

THE RELATIONSHIP OF PARENTAL, INTERGENERATIONAL, PEER, AND
COMMUNITY CONNECTIONS WITH ENGAGEMENT IN RISKY SEXUAL
BEHAVIORS AND SEXTING AMONG COLLEGE STUDENTS

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Abstract: The purpose of this study was to explore college students' connections with peers, their primary parental figure, an intergenerational mentor, and their community as possible protective factors in relation to their risky sexual behaviors and sexting behaviors. Participants included in the study included 344 undergraduate and graduate college students recruited from a large, Midwestern university and through Facebook. The Relational Health Indices, Sexual Risk Survey, and a sexting questionnaire were administered. Results indicated significant and negative correlations between growth-fostering relationships with peers and receiving sexts. Growth-fostering relationships with the primary parental figure were significantly and negatively correlated with sexual risk behaviors and receiving sexts. In addition, sexual risk behaviors were significantly and positively correlated with sending sexts. Multiple regressions were run to determine if peer relationships, parental relationships, intergenerational relationships, and community relationships predicted significant variance in sexual risk behaviors and sexting behaviors; no significant results in these analyses were found. Significant gender effects were noted on the study's measures. Males were more likely than females to endorse engaging in risky sexual behaviors and receiving sexts. Women were more likely than men to endorse growth-fostering relationships with peers and intergenerational mentors. Further research investigating the relationship between sexting and risky sexual relationships, as well as further research regarding the impact of growth-fostering intergenerational relationships, are recommended.

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Introduction

Adolescent sexual risk-taking behavior is currently of utmost concern in the United States. Risky sexual behavior is defined as engagement in any sexual activity that can potentially lead to impairments in an individual's health, including physical illnesses and mental health symptoms. Unprotected sex, sex with multiple partners in a short time period, sex with partners outside of a committed relationship (otherwise known as casual sex), and sex while under the influence of drugs and/or alcohol are commonly identified risky sexual behaviors (Turchik & Garske, 2009). Sexting, a relatively new phenomenon that is becoming increasingly more popular with adolescents and young adults in the United States with the mass accessibility to cellular telephones, is defined as the act of sending or receiving sexually explicit or suggestive photographs or messages via text (Benotsch, Snipes, Martin, & Bull, 2012; Samini & Alderson; Gordon-Messer, Bauermeister, Grodzinski, & Zimmerman, 2012; Weisskirch & Delevi, 2011). Few formal studies have been conducted on the health implications of sexting behaviors, but researchers are beginning to recognize sexting as a risky sexual behavior that requires attention in the literature (Benotsch, Snipes, Martin, & Bull, 2012). Participation in risky sexual activities bears serious consequences, including unintended pregnancies, sexually-transmitted infections, and emotional stress (Erickson, 1998). Approximately 47% of high-schoolers had engaged in

sexual intercourse in 2013, a steady trend since the late 1990's (Center for Disease Control, 2014). Over 5% of youth in the United States reported that they lost their virginity before the age of 13 years (Center for Disease Control, 2014), and 20% of teenagers had engaged in sexual intercourse by age 15 years (Lewin, 2003). About 800,000 teenagers become pregnant in the United States every year (Advocates for Youth, 2006) and in 2009, more than 400,000 girls between 15 years and 19 years old gave birth (Hamilton, Ventura, and Martin, 2010). Among adolescents who report refraining from sexual intercourse, a significant number admit to engaging in oral sex practices, often without any form of protection from sexually-transmitted diseases (Erickson, 1998). Nearly half of the 19 million new cases of sexually transmitted diseases diagnosed each year are among 15- 19 year olds in the United States (Centers for Disease Control and Prevention, 2014). Over 8,000 youth (ages 13-24) were diagnosed with the human immunodeficiency virus in 2009 in the 40 states who provided information to the Centers for Disease Control and Prevention (Centers for Disease Control and Prevention, 2014). While the numbers of adolescent pregnancies and new cases of sexually-transmitted infections among adolescents have declined with a surge of teenage sexual education over the last two decades, these numbers in the United States remain the highest of any industrialized countries in the world (Advocates for Youth, 2006; Brener, Lowry, Kann, Kolbe, Lehnerr, Janssen, & Jaffe, 2002; Centers for Disease Control, 2014; Erickson, 1998; Terry-Humen, Manlove, & Cottingham, 2006; The Alan Guttmacher Institute, 2002). In summary, a significant number of adolescents are sexually active and are doing so without contraception. In addition, they report engaging in sexual activity with multiple partners (Erikson, 1998).

Despite the abundant research on the sexual risk-taking behaviors of adolescents under the age of 18, researchers have investigated these behaviors less often among older adolescents

(Rolison & Scherman, 2003). Older adolescents, including individuals between the ages of 18 and 24 years old, especially college students, have been shown to engage at a high rate of unsafe sexual practices (Bylund, Imes, & Baxter, 2005; Velez- Blasini, 2008; Rolison & Scherman, 2003). According to reports provided by the Centers for Disease Control (1995), nearly 70% of college students administered the National College Health Risk Behavior Survey reported they have engaged in sexual intercourse within the last 3 months, and almost 35% of the college students reported having more than 6 sexual partners (Douglas et al., 1997; Velez-Blasini 2008). Of the college students who engaged in sexual intercourse over the previous three months, less than one-third reported using a condom during their last sexual experience (Centers for Disease Control and Prevention, 1997; Rolison & Sherman, 2003).

Adolescents are more likely to delay engaging in sexual activity if they experience a positive family environment and perceive support from their parents/parental figures (e.g., Henrich, Brookmeyer, Shrier, & Shahar, 2006; Reem & Savin-Williams, 2005). In one study (Reem and Savin-Williams (2005), adolescents who perceive more emotional support from their parents are less likely to engage in risky sexual activity. In the Henrich et al. (2006) study, adolescents who feel a higher level of connectedness with their parents and peers have less unprotected sexual encounters, have fewer sexual partners, and practice safer sex.

Even among college students, positive and secure parental relationships and parental involvement are important protective factors for safer sexual practices (Bylund, Imes, and Baxter 2005). Bylund, Imes, and Baxter (2005) conducted a study in which 164 college student-parent dyads individually completed questionnaires regarding college students' engagement in health-risk behaviors, including sexual activity. The results indicated that parents significantly underestimated their children's risk-taking behaviors such as drinking alcohol, binge drinking,

smoking cigarettes, smoking marijuana, and having sexual intercourse. The researchers imply that parents' misperceptions of their sons' and daughters' health-risk behaviors during their college years, including their level of sexual activity, may result in a decrease in perceived need for communication between parents and their college-aged children regarding such health risk behavior problems.

Close relationships with peers and unrelated mentors, as well as a strong connection within their community, are also important in older adolescents and young adults, including traditional college-aged students (Liang et al., 1998). Relational-cultural theory is a theory in psychology that combines feminist and multicultural perspectives in emphasizing the role of connections to others and involvement in growth-fostering relationships to their development and mental health (Jordan & Walker, 2004). Connections in a variety of relationships are essential, including relationships with family members across the generations, friends, and colleagues, as well as with significant mentors in one's life and connections to the community at large. According to relational-cultural theory, a connected, growth-fostering relationship is characterized by "five good things," (Miller, 1986) including that each person in within the relationship feels a greater sense of zest, or well-being/energy; each person feels more empowered to act within the relationship and in outside situations; each person involved in the relationship develops a more genuine perception of themselves and each other; each person develops a greater sense of self-worth in response to the relationship; and each person is motivated by and seeks additional connections beyond their current relationship (Miller, 1986; Comstock et al., 2008).

A mentor within the relational-cultural framework is defined as "an adult who is often older than you, has more experience than you, and is willing to listen, share her or his own

experiences, and guide you through some part of your own life,” (Liang, Tracy, Taylor, Williams, Jordan, 2002, p.28). Rogers and Taylor (1997) describe the importance of qualities of an intergenerational mentor, listing good listening skills, dependability, and providing fun opportunities in which the youth can learn something new. For the purposes of this study, intergenerational mentors included individuals 40 years older than the participants with whom the participants have a mutual relationship (Rogers and Taylor, 1997), and may include adults such as grandparents, neighbors, professors, and co-workers. Community affiliation and relationships are believed to provide a sense of connectedness, belonging, and provide meaningful engagement (Liang, Tracy, Taylor, Williams, Jordan, 2002). Communities can be described as a group which provides an individual with a sense of belonging/sense of feeling valued by peers that share similar characteristics (Liang, Tracy, Taylor, Williams, Jordan, 2002) and examples can be a college community, neighborhood, extracurricular activity environment, or work environment.

According to relational-cultural theory, when individuals feel disconnected from others in their immediate environment, they often experience psychological distress. In one study, people who felt disconnected from others reported more depression (Jordan, 2004). However, when individuals are involved in non-judgmental and trusting relationships with others, they are more likely to experience mental wellness, are less likely to internalize negative events, and experience less depression compared to individuals who do not have relationships with people they identify as non-judgmental and trustworthy (Jordan, 2004).

Adolescents have the tendency to act out by engaging in risky behaviors, such as unsafe sexual activities, rather than verbally expressing their concerns and personal conflicts with others (Dooley & Fedele, 2001). Adolescents are motivated by a desire to exert control over their own

lives and may engage in risk-taking behaviors to confirm this control (Ream & Savin-Williams, 2005). A relational-cultural theorist would hypothesize that strong relationships and feelings of safety to discuss their problems could reduce adolescent tendencies to act out (Dooley & Fedele, 2001) and help them channel their energies in more productive ways. Furthermore, the supportive relationship need not be parental, as examined in much of the current research; an individual's relationship and experience with any member of an older generation can potentially help them to predict their feelings and plan ahead, process uneasy emotions, and create action plans to more effectively deal with peer pressure and avoid risky behaviors (Dooley & Fedele, 2001). Little is known about the significance of intergenerational relationships in college students' lives, including its connection to risk-taking behaviors, including sexual behaviors.

Additionally, few researchers have investigated the impact of mentoring relationships and community involvement on college students' psychological growth and development. In one study, researchers found that relationships with mentors promoted positive and healthy social interactions with people of all ages in general (Liang et al., 1998). In addition, having supportive relationships with peers and community (a group of individuals connected by common interests), especially for females, appears to have a significant and positive impact on their mental well-being (Liang et al., 1998).

However, little research has been conducted to explore college students' connections with mentors, including intergenerational mentors, and the community at large as possible protective factors in relation to their sexual risk-taking behaviors, which is a focus of the present study. The purpose of this present study was to investigate the relationships of college students' connections or relationships with mentors, including peers, community members, parents or parental figures, and intergenerational figures, and their level of engagement in sexual risk-taking behaviors and

sexting behaviors. It was hoped that the results of this study would identify important relational correlates of sexual risk-taking and sexting behaviors among college students. The primary research questions for this study were:

1) What are the bivariate relationships between growth-fostering relationships (i.e., quality of relationships with peers, parents/parental figures, intergenerational figures, and community members) and sexual risk-taking behaviors and sexting behaviors in college students? 2) Do growth –fostering relationships (i.e., quality of relationships with peers, parents/parental figures, intergenerational figures, and community members) significantly predict sexual risk-taking behaviors (overall score) in college students? 3) Do growth –fostering relationships (i.e., quality of relationships with peers, parents/parental figures, intergenerational figures, and community members) significantly predict sexting behaviors in college students?

Growth-fostering relationships (i.e., quality of relationships with peers, parents/parental figures, intergenerational figures, and community members) were expected to be negatively correlated with sexual risk-taking behaviors in college students. In addition, growth-fostering relationships were expected to be negatively correlated with engagement in sexting behaviors. Additionally, stronger growth-fostering relationships for college students with their peers, parents/parental figures, intergenerational figures, and community members were expected to significantly predict a lower frequency of risky sexual behaviors and sexting behaviors.

Methods

Participants

Participants in this study consisted of 381 undergraduate/graduate college students between the ages of 18 and 25 years old. Two methods of recruitment were utilized to obtain participants: Undergraduate/graduate students in the College of Education at a large, Midwestern university were invited to participate for extra credit in their courses via the SONA

program. Additionally, the study was also made available to college students between the ages of 18 and 25 years old via a direct link posted on Facebook. Of the 381 students who agreed to participate, 37 were missing significant amounts of data (10% total items or 10% of any individual measure) and were omitted from the data analysis. The mean age of the remaining participants was 21.3 with a range of 18-25 (SD = 1.83); one participant did not provide their specific age. Approximately 72% of the participants were female (n = 249), 27% were male (n = 92), and 1% of the participants were transgender (n = 3). The majority of the participants identified themselves as White, Non-Hispanic (68.6%, n = 236), 9.9% as African-American/Black (n=34), 9.6% as Hispanic/Latino(a) (n = 33), 7.0% as American-Indian/Native American (n = 24), 2.6% as Asian/Asian-American (n = 9), 2.0% as Other (n = 7), and 1 participant did not provide their identified race. Regarding sexual orientation, 95.6% of the participants identified themselves as heterosexual (n = 329), 2.6% as bisexual (n = 9), 1.2% as homosexual (n = 4), and 2 participants did not respond. 4.4% of the participants were freshman in college at the time of the study (n = 15), 19.8% were sophomores (n = 68), 30.5% were juniors (n = 105), 36.3% were seniors (n = 125), and 8.7% were graduate students (n = 30). One participant did not provide their year in college.

