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Attachment styles and male sex addiction

James L. Zapf

Jay Greiner jay.greiner@mail.waldenu.edu
Walden University

James Carroll
Walden University

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Romantic Attachment Styles in Sexually Addicted Heterosexual Males

JAMES L. ZAPF

Pathways Christian Counseling, Findlay, Ohio, USA

JAY GREINER

Walden University

JAMES CARROLL

Walden University

This study addresses the adult romantic attachment styles of sexually addicted men. The Sexual Addiction Screening Test and the Experiences in Close Relationships Revised were used to determine the presence of a sexual addiction and the participants' style of romantic attachment. ANOVA revealed that sexually addicted men are more likely to relate with insecure attachment styles. Specifically, sexually addicted men were found to have higher anxiety $F(1, 38) = 6.122, p < .05$ and avoidance $F(1, 37) = 4.685, p < .05$ in their romantic relationships. Treatment for male sexual addicts should address both addiction and relationship insecurity.

INTRODUCTION

Romantic relationships are significant to one's quality of life. Bramlett and Mosher (2001) found married men and women had higher life expectancy, increased health monitoring, higher sexual frequency and satisfaction and higher wages and financial savings, whereas divorced individuals had poorer psychological health, higher mortality rates and decreased levels of happiness. Unfortunately, maintaining romantic relationships is often problematic for many Americans. Currently, the U.S. divorce rate is slightly over 50% (National Center for Health Statistics, 2004). This rate increases significantly when considering only second and third marriages.

One factor affecting the quality of adult romantic relationships is the style of attachment of each individual in the relationship (Feeney, 1996; Jacobsen, 2003; Marchand, 2004). Attachment style refers to the level of anxiety and avoidance in a relationship and one's response to these variables. Those whose attachment style is relatively low in anxiety and avoidance are characterized as having a secure attachment style and tend to be trusting, confident about their relationships and believe love will persist over time. Those who tend to have high anxiety or avoidance are considered to

Address correspondence to James L. Zapf, Ph.D., Pathways Christian Counseling, 232 West Hardin Street, Findlay, OH 45840, USA. E-mail: jimzapf@earthlink.net

have insecure attachment styles and may fear intimacy, be extremely needy of emotional intimacy, experience extreme jealousy or be unable to rely on their partners.

Because attachment style predicts relationship satisfaction, a review of attachment theory will provide a necessary introductory background for understanding this study. Bowlby (1969) originated the concept of attachment styles, describing different ways in which infants attached to their mothers immediately after birth, based primarily upon the caregivers' availability to, and consistency with, the infant. While Bowlby believed the processes of attachment applied to one's entire life (i.e., early attachment styles remained relatively unchanged throughout one's lifetime), his work centered primarily on the early-life attachment processes. Three general attachment styles were theorized: secure, avoidant and anxious/ambivalent. Later, the concept of attachment was applied to adult romantic relationships (Hazan & Shaver, 1987). Hazan and Shaver found 56% of adults reported a secure attachment style, 25% reported an avoidant attachment style and 19% reported an anxious/ambivalent attachment style. These percentages closely mirrored earlier studies of infant-mother attachment styles, supporting, but certainly not proving, the notion that attachment styles are fairly consistent throughout the lifespan.

A study by Leedes (1999) regarding adult attachment styles among sexual addicts found that these individuals have a significantly higher rate (95%) of insecure attachment styles in adult relationships than the 44% found by Hazan and Shaver (1987). Since those with insecure relationship styles are more likely to have problematic relationships (Marchand, 2004), sexual addicts would be expected to be at greater risk for problematic adult romantic relationships due, at least in part, to their insecure attachment styles.

Cassidy (2001) described intimacy as an attachment process wherein four elements exist: the ability to seek care, to give care, to feel comfortable with one's autonomy and to negotiate. He believed representational models (i.e., Bowlby's internal working models) could be "reworked" in adult relationships if a person had not had a securely attached childhood. This reworking could result in an enhanced ability to attain intimacy. Interestingly, the biology of sexuality itself may have an influence in this reworking. Cassidy suggested that gonadal steroids influence opioids, oxytocin and vasopressin which modify the brain's affiliative systems, enabling the sexually-charged mind to forge capacity for secure attachment and intimacy. As Cassidy puts it: "It may be that the time of pair-bonding . . . is a time when attachment-related neural pathways are particularly open to change" (p.139). If a person's healthy sexuality can benefit attachment style, unhealthy sexual expression may decrease the security of that person's attachments. Therefore, it may be possible for them to rework their attachment style and experience more satisfying relationships.

There is no one agreed upon diagnostic category for sexual addictions in the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (*DSM-IV*; American Psychiatric Association [APA], 1994). Multiple definitions and classifications for this problematic psychobehavioral phenomenon have been suggested (Irons & Schneider, 1996; Seegers, 2003). The prevalence of sexual addiction has been estimated

Address correspondence to James L. Zapf, Ph.D., Pathways Christian Counseling, 232 West Hardin Street, Findlay, OH 45840, USA. E-mail: jimzapf@earthlink.net

between 5% and 18% of the general population (Weiss, 2004). A variety of theories exist regarding the etiology of sexual addictions. These theories range from primarily psychobiological explanations (Ragan & Martin, 2000), trauma-adaptive responses (Robinson, 1999), attachment processes (Leedes, 2001) and “super-charged erotic desire” (Carnes, 2001, p. 45) to multimodal theories (Bancroft & Vukadinovic, 2004). While the theories suggest different conceptualizations of the problem of sexual addiction, research from all theoretical positions has shown similar maladaptive responses in the sexually addicted individual. These individuals tend to engage in more frequent risky sexual behaviors, have large numbers of sex partners, use crack cocaine and inhalants more frequently (Kalichman & Cain, 2004), retreat from relational sex (Dodge, Reece, Cole, & Sandfort, 2004), abuse alcohol more frequently (Eisman, Dantzker & Lee, 2004), struggle with depression more frequently (Weiss, 2004), experience troubling emotions more frequently (Schneider, 2003) and take greater risks on the job (Peck & McKee, 2002) compared to nonaddicted individuals.

Leedes (1999) developed a theory regarding sexual addictions based on attachment styles. His theory proposed that sexual addictions occur based on two emotional dispositions related to an individual's attachment style: one toward fantasy and the other toward interpersonal relationships. He found that as a person's comfort toward interpersonal relationships increased there was a diminishing effect of the negative power of his objectified fantasies. In other words, those who are securely attached are believed to be more comfortable with interpersonal relationships and those who are insecurely attached are believed to use fantasy as a surrogate means to establish a sense of security. Applied to sexual addictions, research on this theory would expect to demonstrate that individuals who are insecurely attached would be more likely to develop sexual addictions than those who are securely attached because the former would attempt to find a surrogate attachment object that did not require comfort with interpersonal relationships (e.g., pornography, noncommitted sexual relationships). Leedes found 95% of his sample of sexual addicts ($N = 22$) had an insecure attachment style. Leedes's sample size was small. His study used an instrument that conceptualized three styles of attachment (secure, anxious, and avoidant). More recently, a fourth dimension to attachment ("preoccupied attachment") has been psychometrically demonstrated and a measurement instrument developed and validated (Bartholomew & Horowitz, 1991). This fourth dimension represents a second style of avoidant attachment. Thus, a gap exists in the understanding of the connection between sexual addiction and all four styles of attachment. Further, a larger sample will help to extend and provide further evidence for Leedes's theory. The intention of this study is to better understand the relationship between sexual addiction and the four styles of adult romantic attachment.

Based on the literature review, it is hypothesized that individuals who are sexually addicted will more frequently endorse insecure adult romantic attachment styles (i.e., preoccupied, fearful-avoidant, and dismissing-avoidant).

Attachment is an inbuilt propensity for strong affectional bonds between human beings, particularly between a mother and her child (Bowlby, 1969). There are several styles of attachment. Fraley, Waller, and Brennan (2000) developed a four-category self-report measure entitled The Experiences in Close Relationships Revised (ECR-R). The following descriptions are adapted from their work.

A *secure attachment style* is a relationship style wherein an individual is comfortable with intimacy and autonomy, maintains a sense of worthiness or lovability and expects others to be generally accepting and responsive.

A *preoccupied attachment style* is a relationship style wherein an individual is preoccupied with relationships, maintains a sense of unworthiness or feels unlovable, evaluates others positively and tends to strive for the acceptance of valued others as a means for attaining self-acceptance.

A *fearful-avoidant attachment style* is a relationship style wherein an individual is fearful of intimacy and socially avoidant, maintains a sense of unworthiness or feels

Address correspondence to James L. Zapf, Ph.D., Pathways Christian Counseling, 232 West Hardin Street, Findlay, OH 45840, USA. E-mail: jimzapf@earthlink.net

unlovable, expects negativity (untrustworthiness and rejection) from others and avoids others as a means of self-protection from anticipated rejection.

A *dismissing-avoidant attachment style* is a relationship style wherein an individual is dismissing or avoidant of intimacy, counter-dependent, maintains a sense of worthiness or lovability, evaluates others negatively, avoids close relationships, strives for independence and invulnerability in order to protect him or herself from disappointment. Each of these attachment styles can be psychometrically assessed by the ECR-R scale.

Sexual addiction is sexual behavior that produces pleasure as well as discomfort and is characterized by “recurrent failure to control the behavior...and continuation of the behavior despite significant negative consequences” (Goodman, 1990, p. 1404). Several assessment tools for the measurement of sexual addiction have been developed. Among them is the Sexual Addiction Screening Test (SAST) developed by Carnes (1989). For the purposes of this study, sexual addiction will be defined as a score of 13 or higher on the SAST.

