

Love Addiction: Definition, Etiology, Treatment

STEVE SUSSMAN

*Departments of Preventive Medicine and Psychology, University of Southern California,
Alhambra, California*

In this paper, I review the definition, etiology, prevention and treatment of love addiction. First, I provide an introduction to the concept and information on a literature search I conducted. Using seven search terms and three search engines, I was able to locate only 40 data-based articles on love addiction. Next I provide a description of this concept, particularly its negative consequences. Then, I provide a review of its etiology, considering neurobiological, developmental, and social/cultural factors. Next, I provide information on its assessment, prevention and treatment. I conclude by suggesting that love addiction likely is manifested by the time one reaches adolescence, and that it functions similarly to substance abuse disorders. I argue that much more empirical research is needed.

INTRODUCTION

Romantic love connotes deep connection in a relationship, including intense feelings for another person, and physical and emotional intimacy (Acevedo & Aron, 2009). Furthermore, romantic love has been conceptualized as a “dynamic structure of experience that must be continually reanimated” to continue (Solomon, 1988). In addition, this dynamic structure may be “mature” or “immature” in form. Curtis (1983) suggested that the elements of mature love relationships are: (1) needing, (2) giving, (3) romance, and (4) companionship. Mature romantic love helps create an environment that permits mutual growth among the lovers. Each individual in the healthy romantic dyadic unit may feel motivated to acquire additional education,

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Address correspondence to Steve Sussman, Ph.D., FAAHB, FAPA, Professor of Preventive Medicine and Psychology, Institute for Health Promotion and Disease Prevention Research, University of Southern California, 1000 S. Fremont Avenue, Unit 8, Bldg. A-6, Room 6129, Alhambra, CA 91803. E-mail: ssussma@usc.edu

earn more money, and achieve greater self-knowledge to permit an even more mature relationship attachment, and each partner may feel a sense of increased self-esteem and wellbeing (e.g., Acevedo & Aron, 2009).

Immature love, on the other hand, tends to create a maladaptive social environment. Curtis (1983) suggested that elements of maladaptive love relationships are: (1) power, (2) possession, (3) protection, (4) pity, and (5) perversion. Immature love involves such characteristics as obsessions (e.g., over potential lack of faithfulness of the partner, needing to cling to the partner), uncertainty (e.g., as if the relationship might end at any moment), and related anxiety (Acevedo & Aron, 2009). Immature love promotes a perception that love is blind, external, and beyond one's control (Levesque, 1993; Noller, 2005; Schaeffer, 1987; Simon, 1982; Weiss & Schneider, 2006). Immature romantic love, when: (a) permeating one's daily life, (b) involving repeated out-of-control behavior, and (c) resulting in negative life consequences, may be considered "love addiction."

Some researchers estimate that the prevalence of love addiction is 5–10% of the U.S. population (see Timmreck, 1990). Love addiction is considered a process addiction; that is, it pertains to a pattern of recurrent behavior that at first results in reports of pleasurable feelings and obsessive thinking. These pleasurable feelings and obsessive thoughts may be subjectively described as craving for continued union with a love object ("true love"; Fisher, 2006; Yoder, 1990). Cycles of elation and craving are followed eventually by negative consequences (Fisher, 2006; Miller, 1987; Schaefer, 1987; Sussman & Ames, 2008). In essence, one is more or less rigidly focused on love-type feelings leading to decreased adaptive functioning (Timmreck, 1990).

A key element of love addiction is the belief that, somehow, romantic relations are magically potent; that they are relationships that can surmount all emotional obstacles (Peele & Brodsky, 1992). There are several phrases people use that reflect love addiction-type obsessive thinking including "I can't live without you" (Anonymous, 1986; Timmreck, 1990; Wolfe, 2000), "I am nothing without your love to call my own," "You make me feel whole" (Yoder, 1990), "You are my saving grace" (Anonymous, 1986), and "I am always thinking of you" (Timmreck, 1990). Love addicts may also be sex addicts, but not necessarily (Anonymous, 1986; Hatfield & Rapson, 1987; Speziale, 1994; Yoder, 1990), and the restrictive pattern of love addiction may be more like a substance abuse type addiction than sex addiction (Keane, 2004). While several chapters and books have been written about the topic, little empirical research is available (Fisher, 2006; Timmreck, 1990; Yoder, 1990).