Annual family income and state of residency were also collected via the demographics page. 9.0% of the participants reported an annual family income of less than \$10,000 (n = 31), 4.6% reported \$10,001-15,000 (n = 16), 3.8% reported \$15,001-20,000 (n = 13), 9.0% reported \$20,001-30,000 (n = 31), 7.3% reported \$30,001-40,000 (n = 25), 6.4% reported \$40,001-50,000 (n = 22), 7.3% reported \$50,001-60,000 (n = 25), 8.4% reported \$60,001-70,000 (n = 29), 7.3% reported \$70,001-80,000 (n = 25), 8.7% reported \$80,001-90,000 (n = 30), and 28.0% reported an annual family income of \$90,001 or above. One participant did not provide their annual

family income. The majority of the participants identified their state of residence as Oklahoma (65.4%, n = 225). Texas accounted for 25% of the participants' identified state of residence (n = 85). The remaining 9.5% of the participants' state of residency were distributed among 14 other states including Arizona (n = 1), Arkansas (n = 3), California (n = 3), Colorado (n = 1), Connecticut (n = 1), Florida (n = 1), Illinois (n = 2), Kansas (n = 5), Massachusetts (n = 1), Michigan (n = 1), Missouri (n = 6), Tennessee (n = 1), Washington (n = 4), and Wisconsin (n = 2). Two remaining participants reported that they were residents of a country other than the United States.

Procedure

Participants for this study were recruited through the College of Education SONA, a web-based program at a large Midwestern university, and Facebook. Participants were invited to participate in an online study investigating their relationships with others and their sexual experiences. Students who were interested in participating clicked on the provided URL and will be directed to a secure website through Qualtrics. Once the participant entered the secure website, they were provided with the online informed consent page which included the purpose of the study and the possible benefits and risks of participation. If they agreed to participate, they selected the "Submit" button to move on to the survey; if they did not want to participate, they selected the "Decline" button and were redirected from the study. Participants who selected "Submit" were directed to the online survey including a demographic page, 4 scales of the Relational Health Indices, the Sexual Risk Survey, and 4 items about their sexting behaviors. The entire survey took approximately 30 minutes to complete. Participants did not provide their name on any of the online survey pages. However, following the completion of the information collection process, the names of the participants recruited from SONA were sent by the program

to their professors for the assignment of extra credit for research participation. Instructors utilizing SONA will not be given access to the participants' survey responses. After completing all items in the study, participants were be directed to a page thanking them for their participation in the study and inviting them to send their name and address to kimberly.samuels@okstate.edu if they wished to be considered for one of three incentive gift cards. No individuals will have access to the data file except the researchers associated with the study.

Measures

The online survey included a demographic page, the Sexual Risk Survey (SRS; Turchik & Garske, 2007), and The Relational Health Indices (RHI; Liang, Tracy, Taylor, Williams, Jordan, & Miller, 2002).

Demographic Page. Participants were asked to provide their age, gender, race, sexual orientation, academic year in college (i.e., freshman, sophomore, junior, or senior), state of residency, and annual family income.

Sexting Questionnaire. Four items were created for the purposes of this study to explore the extent to which participants have engaged in sexting behaviors. Examples of items included, "How many times have you sent sexually suggestive images, videos, or messages to someone via cell-phone?" and "How many times have you received sexually suggestive images, videos, or messages from someone else via technology other than a cell phone (i.e. email)?"

Sexual Risk Survey (SRS; Turchik & Garske, 2007). The SRS is a 23-item self- report questionnaire to assess sexual risk-taking behaviors. Individuals will answer each items by indicating the number of times they have engaged in the stated behavior. The individual is to select "0" if they have never had sex or engaged in the behavior described in the given item. The

SRS contains 5 subscales including Sexual Risk Taking with Uncommitted Partners; Risky Sexual Acts; Impulsive Sexual Behaviors; Intent to Engage in Risky Sexual Behaviors; and Risky Anal Sex Acts.

The Sexual Risk Taking with Uncommitted Partners subscale is an 8- item subscale (items 8, 16, 17, 19, 20, 21, 22, and 23) that measures the number of times the participant has engaged in sexual behaviors with uncommitted sexual partners. Examples of items from the Sexual Risk Taking with Uncommitted Partners subscale are “How many partners have you had sex with?” and “How many times have you had sex with someone you do not know well or just met?”

The Risky Sexual Acts subscale is a 5- item subscale (items 9, 10, 11, 12, and 18) that measures the number of times the participant has engaged in risky sexual acts in any relationship. An example of a question from the Risky Sexual Acts subscale is “How many times have you had vaginal intercourse without a latex or polyurethane condom? Note: Include times when you have used a lambskin or membrane condom.”

The Impulsive Sexual Behaviors subscale is a 5- item subscale (items 1, 3, 6, 7, and 2) that measures the number of times the individual has engaged in sexual behaviors impulsively without considering the consequences of their actions. An example of a question from the Impulsive Sexual Behaviors subscale is “In the past six months, how many times have you had an unexpected and unanticipated sexual experience?”

The Intent to Engage in Risky Sexual Behaviors subscale is a 2- item subscale (items 4 and 5) that measures how many times the individual participant has engaged in social behaviors with the intention of having sex with someone from the social scene. An example of a question from the Intent to Engage in Risky Sexual Behaviors subscale is “In the past six months, how

many times have you gone out to bars/parties/social events with the intent of “hooking up” and having sex with someone?”

The Risky Anal Sex Acts subscale is a 3-item subscale (items 13, 14, and 15) that measures how many times the individual participant has engaged in risky anal sex behaviors. An example of a question from the Risky Anal Sex Acts subscale is “How many times have you given or received anilingus (oral stimulation of the anal region, “rimming”) without a dental dam or “adequate protection” (please see definition of dental dam for what is considered adequate protection).”

The SRS is a reliable measure of sexual risk taking behaviors (Turchik & Garske, 2007). The 2-week test- retest reliability for the SRS total score was .93. The 2-week test-retest reliabilities for the subscales were as follows: Sexual Risk Taking with Uncommitted Sexual Partners (.90), Risky Sexual Acts (.89), Impulsive Sexual Behaviors (.79), Intent to Engage in Risky Sexual Behaviors (.70), and Risky Anal Sex Acts (.58). The internal consistency for the total SRS score was .88.

Cronbach alpha reliability estimates for the subscales were as follows: .88 for Sexual Risk Taking with Uncommitted Sexual Partners, .80 for Risky Sexual Acts, .78 for Impulsive Sexual Behaviors, .89 for Intent to Engage in Risky Sexual Behaviors, and .61 for Risky Anal Sex Acts. For the purpose of this study, the overall SRS score will be used unless the subscale scores are more internally consistent than the overall score for this college student sample.

An exploratory principal components analyses of the SRS revealed a five-component solution, accounting for approximately 42% of the variance in sexual risk taking behavior scores (Turchik & Garske, 2007). The factors represent the five subscales of the measure: Sexual Risk Taking (8 items), Risky Sex Acts (5 items) Impulsive Sexual Behaviors (5 items), Intent to

Engage in Risky Sexual Behaviors (2 items) and Risky Anal Sex Acts (3 items). For the purposes of this study, we will use the overall score.

The SRS has good convergent validity with other measures assessing sexual-risking taking behaviors. Sexual risk-taking behaviors, as measured by the total score on the SRS, has been significantly and positively correlated with other measures of sexual behavior including sexual inhibition, sexual excitation, and sexual desire as well as measures of impulsive sensation seeking and substance abuse (Turchik & Garske, 2007).

Relational Health Indices (RHI; Liang, Tracy, Taylor, Williams, Jordan, & Miller, 2002).

The RHI is a 37-item self-report measure used to assess growth-fostering relationships with peers, mentors, and the community in general. The RHI was developed using the Relational-Cultural Model, in which theorists conceptualize ongoing, growth-fostering connections as critical to one's development (Jordan, 1986). Participants read each item and rate them using a 5- point Likert- type scale (1= Never; 2 = Seldom; 3 = Sometimes; 4 = Often; 5 = Always).

The three subscales of the RHI are: Peer, Mentor, and Community. The Peer Index (RHI-P) consists of 12 items that measure participants' level of connectedness in their perceived closest peer. An example of an item from this index is, "Even when I have difficult things to share, I can be honest and real with my friend."

The Mentor Index (RHI-M) consists of 11 items that measure participants' level of connectedness in their relationship with their most important mentor. For the purposes of this study, the mentor scale was administered twice to identify participants' level of connectedness to a) a primary parental figure mentor (RHI-PM), and to a b) mentor from a generation previous to their parents' generation (RHI-IM). The mentors for each were identified in their relation to the participant (i.e., parent, grandparent, teacher, neighbor) prior to the completion of that set of

questions. Examples of items from this scale include, “I can be genuinely myself with my [parental] mentor,” and “My [intergenerational] mentor’s commitment to and involvement in our relationship exceeds that required by his/her social/ professional role.”

The Community Index (RHI- C) consists of 14 items that measure participants’ level of connectedness with their communities. Examples of items from this scale include, “I feel understood by members of this community,” and “This community has shaped me in many ways.”

Three subscales exist within each of the indices of the RHI: Empowerment/ Zest, Engagement, and Authenticity. However, for the purposes of the present study, the overall score will be used.

The Empowerment/ Zest subscale is intended to measure the individual’s “experience of feeling personally strengthened, encouraged and inspired to take action” (Liang et al., 2002, p. 26). In other words, this scale measures the extent to which the individual perceives their peers, mentors, or community to empower them and give them energy to achieve their goals. The Empowerment/ Zest items are as follows on each index: RHI-P (items 2, 7, 9, and 10), RHI- M (Parent) (items 5, 7, 8, and 10), RHI- M (Intergenerational) (items 5, 7, 8, and 10) and RHI- C (items 2, 6, 11, 12, 13). An example of an item from the Empowerment/Zest subscale is “I feel uplifted and energized by interactions with my mentor.”

The Engagement subscale is intended to measure “perceived mutual involvement, commitment, and attunement to the [peer, mentor, and community] relationship (Liang et al., 2002, p.26). Specifically, the Engagement subscale assesses if the individual feels as though the relationship is equal in regards to effort put forth and benefits to each other. The Engagement items are as follows on each index: RHI- P (items 3, 4, 5, and 12), RHI- M (Parent) (items 3, 6,

and 9), RHI-M (Intergenerational) (items 3, 6, and 9), and RHI- C (items 1, 3, 5, 8, 14). An example of an item from the Engagement subscale is, “The more time I spend with my friend, the closer I feel to him/her.”

The Authenticity subscale is intended to measure “the process of acquiring knowledge of self and the other and feeling free to be genuine in the context of the relationship” (Liang et al., 2002, p. 26). This subscale measures the extent to which the individual participants can be authentic in their relationships with their peers, mentors, and within their community, or open and express themselves without feeling judged or disliked for their beliefs and behaviors. The Authenticity items are as follows on each index: RHI- P (items 1, 6, 8, 11), RHI- M (Parent) (items 1, 2, 4, 11), RHI-M (Intergenerational) (items 1, 2, 4, 11), and RHI- C (items 4, 7, 9, 10). Examples of items from the Authenticity subscale are “Members of this community are not free to just be themselves,” and “I can be genuinely myself with my mentor.”

The RHI is a reliable measure of growth-fostering relationships with peers, mentors, and communities (Liang et al., 2002). Internal consistency reliability estimates for the indices, including subscales and composites, are as follows: .74, .73, .69, and .85 for the Engagement, Empowerment/Zest, Authenticity, and Composite subscales of the RHI-P (Peer index), respectively. The internal consistency reliability estimates for RHI M (Mentor index) are as follows: .72, .72, .77, and .86 for the Engagement, Empowerment/Zest, Authenticity, and Composite subscales, respectively. The internal consistency reliability estimates for the RHI- C (Community index) are as follows: .86, .87, .75, and .90 for the Engagement, Empowerment/Zest, Authenticity, and Composite subscales, respectively. No information is available regarding the test-retest reliability of the RHI.

For the purposes of this study, the overall composite scores for the RHI-P (Peer), RHI-MP (Parental Mentor), RHI-MI (Intergenerational Mentor), and the RHI-C (Community) will be used instead of the specific subscales scores unless the subscale scores are more internally consistent than the composite scores for this sample.

The RHI composite scores have good convergent validity with other relationship measures, including the Mutual Psychological Development Questionnaire and the Quality of Relationships Questionnaire-Depth Measure, and Quality of Relationships Questionnaire-Support Measure (Liang et al., 2002). RHI was not significantly related to the Quality of Relationships-Conflict Measure, thus providing evidence of its discriminant validity with measures of conflictual relationships (Liang et al., 2002).

Results

The first research question in this study was, “What are the bivariate relationships between growth-fostering relationships (i.e., quality of relationships with peers, parents/parental figures, intergenerational mentor figures, and community members) and sexual risk taking behaviors and sexting behaviors in college students?” Pearson correlational analyses were conducted to identify statistically significant correlations between growth-fostering relationships (as indicated by total scores on the 4 administered scales of the Relational Health Indices) and sexual risk taking behaviors (as indicated by the total score on the Sexual Risk Survey) and sexting behaviors (as indicated by responses to questions regarding sending sexts and receiving sexts). Results indicated that growth-fostering relationships with peers were significantly and negatively correlated with reported receiving sexts ($r = -.113, p < .05$). Growth-fostering relationships with the identified primary parental figure were significantly and negatively correlated with reported sexual risk behaviors ($r = -.122, p < .05$) and reported receiving sexts (r

= $-.116, p < .05$). Growth-fostering relationships with the participants' community were significantly and negatively correlated with reported receiving sexts ($r = -.106, p < .05$). There were no significant correlations between growth-fostering relationships with an identified intergenerational mentor figure and reported sexting or sexual risk behaviors. See Table 2.

Also noted in the Pearson correlational analyses was that reported sexual risk behaviors were significantly and positively correlated with reported sending sexts ($r = .558, p < .01$) and reported receiving sexts ($r = .477, p < .01$). Reported sending sexts was significantly and positively correlated with reported receiving sexts ($r = .456, p < .01$). Growth-fostering relationships with peers was significantly and positively correlated with growth-fostering relationships with parental figures ($r = .407, p < .01$), intergenerational mentor figures ($r = .271, p < .01$), and their community ($r = .415, p < .01$). Growth-fostering relationships with parental figures was significantly and positively correlated with growth-fostering relationships with intergenerational mentor figures ($r = .291, p < .01$), and their community ($r = .342, p < .01$). Growth-fostering relationships with intergenerational mentor figures was significantly and positively correlated with growth-fostering relationships with their community ($r = .213, p < .01$). See Table 2.