LITERATURE REVIEW

Attachment Theory

Original Attachment Theory

The psychodynamically-based theory of attachment was proposed by Bowlby (1969) who observed infants and their mothers. He theorized infants form bonds with their parents or caregivers based on the style of care given by these significant adults in the infants' lives. Specifically, Bowlby observed the separation of infants from, and subsequent reunion with, their mothers. Later, Ainsworth et al. (1978) postulated three patterns of attachment based on differing types of caregiving. Infants whose caregivers provided consistency and emotional support were believed to develop *secure* attachments. Those infants whose caregivers were inconsistent (i.e., varying between overprotection and disengagement) would develop *anxious/ambivalent* attachments. Finally, infants whose caregiver was generally unresponsive to the child's needs were expected to develop *avoidant* attachments. Bowlby (1973) believed there exists a continuity of attachment from early childhood to adulthood such that the style of attachment in infancy would continue to be the style manifested in adulthood. This was believed to be accomplished via a persistent mental model of self that was developed during these early childhood interactions with the primary caregiver.

Attachment Applied to Adulthood

Hazan and Shaver suggested Bowlby's original theory of attachment, which was primarily designed to describe infant attachment, could be applied to adult romantic love. Building upon Ainsworth and colleagues' (1978) focus on the expectations infants have regarding their mothers' accessibility and responsiveness, Hazan and Shaver designed a series of studies to determine whether one's experience of adult romantic love (or “pair-bonding”) might be a product of expectations of accessibility and responsiveness from

Address correspondence to James L. Zapf, Ph.D., Pathways Christian Counseling, 232 West Hardin Street, Findlay, OH 45840, USA. E-mail: jimzapf@earthlink.net

one's lover that have not significantly changed from the childhood expectations regarding one's caregiver's accessibility and responsiveness. These childhood expectations are considered the cornerstone of the mental models, also referred to as working models, described by Bowlby. Along with expectations regarding the person from whom one hopes to receive responsive support and protection, the mental model also includes self-judgment. The individual forms a belief that he or she is the type of person whom others can be expected to respond to favorably or unfavorably. Hazan and Shaver tested whether adult relationship style was a product of one's mental model of self and others and whether parent-child relationships (i.e., attachments) later determined adults' attachment style in their romantic relationships. They found 56% of adults reported a secure attachment style, 25% reported an avoidant attachment style and 19% reported an anxious/ambivalent attachment style. These percentages closely mirrored earlier studies of infant-mother attachment styles, supporting the notion that attachment styles in adulthood "may have been determined by some of the same kinds of forces that affect the attachment styles of infants and children" (p. 515).

It is important to note Hazan and Shaver's (1987) specific findings regarding participants' perceptions of the nature of relationships in each of the attachment style categories because they provide an excellent starting point for defining each of the attachment styles. Those who indicated secure styles experienced happy, friendly, trusting and longer-lasting relationships. Only half the percentage of secure group participants had divorced compared to the avoidant group (6% and 12%, respectively). These (secure) lovers believed that while romantic feelings might come and go throughout the relationship, some love relationships are able to persist throughout time. Securely attached individuals considered themselves likeable and easy to get to know, and had a generally humanistic view of others (i.e., believing others to be well-intentioned and good-hearted). Those whose attachment style was avoidant tended to fear intimacy and to experience jealousy and emotional highs and lows more frequently than the secure group. They did not believe in "fairy-tale" romance and considered it uncommon to actually find someone to fall in love with or for a romantic relationship to last. Finally, the anxious/ambivalent group had strong desires for reciprocation and union, experienced extreme sexual attraction and jealousy, felt more obsessed about relationships, had more self-doubts and experienced greater lability of emotions. Anxious/ambivalent lovers reported falling in love easily, but they believed their experience was typically not "real love." Regarding self, the anxious/ambivalent participants felt misunderstood and underappreciated and had self-doubts more often than the other groups. Further, they expected others to be unable or unwilling to commit to relationships. Hazan and Shaver contended these differences constituted three distinct patterns of love relationship, rather than three points on a single continuum, because of the unique pattern of emotions for each category.

Hazan and Shaver (1987) next attempted to find childhood histories that would correlate with an adult's attachment style. Rather than separation from parents or divorce

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of parents, what appeared to predict the adult's romantic attachment style were the perceptions they had regarding their parents' relationship and their own relationship with each parent. Specifically, securely attached adults tended to have parents who were caring and not unhappy, mothers who were confident, accepting, responsible, not intrusive, not demanding or intrusive and fathers who were caring, loving, humorous and affectionate. Avoidantly-attached participants reported cold and rejecting mothers, whereas anxious/ambivalent participants reported unfair fathers. Thus, it is reasonable to surmise from the Hazan and Shaver's studies that a strong connection exists between the infant-caregiver attachment style and the same individual's adult attachment style. However, they noted that to expect the style to remain entirely unmodified from childhood to adulthood would be naïve. A later study by Carnelley, Pietromonaco, and Jaffe (1996) supported the idea that adult romantic attachment and childhood attachment are linked.

Among the limitations of the Hazan and Shaver (1987) study was that it did not consider the attachment style of the participant's lover. Because relationships are complex and dynamic, this aspect would have been helpful to consider. A later study (Carnelley, Pietromonaco, & Jaffe, 1996) addressed this issue and found an individual's own working model of attachment remained a significant predictor of adult relationships even when the partner's style was considered. Also addressing this concern, Fraley and Shaver (2000) suggested that individuals' internal working models are very resistant to change, such that they are likely to distort new information if it is not in agreement with previous information (i.e., cognitive dissonance theory). Thus, individuals are likely to form new romantic relationships based upon general expectations about relationships (e.g., how people will behave and feel about them) that have been developed in the past. Hazan and Shaver provided an excellent theoretical basis for research on three adult attachment styles in romantic relationships. However, later research suggested a distinct attachment style that had not yet been identified at the time of their study.

A Fourth Category of Attachment

The three-category system of attachment styles has been well-documented in the literature since Bowlby's original formulation of the concept (Fraley & Shaver, 2000). A fourth category of insecure attachment, *fearful attachment*, was postulated and researched by Bartholomew and Horowitz (1991), along with renaming the other two insecure attachment styles. This fourth category was believed to represent those individuals who evaluated both self and others negatively. Participants were interviewed and completed a self-report regarding friendships and romantic relationships. Additionally, a friend was asked to fill out a report on the participant. The fourth category was supported statistically. The fearful attachment style was characterized by subservient roles in close relationships, lack of intimacy, lower involvement in romantic relationships, lower levels of self-confidence, less use of others as a secure base, inability to rely on others, and lower levels of self-disclosure. Step-wise analyses indicated three discriminating functions which correctly classified 94% of the individuals in the fearful category.

Address correspondence to James L. Zapf, Ph.D., Pathways Christian Counseling, 232 West Hardin Street, Findlay, OH 45840, USA. E-mail: jimzapf@earthlink.net

Furthermore, the fearful category was found to apply to these individuals in both friendships and romantic relationships.

Bartholomew and Horowitz (1991) used eight subscales in both the self- and friend-report of interpersonal problems. These subscales (autocratic, competitive, cold, introverted, subassertive, exploitable, nurturant, and expressive) are helpful in better understanding the four attachment styles used in this study. Secure individuals were, by self-report, more autocratic and expressive and less cold and introverted. Dismissing-avoidant (avoidant) individuals were reported to be cold, both by self- and friend-report. Preoccupied (anxious/ambivalent) individuals tended to be overly expressive and dominating, yet believed themselves to be more “warm” than their friends viewed them. Fearful individuals tended to be more introverted, lacked assertiveness and expressiveness and were less autocratic. Bartholomew and Horowitz’s study, which included an interview regarding the participants’ family of origin, added to the evidence suggesting a strong relationship between childhood experiences and adult attachment.

Haney and Snell (2002) examined the relationship among romantic perfectionism, adult romantic attachment and relationship affect. They used a four-category attachment scale inventory and their findings supported previous findings regarding the attachment styles and various relationship issues. Particularly, securely attached individuals were found to have fewer doubts regarding their relationships, whereas fearfully attached individuals had self-doubts as well as considering themselves undeserving of love and support. Dismissing-Avoidant attachment style was characterized by self-doubt, lower personal relationship standards, and fewer concerns over mistakes made in the relationship. No statistically significant data were discovered regarding the preoccupied attachment group. As it relates to the present study, Haney and Snell’s research supports the personality profiles of the four adult attachment styles.

Attachment and Sexuality

When Hazan and Shaver (1987) first applied attachment theory to adult romantic relationships, they suggested three significant areas that make up the building blocks of pair-bonding relationships: an attachment system, a caregiving system and sexuality. While most research has focused on the attachment system, a few studies have explored sexuality as it relates to attachment in adult romantic relationships (Jacobson, 2003). In one study, Brennan and Shaver (1995) examined the relationship between adult attachment, measured on three dimensions, and a variety of romantic relationship variables, including several sexual measures. In general, they found adult attachment styles had a significant effect on relationship satisfaction, both for the individual and for the partner. In other words, not only did the individual’s own style correlate with their own level of satisfaction, but the partner’s style of attachment also affected the individual’s satisfaction in the relationship. “One person’s insecurity contributed to the partner’s dissatisfaction with the relationship, over and above the contribution of the partner’s own attachment insecurity” (p. 279).

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In helping define attachment, Brennan and Shaver (1995) explained the difference between the ambivalence of anxious-ambivalent adults and the ambivalence of avoidant adults. Anxious-ambivalent adults “are marked by their simultaneous fear of abandonment and anger at partners who seem insufficiently available and responsive. This is the needy-but-angry pattern” (p. 280). The ambivalence of avoidant adults, however, is in the sense that they are unsure of how they feel toward an attachment figure. The term *preoccupied* thus came to describe avoidant adults because they tend to be preoccupied with trying to decide how they feel about their attachment figures.