In the present brief review, I describe in more detail the concept of love addiction, provide current knowledge regarding its etiology, prevention and cessation, and make suggestions for future research. To create a literature base for this review, I first completed Google Scholar searches (on May 5, 2009 and October 9, 2009). Seven search terms were used: "love addiction,"

“pathological love,” “romance addict,” “pathological limerence,” “obsessive love,” “lovesickness,” and “infatuation.” The resulting numbers of Web pages were 442, 329, 18, 0, 1600 (first 500 pages were examined), 2310 (first 500 pages were examined), and 62,500 (first 500 pages were examined), respectively. Among these Web pages, however, there were only 81 data-based peer-reviewed articles located, and on closer examination, a vast majority of these studies pertained to sex addiction rather than love addiction.

I completed additional searches using OVID Medline (1950 to October Week 1, 2009) and PsycINFO (1887 to October 7, 2009), using the same seven search terms (14 searches), in which 16 additional empirical articles were located out of 240 total Web pages. A total of 40 empirical data-based and review articles on love addiction were located across the three search engines, and all of them are included herein. In addition, some books and theoretical pieces were included to assist in the review.

I did not include a search under the term “codependency,” which is debatable as to whether or not it is closely related to love addiction, a personality disorder, or a means of adjustment to maladaptive relationships (Haaken, 1993; Peele & Brodsky, 1992; Wright & Wright, 1991). Also, I did not include a search under the term “stalking,” which appears more closely associated with bullying, retaliation, or sexual predation (i.e., violence) rather than indicating a longing for another person (Meloy & Fisher, 2005; Purcell, Moller, Flower, & Mullen, 2009), although female stalkers (who constitute perhaps 20% of stalkers) may be relatively likely to engage in this behavior to establish intimacy (Mullen, Pathe, Purcell, & Stuart, 1999; Purcell, Pathe, & Mullen, 2001).

Love Addiction—Similarity to Substance Abuse Disorders

Researchers consensually view love addiction as sharing several negative consequential features of other addictions (Fisher, 2006; Peele & Brodsky, 1992; Wolfe, 2000), particularly substance abuse disorders. As with substance abuse, role, social, physically hazardous, and legal consequences result (APA, 2000). One’s ability to continue to function at work or at home is jeopardized as the result of one’s love addiction. For example, one may risk claims of harassment of a coworker at the workplace by engaging in an at-office affair. Regarding social consequences, one may experience relationship dissatisfaction. For example, love addiction-based relationships tend to lack true intimacy and growth, and involve “power games” (Yoder, 1990). Furthermore, in the instance of a love addiction that involves infidelity, one may distance from spouse and children (online love addiction; see Young, Griffen-Shelley, Cooper, O’Mara, & Buchanan, 2000) in pursuit of romantic online fantasies. Regarding entering dangerous situations, one may, for example, travel to unfamiliar places to visit the object of a telephone or Internet

love addiction (Weiss & Schneider, 2006). Regarding legal consequences, for example, one may embezzle money to pay for the love addictive relationship which may result in legal action (APA, 2000; Meloy & Fisher, 2005; Purcell, Pathe, & Mullen, 2001; Wolfe, 2000).

Likewise, as with the seven criteria that define a substance dependence disorder (APA, 2000), love addiction may also exhibit consequential dependence-like features. It has been suggested that there is a need for *markedly increased amounts* of the behavior to achieve the desired emotional effect (increased time spent love-seeking), there are subjective *urges to continue the behavior when one tries to stop* engaging in the behavior (e.g., feeling desperate and alone when not in a relationship, heartache and longing, like drug withdrawal; Anonymous, 1986; Wolfe, 2000), the behavior is engaged in *over a longer period than was intended* (e.g., one may continue trying to romance the love object long after the relationship has broken up; Timmreck, 1990; Weiss & Schneider, 2006; Wolfe, 2000), there is *a persistent desire or unsuccessful efforts to cut down or control* the behavior (e.g., one may say “I’ll never fall in love again” and yet tend to always be in a love relationship, and may tend to replace ended relationships immediately; see <http://www.allaboutlove.org/love-addiction.htm>; accessed on May 11, 2009; also see Feeney & Noller, 1990; Weiss & Schneider, 2006; Wolfe, 2000; Young, 1990), and *a great deal of time is spent on activities necessary to begin or continue the behavior, or recover from its effects* (e.g., one may spend hours roaming Internet chat rooms looking for a new relationship).