The second research question for this study was, "Do growth-fostering relationships (i.e., quality of relationships with peers, parents/parental figures, intergenerational mentor figures, and community members) significantly predict sexual risk behaviors?" A multiple regression was conducted to answer this question. The predictor variables were peer relationships, parental relationships, intergenerational relationships, and community relationships (as indicated by the scale totals from the Relational Health Indices). Results indicated that a linear combination of peer relationships, parental relationship, intergenerational relationships, and community

relationships and did not predict a significant amount of variance in reported sexual risk behaviors, $R^2 = .017$, $F(4, 338) = 1.462$, $p > .05$. See Table 3.

The third research question for this study was, “Do growth-fostering relationships (i.e., quality of relationships with peers, parents/parental figures, intergenerational mentor figures, and community members) significantly predict sexting behaviors?” A multiple regression was conducted with reported receiving sexts behavior as the dependent variable. The predictor variables were peer relationships, parental relationships, intergenerational relationships, and community relationships (as indicated by the scale totals from the Relational Health Indices). Results indicated that a linear combination of peer relationships, parental relationship, intergenerational relationships, and community relationships and did not predict a significant amount of variance in reported receiving sexts behaviors, $R^2 = .022$, $F(4, 338) = 1.922$, $p > .05$. See Table 4.

Additionally, a series of ANOVAs were conducted to compare the effects of gender on the study’s measures. Those who identified as transgender ($n = 3$) were removed from these analyses due to their small sample size, which is equated to minimal power to detect significant findings. A one-way between subjects ANOVA was conducted to compare the effect of gender on reported risky sex behaviors. There was a significant effect for gender on reported risky sex behaviors, $F(1, 338) = 8.818$, $p = .003$. The mean score for males ($M = 56.457$, $SD = 31.171$) was significantly higher than the mean score females ($M = 47.270$, $SD = 22.822$). These results suggest that male college students are more likely to report a history of engaging in risky sexual behaviors when compared to female college students. See Table 5.

A one-way between subjects ANOVA was conducted to compare the effect of gender on reported sending sexts behaviors. There was not a significant effect of gender on reported sending sexts behaviors, $F(1, 338) = .055, p = .814$. See Table 6.

A one-way between subjects ANOVA was conducted to compare the effect of gender on reported receiving sexts behaviors. There was a significant effect of gender on reported receiving sexts behaviors, $F(1, 338) = 6.243, p = .013$. The mean score for males ($M = 4.271, SD = 3.736$) was significantly greater than the mean score for females ($M = 3.290, SD = 3.004$). These results indicate that male college students report receiving sexts more often than female college students. See Table 7.

A one-way between subjects ANOVA was conducted to compare the effect of gender on growth-fostering relationships with peers. There was a significant effect of gender on growth-fostering relationships with peers, $F(1, 339) = 6.600, p = .011$. The mean score for males ($M = 46.380, SD = 7.654$) was significantly less than the mean score for females ($M = 48.679, SD = 7.210$). These results indicate that female college students are more likely to report stronger growth-fostering relationships with their peers than male college students. See Table 8.

A one-way between subjects ANOVA was conducted to compare the effect of gender on growth-fostering relationships with parental figures. There was not a significant effect of gender on growth-fostering relationships with parental figures $F(1, 339) = .612, p = .434$. See Table 9.

A one-way between subjects ANOVA was conducted to compare the effect of gender on growth-fostering relationships with an intergenerational mentor figure. There was a significant effect of gender on growth-fostering relationships with an intergenerational mentor figure, $F(1, 339) = 5.067, p = .025$. The mean score for males ($M = 34.337, SD = 19.551$) was significantly lower than the mean score for females ($M = 39.414, SD = 18.078$). These results indicate that

female college students are more likely to report a stronger growth-fostering relationship with an intergenerational mentor than male college students. See Table 10.

A one-way between subjects ANOVA was conducted to compare the effect of gender on growth-fostering relationships with community. There was not a significant effect of gender on growth-fostering relationships with community, $F(1, 339) = 3.168, p = .076$. See Table 11.

Discussion

This study was conducted to investigate the relationships of college students' connections/relationships with peers, community members, parents/parental figures, and intergenerational mentor figures and their level of engagement in sexual risk-taking behaviors and sexting behaviors with the goal of identifying important relational correlates of sexual risk-taking and sexting behaviors among college students.

Overall, there were several correlational relationships identified in the present study. There was a significant and negative correlation ($r = -.122, p < .05$) between growth-fostering relationships with the primary parental figure and endorsed sexual risk behaviors for college students. These results suggest that college students who have connected relationships with their parents are less likely to engage in risky sexual behaviors. These findings contribute to previous research concluding that adolescents who perceive more emotional support from their parents are less likely to engage in risky sexual activity (Reem & Savin-Williams, 2005) and may delay initiation of sexual activity (Henrich, Brookmeyer, Shier, & Shahar, 2006; Reem & Savin-Williams, 2005). In addition, the results of this study further indicate that college students who have stronger growth-fostering relationships with their primary parental mentor are less likely to report receiving sexts ($r = -.116, p < .05$). However, a significant relationship between growth-fostering relationships with the primary parent and reported sending sexts was not observed.

In this study, reported sexual risk taking behaviors were also significantly correlated to reported sending sexts behavior ($r = .558, p < .01$) and reported receiving sexts behavior ($r = .477, p < .01$). While the research is non-conclusive regarding whether or not sexting is considered a risky sexual behavior or an emerging component to modern dating and healthy sexual behavior (Gordon-Messer, Bauermeister, Grodzinski, & Zimmerman, 2013; Temple & Choi, 2014; The Guttmacher Institute, 2015), the results in this study maintain they are related and their relationship warrants further research, supporting the results of other recent studies on sexting behavior (Temple & Choi, 2014; Ybarra & Mitchell, 2014; The Guttmacher Institute, 2015). Temple and Choi (2014) suggest that sexting is becoming common in the adolescent culture, and while likely a viable indicator of sexual activity, does not necessarily indicate risky sexual activity.

Regarding the Relational Health Indices, including the original scales utilized and scales modified for this study, there were significant and positive correlations among all of the scales. College students who reported stronger growth-fostering relationships with their peers were more likely to report growth-fostering relationships with their parental figure mentor ($r = .407, p < .01$), their identified intergenerational mentor ($r = .271, p < .01$), and their community ($r = .415, p < .01$). College students who reported stronger growth-fostering relationships with their parental figure mentor were also more likely to report stronger growth-fostering relationships with their identified intergenerational mentor ($r = .291, p < .01$) and their community ($r = .342, p < .01$). College students who reported stronger growth-fostering relationships with their intergenerational mentor were also more likely to report stronger growth-fostering relationships with their community ($r = .213, p < .001$). In addition to supporting the reliability of the scales of the measure, these correlations suggest that individuals who form growth-fostering relationships

in one dimension of their life are more likely to form similar relationships in other aspects. This tendency may be impacted by numerous contributing factors such as the personality, perception, confidence, and emotional health of the individuals.

To investigate if growth-fostering relationships with peers, parental mentors, intergenerational mentors, and community predict sexual risk-taking behaviors and sexting behaviors in college students, two multiple regressions were conducted. As earlier exploratory data of the study found no significant correlation between reported sending sexts behavior and growth-fostering relationships, the regression to investigate sexting behavior only considered receiving sexts behavior. Although growth-fostering relationships accounted for approximately 2% of the variance in reported risky sexual behaviors and reported receiving sexts behavior, the results were not significant in either model. This finding was unexpected, as research has identified peer relationships, parental relationships, relationships with non-parental adults, and attachment to teachers/school as predictors for risk-taking behaviors, including sexual risk behavior (Mancini and Huebner, 2004; Ali & Dwyer, 2011; Taylor-Seehager and Rew (2000). One factor that may have impacted the lack of significant regression results in this study is the research design. In this study, participants were allowed to indicate whether or not they have an intergenerational relationship, and those who did not were not excluded from the results. Although it was considered important to consider all participants due to limited research available on this topic, lower scores on the intergenerational scale may have skewed the total results.

In addition to addressing the research questions, a series of ANOVAs were conducted to compare the effects of gender on the study's measures. Interestingly, there were several significant effects. Males were more likely than females to endorse engaging in risky sexual

behaviors. While college men may actually be engaging in more risky sexual acts than college women, it is also possible that they are more likely to admit behaviors such as having multiple partners or casual relationships, as gender stereotypes tend to label women who engage in such acts as promiscuous, while men are often praised for similar behavioral patterns.

Another gender effect noted in this study was that men were more likely to endorse receiving sexts than women, although there were no significant gender differences in reported sending sexts behaviors. These results are consistent with recent studies conducted among high school adolescents in Utah (Strassberg et al., 2013; Strassberg et al., 2014). A probable factor in these findings is that men are significantly more likely to forward sexts received to another person for whom the sext was not intended (Strassberg et al., 2014). This is a concerning phenomenon and has clinical implications, as the consequences of a sext circulating among unintended individuals may lead to embarrassment, shame, bullying, self-harm/suicidal ideations, and other mental health symptoms.

Significant gender effects were also observed in this study for growth-fostering relationships with peers and with intergenerational mentors. Women were more likely to endorse stronger growth-fostering relationships with peers and with an intergenerational mentor than their male counterparts. Liang et al., (1998) concluded that close relationships with peers and unrelated mentors are especially important within this population. These effects have clinical implications, especially within the relational-cultural model, as connections to others are crucial to healthy development and mental health (Jordan & Walker, 2004). Such growth-fostering relationships may serve as a protective factor for college students when they are presented with stressors or faced with decisions, such as whether or not to engage in risky sexual behaviors.

Limitations of the Study

One limitation of the study was the population sampled. College students were the focus of the study, but are not representative of the older adolescent population as a whole. In addition, while an effort was made to open the study to college students around the United States by posting an invitation on Facebook, the majority of the participants (65.4%) were from Oklahoma and 25% of the participants were from Texas. Less than 10% of the population represented other geographical locations/regions. Texas and Oklahoma are not as diverse as other parts of the United States in areas such as ethnicity and religion, and results should be interpreted with caution. Additional limitations noted within the sample include that the majority of participants were female (72.4%), the majority of participants were Caucasian/White (68.6%), and the majority of participants were heterosexual (95.6%). Findings may vary with different sub-populations and generalizations should be made with caution. Also, all participants were offered incentives including extra credit and/or the option to be included in a drawing for gift cards; the motivation for completing the study for some participants may not have been an interest in/commitment to the research topic.

The measures utilized in this study are also a potential limitation. The Relational Health Indices were normed on women, yet were administered to men as well in this study. In addition, the mentor scale was modified to assess mentoring relationships with parental figures and intergenerational mentors. There are no formal sexting measures published to date, so the 4 items developed to measure sending and receiving sexts, although based on definitions/wording in research, have not been validated. Finally, all instruments were self-reports based on the participants' perceptions rather than direct observations of their relationships, sexting behaviors,

and risky sexual behaviors. Participants may or may not have reported honestly or accurately, which may have impacted the results.

An additional limitation to this study was the research design regarding the collection of intergenerational relationship data. All other scales of the Relational Health Indices prompted the participants to complete the items for their closest peer, primary parental figure, and current community. Those who did not complete 90% of each scale were excluded from the data pool. However, as intergenerational relationships are less-studied in the research and participants were less likely to have a growth-fostering relationship with an intergenerational mentor, the participants were first asked to identify if they had a growth-fostering intergenerational relationship. If they answered “no,” they were not penalized and were redirected to the next measure; these participants were not excluded from the data pool. Seventeen percent of the participants claimed they did not have a growth-fostering relationship with an intergenerational mentor, and their lack of scores on the measure may have skewed the overall results of this study.

Suggestions for Future Research

Although the results were not significant in the current study, the data collected on growth-fostering intergenerational relationships warrants further investigation. While the research on this topic is extremely limited, prior findings suggest that growth-fostering intergenerational relationships can be beneficial for adolescents and the presence of these relationships may serve as a protective factor for negative behaviors. Additional data was collected for the database regarding the nature of reported intergenerational relationships. Future data analyses considerations may include separating participants who denied intergenerational relationships from those who endorsed them and comparing sexting behaviors and risky sexual

behaviors between the two groups, as well as between the different categories of intergenerational relationships (i.e. grandparent, teacher/coach, neighbor, etc...).

Further research on sexting as risky sexual behavior versus an emerging practice in modern dating relationships is important. The current research remains divided on this topic, and the possible consequences of sexting, especially for the adolescent population, can lead to future complications than may impact their mental health.

Further research on sexting behaviors between different age groups, including but not limited to the motivation to engage and impact on sexual relationships (positive and negative), would be valuable.

Further research investigating various growth fostering relationships as protective factors against risky sexual behavior would be beneficial.