Brennan and Shaver (1995) added to the understanding of the adult attachment literature through multiple findings regarding each style. Avoidant and preoccupied individuals tend to be frustrated with previous partners, compared to secure individuals. Anxious-ambivalent adults tend to be “clingy” in relationships. Avoidant individuals drink more heavily and more frequently, fantasize about sex with someone other than their partner more often and become involved in affairs and brief sexual encounters more frequently than individuals with the secure or anxious-ambivalent styles. Preoccupied individuals use binge drinking to reduce stress and tend to become highly dependent on their partners.

Bogaert and Sadava (2002) researched adult attachments and various sexuality measures. Their findings support the research discussed above in that less securely attached individuals tended to maintain shorter-term mating strategies than securely attached individuals. Specifically, they found anxious attachments correlated to lower self-perceived attractiveness, likelihood of being in a steady relationship, higher erotophilia, earlier first intercourse, more sexual partners, greater infidelity, and more recent condom use. Because their findings were far more significant in the female portion of their sample, they contended the women in relationships were more sensitive to the internal working models of attachment than men and the women “drove” the associations between attachment and sexuality.

Seeking to understand the correlation between several measures of sexuality and the various attachment styles, Gentzler and Kerns (2004) sampled undergraduate students. They found that avoidantly-attached individuals were more likely to have had first intercourse earlier, or not to have experienced intercourse. Avoidant individuals also were found to have fewer committed relationships and to hold less restrictive sexual beliefs (i.e., to be more open to casual or noncommitted sexual relationships). Avoidant attachment for both men and women, and anxious attachment for women were associated with unwanted but consensual sexual experiences. Consequently, insecure attachments were also associated with more negative affect regarding previous sexual encounters. In considering mediational factors, Gentzler and Kerns found avoidantly attached individuals had less restrictive sexual beliefs, enabling them to pursue sexual intimacy apart from emotional intimacy. Another mediating factor between insecure attachments and sexual experience was that anxiously attached individuals had lower self-esteem, partially explaining their greater negative affect regarding their sexual encounters. As

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related to the present study, Gentzler and Kerns' results suggest that sexual addicts who pursue sexual intimacy apart from emotional intimacy, might have a greater likelihood of having avoidant attachment styles.

Stephan and Bachman (1999) researched the influence of various attachment styles on several aspects of adult sexuality. Based on a belief that developmental tasks of childhood and adolescence, in addition to infancy caregiver practices, affect adult attachment, they used a six-love schema that was believed to be inclusive of those whose later development (adolescence) moved them into one of the two latter schemas. In this model, the first four schemas correlate to the four types of attachment described above. The latter two attachment styles depict individuals who are disinterested in relationships. In the casual type, only problem-free relationships are desired. In the uninterested type, there is a complete detachment from relationships. Their results demonstrated that securely attached individuals tended to be more sexually restrictive than others, while women were more sexually restrictive in general compared to men. Fearfully attached (as well as casually-attached) individuals were more interested in emotionless sex than securely attached individuals. Men were more interested in emotionless sex than women. Those with avoidant/dismissing-avoidant attachments tended to behave in more relationally destructive manners in their love relationships. Additionally, avoidant/dismissing-avoidant individuals tended to be less committed to relationships and used more substitute fantasy than secure individuals. Men generally were less committed and more prone to use fantasy than women. As applied to this study, Stephan and Bachman's research would suggest securely attached individuals would be less likely to be sexually addicted because they would be more sexually restrictive than insecurely-attached individuals. Fearfully-attached individuals would be more likely to be sexually addicted due to their greater interest in emotionless sex. Avoidant (Dismissing-Avoidant) individuals would be more likely to be sexually addicted because of their relationally-destructive patterns (i.e., the addiction itself would be destructive to a relationship) and their use of fantasy as a substitute for intimacy.

Attachment and Addictions

In addition to its effect on relationships directly, one's attachment style has also been shown to indirectly affect relationships in that adult attachment styles and substance addictions have been shown to be significantly related. In their study among Israelis, Finzi-Dottan et al. (2003) found 73.2% of their drug-using sample manifested an insecure attachment style. Over 60% of the sample was found to have an avoidant style. Drug users were approximately 36% more likely to have an insecure style of attachment compared to normal controls. Although the anxious/ambivalent style of attachment was quite similar between controls and drug users, the avoidant style was nearly 37% more likely for drug users. As it relates to the present study, Finzi-Dottan et al.'s study demonstrates a significantly greater likelihood for drug addicted individuals to have an insecure attachment style, particularly the avoidant style. Inasmuch as drug addiction and

Address correspondence to James L. Zapf, Ph.D., Pathways Christian Counseling, 232 West Hardin Street, Findlay, OH 45840, USA. E-mail: jimzapf@earthlink.net

sexual addiction have commonalities, it would be expected that sexual addicts would also demonstrate insecure styles of attachment.

Many other studies have been completed that associate attachment styles with addictions. For instance, a European study by McArdle et al. (2002) found adolescents who had greater secure attachment to their mothers (as measured by their ability to openly dialogue with their mothers) were far less likely to be substance abusers or addicts. Caspers et al. (2005) found insecure attachments were positively correlated with higher instance of lifetime illicit substance use in their sample of adoptees. Infants in alcoholic homes are more likely to be insecurely attached (Edwards, Eiden, & Leonard, 2004). Adult daughters of alcoholic fathers were found to more frequently exhibit insecure attachments than adult daughters of nonalcoholic fathers (Jaeger, Hahn, & Weinraub, 2000). Attachment theory has been found to be a useful theoretical basis for studying addictions, both substance addictions and sexually-addictive behaviors.

Attachment Styles Summary

Securely attached individuals have been found to be happy, friendly, trusting individuals (Hazan & Shaver, 1987) who tend to be autocratic, expressive, extroverted and relationally warm (Bartholomew & Horowitz, 1981), as well as, to be more sexually restrictive (Stephen & Bachman, 1999), less likely to abuse substances (McArdle et al., 2002) and to have fewer doubts about relationships (Haney & Snell, 2002).

Avoidantly attached individuals tend to be more jealous, fearful and minimizing of intimacy, emotionally labile, and self-doubting (Hazan & Shaver, 1987). These individuals tend to have lower personal relationship standards (Hazan & Shaver), be emotionally cold (Bartholomew & Horowitz, 1991), use drugs more often (Finzi-Dottan et al., 2003), hold less restrictive sexual beliefs (Gentzler & Kerns, 2004), and use fantasy about sex with someone other than their partner more frequently (Brennan & Shaver, 1995).

Those with anxious/ambivalently or preoccupied attachments tend to have labile emotions, self-doubts, extreme jealousy and sexual attraction, feel misunderstood and underappreciated (Hazan & Shaver 1987), be overly expressive and dominating (Bartholomew & Horowitz 1991), be frustrated with previous partners, binge drink (Brennan & Shaver, 1995), have lower self-perceived attractiveness (Bogaert & Sadava, 2002) and use more substitute fantasy (Stephen & Bachman, 1999).

Fearfully attached individuals tend to take subservient roles in relationships, have lower self-confidence, are unable to rely on others, use less self-disclosure, and are likely to be introverted, unassertive and unexpressive (Bartholomew & Horowitz, 1991). They often consider themselves to be undeserving of love and support (Hazan & Shaver, 1987) and are often more interested in emotionless sex (Stephen & Bachman, 1999).

Table 1 depicts the characteristics of the four adult attachment styles as described in the studies reviewed above. Figure 1 depicts the four adult attachment styles based on the dimensions of anxiety and avoidance.

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Summary

The above studies on attachment briefly demonstrate a small portion of the rich history of attachment research. From Bowlby's (1969) original concepts through Ainsworth et al's (1978) expansion and onto Hazan and Shaver's (1987) application to adulthood, attachment research has proven to be an interesting and informative research variable. The original three categories of attachment (secure, anxious-ambivalent, and avoidant) have been renamed (secure, preoccupied, and dismissing-avoidant, respectively) and a fourth category, fearful-avoidant, has been added. The categories have been well-defined through a variety of research interests. In addition, the categories have been found useful in studying many psychological concerns, one of which being the relationship between one's attachment style and their sexuality. The studies reviewed above demonstrate many significant findings regarding attachment and various aspects of human relationships and sexuality (e.g., relationship satisfaction, sexual restrictiveness, sexual attitudes, perceived attractiveness, number of sexual partners and use of fantasy). These studies have laid the foundation for one side of the current investigation's equation: attachment. The other side, sexual addiction, will be reviewed in the following pages.

Sexual Addiction

Introduction

In this section, the origin of the term sexual addiction is presented, followed by a discussion regarding the diagnostic considerations regarding sexual addictions. Next, the conceptualization of sexual addictions as addictions (e.g., as similar to substance addictions) is defended. A definition for sexual addiction is offered and a few leading theories of sexual addiction are described. This section concludes with a brief consideration of research regarding the effects of sexual addiction upon the addict as well as the addict's loved ones.

Origin of the Term "Sexual Addiction"

The term "sexual addiction" was introduced to the PsycINFO database in 1997. "Sexual addiction" appeared in the peer reviewed literature 20 years ago when Schwartz and Brasted (1985) defined it as an intimacy disorder wherein stress, self-hatred, rage and guilt are "managed" through the use of sexuality. The concept of sexual addiction can be traced back in the PsycINFO database as far back as Walsh's (1912) characterization of sexual addiction as "self-abuse" through masturbation. There are some who prefer the terms "hypersexuality" (Casady, 2001), "excessive sexual desire" (Marshall and

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Marshall, 2001). or “obsessive-compulsive” sexuality (Leedes, 2001). The sexual addiction field is burgeoning and much research is needed in order to better understand and describe the phenomenon.

