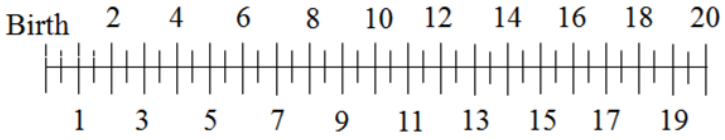
What is your biological sex?

- ☐ Male
- ☐ Female

What is your current age?

- ☐ 18
- ☐ 19
- ☐ 20

Please mark below the years in your life during which you have felt depressed. Clicking along the timeline below, you will notice corresponding years become highlighted. If you have felt depressed for periods of time longer than one year or during more than one year of your life, please highlight all years during which you have felt depressed.



Since the age of 12, have you been treated for Depression?

- ☐ Yes
- ☐ No

Have you ever personally experienced rape or sexual coercion?

- ☐ Yes

- No

At what age did you first have sexual intercourse (i.e. go all the way, have sex, sleep together, etc.)?

If you have had sex, did you first have sex in the context of a committed romantic relationship?

- Yes
- No
- I've never had sex.

How many sexual partners have you had?

APPENDIX C: RETROSPECTIVE ATTACHMENT SCALE

These questions are concerned with your experiences in your relationship with your closest primary caretaker. Take a moment to think about experiences with your closest primary caretaker throughout your childhood and answer the following questions with him/her in mind.

Read each of the three self-descriptions below (A, B, and C) and then place a checkmark next to the single alternative that best describes how you have felt in your relationship with your closest primary caretaker or is nearest to the way you have felt. (Note: The term "close" refers to psychological or emotional closeness, not necessarily to geographical distance.)

_____I was somewhat uncomfortable being close to my primary caretakers; I found it difficult to trust them completely, difficult to allow myself to depend on them. I was nervous when they tried to get too close, and often, they wanted to be closer to me than I wanted to be to them.

_____I was relatively close to my primary caretakers and was comfortable depending on them. I didn't worry about being abandoned or about them getting too close to me.

_____I found that my primary caretakers were reluctant to get as close as I would like. I often worried that my primary caretakers didn't really love me or wouldn't want to stay around me. I wanted to be very close to my primary caretakers, and that sometimes pushed them away.

APPENDIX D: RETROSPECTIVE ROMANTIC PARTNER ATTACHMENT SCALE

These questions are concerned with your experiences in your relationship with your first sexual partner. Take a moment to think about experiences with your first sexual partner and answer the following questions with him/her in mind.

Read each of the three self-descriptions below (A, B, and C) and then place a checkmark next to the single alternative that best describes how you have felt in your relationship with your first sexual partner or is nearest to the way you have felt.

_____I was somewhat uncomfortable being close to my first sexual partner. I found it difficult to trust him/her completely, difficult to allow myself to depend on him/her. I was nervous when he/she tried to get too close, and often, he/she wanted to be closer to me than I wanted to be to him/her.

_____I was relatively close to my first sexual partner and was comfortable depending on him/her. I didn't worry about being abandoned or about him/her getting too close to me.

_____I found that my first sexual partner was reluctant to get as close as I would like. I often worried that my first sexual partner didn't really love me or wouldn't want to stay around me. I wanted to be very close to my first sexual partner, and that sometimes pushed him/her away.

APPENDIX E: CENTER FOR EPIDEMIOLOGIC STUDIES DEPRESSION SCALE—REVISED (CESD-R)

Below is a list of the ways you might have felt or behaved. Please check the boxes to tell me how often you have felt this way in the past week or so.	Last Week				Nearly every day for 2 weeks
	Not at all *or* Less than 1 day	1 - 2 days	3 - 4 days	5 - 7 days	
My appetite was poor.	0	1	2	3	4
I could not shake off the blues.	0	1	2	3	4
I had trouble keeping my mind on what I was doing.	0	1	2	3	4
I felt depressed.	0	1	2	3	4
My sleep was restless.	0	1	2	3	4
I felt sad.	0	1	2	3	4
I could not get going.	0	1	2	3	4
Nothing made me happy.	0	1	2	3	4
I felt like a bad person.	0	1	2	3	4
I lost interest in my usual activities.	0	1	2	3	4
I slept much more than usual.	0	1	2	3	4
I felt like I was moving too slowly.	0	1	2	3	4
I felt fidgety.	0	1	2	3	4
I wished I were dead.	0	1	2	3	4
I wanted to hurt myself.	0	1	2	3	4
I was tired all the time.	0	1	2	3	4
I did not like myself.	0	1	2	3	4
I lost a lot of weight without trying to.	0	1	2	3	4
I had a lot of trouble getting to sleep.	0	1	2	3	4
I could not focus on the important things.	0	1	2	3	4

APPENDIX F: DEPRESSION ITEMS OF DEPRESSION ANXIETY STRESS SCALE (DASS-21)

	Did not apply to me at all- NEVER	Applied to me to some degree, or some of the time- SOMETIMES	Applied to me to a considerable degree, or a good part of the time- OFTEN	Applied to me very much, or most of the time- ALMOST ALWAYS
I couldn't seem to experience any positive feeling at all.				
I found it difficult to work up the initiative to do things.				
I felt that I had nothing to look forward to.				
I felt down-hearted and blue.				
I was unable to become enthusiastic about anything.				
I felt I wasn't worth much as a person.				
I felt that life was meaningless.				

APPENDIX G: DEBRIEFING STATEMENT

Thank you for your participation! In this study, you were asked several questions regarding your dating behaviors, psychological wellbeing, and parental relationship patterns. The information you provided will be used in order to explore the relationship between these three factors in a young adult's life.

Should you have any questions or concerns about your participation today, please do not hesitate to contact the principal investigator, Courtney Camp or Dr. Rich Tedeschi (rtedesch@uncc.edu). If you have any concerns about how you were treated as a study participant, you are encouraged to contact the university's Research Compliance Office (704-687-3309). Furthermore, if you feel you would benefit from the professional assistance of a counselor, please contact the UNCC Counseling Center at 704-687-0311.

Thank you again for your participation.