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Table 1. Demographics of the Sample (n=344)

Age	m=21.3	sd=1.84	range=18-25
*n=1, no age reported			
Gender	n	%	
Male	92	26.7	
Female	249	72.4	
Transgender	3	.9	
Race	n	%	
African-American/Black	34	9.9	
Indian/Native American	24	7.0	
Asian/Asian American	9	2.6	
Hispanic/Latino(a)	33	9.6	
White, Non-Hispanic	236	68.6	
Other	7	2.0	
No Response	1	.3	
Sexual Orientation	n	%	
Heterosexual	329	95.6	
Gay/Lesbian	4	1.2	
Bisexual	9	2.6	
No Response	2	.6	

Table 1 (continued). Demographics of the Sample (n=344)

Year in College	n	%
Freshman	15	4.4
Sophomore	68	19.8
Junior	105	30.5
Senior	125	36.3
Graduate Student	30	8.7
No Response	1	.3
Family Annual Income	n	%
<10,000	31	9.0
10,001-15,000	16	4.6
15,001-20,000	13	3.8
20,001-30,000	31	9.0
30,001-40,000	25	7.3
40,001-50,000	22	6.4
50,001-60,000	25	7.3
60,001-70,000	29	8.4
70,001-80,000	25	7.3
80,001-90,000	30	8.7
90,001 or above	96	28.0
No Response	1	.3

Table 1 (Continued). Demographics of the Sample (n=344)

State/Territory of Residence	n	%
Alabama	0	0
Alaska	0	0
Arizona	1	.3
Arkansas	3	.9
California	3	.9
Colorado	1	.3
Connecticut	1	.3
Delaware	0	0
Florida	1	.3
Georgia	0	0
Hawaii	0	0
Idaho	0	0
Illinois	2	.6
Indiana	0	0
Iowa	0	0
Kansas	5	1.5
Kentucky	0	0
Louisiana	0	0
Maine	0	0
Maryland	0	0

Table 1 (Continued). Demographics of the Sample (n=344)

Massachusetts	1	.3
Michigan	1	.3
Minnesota	0	0
Mississippi	0	0
Missouri	6	1.7
Montana	0	0
Nebraska	0	0
Nevada	0	0
New Hampshire	0	0
New Jersey	0	0
New Mexico	0	0
New York	0	0
North Carolina	0	0
North Dakota	0	0
Ohio	0	0
Oklahoma	225	65.4
Oregon	0	0
Pennsylvania	0	0
Puerto Rico	0	0
Rhode Island	0	0

Table 1 (Continued). Demographics of the Sample (n=344)

South Carolina	0	0
South Dakota	0	0
Tennessee	1	.3
Texas	85	25.0
US Virgin Islands	0	0
Utah	0	0
Vermont	0	0
Virginia	0	0
Washington	4	1.2
Washington DC	0	0
West Virginia	0	0
Wisconsin	2	.6
Wyoming	0	0
Country other than US	2	.6
No Response	0	0

Table 2. Correlation Matrix of Main Study Variables

	SRSTOT	SSEND	SREC	PRTOT	PATOT	INTOT	CMTOT
SRSTOT	1.00						
SSEND	.558**	1.00					
SREC	.477**	.456**	1.00				
PRTOT	-.087	.048	-.113*	1.00			
PATOT	-.122*	-.032	-.116*	.407**	1.00		
INTOT	-.024	-.082	-.079	.271**	.291**	1.00	
CMTOT	-.052	-.049	-.106*	.415**	.342**	.213**	1.00

*p<.05 **p<.01

SRSTOT=Sexual Risk Total

SSEND=Sexting-Sending Behaviors

SREC=Sexting-Receiving Behaviors

PRTOT=Peer Relationship Total

PATOT=Parent Relationship Total

INTOT=Intergenerational Relationship Total

CMTOT=Community Relationship Total

Table 3. Multiple Regression Findings for Peer Relationships, Parental Relationships, Intergenerational Relationships, and Community Relationships as Predictors of Sexual Risk Behavior

Variable	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>Sig.</i>
Peer Relationships	-.170	.217	-.050	-.787	.432
Parental Relationships	-.307	.174	-.109	-1.767	.078
Intergenerational Relationships	.029	.079	.021	.361	.718
Community Relationships	.005	.179	.002	.025	.980
<i>R</i>			.130		
<i>R</i> ²			.017		
<i>F</i>			1.462		

p*<.05 *p*<.01

Table 4. Multiple Regression Findings for Peer Relationships, Parental Relationships, Intergenerational Relationships, and Community Relationships as Predictors of Sexting-Receiving Behavior

Variable	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>Sig.</i>
Peer Relationships	-.024	.027	-.055	-.869	.386
Parental Relationships	-.024	.022	-.066	-1.077	.282
Intergenerational Relationships	-.006	.010	-.034	-.591	.555
Community Relationships	-.020	.023	-.054	-.886	.377
<i>R</i>			.149		
<i>R</i> ²			.022		
<i>F</i>			1.922		

p*<.05 *p*<.01

Table 5. One-way ANOVA Findings for Gender and Risky Sex Behaviors

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5663.013	1	5663.013	8.818	.003**
Within Groups	217061.725	338	642.194		
Total	222724.738	339			

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

	N	Mean	SD	Std. Error
Male	92	56.457	31.171	3.250
Female	248	47.270	22.822	1.450
Total	340	49.756	25.632	1.390

Table 6. One-way ANOVA Findings for Gender and Sending Sexts Behaviors

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.277	1	1.277	.055	.814
Within Groups	7796.661	338	23.067		
Total	7797.938	339			

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

	N	Mean	SD	Std. Error
Male	92	6.457	4.773	.498
Female	248	6.319	4.814	.306
Total	340	6.356	4.796	.260

Table 7. One-way ANOVA Findings for Gender and Receiving Sexts Behaviors

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	64.635	1	64.635	6.243	.013*
Within Groups	3499.303	338	10.353		
Total	3563.938	339			

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

	N	Mean	SD	Std. Error
Male	92	4.272	3.736	.390
Female	248	3.290	3.004	.191
Total	340	3.556	3.242	.176

Table 8. One-way ANOVA Findings for Gender and Relationship with Peers

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	354.845	1	354.845	6.600	.011*
Within Groups	18225.982	339	53.764		
Total	18580.827	340			

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

	N	Mean	SD	Std. Error
Male	92	46.380	7.654	.780
Female	249	48.679	7.211	.457
Total	341	48.059	7.393	.400

Table 9. One-way ANOVA Findings for Gender and Relationship with Parental Figure

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	49.545	1	49.545	.612	.434
Within Groups	27434.215	339	80.927		
Total	27483.760	340			

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

	N	Mean	SD	Std. Error
Male	92	44.772	8.724	.910
Female	249	45.631	9.094	.576
Total	341	45.400	8.991	.487

Table 10. One-way ANOVA Findings for Gender and Relationship with Intergenerational Mentor

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1731.382	1	1731.392	5.067	.025*
Within Groups	115830.948	339	341.684		
Total	117562.340	340			

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

	N	Mean	SD	Std. Error
Male	92	34.3370	19.551	2.039
Female	249	39.4137	18.078	1.146
Total	341	38.0440	18.595	1.007

Table 11. One-way ANOVA Findings for Gender and Relationship with Community

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	233.702	1	233.702	3.168	.076
Within Groups	25007.060	339	73.767		
Total	25240.762	340			

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

	N	Mean	SD	Std. Error
Male	92	41.734	8.456	.882
Female	249	43.659	8.637	.547
Total	341	43.155	8.616	.467

APPENDIX A

Literature Review

Literature Review

Risky Sexual Behavior Trends of Adolescents

An alarming number of adolescents engage in risky sexual behaviors. Every two years, the Center for Disease Control and Prevention collects data via the Youth Risk Behavior Survey (YRBS) from high-school students across the United States in public, private, territorial, and tribal schools. The national YRBS is administered in an effort to monitor health behavior risks that contribute to leading causes of death, disability, and social concerns among youth and young adults in the United States, including risky sexual behaviors (CDC 2014). In their most recent report, The Center for Disease Control and Prevention (CDC) reported that of the high school students surveyed in 2013, 46.8% had engaged in sexual intercourse, and 15% had engaged in intercourse with four or more people during their life. Of the 40.9% of students who had engaged in sexual intercourse over the past three months, 40.9% did not use a condom the last time they had sex (CDC 2014). Although trends over the past two decades show overall decreases in adolescents engaging in sexual activity and increases in the use of contraceptives (CDC 2014), risky sexual behaviors continue to contribute to health concerns within the adolescent population of the United States. In 2009, 8,300 youth between the ages of 13-24 years in 40 states reported to the CDC that they had HIV infection (CDC 2009) and nearly half of the 19 million new cases of sexually transmitted diseases in the United States were diagnosed in adolescents between the ages of 15-24 years (Weinstock, Berman, & Cates 2004). In the literature, risky sexual behavior has been broadly defined, but the focus has been on behaviors that potentially lead to negative health outcomes, including sexually transmitted diseases, unplanned pregnancies, and death (Taylor-Seehafer and Rew 2000; Turchik and Garske 2009; CDC 2014). Other recognized negative outcomes of risky sexual behavior can be more

emotional in nature, such as damage to relationships, mental health symptoms, financial struggles, and legal concerns (Turchik and Garske 2009). Commonly identified risky sexual behaviors in the literature have included early age of sexual debut, number of partners, multiple partners during the same time period, and lack of consistent and properly utilized protection against diseases and pregnancy (Taylor-Seehafer and Rew 2000; Le and Kato 2006; Turchik and Garske 2009; Marcus, Fulton, & Turchik, 2011).

Turchik and Garske (2007) found that sexual risk-taking college students over the previous 6 months has been positively related to the lifetime number of sexual partners ($r = .58$, $p < .001$), the lifetime number of vaginal sex partners ($r = .65$, $p < .001$), the lifetime number of oral sex partners ($r = .64$, $p < .001$), the lifetime number of anal sex partners ($r = .31$, $p < .001$), and a history of sexual infidelity ($r = .40$, $p < .001$). Sexual risk-taking over the past 6 months for college students was negatively related to age of first vaginal sex experience ($r = -.17$, $p < .001$) and age of first oral sex experience ($r = -.26$, $p < .001$) when only those who had oral and vaginal sex experiences were included. The age of first anal sex experience was not significantly related to sexual risk-taking behaviors at the time that the survey was administered ($r = .08$, $p < .01$).

Sexting

A trending cultural phenomenon that has been minimally researched in the psychological literature is sexting. Sexting, defined as “sending or receiving sexually-laden text messages, sexually suggestive photos or videos, or partially nude or nude photos or videos via cell phone,” (Weisskirch and Delevi 2011, pp. 1698), is becoming recognized as part of the modern dating process (Gordon-Messer, Bauermeister, Grodzinski, & Zimmerman, 2013). As cell phones have become widely accessible to adolescents, sexting has become more common. As with other

risky sexual behaviors, the consequences of engaging in sexting can be long-term and psychologically debilitating.

Only a few studies to date have explored correlates and predictors of sexting in adolescents and young adults/college students. These researchers found that sexting was significantly related to lifetime sexual activity; in other words, individuals who participate in sexting behaviors were also more likely to be sexually active (Gordon-Messer, et al., 2013). Sexting has also been associated with insecure romantic attachments and in one study, attachment anxiety predicted young adults sending sexually suggestive texts if they were in a relationship (Weisskirch & 2011). Attachment anxiety also predicted positive attitudes towards sexting, including accepting it as a normal part of a relationship, believing it would enhance their relationships, and their believing their partners expected to receive sexually suggestive content via texts (Weisskirch & Delevi, 2011). Samimi & Alderson (2014) found that college students who hold more permissive sexual attitudes were more likely to engage in sexting than their conservative counterparts. Despite the consensus that more research is needed regarding the sexting phenomenon, there is some disagreement among researchers regarding whether sexting is considered a risky behavior, (i.e. a contributing factor to mental health or physical harm versus a modern component to the dating/courtship rituals) (Gordon-Messer et al., 2013; Benotsch et al., 2012). Due to the potential psychological harm, as indicated by media reports of depression and even suicide following negative sexting experiences (Weisskirch & Delevi, 2011) and speculation that sexting may lead to/be associated with earlier sexual debut, less contraception use, or other risky sexual behaviors (Gordon-Messer et al., 2013), sexting was examined separately from risky sexual behaviors for the purpose of this study. Below are summaries of the psychological empirical studies conducted examining sexting behavior.

Weisskirch and Delevi (2011) conducted a study designed to investigate how romantic attachment styles relate to sexting behaviors and attitudes regarding sexting activity. They surveyed 128 college students from two public, state universities. Participants ranged in age from 18 to 30 years and were primarily women (men = 22, women = 106). The racial composition of the sample was 4% African-American, 9% Asian-American, 27% White, 55% Hispanic, and 6% identified as “Other”. Fifty-eight percent of the participants were in romantic relationship at the time of the study, and 42% reported that they were single. The participants completed a questionnaire that included 36 items from the Experiences in Close Relationships-Revised measure (ECR-R) to assess attachment anxiety and avoidance. The participants also completed 19 items specifically designed for the study to determine sexting attitudes, including the subscales of Fun and Carefree (i.e., individuals feel that sexting is fun, exciting, and do not perceive any potential harm in engaging in sexting behaviors), Perceived Risk (i.e., individuals are concerned that sexting may lead to vulnerability and some problems in the future and believe that people should be careful regarding in what situations they choose to sext), and Relational Expectations (i.e., individuals believe that sexting is expected by their partners and sexting improves their relationships) and 5 items specifically designed for the study to determine the participants’ sexting behavior. Initial analyses indicated that individuals who reported being in a relationship were more likely to have sent a sexually suggestive text than those who reported being single. Additionally, those individuals who reported being in a relationship were also more likely to have sent a text message propositioning sexual activity than those who were single. Multiple regression analyses were conducted to examine if attachment styles were predictive of sexting behavior. Attachment anxiety for individuals who reported being in relationships significantly predicted individuals sending a text message propositioning sexual

activity. To explore attachment styles and sexting attitudes, separate multiple regression analyses were conducted with attachment anxiety and avoidance as predictors and the sexting attitude subscales (Fun and Carefree, Perceived Risk, and Relational Expectations) as the outcome variables. Findings indicated that attachment anxiety significantly predicted Relational Expectations of sexting, meaning that if you are feeling anxiously attached to your partner, you may sext to please your partner, thinking that your partner expects you to sext with him/her; no other significant relationships were found. Further research is needed to validate their measure of sexting attitudes.