Diagnostic Considerations for Sexual Addictions

There is no one diagnostic category for sexual addictions in the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (*DSM-IV*; American Psychiatric Association [APA], 1994). However, specific paraphilias, Impulse Control Disorder NOS, and Sexual Disorder NOS are categories which may be used for the psychological categorization of sexual addictions (Seegers, 2003). Multiple other currently classified disorders have been suggested for the differential diagnosis of sexual addictions as well. Among these are Bipolar Affective Disorder, Post-Traumatic Stress Disorder, Adjustment Disorder, Cyclothymic Disorder, Dissociative Disorder, Obsessive-Compulsive Disorder, Gender Identity Disorder and cognitive disorders such as Delirium and Dementia, Substance-Induced Anxiety Disorder and Substance-Induced Mood Disorder according to Irons and Schneider (1996). At the time of their writing, Irons and Schneider suggested an adaptation of the substance dependence categories of the *DSM-IV* would be the most appropriate method of diagnosing sexual addictions. Manley and Koehler (2001) have proposed a new classification system for sexual disorders in the *DSM-V*. They believe “Sexual Behavior Disorder” would be an appropriate term to use to describe extreme excesses or restrictions in sexual behaviors which are not appropriately classified within the existing paraphilias, hypoactive sexual desire, or sexual aversion disorder categories. One of three proposed categories within the Sexual Behavior Disorder umbrella would be that of sexually excessive behaviors, one of which is currently being referred to as sexual addictions or sexual compulsions. Further, the sexually excessive behaviors would be differentially diagnosed based on whether they are culturally normative or deviant, and whether or not they lead to significant impairment (e.g., sexual dysfunction, legal problems, disruption of social relationships, necessary for sexual pleasure). Proposed subtypes include unipolar (excessive or restrictive only) or bipolar (cyclical episodes of both types). Beyond labeling of sexual addictions, other issues must be researched in order to establish the place of these problematic behaviors within the *DSM* categories for mental disorders. Among these are prevalence, gender differences, and ethnic, cultural and comorbidity issues. The literature regarding these issues will be reviewed briefly next.

To date, no researched prevalence data are available for the phenomenon of out of control sexual behavior. However, according to Weiss (2004) estimates range between 5% and 18% of the general population. Intuitively, one might expect to find a greater number of sexual addicts among sexual offenders. However, Marshall and Marshall (2001) found no significant difference in prevalence of sexual addiction between offenders and community controls.

Are sexual addictions more common in men or women? To answer this question, Seegers (2003) enlisted 240 students ranging in age from 17 to 51 years old. Seegers

Address correspondence to James L. Zapf, Ph.D., Pathways Christian Counseling, 232 West Hardin Street, Findlay, OH 45840, USA. E-mail: jimzapf@earthlink.net

found the females in her sample were at far greater risk for sexual addiction than the males. Specifically, more than four times as many females fell into the “needing to seek further evaluation and treatment” category than males and nearly four times as many females were in the “at-risk” category. However, the instrument used had not yet been validated. The number of males in the study who were at risk or in need of evaluation and/or treatment was similar to other studies with males. Certainly no conclusive evidence can yet be drawn regarding the balance of prevalence between male and female sexual addiction. Schneider (2000) used an online survey of cybersex users and over 90% self-identified as “sex addicts,” either current or former. Differences between males and females in her study included that men were more likely to download pornography, whereas women were more interested in relational sex (even if that were only e-mail or chat room activity). Nearly 80% of the men in her study mentioned pornography while only 10% of the women had used pornography. The women more frequently used chatting and online real-time sexual activity (80% and 30%, respectively). Additionally, nearly three times as many women as men reported online sexual activity had turned into real-life sexual activity with someone met online. Taken together, these two studies may indicate that there is both a quantitative and a qualitative difference in sexual addictions among men and women.

Robinson (1999) noted the lack of research regarding sexual addictions and minorities. Those studies that have included ethnicity as a variable have considered ethnicity only secondarily (Robinson). No cross-cultural data were found regarding sexual addictions prevalence, impact or course at the time of this study.

There have been a few studies regarding comorbidity issues of sexual addictions. In his dissertation, Weiss (2004) found 28% of sexually addicted individuals are depressed, as measured by the Beck Depression Inventory, compared to 12% (per *DSM-IV* estimates) of the general population who are depressed. In a study regarding the possible link between attention-deficit/hyperactivity disorder (ADHD) and sexual addiction, Blankenship and Laaser (2004) found a high percentage of individuals with sexual addictions as also having characteristics of ADHD as determined by the Amen Brain System Checklist. Marshall and Marshall (2001) found a positive correlation between sexual addiction and alcohol addiction, as measured by the Michigan Alcohol Screening Test (MAST), in their study of incarcerated sex offenders and community controls. Interesting, they found no correlation with the Drug Abuse Screening Test (DAST) and concluded sexual addictions may not be closely related to addictive personalities as is believed by many theorists in the field. Their data indicated higher levels of childhood sexual abuse for sexually addicted individuals in both the prison and community samples. Other theorized comorbidities (e.g., dissociation, obsessive-compulsions) remain to be researched.

Sexual Addictions as Addictions

There is considerable debate in the professional literature regarding whether sexual addiction should be viewed as an addiction, with its connotations, or as a

Address correspondence to James L. Zapf, Ph.D., Pathways Christian Counseling, 232 West Hardin Street, Findlay, OH 45840, USA. E-mail: jimzapf@earthlink.net

compulsion or impulse disorder (Bancroft and Vukadinovic, 2004; Weiss, 2004). In this section, Goodman's (2001) excellent arguments for considering sexual addictions to be addictions rather than compulsions or impulses will be reviewed.

Goodman (2001) refuted the notion that sexual addiction is a compulsion, rather than an addiction by pointing out that individuals derive pleasure from the sexual behaviors and the experience of pleasure runs contrary to the *DSM's* explanation of a compulsion. Goodman also refuted the notion that impulse control disorders best refer to sexually addicted behavior by suggesting that, while the criteria for Impulse Control Disorder could equally characterize substance dependence, deriving pleasure from the addictive substance is a specific endorsement of the substance dependence criteria. Sexual addicts derive pleasure from their "substance" (i.e., sex). Thus, deriving pleasure from the addiction is more closely related to substance dependence than it is to impulse control problems.

Goodman (2001) refuted the specific objections to considering out-of-control sexuality as an addiction. These objections include that conventional addictions theories have implied physical dependence and withdrawal are essential diagnostic criteria, a 12-step treatment approach is necessary and the treatment goal of abstinence is always imperative. Concerning sexual "dependence," Goodman noted the unity of biopsychological thinking in the greater field of psychology regarding physiological and psychological dependence in sexuality (e.g., it is commonly agreed that human sexuality is a dynamic interaction between physiological and psychological processes). Thus, a dependency upon sex may develop in a similar psychophysiological fashion to the dependence found in substance dependency. Further, Goodman noted methods other than 12-step programs have been found to be effective for substance addictions, thereby suggesting sexual addictions may be accurately defined as addictions even though alternative forms of treatment prove to be effective. In response to the third criticism of the addiction model of sexual addiction, Goodman stated moderation, rather than abstinence, is now being considered a reasonable goal of substance abuse treatment, just as moderation of sexual activity may be a goal of sexual addiction treatment. An interesting objection to the use of "addiction" to describe out-of-control sexual behavior comes from a sociological perspective and suggests the term addiction may oppress minorities and cultures wherein the particular sexual behavior is not deemed pathological. Goodman's rebuttal to this objection was that only patterns of behavior which meet the diagnostic criteria for addictions would be considered pathological rather than any individual behaviors themselves. For the purposes of this study, sexual addictions, while not yet having a distinctive diagnostic category, will be considered closely related to other addictive processes. Specifically, sexual addictions will be considered to closely resemble substance abuse addictions. However, this does not imply a discrepancy with the concept of "intimacy disorders" presented later, in the discussion on theories of sexual addiction. Rather, addictions disorders and intimacy disorders will be considered to be conceptual partners, with dynamic interaction. Carnes (2001), a clear advocate of

Address correspondence to James L. Zapf, Ph.D., Pathways Christian Counseling, 232 West Hardin Street, Findlay, OH 45840, USA. E-mail: jimzapf@earthlink.net

the idea that sexual addictions are disorders primarily evidenced in intimate relationships, defined sexual addiction as a “pathological relationship to a mood-altering experience” (p. 167) in clear support of the addictions-model of understanding this phenomenon.

Bancroft and Vukadinovic (2004) suggested no one etiology has yet to provide adequate explanation for all out-of-control sexual behaviors. Therefore, they argue against the use of either addiction or obsession-compulsion as descriptors of unregulated sexual behavior. Their study found several etiologies for various types of problematic sexual responses: affect (depression and anxiety) reduction, inhibition responses, neurobiological factors, self-regulation and motivational reward system. The authors admit, however, that the use of addictions terminology and philosophy may be a helpful conceptual component of treatment for some individuals who are struggling to control their sexual activity.

Definition of Sexual Addiction

Considering sexual addictions to be addictions, rather than obsessions or compulsions, leads to a definition that mirrors the *DSM-IV TR*'s substance dependence and abuse diagnostic criteria. Goodman's (1990) definition of a sexual addiction included the following: a recurrent failure to resist impulses, an increasing sense of tension that occurs just prior to acting out, a sense of pleasure or relief upon acting out and a sense of lacking control while acting out. Additionally, he proposed at least five of the following will also be present: frequent preoccupation with the sexual behavior, acting out to a greater extent or for longer time periods than intended, attempts to reduce or cease acting out, a large time investment in acting out or recovering, acting out in lieu of fulfilling other obligations (e.g., occupational, academic, domestic or social), reducing other important behaviors, continuing to act out despite persistent social, financial, psychological or physical problems caused or exacerbated by the behaviors, development of tolerance (as used in the addictive sense) for the behaviors, and a sense of restlessness when unable to act out. Finally, the symptoms must have persisted for one month or more or have occurred repeatedly over a greater time period. The SAST taps into several of these areas and will serve as the defining criteria for sexual addiction in this study.