Gordon-Messer, Bauermeister, Grodzinski, and Zimmerman (2013) conducted a study to examine sexting behavior among young adults and how sexting behaviors were associated with sexual behaviors and psychological well-being. They recruited 3447 young adults in the United States between the ages of 18-24 years old via Facebook. The first wave of participants were recruited an advertisement, and 22 seeds were selected based on race/ethnicity and region of the United States. The remainder of the sample for this study was recruited through referral chains. Of the final participant pool, 52% were male respondents and 93.9% identified themselves as heterosexual. The average age of the participants was 20 years old, and 66% had completed some college education. The racial breakdown of the participant pool was 70% White, 12% Asian/Pacific Islander, 9% Hispanic/Latino, and 5% African-American/Black. The participants were asked whether they have ever sexted or received a sext message. Based on their responses, participants were assigned a status of nonsexter, sender, receiver, or two-way sexter. Sexual behavior was assessed by asking participants if they have ever engaged in oral, vaginal, or anal sex with a male or female. Based on their responses, participants were assigned a status of being sexually active or being sexually non-active. Those participants coded as sexually active were

also asked to report number of partners in the past 30 days and number of unprotected sexual partners in the last 30 days. Mental health symptoms were assessed by administering three brief scales. An 11-item short version of the Center for Epidemiologic Studies Depression Scale was used to assess depressive symptoms in the past week at the time of the study. Anxiety symptoms for the past week at the time of the study were assessed using the anxiety subscale of the Brief Symptom Inventory. Self-esteem was assessed using the 10-item Rosenberg Self-Esteem Scale and creating a mean composite score; high scores indicated higher self-esteem. In addition to sexting behaviors, sexual behaviors, and mental health symptoms, socio-demographic characteristics, internet use, and phone/texting communication use was collected from the participants.

Due to their referral recruitment method, Messer, Bauermeister, Grodzinski, and Zimmerman (2013) computed a statistical weight to correct for clustering related to factors such as the participants' network characteristics and how many people the participants interacted with online. The final analytical sample included 827 individuals. Approximately 57% of responders were nonsexters, 28.2% were two-way sexters, 12.6% were receivers, and 2% were senders. The senders were excluded from subsequent analysis due to small cell size ($n = 15$). Bivariate analyses were conducted to examine sexting status by demographics, sexual behavior, and psychological well-being. Results indicated that male respondents were more likely to be receivers of sexting messages than females, but no gender differences were found for non-sexters or two-way sexters. Lifetime sexual activity was positively associated with sexting behavior. Receivers of sext messages were three times more likely to be sexually active than non-sexters, and two-way sexters were 14 times more likely to report lifetime sexual activity. No differences were found across sexting groups in depression, anxiety, or self-esteem. The authors concluded

that sexting is prevalent in the sexual relationships of young adults, but that it is not correlated with riskier behavior.

Samimi and Alderson (2014) examined the relationship between permissive versus conservative sexual attitudes and the practice of sexting, as well as to examine if there were gender differences regarding positive sexual attitudes towards sexting. Participants consisted of 525 college students, 263 men and 262 women, enrolled in psychology courses at a university in Western Canada. The participants ranged in age from 18 to 50 years old; 62.7% were between 18 and 20 years old. Over half of the participants (52.2%) endorsed being single without any commitments, 9.9% endorsed being single, but dating someone, and 37.9% indicated that they were in a relationship (married, long-term relationship, or 'friends with benefits'). The participants were asked to complete demographic data, information revealing the length of their relationship, items intended to determine sexting attitudes (including 17 items taken from Weisskirch and Delevi, 2011, as well as 30 items created specifically for this study), and the Sexual Attitude Scale (SAS). The researchers found that the participants who were single but dating someone or in a relationship were significantly more likely to engage in the practice of sexting than those who were single but had no relationship commitments; there were no statistically significant differences in sexting between those who were in relationships and those who were single but dating someone. Additionally, participants who were in a relationship or single but dating someone for 1 year or less were more likely to engage in sexting than those who were single with no relationship commitments. Based on their responses on the SAS, participants were coded as liberal and conservative regarding their sexual attitudes. Chi square findings revealed that the participants coded as liberal were more likely (65.9%) to engage in sexting than those who fell in the conservative group (39%). To examine attitudes regarding sexting, a

principal component analysis was used to explore the underlying component structure of the measure of sexual behaviors/outcomes developed for their study. Six component-based scales of sexual outcomes/behaviors were identified: Openness to Sexuality (i.e., sexting helps individuals be more open regarding sex and sexuality), Entertainment and Relationship (i.e., sexting is fun and part of a relationship), Control and Prevention (i.e., sexting can be risky and bear serious negative consequences), Negative Consequences (i.e., beliefs that sexting is like pornography and government should ban sexting by preventing images from being sent via cell phones); Sharing and Expectation (i.e., belief that romantic partners expect sexting as part of the relationship and that it is acceptable to share received/sent sexts with friends for whom the sext was not intended), and Legality (i.e., individuals should be charged by authorities for sending sexually suggestive content). Between-groups analysis of variance (ANOVA) was used to compare males' ratings versus females' ratings on the six scales. Males scored significantly higher than females on Openness to Sexuality, Entertainment and Relationship, and Sharing and Expectation scales. Men scored significantly lower than women on the Control and Prevention and Negative Consequence scales. There was no significant difference between men and women on the Legality scale. A 2x3 factorial ANOVA was used to examine the interaction between gender and relationship status on the sexting attitude scales. A main effect of relationship status was found on all scales. The factorial ANOVA revealed a significant two-way interaction between gender and relationship status on the Entertainment and Relationship scale. Independent sample t-tests showed that there was a significant difference in sexting attitude between men and women when they are single and do not have relationship commitments versus when they are in a relationship. Most of the participants in this study had liberal attitudes regarding sex, and the majority of the participants in the study had engaged in sexting behavior.

Women were more likely than men to recognize and be concerned with negative consequences regarding sexting, and endorse a desire to try to prevent negative consequences. These interesting results contribute to the sparse data regarding sexting differences between men and women, how sexting may be part of modern relationships, and attitudes regarding sexting in general.

Benotsch, Snipes, Martin, and Bull (2012) examined associations between sexting, substance abuse, and sexual risk behavior in youth. Their sample included 763 undergraduate students, ages 18-25 years, enrolled in psychology courses at a large public university in the mid-Atlantic region of the United States. Sixty-six percent of the students who completed their study were female, 52.9% were Caucasian, 19.3% were African-American, 12.3% were Asian/Asian-American, 5.6% were Latino/a, .1 were Native American, and 9.7 identified their ethnicity as other/mixed. Participants completed brief, online questionnaires designed for the study to collect information on their demographics, cellular telephone habits, sexting history, and sexual risk behaviors and substance use over the last 3 months. Forty-four percent of the participants endorsed that they had engaged in sexting behaviors. Individuals who endorsed sexting reported significantly more texting on cellular phones in a typical day than those who denied sexting behaviors. Men and women reported comparable sexting rates. White participants endorsed higher sexting rates than other ethnicities. Individuals who endorsed a history of sexting behaviors were significantly more likely to report recent use of recreational drugs including alcohol, marijuana, ecstasy, and cocaine. In this study, participants who endorsed a history of sexting behaviors had significantly higher rates of sexual risk-taking behavior than those who did not have a history of sexting. Over the last 3 months, individuals with a history of sexting were significantly more likely to report multiple sexual partners, unprotected sex, and having sex after

drinking/using drugs. Students with a history of sexting also endorsed higher lifetime sexual partners and were more likely to report diagnoses of sexually transmitted infections than their non-sexting counterparts. Although their study was conducted without validated assessments and with a limited population, the research findings demonstrated that sexting is indeed related to high-risk sexual behaviors, a view that has been questioned in previous literature with authors arguing that sexting has not yet been shown to pose a health/emotional risk to sexters. Benotsch, Snipes, Martin, and Bull (2013) further suggested that future studies may benefit from the addition of sexting questions to sexual risk assessments.

In summary, a total of four relevant studies have been conducted exploring the psychological components of sexting, one of which has focused on relational aspects, such as attachment. In the present study, mentorship relationships (i.e., parental, peer, intergenerational) and community connections will be explored as predictors of sexting and sexual risk-taking behaviors. In the next section, the literature on how relationships with parents, peer, and community and sexual risk-taking behaviors of adolescents and college students will be briefly summarized.

Social Relationships and Sexual Risk-Taking

As risky sexual behavior remains an ongoing health concern and nationwide financial burden (i.e. related to medical costs, unwanted pregnancies), abundant research has been devoted to investigate the predictive factors of adolescent sexual risk behaviors, as well potential protective factors of sexual risk behaviors. Several models exist that focus on the social influences (such as peer/parental/neighborhood/school relationships), biological factors (such as onset of puberty, hormone influences), socioeconomic/demographic factors (such as a poverty rates), and individual factors (such as knowledge of sexual education/use of protection during

sexual encounters) on risky sexual behavior (Ali & Dwyer, 2011); Chia-Chen Chen, Thompson, & Morrison-Beedy, 2010; Taylor-Seehafer & Rew, 2000). Taylor-Seehafer and Rew (2000) conducted a review of literature regarding the epidemiology and etiology of the risky sexual behaviors of adolescent women in 2000. Their findings support that environmental factors and individual factors interact to influence choices of adolescent women to engage in risky sexual behaviors. Environmental factors specifically identified were poverty, social isolation, cultural norms, gender roles, family, school, and peers. Individual factors specifically identified were developmental factors, including biological changes, age at menarche, cognitive maturity, and emotional growth, and personal factors, including self-efficacy, sexual knowledge, self-esteem, and communication. Taylor-Seehafer and Rew (2000) suggest that communication and bonding between adolescents and their family/supportive adults in school may enhance self-esteem and provide a model for effective expression of their personal beliefs when exposed to risky situations. Therefore, these connected relationships with caring adults can serve as a protective factor for risky sexual behaviors and should be considered when developing interventions. These findings further support the potential effectiveness of the relational-cultural model in explaining why people engage in risky sexual behaviors.

Since their review in 2000, a number of studies exploring factors associated with sexual risk-taking behaviors have been conducted. While it is understood that predictors/ protective factors of sexual risk behaviors are dynamic in nature, for the purpose of this study, relational influences will be the focus. Only those studies focused on family, peers, community, and extended family will be summarized.

Adolescents are motivated by a desire to exert control when they engage in risk-taking behavior, such as sexual activities. It has been shown that if they lose parental support, or the

equivalent, problem behaviors increase (Ream & Savin-Williams, 2005). Ream and Savin-Williams (2005) examined the differences in adolescents' relationships with their parents before and after their first sexual relationship. Their participants were members of the core sample from the National Longitudinal Survey of Adolescent Health, Waves 1 and 2 (18 months between each data collection). The sample for this study who completed both waves was 13,570 adolescents. The dyads included in the results were as follows: son-mother (4,646); son-father (5,331); daughter-mother (3,594); and daughter-father (3,788). The participants completed during each Wave a parental closeness scale, a sexual activity scale, and were asked to identify out of a list of 10 activities, which they had engaged in their parents over the last 4 weeks. Activities included shopping, playing a sport, discussing a personal problem, working on a school project, and attending a religious service. Results were considered for adolescents who were sexually active at Wave 1, who became sexually active between Wave 1 and 2, and who were not sexually active at Wave 1 or Wave 2. Ream and Savin-Williams utilized path-analysis to explore changes in adolescent-parent closeness, shared activities, and problem-focused interactions (e.g. interactions related to discipline, disagreements, or focus on solving a problem with teachers) associated with the onset of the adolescents' sexual activity. Their results indicated that increased problem-focused interactions (i.e. interacting to discuss a problem, argue about behavior, or talk about life) and decreased parental closeness both preceded and followed the adolescents' engagement in sexual activity. Limitations of this study include that data was self-reported and that while problem-focused interactions/decreased parental closeness were positively related to sexual activity, they were not necessarily predictors of the adolescents' sexual activity. The researchers suggest that maintaining positive parental relationships after

their adolescents' first sexual encounter can be utilized as a protective factor to reduce risky sexual behaviors.

Bylund, Imes, and Baxter (2005) compared college students' reports of health risk behaviors with their parents' perceptions of these health risk behaviors. A sample of 164 parent-college student dyads were surveyed. The college participants were recruited from a large Midwestern university. The students in this study were predominately white (94%) and female (81%), as were their participating parents. The students were provided a survey to complete which included questions about their current health and health risk behaviors, addressing issues including nutrition, exercise, sleep, sun protection, vehicle safety, illness, safe-sex behaviors, and alcohol/tobacco/drug use. Questions used were primarily adapted from the 1995 National College Health Risk Behavior Survey and the Project GRAD 2-year follow-up health survey. The student participants were asked to have their parent from their primary household residence to complete a copy of the survey referencing their participant child's behaviors. A paired-sample t-test was conducted of the responses and results indicated that parents rated their college student children's health higher than the student participants. Specifically, parents perceived that their college student children engaged in significantly less health risk behaviors compared to what these students actually reported including drinking alcohol, binge drinking, smoking cigarettes, having sexual intercourse, and smoking marijuana. In no cases in their study did a college student rate their health higher than their parents rated the student's health. Bylund, Imes, and Baxter (2005) conducted this study with a goal of imparting the importance that parents can play in reducing their college students' health risk behaviors, including sexual practices. Their findings contribute to literature in that their findings imply that impaired parental perceptions of

their children's risky behaviors, such as contraceptive use and occurrence of sexual activity, can negatively impact how they guide and mentor their children regarding specific health risks.