Theories of Sexual Addiction

A variety of theories have been offered to suggest the etiology of sexual addictions. These range from primarily psychobiological explanations (Ragan and Martin, 2000) to trauma-adaptive response (Robinson, 1999) to attachment (Leedes, 2001) to multimodal theories (Bancroft and Vukadinovic, 2004). Each of these theories will be very briefly discussed, followed by a somewhat more substantial review of Carnes' (2001) current conceptualization of sexual addictions as intimacy disorders.

Ragan and Martin (2000) challenged the psychological community to further research sexual addictions in a manner similar to that of known Axis I disorders. Further, they suggested biopsychosocial approaches be used to encompass the multiple causations speculated to be etiological for this pathology. In their theorizing, however, they focused

Address correspondence to James L. Zapf, Ph.D., Pathways Christian Counseling, 232 West Hardin Street, Findlay, OH 45840, USA. E-mail: jimzapf@earthlink.net

mainly on the biological factors contributing to sexual addictions. Ragan and Martin noted that inhibitory and excitatory systems within the central nervous system (CNS) are at work in the process of sexual behaviors. They reported three major systems of the hypothalamus that are suspected to be linked in some way to sexual addictions: the autonomic nervous system, the pituitary complex and the limbic system because each is known to be linked to sexual behavior in general. Efferents of hypothalamus-originated neurons limit blood flow or release oxide and acetylcholine to limit or encourage (respectively) erection of the penis. A gonadotropin-releasing hormone (GnRH) has been discovered which is connected to areas of the brain that, when injured, cause precocious puberty. Additionally, vasopressin, which is elevated during sexual arousal in men, and oxytocin, which increases at ejaculation in men, have been implicated in the memory and learning processes. Thus, the relationship may later be understood between sexual addictions, brain chemistry and the learning process. With regard to the limbic system, Ragan and Martin pointed to evidence linking hypothalamus with affect and emotion and the sexually dimorphic nucleus found in rodents and humans. However, they admit little is understood regarding the effect of this system on human sexuality at this time. Also concerned with the biology of sexual addictions, Carnes (2001) pointed to the chemicals associated with each of the stages of courtship. For example, the sexual drive areas of courtship are facilitated by estrogen and androgen, whereas the overlapping romance areas of courtship also include dopamine, norepinephrine and serotonin responses. The psychobiological explanations of sexual addictions are not yet able to account for their etiology in full but they do represent a promising avenue for future theorizing and research.

Another theory of sexual addictions is that they are closely related to mood and arousal issues. Bancroft and Vukadinovic (2004) conducted research with a local Sex Addicts Anonymous (SAA) group. They found their participants increased their sexual interest when they experienced negative mood states. Rather than a simplistic notion that sex addicts act out in order to promote positive moods, Bancroft and Vukadinovic suggest the arousal/excitation of the negative mood state (e.g., anxiety) is transferred to sexual arousal. When sexual arousal is culminated in orgasm, the individual has “learned” to think about sexual things when they become anxious. They suggested three patterns of affect and sexual addiction. In the first, an individual with depressed feelings maintains their sexual interest (which is a contradiction for most individuals, but not for sexually addicted individuals) and seeks to meet his depression-related needs through sexual contact with someone else. This may cause them to feel validated, thus reinforcing the learned behavior. In the second pattern, an individual uses sexual stimulation to distract his attention from an issue that would likely induce a negative mood. In the third pattern, an individual transfers their negative mood arousal to sexual arousal and pursues sexual release, usually through masturbation. Bancroft and Vukadinovic’s theory, then, focuses on the individual’s mood regulation and considers sexual addictions to be more intrapersonally oriented than the next two theories to be reviewed.

Address correspondence to James L. Zapf, Ph.D., Pathways Christian Counseling, 232 West Hardin Street, Findlay, OH 45840, USA. E-mail: jimzapf@earthlink.net

Leedes (2001) believed sexual addiction theory must focus primarily on psychological processes (e.g., obsessions) rather than behavioral ones. In his theory, two variables are considered significant: the comfort of an individual with interpersonal relationships and the comfort of an individual with fantasy. His premise is attachment theory. He wrote “although the inability to form close attachments may not be sufficient to explain the etiology of sexual addiction, it is a necessary component...” (p. 218) He believed those who are unable to form a close relationship at an early age will yearn for relationship and fantasize about “metaphoric surrogates” (p. 218) for relationship. When no attachment figure presents itself, the individual’s fantasies become their secure base. As evidence of this notion, Leedes pointed out oxytocin (OT) is released during infant attachment through the nursing process and is released during all phases of the human sexual response, creating for both a feeling of security. If this security is found during sexual acting out, or even sexual obsessing, the individual will experience a sense of security with or without a “real” attachment figure.

Another interpersonally oriented theory is proposed by Carnes (2001) who considered sexual addictions to be “super-charged erotic desire” (p. 45) and suggested they are caused by the combination of events, culture and family. He believed the addict has a dynamic lovemap, he called an “arousal template.” Carnes suggested one source of arousal is eroticized rage. He pointed to several examples of sexual addicts who appeared to use sex as a means of expressing the rage that was often not within their conscious awareness. Carnes described the arousal template as our incorporated experiences in life and sex that add to the sexual preferences we already possess genetically. He suggested almost anything can become eroticized into one’s arousal template (e.g., smoking, urination, and computer keyboards), but certain emotional experiences (i.e., fear, risk, pain, and anger) particularly lend themselves to eroticism. Once eroticized, these emotions are used in the sexual repertoire of the individual to restore a sense of self by enabling the person to feel power while enacting the emotions and simultaneously experiencing sexual arousal and/or release. As Carnes noted, the real problem here is an intimacy deficit. The individual is unable to directly address their emotional needs and so they express these needs through (often risky) sexual behaviors.

One helpful conceptualization of sexual addictions is outlined by Carnes’ (2001) delineation of 12 stages of courtship: noticing, attraction, flirtation, demonstration, romance, individuation, intimacy, touching, foreplay, intercourse, commitment and renewal. Various types of sexually compulsive behavior represent theoretical disorders of specific courtship stages. For example, in the case of sexual addicts who inappropriately touch people in crowds, the courtship stages of touching, intimacy, individuation and foreplay would be considered to be impaired in some way. Consider one of these stages, touching, which necessarily requires a trusting and caring relationship, is affirming to the one being touched, is respectful of time, situation and boundaries of the relationship and judges whether touch is appropriate. In the case of an addict touching an unsuspecting

individual in a crowd, none of these normative courtship variables would have been applied to the situation.

Description/Nature of Sexual Addiction

Earlier, a formal definition for sexual addiction was given. But what does the typical sexual addict look like and how does his addiction affect him and his loved ones? In this section, research findings regarding the sexually addictive individual's patterns of behavior and their consequences to self and others will be explored. Particular attention is given to those whose behaviors involve Internet-based sexual behaviors.

Individuals with sexually addictive behaviors may be involved in many types of activities. The behaviors, considered alone, may not warrant a "diagnosis" of sexual addiction. Rather, it is the context of the behaviors which sheds light upon whether or not they are addictive. Carnes (1991) proposed 10 indicators of the presence of a sexual addiction that included out-of-control sexual behavior with severe consequences, an inability to cease the behaviors, self-destructive or high-risk sexual behaviors, inability to limit sexual behaviors, use of fantasy as a coping mechanism, tolerance (a need to increase sexual experiences for the same effect), mood shifts related to sexual behaviors, large amounts of time engaging in obtaining, having or recovering from sex, and neglect of other significant activities due to the sexual behavior.

The advent of the Internet opened a new door for sexual addicts to feed their addictions. While not all "cybersex" addicts were sexual addicts prior to the widespread use of the World Wide Web, Schneider (2003) noted nearly 31% of her sample had compulsive sexual behaviors (e.g., use of pornographic videos and magazines) prior to their use of cybersex activities. This is likely an underestimate because Schneider's sample consisted of the significant others of the addicted individual, who may not have been aware of prior sexually compulsive behaviors. Delmonico and Miller (2003) found the average age of male online sex addicts was slightly higher than nonsexually addicted Internet users (Mean = 34 and 31, respectively). Additionally, while the addicted individuals did not spend more total time online than nonaddicted individuals, they did spend much more time accessing both social and isolated sexual activity, spent more money on sexual activity, accessed more illegal sexual material and used computers away from home more often for sexual activity. If these are the behaviors of sexual addicts, what are the consequences to these behaviors?

There are many negative effects of a sexual addiction on the addict himself. These may include legal, financial, relationship, social, emotional, sexual relationship problems, and occupational problems (Cooper, 2004; Schneider, 2000). These problems have become so common that, for internet sex addicts, the phrase "online sexual problems" (OSP) has been used (Cooper). Other effects include high risk sexual behaviors and isolation, as will be discussed below.

Kalichman and Cain (2004) measured the sexual compulsivity of men and women who were seeking treatment at a sexually transmitted infections (STI) clinic. Their sample included 625 participants. Those with high sexual compulsivity scores were

Address correspondence to James L. Zapf, Ph.D., Pathways Christian Counseling, 232 West Hardin Street, Findlay, OH 45840, USA. E-mail: jimzapf@earthlink.net

significantly more likely to have a larger number of sex partners, have nearly four times as many STIs and engage in more frequent risky sexual behaviors with casual sex partners than those with lower sexual compulsivity scores. Those high in sexual compulsivity were more likely to endorse alcohol and drug abuse and to have used drugs such as crack cocaine and inhalants recently. Additionally, significant proportions of the participants indicated their lives had been disrupted by their sexual compulsions, they thought about sex more than they wanted to, and their appetite for sex had caused problems in their relationships. The population for the study was primarily African American and had a 5:2 gender ratio (men to women). Thus, it is not possible to make profound generalizations from this study, but it does suggest those who are unable to control their sexual impulses may be at greater risk for a variety of problems.

While many of the studies performed on sexual compulsivity and its relationship to sexual compulsion and sexual addiction have focused on the “at-risk” population (e.g., Kalichman and Cain’s (2004) study at an STI clinic, reviewed above), Dodge, Reece, Cole and Sandfort (2004) researched the general heterosexual college student category. Their findings supported the hypothesis that sexually compulsive individuals who are not deemed to be at high risk for dangerous sexual behaviors are in fact more likely to engage in higher risk sexual behaviors than those who are not sexually compulsive. One finding that relates to the effects of sexual addictions on the addict is that the researchers found a greater correlation between the Sexual Compulsivity Scale (SCS) and masturbatory behaviors than with partnered sex. The implication of this finding would suggest those who are sexually compulsive tend to retreat from relational sex, and possibly from relationships in general, and become more intrapersonally oriented.

One man in Schneider’s (2000) qualitative study listed several negative effects sexual addiction had had on him. Included in this list were that he could not respond sexually to his wife and that he became so preoccupied with particular body parts online that he began to focus only on these parts in real life. His addiction wasted his time, kept him from needed sleep, and “seduced” him into ego-dystonic, culturally-deviant sexual thinking (e.g., incest, bestiality, and transvestite sex). In addition to all of the above negative effects of sexual addiction on the addict, sexual addiction has been found to be statistically correlated with alcohol addiction (Eisman, Dantzker, & Lee, 2004) and with depression in males (Weiss, 2004).

Sexual addictions have an effect not only on the addict, but also on those who care for the addict. Cooper (2004) noted “families, friends, employers...may also suffer serious consequences due to the actions of another” (p. iv) who is involved in sexual addiction behaviors. A few studies of the effects of sexual addictions on significant others in the addicts’ life are presented below.

In a qualitative study of 100 letters from the female romantic partners of heavy pornography users, Bergner and Bridges (2002) deciphered the personal experiences and the meanings attached to them by these women. Most of the addicted men referred to in the letters reportedly viewed pornography daily, some for several hours at a time. In

Address correspondence to James L. Zapf, Ph.D., Pathways Christian Counseling, 232 West Hardin Street, Findlay, OH 45840, USA. E-mail: jimzapf@earthlink.net

nearly all the cases, the use of pornography was believed by the female to cause significant interference with their relationship and with the man's ability to work. Interference was reported in the sexual relationship, where the male had become uninterested in sex and had withdrawn emotionally from the relationship. Using a profile theme, they described the experience of the typical woman from their sample. The discovery of the partner's use of pornography was found to be traumatic in that it caused her to re-evaluate the relationship, her self-concept and her beliefs regarding her partner's character. With regard to the re-evaluation of the relationship, the authors point out several characteristics of romantic relationships that may have been taken for granted until the discovery of pornography use was made: exclusivity, sexual desire, understanding, respect, inclusion and others. The partner's sense of self was found to be affected by new beliefs that she is sexually undesirable, worthless, and either weak or stupid. The latter two were repeated statements to the effect of self-denigration for not leaving the relationship immediately upon discovery of the pornography use. The participants re-evaluated their male partners as "perverted," liars, and inadequate as fathers or husbands, but the sample was mixed between those who believed the men were sick, bad, or both.

Schneider (2003) researched how compulsive cybersex behaviors would impact not only spouses/relationship partners, but also the children of these couples. In her study, the cybersex addicts had all downloaded pornography to view and use to masturbate. Many, however, had been involved in various other sexual behaviors online, including sadomasochism and illegal behaviors such as the use of child/adolescent pornography. Using a qualitative method and 94 participants, Schneider found several common emotional experiences in the partner of the compulsive cybersex user. The emotions included betrayal, abandonment, loneliness, shame, rejection, anger and decreased self-esteem. Nearly 70% of the respondents noted one or both individuals had lost interest in a sexual relationship with their partner and many of the sample reported the cybersex had contributed to their divorce. This disruption to relationship was true even for those whose addictions had not reached the point of physical contact with another person, but had been limited to only online sexual activity. Over 50% of the respondents noted it was the husband (cybersex user) who was uninterested in sex with his wife/partner. Nearly twice as often, the significant other was the one left desiring more sex in the relationship, rather than the cybersex user. Schneider found feelings of inadequacy and unattractiveness or even "ugliness" were common responses to the discovery of a partner's cybersex activities. Additionally, a sense of being objectified and both a response of increasing and decreasing the sexual activity of the couple immediately following discovery were typical responses. This sense of being objectified was noted in the responses of many significant others who referenced that their partner seemed emotionally detached during relational sex and only concerned about his or her own experience of pleasure. The most commonly cited effects of cybersex addictions on addicts' children included the loss of parental time/attention, the increase of stress and arguing in the home, and the exposure of the

Address correspondence to James L. Zapf, Ph.D., Pathways Christian Counseling, 232 West Hardin Street, Findlay, OH 45840, USA. E-mail: jimzapf@earthlink.net

children to pornographic material and masturbation. Some respondents were able to articulate the theme of the children being exposed to the objectification of women. Schneider noted that even though no physical sexual expression may occur in cybersex addiction, the problems caused by tolerance behaviors, lying, emotional unavailability, and decreased self-esteem of the partner, due to an inability to “compete” with the fantasy partner, remain. Further, many of the respondents in Schneider’s research had endured both virtual and live affairs, commenting that they were equally destructive and painful.

Along with spouses and families, employers may be affected by sexual addictions. Peck and McKee (2002) wrote about employee assistance program (EAP) counselors’ experiences of individuals with compulsive sexual behaviors. They noted downloading of pornography during work hours and employee’s inability to get to work on time were both issues of concern for the employers of sexually addicted individuals. Employees who are sexually addicted are often risk takers. The pattern found in sexually addicted employees is that of knowing the possibility of losing their jobs and yet continuing to use pornography while at work.

METHODS

Subjects

Participants in this study were drawn from two sexual addiction self-help Web sites and ranged in age from 18 to 81 years with an average of 38. Men who visit these Web sites have, for the most part, intentionally sought out help online for their problematic sexual behaviors. Participating websites (www.purewarrior.org and www.sexaddichelp.com) linked their website to a temporary site containing the two instruments for them to complete, along with a brief demographic data questionnaire. Due to the instruments used, eligible participants for the study were adult males who reside in the United States. There was complete anonymity of participants.

Both the SAST and the ECR-R are available online for the general public to use. Rather than receiving individual feedback regarding their scores, participants were directed to sites where they could complete the two instruments and receive immediate feedback regarding their individual results.

The total number of participants in this study was 71. Fifty-two were qualified to participate (i.e., males living in the United States who completed the sexual addiction section of the survey). Of these 52 participants, 32 were identified as sexual addicts due to responding “yes” to 14 or more questions on the SAST and 20 were identified as nonaddicts due to 13 or fewer “yes” responses on the SAST.

The participants indicated their marital status. Married participants represented 60.6% ($n = 43$) of the total group compared to singles, divorced, remarried, separated,

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widowed and engaged (19.7%, 7.0%, 1.4%, 4.2%, 2.8%, and 2.8%, respectively). The length of longest relationship for the participants ranged from less than 3 months to more than 10 years, with the majority of individuals indicating their longest relationship being from 3 years to more than 10 years ($n = 52$). The ethnic identity of the participants included Black/African American, Chinese, Filipino, Latino/Hispanic/Mexican-American, Native American, White/European American, Japanese American, other Asian, and other, with the predominate response being from White/European American at 81.7% ($n = 58$).

The numbers and categories of excluded participants are presented in Table 2.

Instruments

Carnes (1987) developed the SAST (see Appendix B), a 25-question yes/no test to screen for sex addictions. Participants answer questions regarding their feelings about their sexual behaviors and thoughts, as well as their attempts to cease the behaviors. The scoring consists of one “point” for each affirmative answer. A person who answers yes to 14 items on this inventory is 87.5% likely to be sexually addicted. Each additional yes answer increases the likelihood of sex addiction discrimination. For the purposes of this study, those who score 14 or more affirmative answers were operationally defined as sex addicted. Those with a score of 13 or fewer affirmative answers were operationally defined as not sex addicted. Although a score of 13 affirmative answers yields a 64.3% likelihood of sexual addiction, the higher score was used in this study as a cutoff to ensure the higher probability of accurately measuring the differences between sex-addicted men and non-sex-addicted men. As Carnes (1989) pointed out, the instrument was not developed with specific behaviors in mind. Rather it was an attempt to tap into the addictive mindset. In addition, it was not made for “special” populations (e.g., homosexuals, minors, and women) and should not be used for assessing sexual addictions in these populations.

The ECR-R was developed by Fraley, Waller and Brennan (2000) as a 36-item self-report attachment style measure. Its predecessor, the Experiences in Close Relationship (ECR) scale had been developed 2 years earlier. The ECR was improved upon by the use of item response theory by Fraley et al., who explained that one advantage to subjecting the original scales to item response theory was this would give a more equal distribution of precision across the entire range of the continuum being tested.