Researchers have also found that having relationships and receiving support with reliable adults other than parents help to decrease engagement in the risk-taking behaviors of adolescents (Mancini and Huebner, 2004). Mancini and Huebner (2004) investigated the role that connections with others played as a protective factor for adolescent risk patterns. They collected data from 2701 students in public schools between the grades of 7th and 12th grade. To assess risky behaviors, single-item questions were used to address use of cigarettes, alcohol, marijuana, and sexual activity; a nine-item scale was also administered to evaluate delinquency. Within the study, participants were asked questions developed by the researchers to assess their connections with friends, parents, a reliable adult (non-parent), and school. Examples of these items included, "My parents are good parents," and "I have at least one good friend I can count on." Other factors were also investigated including self-system/individual protective factors, socio-demographic context, and structured time-use. Correlational findings indicated that health risk behaviors were significantly negatively associated with use of structured time, having a reliable adult to talk to, parent attachment, family time, self-esteem, grades, age, gender, and socio-economic status. Stepwise multiple regression analysis was utilized to further interpret the meanings of the variable correlations. Teacher attachment was entered, followed by age, school success, parent attachment, gender, structured time-use, and having at least one good friend. In this study, the strongest predictor of decreased health risk behaviors was age (beta = .22), followed by school attachment (-.19); school success (-.17); parent attachment (-.11); gender (-.09); structured time use (-.06); and having at least one good friend (.05). Among the findings found by Mancini and Huebner, 7 of their hypothesis were confirmed: adolescents who

participate in structured time-use were associated with less risk behavior, even after other factors were taken into consideration; stronger attachment to parents were associated with decreased sexual risk behavior; attachment to school related to less risk behavior; school success was positively related to less risk behavior; males were more likely to engage in risk behavior; older age related to increased risk behavior; and socioeconomic status was not related to risk behaviors (2004, 661-662). The findings of Mancini and Huebner contribute to the literature by suggesting factors that statistically impact sexual risk behavior. Furthermore, connections to the youth (i.e. parents, peers, teachers) were positive influences and should be considered as a protective factor when developing prevention plans for risky behaviors (2004, 663).

Aspy, Vesely, Oman, Rodine, Marshall, and McLeroy (2007) investigated the role of parental communication and instruction in relationship to the sexual behaviors of 13- 17 year old youth. Abstinence was supported by talking about the youth's problems within the family, understanding youths' point of view and their parents' expression of high expectations, love and concern, and clear rules related to youths' abstinence (Aspy et al., 2007). In their study, sexually active youth from single-parent homes who reported their parents had communicated they loved them and wanted good things for them were significantly less likely to have had multiple sexual partners. The same youth were three times more likely to have used birth control in their last sexual encounter than in homes with parents who did not communicate love. In addition, the adolescents who reported they had adult role models who supported abstinence were significantly less likely to have had multiple sexual partners (Aspy et al., 2007)

Le and Kato (2006) explored the influences of peer, family, and culture on adolescent risky sexual behaviors within a sample of Cambodian and Laotian youth within the United States. The researchers collected data from youth recruited from 2 schools and 5 community

centers that served predominately Asian populations. Once youth indicated consent to participate and provided demographic and contact information, guardians were contacted for consent and interviews were conducted with youth and willing guardians. Data was collected to assess the youths' individualism/collectivism (measured by a 32 item scale); acculturation (measured by 13 items asking participants how often they engaged in a particular activity in mainstream American culture, such as watching movies or going to professionals); risky sexual behavior measured by questions developed for this study, including items such as "have you had sex?"; peer delinquency (measured with a 16-item scale asking how many of their friends engaged in various delinquent activities over the last 6 months, such as damaging property or using drugs); parental engagement (measured by Hirschi's concept of parent attachment/engagement); and parent discipline style (measured by a 16-item scale asking for information about how often the parents used methods such as shaming, slapping, or yelling to punish for wrongdoing). Interview questions used to collect this data were adopted from the Denver Youth Study; Rochester Youth Study; and Pittsburgh Youth Study. Results of this study indicated that peer delinquency and age were significant predictors of risky sexual behavior. Experiencing problems with delinquent behaviors and age were positively associated with risky sexual behaviors among U.S. Cambodian and Laotian youth in this study. Additionally, individualism ("perceiving the self as being unique, different, and separate from others, pp. 289)) was associated positively with risky sexual behavior for Cambodian youth, whereas collectivism (perceiving the self in relation to others, pp. 289) was negatively associated with risky sexual behavior for Laotian youth. Parental engagement correlated negatively within the Lao culture, but not significantly so for Cambodians, and parental discipline significantly predicted risky sexual behavior for Laotian youth; stricter parental discipline resulted in less risky behavior, and

may serve as a protective factor. Le and Kato's findings suggest that, in addition to the more often-studied factors of age, parental relationships, and peer relationships, culture may also be an imperative factor in adolescent risky sexual behaviors.

Chia-Chen Chen, Thompson, and Morrison-Beedy (2010) examined multi-system influences on the risky sexual behaviors of adolescents. Their data was collected from the Wave I and Wave II National Longitudinal Study of Adolescent Health, which polled 20,745 students, grades 7-12, across the United States in 1995 and 1996 via questionnaires completed in their homes. Parents of the participants were also asked to complete a survey, and 85.6% of the participants had a parent who also completed a parental questionnaire which collected information regarding family factors such as family structure, parent-child relationship satisfaction, parental disapproval of pre-marital sex, parental monitoring/supervision, and parent-child communication about sex. The sample for Chia-Chen Chen et al.'s study included 4,466 adolescents who were single, sexually experienced, and 15 years or older; younger adolescents were excluded from their data pool. The participants' sexual behaviors that increase the threat of acquiring sexually transmitted diseases were measured by administering composite outcome measures including the Cumulative Sexual Risk Index (CRSI) and assessing the number of self-reported nonromantic sexual partners. Independent variables were drawn from adolescent self-reports and parental reports and included background variables; knowledge, beliefs, and behaviors related to sexual behaviors; psychosocial attributes and problems behaviors; family factors; peer influence; school influence; and neighborhood influence. Hierarchical Poisson Regression was completed to analyze the data. Results indicate that sex-related knowledge, beliefs, and behaviors as well as psychosocial attributes and problem behaviors made significant contributions to the prediction of cumulative sexual risk behaviors (the CRSI score). Family

factors predicted CRSI and the number of nonromantic sexual partners. Neighborhoods predicted the number of nonromantic relationships. In addition, strong relationships between risky sexual behavior, drug use, and delinquent behaviors were noted. The results indicate a need for multi-faceted prevention programs that address relevant factors that contribute to increased risky behaviors of adolescents (Chia-Chen Chen et al., 2010).

Resnick, Bearman, Blum, et al. (1997) conducted a cross-sectional analysis of the data obtained in the National Longitudinal Study of Adolescent Health in an attempt to identify risk and protective factors regarding adolescent health. Emotional health, violence, substance abuse, and sexuality were the targeted domains of the study. A total of 12118 adolescent participants' data were drawn from the surveys collected during the National Longitudinal Study of Adolescent Health. Their findings support aspects of the relational-cultural model, indicating that parent-family connectedness and perceived school connectedness were protective against health risk behaviors.

Lohman and Billings (2008) investigated protective and risk factors regarding the rate of onset of sexual activity and risk sexual behaviors in low-income adolescent boys. They utilized longitudinal data collected through two waves of surveying entitled Welfare, Children, and Families: A Three City Study in 1999 and 2001. A total of 528 adolescents from low-income homes were surveyed who were between the ages of 10 and 14 years old during 1999 in Boston, Chicago, and San Antonio. The participants were asked 25 questions regarding their past and present sexual experiences, as well as questions investigating in-place protective factors related to academic expectations/achievement/and school recognition, parental monitoring, family routines, and parent-son relationship quality. Risk factors including delinquency, demographics, neighborhood environment, and family welfare receipt were also assessed. A multivariate

analysis was conducted and results indicated that early parental monitoring (measured by a series of questions that investigated curfew, the mothers' awareness of friendships, mothers' awareness of where the participant was when away from the mother, and mothers' knowledge of how free-time and money were spent) and academic achievement were shown to protect the adolescent boys from early sexual initiation and risky sexual behaviors by reducing contributing risk factors, such as delinquent behaviors.

Henrich, Brookmeyer, Shrier, and Shahar (2005) studied the longitudinal associations between supportive relationships with friends and parents and risky sexual behaviors over time. Supportive relationships with parents and friends were considered a potential protective factor for risky sexual behavior and the research was based on an ecological-transactional perspective. Data for their study was taken from the first two waves of the National Longitudinal Study of Adolescent Health and an extensive survey addressing the adolescents' relationships with family and friends and their sexual risk behaviors was administered twice in 1995 and 1996 to participants. Included in the data, an 11-item parent connectedness scale for which adolescents reported the quality of their relationships with their parents; parent questionnaires which collected information regarding the extent to which parents had discussed sex with their children; a survey investigating perceived peer support from the participants' closest friends; and a sexual risk behavior measurement (5 items including information about condom use, using drugs during sex, drinking during sex, having sex for drugs or money, and early onset of sexual activity). Results indicated that African-American adolescents had a lower risk for sexual risk behavior than their peers of all other races in this study. Supportive relationships and connections with parents and peers were associated with decreased engagement in risky sexual behaviors. For girls, mother-child communication about sex was also a protective factor against risky sexual

behavior. The results support previous research findings that strong connections with family members and peers act as a protective factor for risky sexual activities, potentially improving adolescent health.

In summary, the results of the research on sexual risk-taking behaviors indicates that sexual risk-taking is associated with a number of variables including parental monitoring, age, peer influences, and school success. Most studies investigating parental influences focus on factors such as parental monitoring of adolescent activities, parental presence in the home, or parental discipline styles. Few focus on the quality of relationships between the parents and their child. While the family is the primary social system that is generally present to nurture and impact the social development of adolescents, and therefore the most studied, (Chia-Chen Chen & Thompson, 2007), peers are also believed to be a contributing influence on adolescent development (Ali & Dwyer, 2011). Within the literature, several groups of researchers have investigated the role of peer influence on risky sexual behavior. However, most focus on the impact of deviant peers on risky sexual behavior and recognize a correlation between deviant friends and increased sexual risk behaviors (Ali & Dwyer, 2011). Few incorporate the impact of a healthy relationship with a peer as a predictor of decreased risky sexual behavior. The influence of extended relationships of adolescents, such as with grandparents or within their community, is underdeveloped and limited in the literature pool. Of interest in this study, little is known about the relationship of mentorship and connections adolescents and college students have with others and how this relates to sexual risk-taking behaviors, which is the focus of the present study. In the next section, the Relational Cultural model on relationships and connections that are theorized to be related to health and wellness will be summarized.

Relational Cultural Theory

Relational Cultural theorists suggest that when individuals are connected, relationships are bidirectional and lead to acceptance, mutual empathy, and maturity. Meaningful relationships are evident when one person is both affecting the other person and being affected by the other individual in the relationship; one extends oneself out to the other and is receptive to the impact of the other. There is openness to influence, emotional availability, and a constantly changing pattern of responding to and affecting the other person. The movement toward the other's differentness is actual central to the growth of the interpersonal relationship. (Jordan, 1986). Theorists of the relational cultural model state that 'connection is the core of human growth and development' and 'isolation is the primary source of human suffering,' (Jordan, Kaplan, Miller, Stiver, & Surrey, 1991; Miller & Stiver, 1997). Individuals gain a sense of health and psychological well-being and importance through growth-fostering and meaningful relationships.

According to relational-cultural theory, when acutely disconnected to society and important relationships, individuals experience symptoms of depression, anger, and discontent (Jordan 2004). Often disconnected people will act out behaviorally and internalize pain, impacting feelings of self-worth, satisfaction, and happiness. Such depressive symptoms are known to be predictors of adolescent sexual experimentation and risk-taking behaviors (Lehrer, Shrier, Gortmaker, & Buka, 2006).

Intergenerational Influences

Spencer, Jordan, and Sazama (2004) explored the experiences and understandings of youth and adolescents regarding their relationships with important adults in their lives using the relational-cultural theory as framework. They hosted 7 focus groups with 91 participants

between the ages of 7 and 18 years. Pre-determined interview questions were asked during the focus groups, guiding the participants to discuss and reflect on their perceptions of a good relationship with adults and the components of a healthy and mutual relationship with an adult. A thematic analysis was conducted on the responses of the focus group participants through content coding and a conceptually clustered matrix. Results indicated that within each group, good/close relationships with several different types of adults were identified including parents/stepparents, teachers, youth group leaders, older siblings, and extended family members. Mutuality and respect within these close relationships were vital to the participants and they tended to develop meaningful and close relationships with adults who seemed to genuinely care about them for who they were, who were open, and who engaged with them unconditionally. Additional themes identified included the participants' desire to feel like the adults could relate to them, felt trusted by the adults, and their role in the relationships could impact the adults as equally as the adult impacted the participants through their interactions. The youth and adolescents who attended the focus groups indicated both a need and desire for meaningful relationships with adults that can offer a sense of safety and opportunity for emotional growth from expression of experiences. It is important to note that the participants in this study indicated that while they may rely on peers for support in the absence of a meaningful relationship with an adult, peers cannot provide the structure and guidance they deemed essential for healthy emotional development during adolescence.

Bartlett (2004) conducted follow-up interviews from an earlier qualitative study in which five women, ages 62-80 years, and seven adolescent girls, ages 13-15, participated in a 48-hour intergenerational storytelling retreat. All of the girls selected had limited female role models and little to no contact with their grandmothers/women older than their mothers. The focus of the

retreat was an opportunity for unrelated, intergenerational women to discuss openly life issues such as puberty, dating, peer pressures, and hardships; the girls spoke of their current challenges and concerns, and the women shared with the group their experiences during adolescence. In addition to storytelling, the participants shared meals, planned activities, and free-time. The goal of the retreat was to examine whether the newly-formed intergenerational relationships would benefit the adolescent and older women through the expression of experiences. The data collected for the initial study included in-depth interviews, journals, video, case notes, and other documentation from the retreat. All interviews, observations, and notes taken from the video recording were transcribed. Follow-up interviews were conducted four years later with the five available adolescent participants and four available older women participants. The purpose of the follow-up interviews was to investigate the residual impact of the retreat on the participants. The follow-up interviews were transcribed. Open coding, axial coding, and selective coding were utilized to analyze the data. Themes that emerged from the adolescent participants regarding their reported gains from the retreat included increased confidence, comfort with self and positive risk-taking, such as engaging in beneficial activities outside of one's comfort, new openness with others, less judging of others in all generations, and new friendships and memories. Themes emerging from the older women's reports regarding the impact of the retreat included instillation of hope for future generations, increase in risk-taking, pride in how women have developed in society, and self-pride. Long-term benefits have included that the developed connections with unrelated women did meet the relationship needs of the adolescents and that the experience was positive. Bartlett recommended that further research might include the role and extent that intergenerational relationships have on the at-risk behaviors of adolescents.