In taking the ECR-R, participants answer questions on a 7-point Likert-type scale from Strongly Disagree to Strongly Agree. The ECR-R is scored by averaging the scores for all items in each subscale. There are 18 items in the Avoidance (e.g., discomfort with closeness/dependency on others) subscale and 18 items in the Anxiety (e.g., fear of rejection/abandonment) subscale.

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Sibley and Liu (2004) found the internal reliabilities for the two subscales, anxiety and avoidance, are high (.9477 and .9344; respectively). Fraley, Waller and Brennan (2000) noted that the reliability may be slightly less at the secure end of each subscale (i.e., low levels of avoidance and anxiety). They used item-response calculation of alpha values and found most items on both subscales to exceed .90 values. Their sample size was 1,085 undergraduate students. Similarly, test-retest correlations were found to be .90 and higher on both the anxiety and avoidance dimensions of the questionnaire.

RESULTS

In this study regarding the attachment styles of male sex addicts there were two groups of participants. A score of 14 “yes” responses on the SAST qualified the participant as a sexually addicted individual, whereas a 13 or lower qualified the participant as a nonsexually addicted individual. The participants also completed the ECR-R. Scores on the ECR-R can be considered categorically, yielding a score that falls into one of four categories. The independent variable was sexual addiction. The dependent variable was the category of adult attachment style. An ANOVA was used to determine the relationship between these variables. Values of $p < 0.05$ were considered statistically significant. This study compared sexually addicted men’s adult romantic attachment style to that of nonsexually addicted men.

Means and standard deviations for the total scores on the ECR-R Anxiety scale and the ECR-R Avoidance subscale are given in Table 3.

Two, one-way ANOVAS were conducted to analyze anxious attachment and avoidant attachment as a function of sexual addiction. There was a significant difference found in both the anxiety [$F(1, 38) = 6.122, p < .05$] and avoidance scales [$F(1, 37) = 4.685, p < .05$] for sex addicts compared to nonaddicts. For anxiety, the difference was nearly significant at the $p < .01$ level. (Refer to Table 4). Of the 42 participants who completed the Experiences in Close Relationships-Revised scale in its entirety, each was placed into one of the four proposed adult romantic attachment styles. The Secure Style (characterized by low avoidance and low anxiety scores) was represented by 8 participants (19%). The Preoccupied Style (characterized by low avoidance and high anxiety scores) was represented by 9 participants (21%). The Dismissing-Avoidant Style (characterized by high avoidance and low anxiety scores) was represented by 7 participants (17%). The Fearful-Avoidant Style (characterized by high avoidance and high anxiety scores) was represented by 18 participants (43%). Thus, twice as many or more than twice as many participants were found to represent the Fearful-Avoidant Style than each of the other styles. By sexual addiction or non addiction, Table 5 shows the participants represented in each adult romantic attachment category.

DISCUSSION

Interpretation

It has been statistically shown that men with sexual addictions are more likely than men without sexual addictions to relate romantically with insecure attachment styles. In this study, both relational anxiety and avoidance were statistically significant in the ANOVA. In particular, sex-addicted men were likely to be found to have both high anxiety responses in their romantic relationships as well as high avoidance behaviors. This is shown by the larger percentage of sexually addicted men (44%) demonstrating the Fearful-Avoidant Attachment Style (characterized by high scores in anxiety and avoidance) compared to 28% in the Preoccupied Attachment Style (high anxiety, low avoidance), 20% in the Dismissing-Avoidant Attachment Style (low anxiety, high avoidance) and only 8% in the Secure Attachment Style (low anxiety, low avoidance). This may be compared to Bartholomew and Horowitz's (1991) original study of the four categories of attachment where the distribution was as follows: Fearful-Avoidant (15%), Preoccupied (10%), Dismissing-Avoidant (18%) and Secure (57%). Thus, sexually addicted men are nearly 50% less likely to relate to their partners in a secure manner than nonaddicted men while sexually addicted men are nearly 30% more likely to relate in fearful and avoidant manners. Interestingly, the Dismissing-Avoidant Style was represented nearly equally in the Bartholomew and Horowitz study and the present study (18% and 20%, respectively). This may suggest that anxiety is the greater mitigating factor between addicts and nonaddicts in terms of their relationship style because both the Preoccupied and the Fearful-Avoidant Styles indicate higher levels of anxiety, while the Dismissing-Avoidant Style is the only insecure style with low anxiety.

Unfortunately, the present research design is unable to determine whether insecure attachments lead a person to become sexually addicted, or whether sexually addicted individuals tend to develop insecure attachments. However, because attachment theory is strongly grounded in early childhood experiences, whereas sex addiction is most often considered a phenomenon developed sometime after infancy, it is fair to suggest on theoretical grounds that insecure attachments may be a causal factor in the development of later sexual addictions. While no causation can be determined, this research strongly suggests that individuals who suffer from sex addiction are very likely also suffer in their adult romantic relationships in specific ways. Those high in relational anxiety and low in relational avoidance (preoccupied) are likely to have more self-doubts, be extremely jealous, fall in love easily, feel underappreciated and misunderstood, have difficulty committing to relationships, be overly expressive and dominating, see themselves as warm (while others disagree), have lower self esteem, have labile emotions, be more clingy in relationships, use substitute fantasies, binge drink, and be frustrated with previous partners. Those individuals who are high in relational anxiety and high in relational avoidance (Fearful-Avoidant) are more likely to take subservient roles in relationships, lack intimacy, have lower self-confidence, be unable to rely on others, have difficulty in disclosing their feelings, be introverted, unassertive, unexpressive, consider themselves undeserving of love and support and be more interested in emotionless sex. The Preoccupied and Fearful-Avoidant styles of relating were the most prevalent in this study. The third most represented style of adult romantic relationship in this study was the Dismissing-Avoidant Style, wherein an individual tends to minimize emotional intimacy, be jealous, have labile emotions, expect relational failure, be emotionally cold, hold less restrictive sexual beliefs, be more likely to use drugs, have more self-doubts, use fantasies more frequently, and have more affairs.

The findings of this study suggest that treatment for sexual addicts should include intervention for the addict's adult romantic relationships. Specifically, treatment should address the style and beliefs of his relationship rather than solely the sexual aspects of the relationship. Perhaps then addicts can be taught to behave in ways that exemplify a more traditional secure attachment style in his adult romantic relationships. For example, one may be able to learn to be autocratic and extroverted, believe that love can persist through time, maintain longer relationships, be relationally warm and expressive, consider himself to be likeable and have fewer doubts about relationships.

Implications for Social Change

Address correspondence to James L. Zapf, Ph.D., Pathways Christian Counseling, 232 West Hardin Street, Findlay, OH 45840, USA. E-mail: jimzapf@earthlink.net

Sexual addiction has been estimated conservatively to affect 5% of the overall population (Weiss, 2004). Individuals with sexual addictions have been found to be more depressed than other individuals (Weiss), to be comorbid with ADHD (Blankenship & Laaser, 2004), and substance addictions (Marshall & Marshall, 2001) and are suspected to be correlated with several other mental and emotional disorders. Sexual addicts may experience legal, financial, relational, social, emotional, sexual and occupational problems as a result of their addictive behaviors. In addition, the partners and families of sexual addicts often experience difficult emotions such as betrayal, abandonment, loneliness, shame, rejection, anger and decreased self-esteem. Often a loss of interest in a sexual relationship with one's partner accompanies sexual addictions. Employers also experience problems (tardiness, use of work hours to download pornography) due to the sexually addictive behaviors of their employees.

More effective treatment for sexually addicted individuals is likely to improve their condition in all of the above-mentioned areas. Specifically, this study has emphasized the need to treat an individual's relationship style along with his addictive behaviors. This is consistent with both Leedes's (1999) and Carnes' (1989, 2001) conceptualization of sexual addictions: that sexual addictions are primarily relationally oriented problems. Leedes wrote "Although the inability to form close attachments may not be sufficient to explain the etiology of sexual addiction, it is a necessary component" (p. 218). He further contended that those who are unable to form a close relationship at an early age will yearn for relationship and fantasize about "metaphoric surrogates" (p. 218) for relationship and that when no attachment figure presents itself, people's fantasies become their secure base. As evidence of this notion, Leedes noted that oxytocin (OT) is released during infant attachment through the nursing process and is released during all phases of the human sexual response, creating for both a feeling of security. If this security is found during sexual acting out, or even sexual obsessing, the individual will experience a sense of security with or without a "real" attachment figure. As Carnes (2001) noted, the real problem here is an intimacy deficit. The individual is unable to directly address his emotional needs and so expresses these needs through (often risky) sexual behaviors. If these relational problems (the need to form a close relationship and the need to directly address one's emotional needs) are adequately resolved through therapy for individuals who have sexual addictions, they will have a better personal foundation and a more intimate support system. This in turn will serve them well as they attempt to resolve the legal, financial, social, emotional, sexual and occupational problems that have resulted from their sexual addictions.

Treating the relationship aspects of sexual addictions is likely to lead to an increased ability to relate openly and honestly to one's partner, which will lead to increased perceived quality in adult love relationships (Feeney, 1996). Increased relationship satisfaction will ultimately lead to less frequent disruptions of relationship (e.g., divorce, separation) and improved general quality of life (i.e., higher life expectancy, increased health monitoring, higher sexual frequency and satisfaction, and higher wages and financial savings) according to Bramlett and Mosher (2001). This is a social change that would benefit not only one individual (the addict), but possibly also his partner, family, friends, employer and thus, society as a whole.

Recommendations for Action

The results of this study will be most useful for clinicians who work with sexually addicted individuals. Sexually addictive behavior includes a recurrent failure to resist sexual impulses, an increasing sense of tension that occurs just prior to acting out, a sense of pleasure and a sense of lacking control while acting out, frequent preoccupation with the sexual behavior, acting out for longer time periods than intended, attempts to reduce or cease acting out, a large time investment in acting out or recovering, acting out in lieu of fulfilling other obligations (e.g., occupational, academic, domestic, or social), reducing other important behaviors, continuing to act out despite persistent social, financial, psychological or physical problems caused or exacerbated by the behaviors, development of tolerance (as used in the addictive sense) for the behaviors, and a sense of restlessness when unable to act out (Goodman, 1990). The results of this study suggest that therapy should not only address these sexually addictive behaviors themselves but also the way a sexually addicted man approaches relationship partners. For example, Bibliotherapy, a treatment approach which addresses both sexually addictive behaviors and relationship problems, such as Carnes' (2001) *Out of the Shadows* may be particularly effective for sexually addicted men. In addition, the findings suggest that therapists should look for and use clients' attachment style expressions in the therapy sessions. An attachment style inventory, such as the ECR-R, would provide useful information for the therapist as well.

Finally, researchers and the academic community interested in attachment styles and sexual addictions should become aware of the strong correlation between these two issues so that further study may take this into account. Perhaps greater understanding could be found regarding the factors that contribute to the correlation between the two issues.

Recommendations for Further Study

Address correspondence to James L. Zapf, Ph.D., Pathways Christian Counseling, 232 West Hardin Street, Findlay, OH 45840, USA. E-mail: jimzapf@earthlink.net

Future studies of sexual addiction and attachment style might consider a sex addict's partner in addition to the sex addict. This would add a greater objectivity to both the report of the sex addict's addiction behaviors as well as his attachment style behaviors. Additionally, there has been increasing interest in sexual addictions in women. Another study could use a woman's version of the SAST in order to understand any gender differences for sexually addicted individuals and their adult romantic attachment styles. Additionally, the SAST was normed on an American population. Another study might use a measure that could include sexual addicts from around the world. Lastly, further study could be conducted with various levels of addiction, rather than a yes/no dichotomy. This would give information regarding whether various styles of attachment are more likely at various levels of sexual addiction and suggest further treatment implications.

Conclusion

Sexual addiction has been around for a long time. It is currently a significant problem in American society. Public attention to this problem became greater in recent years by two significant events: the birth of the World Wide Web and President Clinton's highly publicized sex scandal in 1998. The Internet has, unfortunately, provided a means for immediate access to addictive material for men. While some men do not fall prey to this addiction, many others do. Sexual addictions are destructive in many ways to an individual, affecting his social life, intimate relationships, and overall life satisfaction. This study has shown that men with sexual addictions are statistically more likely to have insecure attachment styles in their adult romantic relationships. Both lead to unhappiness. Fortunately, there is hope. As discussed previously, Cassidy (2001) believed representational models (i.e., Bowlby's internal working models) could be "reworked" in adult relationships if a person had not had a securely attached childhood. This reworking could result in an enhanced ability to attain intimacy. Interestingly, the biology of sexuality itself may have an influence in this reworking. Cassidy suggested that gonadal steroids influence opioids, oxytocin and vasopressin which modify the brain's affiliative systems, enabling the sexually-charged mind to forge capacity for secure attachment and intimacy. As Cassidy wrote, "It may be that the time of pair-bonding . . . is a time when attachment-related neural pathways are particularly open to change" (p.139). If a person's healthy sexuality can benefit one's attachment style, unhealthy sexual expression may decrease the security of attachments. As this study has shown, sexually addicted individuals tend to be insecurely attached. Their sexual relationships may prompt them to rework their attachment style and experience more satisfying relationships.

Styles of relating to one's partner can be modified. Some who promote sexually addictive material and lifestyles maintain either that sexual addictions do not exist or that they do not affect relationships negatively. Do not believe them.

Address correspondence to James L. Zapf, Ph.D., Pathways Christian Counseling, 232 West Hardin Street, Findlay, OH 45840, USA. E-mail: jimzapf@earthlink.net

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- Address correspondence to James L. Zapf, Ph.D., Pathways Christian Counseling, 232 West Hardin Street, Findlay, OH 45840, USA. E-mail: jimzapf@earthlink.net

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Address correspondence to James L. Zapf, Ph.D., Pathways Christian Counseling, 232 West Hardin Street, Findlay, OH 45840, USA. E-mail: jimzapf@earthlink.net

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TABLES

Table 1

Characteristics of the Four Adult Attachment Styles

Secure	Anxious/Ambivalent (Preoccupied)
Happy, friendly, trusting relationships	Strong desire for union
Longer lasting relationships	More self-doubts
Less frequent divorce	Extreme jealousy
Believe others are well-intentioned	Extreme sexual attraction
Believe love persists through time	Fall in love easily
Autocratic	Feel under-appreciated and misunderstood
Expressive	Difficulty committing to relationships
Fewer doubts about relationships	Overly expressive
Consider themselves likeable	See themselves as warm, although friends disagree
More extroverted	
Relationally warm	Dominating
More sexually restrictive	Lower self-perceived attractiveness
Less likely to abuse substances	Higher levels of erotophilia

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Earlier first intercourse
 More sexual partners
 Greater infidelity
 Lower self-esteem
 Labile emotions
 Clingy in relationships
 Use more substitute fantasy (table continues)

Avoidant (Dismissing-Avoidant)

Fearful Attachment

Minimize emotional intimacy	Take subservient roles in relationships
Fear intimacy	Lack true intimacy
Labile emotions	Less likely to be in a romantic relationship
Expect relationships to fail	Lower self confidence
Emotionally cold	Unable to rely on others
Lower personal relationship standards	Lower levels of self-disclosure
Fewer concerns over relationship mistakes	Less use of others as a secure base
Hold less restrictive sexual beliefs	Introverted
More frequent unwanted sexual experiences	Unexpressive
More likely to be use drugs	Unassertive
Self-doubting	Less autocratic
Frustrated with previous partners	Consider self to be undeserving of love
Drink more heavily	and support

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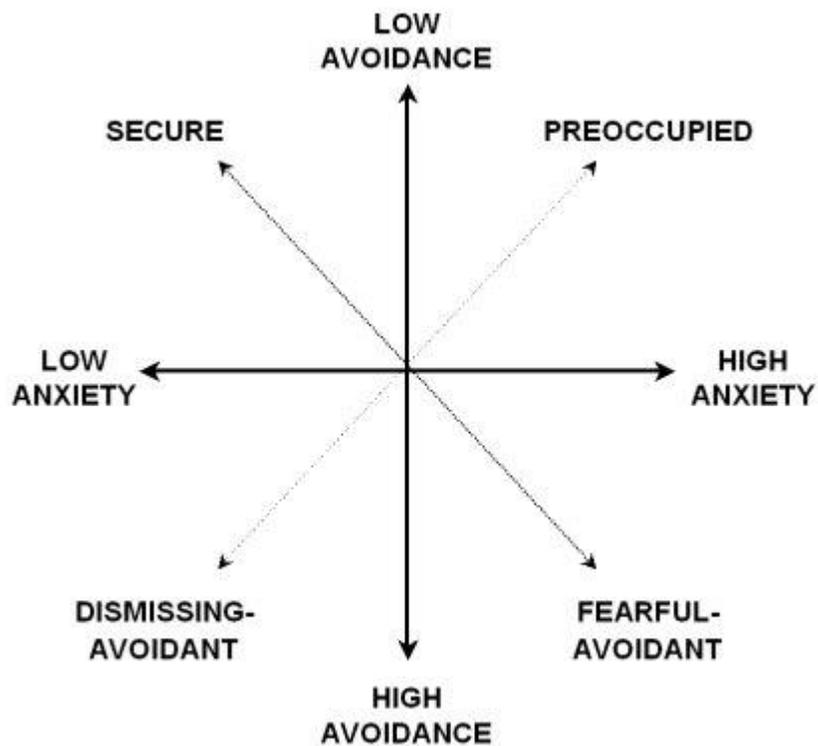


Figure 1. The four adult romantic attachment styles characterized by anxiety and avoidance.

Table 2

Excluded participants

Category	Total Number
Females	4
NonU.S. respondents	10

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Incomplete Surveys	12
Homosexual	4
Total Excluded	19

Note. Some subjects are represented in more than one category.

Table 3

Means and Standard Deviations for Total Scores on the ECR-R Anxiety Scale and ECR-R Avoidance Scale for Sexual Addicts

	ECR_ANX		ECR_AVOID	
Sexual Addiction Status	M	SD	M	SD
Sexual Addict	75.12	14.73	74.00	13.08
NonSexual Addict	62.20	17.93	63.64	14.60

Note. ECR_ANX = Total Score ECR-R Anxiety Scale; ECR_AVOID = Total Score ECR-R Avoidance Scale.

Table 4

One-Way Analysis of Variance with Contrasts of Total Scores on the ECR-R Anxiety Scale and ECR-R Avoidance Scale by Sexual Addiction

	<u>SS</u>	<u>Df</u>	<u>MS</u>	<u>F</u>	<u>P</u>
ECR-R Anxiety Scale					

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Between group	1564.935	1	1564.935	6.122	.018
Within group	9713.040	38	255.606		
Total	11277.975	39			

ECR-R Avoidance Scale

Between group	848.224	1	848.224	4.685	.037
Within group	6698.545	37	181.042		
Total	7546.769	38			

Note. Two Group Sexual Addiction status: Sexual Addiction positive (n = 32), Sexual Addiction negative (n = 20).

Table 5

Adult Romantic Attachment Style by Sexual Addiction

	Secure	Preoccupied	Dismissing	Fearful	Total
Addict	2 (8%)	7 (28%)	5 (20%)	11 (44%)	25
NonAddict	4 (40%)	1 (10%)	1 (10%)	4 (40%)	10

Note: 7 participants completed the ECR-R but did not complete the SAST and thus could not be included in the Table 5.

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