Liang, Spencer, Brogan, and Corral (2008) compared the perceptions of informal mentoring relationships (formed naturally in everyday interactions and not within a mentoring program) among the sub-stages of adolescence groups: early adolescence (middle school students), middle adolescence (high-school students), and emerging adults (college students/older adolescents entering the work field). They conducted a qualitative study using 10 focus groups, totaling 56 middle school, high school, and college students (ages 11-22) attending school in the Northeast region of the United States. The participants were divided by stage of adolescence, and subdivided by gender. The grade school participants attended public school. The college-aged participants were recruited from a private liberal arts college and public universities. Students at the recruitment schools were invited to participate if they had a relationship with a non-parental adult who they considered important in their personal development. The identified participant pool was divided and participants were assigned to focus groups in which data pertaining to their mentoring relationships was gathered utilizing a semi-structured format. Questions were designed to gather information on mentoring in general (i.e. “What is a mentor?” pp.172), who, out of the important adults in their life (such as a coach, teacher, religious leader, pp.172), might they consider to be a mentor, and what activities and significant experiences (negative or positive) they engaged in with their identified mentors. While specific questions were structured and all focus group members were asked to contribute to the conversation by taking turns addressing the group questions, free-flowing additions/elaborations/feedback were encouraged. The focus group was concluded when no members could think of any more incidents or experiences related to mentoring to describe. Audiotapes of the focus group sessions were transcribed and a team of three coders independently reviewed and categorized themes from the ten focus groups. Three themes were

similar across all adolescent groups: the importance of spending time together/spending time engaging in mutual activities; trust; and role-modeling/identification (e.g. “My cousin is an A and B student... I want to follow in his footsteps.” pp. 173). Themes of balancing connection and autonomy (e.g. “It’s not good to raise your mentors on a pedestal, or see them as flawless,”; “You have to see them as humans, and you need to want to be better than them.” pp. 173) and empowerment (e.g. “He tells me to never give up.” pp. 173) were noted in all three adolescent groups, but emerged at different developmental/maturity levels respectively. Liang, Spencer, Brogan, and Corral (2008) conducted this study in an effort to address the gaps in research regarding adolescence and non-formal mentoring relationships. The findings, such as the themes identified in the focus groups and the notable developmental differences between the adolescent groups, contributes to the literature by elucidating mentoring patterns, benefits, and opportunities at different adolescent sub-stages (e.g., middle school, where mentors are more likely to be family or teachers; high school, where with developing autonomy, natural mentoring possibilities may expand; and college/work field, where mentors are more available and may impact adolescents differently). Liang, Spencer, Brogan, and Corral (2008) called for further research addressing the relevance of Relational-Cultural Theory qualities (such as authenticity, engagement, empowerment, and zest) in youth mentoring (pp. 180).

In summary, only a few studies have been conducted to date that address mentoring, from a cultural relational model, especially at the intergenerational level. The findings of these studies suggest that adolescents find these relationships beneficial. Mentors provide emotional support, guidance, and help improve self-worth. Intergenerational mentors, in particular, provide the added benefit of a long life of experiences to help relate to mentees. The positive influence of a mentor in the life of a college student may provide the self-esteem, knowledge, and strength

to help the young adult make more responsible choices regarding their sexual relationships.

To date, no researchers have explored the relationship of parents, peer, and intergenerational members and community influences on sexual risk taking behaviors and sexting of college students, which was the focus of the present study.

APPENDIX B

Informed Consent

Informed Consent Form

You are invited to participate in a study exploring your relationships with your peers, parents, community, and intergenerational mentors and your engagement in potentially risky sexual behaviors, including sexting. Participation in this study involves the completion of a demographics form and three inventories which should take approximately 30 minutes to complete.

The potential benefits of participating in this study include an increased awareness of your relationships and the choices you make regarding engaging in sexual risk-taking and sexting behaviors. There are no foreseeable risks in participating in this study. However, if the surveys make you feel uncomfortable, you may withdraw your consent and discontinue the surveys at any time.

Participation in this study is completely voluntary. If you choose to participate, please complete the questionnaires in this study. There is no penalty for not participating and you have the right to withdraw your consent and participation at any time. If you are completing this study through SONA at Oklahoma State University, you will earn .5 extra credit points for your participation. If you choose not to complete this study, you may complete alternative studies available on SONA for extra credit, or complete any alternative assignments your professor may offer.

All participants will have the opportunity to be entered for a drawing for one of 3 \$25.00 gift cards after all data is collected.

All information in this study is strictly anonymous. No individual participants will be identified. Your instructor will not know your individual responses to the questionnaires. However, it will be indicated that you participated in the study and you will receive extra- credit for your participation. Your consent will be kept separately from your responses to questionnaires; therefore, there will be no way to identify your responses. Any written results will discuss group findings and will not include information that will identify you. Research records will be stored securely and only the researcher and individuals responsible for research oversight will have access to the records. Your participation in this study is greatly appreciated. If you have any questions concerning this study, please feel free to contact Kimberly Samuels, M.A. (281) 382-0305 or Al Carlozzi, Ed.D. (918) 594-8063. If you have questions about your rights as a research volunteer, you may contact Dr. Hugh Crethar, IRB Chair, 219 Cordell North, Stillwater, OK 74078, (405) 744-1676 or irb@okstate.edu.

If you agree to participate, please click the SUBMIT button to move to the survey study.

APPENDIX C

Scripts

SONA Recruitment

You are invited to participate in a study exploring your relationships with your peers, one parental mentor, and one intergenerational mentor, and the community, and your engagement in potentially risky behaviors, including but not limited to sexting and sexual activity.

Participation in this study involves the completion of an on-line survey with three questionnaires which should take approximately 30 minutes to complete.

The potential benefits of participating in this study include an increased awareness of your relationships with peers, parental mentors, intergenerational mentors, and your community as well as choices you have made regarding the decision to engage in certain activities, including sexting and other sexual behaviors.

There are no foreseeable risks in participating in this study. No one will have access to your individual responses. Information collected in this study will be presented in group form. You will not write your name on any part of this survey, so there will no way to connect your survey responses to your identity.

After you complete this survey, you will be directed to a separate website wherein you will include your name for the purposes of receiving one half hour (or .5 units) of extra credit for your participation in this study. Your instructor will only have your name and whether you participated or not.

After you complete this survey, you will be provided an email address to send your name and email address to the researchers if you wish to be entered in a drawing for 1 of 3 available VISA gift cards to be awarded following the completion of data collection.

Please click the following link to continue to the study:

https://okstatecoe.az1.qualtrics.com/SE/?SID=SV_br0Y18saN6NzPkF

Facebook Recruitment

You are invited to participate in a study exploring your relationships with your peers, one parental mentor, and one intergenerational mentor, and the community, and your engagement in potentially risky behaviors, including but not limited to sexting and sexual activity.

Participation in this study involves the completion of an on-line survey with three questionnaires which should take approximately 30 minutes to complete.

The potential benefits of participating in this study include an increased awareness of your relationships with peers, parental mentors, intergenerational mentors, and your community as well as choices you have made regarding the decision to engage in certain activities, including sexting and other sexual behaviors.

There are no foreseeable risks in participating in this study. No one will have access to your individual responses. Information collected in this study will be presented in group form. You will not write your name on any part of this survey, so there will no way to connect your survey responses to your identity.

After you complete this survey, you will be provided an email address to send your name and email address to the researchers if you wish to be entered in a drawing for 1 of 3 available VISA gift cards to be awarded following the completion of data collection.

Please click the following link to continue to the study:

https://okstatecoe.az1.qualtrics.com/SE/?SID=SV_br0Y18saN6NzPkF

Conclusion of Study

Thank you for your participation in this study. Your time is greatly appreciated.

If you are completing this survey through SONA at Oklahoma State University, you will earn .5 extra credit points for your participation. Your instructor will be notified that you completed the study. You may wish to print this screen for your own records.

If you would like to be entered for a drawing for one (1) of three (3) \$25.00 gift cards, please send an email with your name and the address you would like the card to be sent to if your name is drawn to: kimberly.samuels@okstate.edu. Please indicate that you have completed the study and wish to be entered in the drawing.

APPENDIX D

Demographics Sheet

Please answer the following questions about yourself to the best of your ability.

1. What is your age?

- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25

2. What is your gender?

- Male
- Female
- Transgender

3. What is your race?

- African American/Black
- American Indian/Native American
- Asian/Asian American
- Hispanic/Latino(a)
- White, Non-Hispanic
- Other _____

4. What is your sexual orientation?

- Heterosexual
- Gay/Lesbian
- Bisexual

5. What year are you in college?

- Freshman
- Sophomore
- Junior
- Senior
- Graduate Student

6. How many years have you been in graduate school?

- 1
- 2
- 3
- 4
- 5 or more

7. What is your family income?

- Less than 10,000
- 10,001 to 15,000
- 15,001 to 20,000
- 20,001 to 30,000
- 30,001 to 40,000
- 40,001 to 50,000
- 50,001 to 60,000
- 60,001 to 70,000
- 70,001 to 80,000
- 80,001 to 90,000
- 90,001 or above

8. What is your state/territory of residence?

- Alaska
- Arizona
- Arkansas
- California
- Colorado
- Connecticut
- Delaware
- Florida
- Georgia
- Hawaii
- Idaho
- Illinois
- Indiana
- Iowa
- Kansas
- Kentucky
- Louisiana
- Maine
- Maryland
- Massachusetts
- Michigan

- Minnesota
- Mississippi
- Missouri
- Montana
- Nebraska
- Nevada
- New Hampshire
- New Jersey
- New Mexico
- New York
- North Carolina
- North Dakota
- Ohio
- Oklahoma
- Oregon
- Pennsylvania
- Puerto Rico
- Rhode Island
- South Carolina
- South Dakota
- Tennessee
- Texas
- US Virgin Islands

- Utah
- Vermont
- Virginia
- Washington
- Washington DC
- West Virginia
- Wisconsin
- Wyoming
- Country other than US _____

APPENDIX E
Sexual Risk Survey

SRS

Please read the following statements and click on the number that is true for you over the past 6 months.

If you do not know for sure how many times a behavior took place, try to estimate the number as close as you can.

Thinking about the average number of times the behavior happened per week or per month might make it easier to estimate an accurate number, especially if the behavior happened fairly regularly.

If you've had multiple partners, try to think about how long you were with each partner, the number of sexual encounters you had with each, and try to get an accurate estimate of the total number of each behavior.

If the question does not apply to you or you have never engaged in the behavior in the question, please select "0,". Please fill in the number for your response if your response choice is not provided.

Please do not leave items blank.

Remember that in the following questions "sex" includes oral, anal, and vaginal sex and that "sexual behavior" includes passionate kissing, making out, fondling, petting, oral-to-anal stimulation, and hand-to-genital stimulation.

Please consider only the last 6 months when answering and please be honest.

In the past six months:

1. How many partners have you engaged in sexual behavior with but not had sex with?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

2. How many times have you left a social event with someone you just met?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

3. How many times have you “hooked up” but not had sex with someone you didn’t know or didn’t know well?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

4. How many times have you gone out to bars/parties/social events with the intent of “hooking up” and engaging in sexual behavior but not having sex with someone?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

5. How many times have you gone out to bars/parties/social events with the intent of “hooking up” and having sex with someone?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

6. How many times have you had an unexpected and unanticipated sexual experience?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

7. How many times have you had a sexual encounter you engaged in willingly but later regretted?

-
- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

For the next set of questions, follow the same directions as before. However, for questions 8–23, if you have never had sex (oral, anal or vaginal), please click on the number “0”.

8. How many partners have you had sex with?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

9. How many times have you had vaginal intercourse without a latex or polyurethane condom? Note: Include times when you have used a lambskin or membrane condom.

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

10. How many times have you had vaginal intercourse without protection against pregnancy?

-
- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

11. How many times have you given or received fellatio (oral sex on a man) without a condom?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

12. How many times have you given or received cunnilingus (oral sex on a woman) without a dental dam or “adequate protection.”

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

13. How many times have you had anal sex without a condom?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

14. How many times have you or your partner engaged in anal penetration by a hand (“fisting”) or other object without a latex glove or condom followed by unprotected anal sex?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

15. How many times have you given or received anilingus (oral stimulation of the anal region, “rimming”_ without a dental dam or adequate protection?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

16. How many people have you had sex with that you know but are not involved in any sort of relationship with (i.e., “friends with benefits,” “fuck buddies”)?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

17. How many times have you had sex with someone you do not know well or just met?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

18. How many times have you or your partner used alcohol or other drugs before or during sex?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

19. How many times have you had sex with a new partner before discussing sexual history, IV drug use, disease status, and other current sexual partners?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

20. How many times (that you know of) have you had sex with someone who has had many sexual partners?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

21. How many partners (that you know of) have you had sex with who had been sexual active before you were with them but had not been tested for sexually transmitted infections/ HIV?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

22. How many partners have you had sex with that you did not trust?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

23. How many times (that you know of) have you had sex with someone who was also engaging in sex with others during the same time period?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- Other (Please provide number): _____

APPENDIX F

Relational Health Indices

For each item below, please select the answer that best applies to your relationship with a close friend.

1. Even when I have difficult things to share, I can be honest and real with my friend.

- Never
- Seldom
- Sometimes
- Often
- Always

2. After a conversation with my friend, I feel uplifted.

- Never
- Seldom
- Sometimes
- Often
- Always

3. The more time I spend with my friend, the closer I feel to him/her.

- Never
- Seldom
- Sometimes
- Often
- Always

4. I feel understood by my friend.

- Never
- Seldom
- Sometimes
- Often
- Always

5. It is important to us to make our friendship grow.

- Never
- Seldom
- Sometimes
- Often
- Always

6. I can talk to my friend about our disagreements without feeling judged.

- Never
- Seldom
- Sometimes
- Often
- Always

7. My friendship inspires me to seek other friendships like this one.

- Never
- Seldom
- Sometimes
- Often
- Always

8. I am uncomfortable sharing my deepest feelings and thoughts with my friend.

- Never
- Seldom
- Sometimes
- Often
- Always

9. I have a greater sense of self-worth through my relationship with my friend.

- Never
- Seldom
- Sometimes
- Often
- Always

10. I feel positively changed by my friend.

- Never
- Seldom
- Sometimes
- Often
- Always

11. I can tell my friend when he/she has hurt my feelings.

- Never
- Seldom
- Sometimes
- Often
- Always

12. My friendship causes me to grow in important ways.

- Never
- Seldom
- Sometimes
- Often
- Always

For each statement below, please select the answer that best applies to your relationship with the parental figure with whom you have the strongest relationship.

Please identify your parent/parental figure for which you are completing this survey:

- Mother
- Father
- Other (Please specify relationship): _____

1. I can be genuinely myself with my parent.

- Never
- Seldom
- Sometimes
- Often
- Always

2. I believe my parent values me as a whole person (e.g., professionally/academically and personally).

- Never
- Seldom
- Sometimes
- Often
- Always

3. My parent's commitment to and involvement in our relationship exceeds that required by his/her social/ professional role.

- Never
- Seldom
- Sometimes
- Often
- Always

4. My parent shares stories about his/her own experiences with me in a way that enhances my life.

- Never
- Seldom
- Sometimes
- Often
- Always

5. I feel as though I know myself better because of my parent.

- Never
- Seldom
- Sometimes
- Often
- Always

6. My parent gives me emotional support and encouragement.

- Never
- Seldom
- Sometimes
- Often
- Always

7. I try to emulate the values of my parent (such as social, academic, religious, physical/athletic).

- Never
- Seldom
- Sometimes
- Often
- Always

8. I feel uplifted and energized by interactions with my parent.

- Never
- Seldom
- Sometimes
- Often
- Always

9. My parent tries hard to understand my feelings and goals (academic, personal, or whatever is relevant).

- Never
- Seldom
- Sometimes
- Often
- Always

10. My relationship with my parent inspires me to seek other relationships like this one.

- Never
- Seldom
- Sometimes
- Often
- Always

11. I feel comfortable expressing my deepest concerns to my parent.

- Never
- Seldom
- Sometimes
- Often
- Always

Please consider a mentor figure you have or have had in the past that is at least 2 generations older than you (i.e., someone approximately 40 years older than you). For each statement below, please choose the answer that best applies to your relationship with that individual of the older generation with whom you identify as a mentor in your life.

Identify your intergenerational mentor's relationship to you before you begin:

- Grandparent
- Neighbor
- Coach/Teacher
- Family Friend
- Other (please specify relationship): _____

1. I can be genuinely myself with my [intergenerational] mentor.

- Never
- Seldom
- Sometimes
- Often
- Always

2. I believe my [intergenerational] mentor values me as a whole person (e.g., professionally/academically and personally).

- Never
- Seldom
- Sometimes
- Often
- Always

3. My [intergenerational] mentor's commitment to and involvement in our relationship exceeds that required by his/her social/ professional role.

- Never
- Seldom
- Sometimes
- Often
- Always

4. My [intergenerational] mentor shares stories about his/her own experiences with me in a way that enhances my life.

- Never
- Seldom
- Sometimes
- Often
- Always

5. I feel as though I know myself better because of my [intergenerational] mentor.

- Never
- Seldom
- Sometimes
- Often
- Always

6. My [intergenerational] mentor gives me emotional support and encouragement.

- Never
- Seldom
- Sometimes
- Often
- Always

7. I try to emulate the values of my [intergenerational] mentor (such as social, academic, religious, physical/athletic).

- Never
- Seldom
- Sometimes
- Often
- Always

8. I feel uplifted and energized by interactions with my [intergenerational] mentor.

- Never
- Seldom
- Sometimes
- Often
- Always

9. My [intergenerational] mentor tries hard to understand my feelings and goals (academic, personal, or whatever is relevant).

- Never
- Seldom
- Sometimes
- Often
- Always

10. My relationship with my [intergenerational] mentor inspires me to seek other relationships like this one.

- Never
- Seldom
- Sometimes
- Often
- Always

11. I feel comfortable expressing my deepest concerns to my [intergenerational] mentor.

- Never
- Seldom
- Sometimes
- Often
- Always

COMMUNITY (RHI-C)

For each statement below, please choose the answer that best applies to your relationship with or involvement in your current college/university community.

1. I feel a sense of belonging to this community.

- Never
- Seldom
- Sometimes
- Often
- Always

2. I feel better about myself after my interactions with this community.

- Never
- Seldom
- Sometimes
- Often
- Always

3. If members of this community know something is bothering me, they ask me about it.

- Never
- Seldom
- Sometimes
- Often
- Always

4. Members of this community are not free to just be themselves.

- Never
- Seldom
- Sometimes
- Often
- Always

5. I feel understood by members of this community.

- Never
- Seldom
- Sometimes
- Often
- Always

6. I feel mobilized to personal action after meetings within this community.

- Never
- Seldom
- Sometimes
- Often
- Always

7. There are parts of myself I feel I must hide from this community.

- Never
- Seldom
- Sometimes
- Often
- Always

8. It seems as if people in this community really like me as a person.

- Never
- Seldom
- Sometimes
- Often
- Always

9. There is a lot of backbiting and gossiping in this community.

- Never
- Seldom
- Sometimes
- Often
- Always

10. Members of this community are very competitive with each other.

- Never
- Seldom
- Sometimes
- Often
- Always

11. I have a greater sense of self-worth through my connection with this community.

- Never
- Seldom
- Sometimes
- Often
- Always

12. My connections with this community are so inspiring that they motivate me to pursue relationships with other people outside this community.

- Never
- Seldom
- Sometimes
- Often
- Always

13. This community has shaped my identity in many ways.

- Never
- Seldom
- Sometimes
- Often
- Always

14. This community provides me with emotional support.

- Never
- Seldom
- Sometimes
- Often
- Always

APPENDIX G

Sexting Questionnaire

Sexting refers to sending and receiving sexually suggestive images, videos, or texts via cell phone or other mobile media (i.e. tablets). Please answer the following questions about your past and current sexting behaviors.

1. How many times have you sent sexually suggestive images, videos, or messages to someone via cell phone?

- 0
- 1
- 2
- 3
- 4
- 5
- 6

2. How many times have you received sexually suggestive images, videos, or messages from someone via cell phone?

- 0
- 1
- 2
- 3
- 4
- 5
- 6

3. How many times have you sent sexually suggestive images, videos, or messages to someone else via technology other than a cell phone (i.e. email)?

- 0
- 1
- 2
- 3
- 4
- 5
- 6

4. How many times have you received sexually suggestive images, videos, or messages from someone else via technology other than a cell phone (i.e. email)?

- 0
- 1
- 2
- 3
- 4
- 5
- 6

APPENDIX H

Institutional Review Board (IRB) Approval

Oklahoma State University Institutional Review Board

Date: Monday, October 27, 2014
IRB Application No ED14158
Proposal Title: The Relationship of Parental, Intergenerational, Peer, and Community Connections with the Engagement in Risky Sexual Behaviors and Sexting Among College Students
Reviewed and Processed as: Exempt

Status Recommended by Reviewer(s): Approved Protocol Expires: 10/26/2017

Principal Investigator(s):
Kimberly Samuels Al Carlozzi
7301 Stonelick Ct MH 2415, 700 N. Greenwood
Pearland, TX 77584 Tulsa, OK 74106

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

- The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval. Protocol modifications requiring approval may include changes to the title, PI advisor, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms
2. Submit a request for continuation if the study extends beyond the approval period. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of the research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Dawnett Watkins 219 Cordell North (phone: 405-744-5700, dawnett.watkins@okstate.edu).

Sincerely,



Hugh Crethar, Chair
Institutional Review Board

Informed Consent Form

You are invited to participate in a study exploring your relationships with your peers, parents, community, and intergenerational mentors and your engagement in potentially risky sexual behaviors, including sexting. Participation in this study involves the completion of a demographics form and three inventories which should take approximately 30 minutes to complete.

The potential benefits of participating in this study include an increased awareness of your relationships and the choices you make regarding engaging in sexual risk-taking and sexting behaviors. There are no foreseeable risks in participating in this study. However, if the surveys make you feel uncomfortable, you may withdraw your consent and discontinue the surveys at any time.

Participation in this study is completely voluntary. If you choose to participate, please complete the questionnaires in this study. There is no penalty for not participating and you have the right to withdraw your consent and participation at any time. If you are completing this study through SONA at Oklahoma State University, you will earn .5 extra credit points for your participation. If you choose not to complete this study, you may complete alternative studies available on SONA for extra credit, or complete any alternative assignments your professor may offer.

All participants will have the opportunity to be entered for a drawing for one of 3 \$25.00 gift cards after all data is collected.

All information in this study is strictly anonymous. No individual participants will be identified. Your instructor will not know your individual responses to the questionnaires. However, it will be indicated that you participated in the study and you will receive extra- credit for your participation. Your consent will be kept separately from your responses to questionnaires; therefore, there will be no way to identify your responses. Any written results will discuss group findings and will not include information that will identify you. Research records will be stored securely and only the researcher and individuals responsible for research oversight will have access to the records. Your participation in this study is greatly appreciated. If you have any questions concerning this study, please feel free to contact Kimberly Samuels, M.A. (281) 382-0305 or Al Carlozzi, Ed.D. (918) 594-8063. If you have questions about your rights as a research volunteer, you may contact Dr. Hugh Crethar, IRB Chair, 219 Cordell North, Stillwater, OK 74078, (405) 744-1676 or irb@okstate.edu.

If you agree to participate, please click the SUBMIT button to move to the survey study.

10-27-14
10-26-17
50-14-158

Facebook Recruitment

You are invited to participate in a study exploring your relationships with your peers, one parental mentor, and one intergenerational mentor, and the community, and your engagement in potentially risky behaviors, including but not limited to sexting and sexual activity.

Participation in this study involves the completion of an on-line survey with three questionnaires which should take approximately 30 minutes to complete.

The potential benefits of participating in this study include an increased awareness of your relationships with peers, parental mentors, intergenerational mentors, and your community as well as choices you have made regarding the decision to engage in certain activities, including sexting and other sexual behaviors.

There are no foreseeable risks in participating in this study. No one will have access to your individual responses. Information collected in this study will be presented in group form. You will not write your name on any part of this survey, so there will no way to connect your survey responses to your identity.

After you complete this survey, you will be provided an email address to send your name and email address to the researchers if you wish to be entered in a drawing for 1 of 3 available VISA gift cards to be awarded following the completion of data collection.

Please click the following link to continue to the study:

LINK TO BE ENTERED AFTER IRB APPROVAL

10-27-14
10-26-17
ED-14158

SONA Recruitment

You are invited to participate in a study exploring your relationships with your peers, one parental mentor, and one intergenerational mentor, and the community, and your engagement in potentially risky behaviors, including but not limited to sexting and sexual activity.

Participation in this study involves the completion of an on-line survey with three questionnaires which should take approximately 30 minutes to complete.

The potential benefits of participating in this study include an increased awareness of your relationships with peers, parental mentors, intergenerational mentors, and your community as well as choices you have made regarding the decision to engage in certain activities, including sexting and other sexual behaviors.

There are no foreseeable risks in participating in this study. No one will have access to your individual responses. Information collected in this study will be presented in group form. You will not write your name on any part of this survey, so there will be no way to connect your survey responses to your identity.

After you complete this survey, you will be directed to a separate website wherein you will include your name for the purposes of receiving one half hour (or .5 units) of extra credit for your participation in this study. Your instructor will only have your name and whether you participated or not.

After you complete this survey, you will be provided an email address to send your name and email address to the researchers if you wish to be entered in a drawing for 1 of 3 available VISA gift cards to be awarded following the completion of data collection.

Please click the following link to continue to the study:

LINK TO BE ENTERED AFTER IRB APPROVAL

10-27-14
10-26-17
ED 14158

VITA

Kimberly Celeste Samuels

Candidate for the Degree of Doctor of Philosophy

Dissertation: THE RELATIONSHIP OF PARENTAL, INTERGENERATIONAL, PEER, AND COMMUNITY CONNECTIONS WITH ENGAGEMENT IN RISKY SEXUAL BEHAVIORS AND SEXTING AMONG COLLEGE STUDENTS

Major Field: Educational Psychology, Option: Counseling Psychology

Biographical Data:

Personal Data: Born in Lima, Ohio on February 2, 1981 to Patrice Vallone and David Samuels.

Education: Bachelor of Arts in Psychology, Baylor University, Waco, Texas in May 2002. Master of Arts in Psychology, Pepperdine University, Culver City, California in December, 2003. Completed degree requirements for the Doctor of Philosophy degree with a major in Counseling Psychology at Oklahoma State University in May 2015.

Experience: Shiloh Treatment Center, Treatment Manager, in Manvel, Texas. Texas Juvenile Justice Department, Giddings State School, Psychology Intern in Giddings, Texas. Shiloh Treatment Center, Service Director in Manvel, Texas. University of Texas Medical Branch, Jester IV Unit, Psychotherapist in Richmond, Texas. Office of Juvenile Affairs, Psychology Executive Affairs, in Stillwater, Oklahoma. Payne County/Logan County Drug Court, Practicum Counselor, in Stillwater/Guthrie Oklahoma. Payne County Youth Services, Practicum Counselor, in Stillwater, Oklahoma. Starting Point II, Practicum Counselor, Stillwater, Oklahoma. Counseling Psychology Clinic, Practicum Counselor, Stillwater, Oklahoma. Oklahoma State University, Graduate Assistant, Stillwater, Oklahoma.