In addition, *important social, occupational, or recreational activities are given up or reduced* because of the behavior (e.g., one may ignore job or family duties, or reduce engagement in prosocial hobbies while pursuing a love relationship), and the *behavior continues despite knowledge of having a persistent or recurrent physical or psychological problem* that is likely to have been caused or worsened by the behavior (e.g., one may suffer from depression or financial loss as a result of love addiction and yet then pursue the next relationship) (e.g., Fisher, 2006). Interestingly, some substance abuse researchers and practitioners view chemical dependence as essentially a committed pathological love relationship of a person with a mood altering chemical in expectation of a rewarding experience (McAuliffe & McAuliffe, 2008; Sussman & Ames, 2008).

ETIOLOGY OF HEALTHY ROMANTIC LOVE AND LOVE ADDICTION

Healthy romantic love has an evolutionary basis (for procreation), biological roots (e.g., neurotransmission-related), cognitive and social learning aspects (e.g., attachment development), and cultural features (e.g., mass media

depictions of romance and family creation) (Fisher, 2006; Gordon, 2007; Marazziti, Akiskal, Rossi, & Casano et al., 1999; Peele & Brodsky, 1992; Young-Bruehl, 2003). Its evolutionary basis may serve as a means to select among potential mates and conserve courtship time (Fisher, 2006). That is, when people experience romantic feelings, they may be relatively likely to search for and find a mate, attach to that mate, have children and try to protect the family unit. Romantic love-related neurotransmission may serve to maintain a focus on a partner despite obstacles, which ultimately leads to greater survival of the partner and family unit. When making subjective reports of romantic love and attachment, activation is observed in the dorsal area of the anterior cingulate cortex, caudate nucleus, and medial insula (Bartels & Zeki, 2000, 2004), along with elevated levels of mesolimbic dopamine and norepinephrine (associated with elation, energy, motivated behavior), endogenous opioids (associated with pleasure), decreased levels of serotonin (associated with obsessive thinking), and increased levels of neuropeptides such as oxytocin (associated with attachment and pleasure [Diamond, 2004; Fisher, 2000, 2006; Marazziti et al., 1999]). This activation is observed particularly at the beginning of a relationship (Marazziti, 2005). These biological pathways may be differentiated from others associated with lust (Fisher, 2006), although there is substantial overlap with attachment (Bartels & Zeki, 2004). Social institutions such as marriage may encourage learning processes that ritualize and facilitate relatively permanent attachment to mates, and some cultural media depictions of happy family lives also may promote norms of healthy romantic love (Young-Bruehl, 2003).

Love addiction may stem from aberrations in neurobiological and social learning processes, and may be influenced by some mass media portrayals or other cultural events. Arguably, fixation on “early phase” relationship neurobiology is definitive of love addiction. For example, Acevedo and Aron (2009) reported that romantic love does exist in healthy long-term relationships (in terms of intensity of affect and sexual interest). However, obsession related to love was only found at the beginning of love relationships, and was inversely associated with relationship satisfaction in longer-term love relationships. Other authors have argued that there is some decrease in romantic love neurobiological reactions (Fisher, 2000). Possibly, maintenance of low levels of serotonin turnover in enduring love relationships may reflect development of love addiction. Also, acting so as to produce a drug-like induced surge of meso-dopaminergic turnover, one may engage in love addictive processes, which may necessitate periodic changing of romantic partners to best induce such early-stage relationship neurobiological reactions (Fisher, 2006; Fisher, Aron, & Brown, 2005; Sussman & Ames, 2008).

Love addiction may not only stem from neurobiological factors, but also from developmental experiences such as formation of social attachments in childhood. Feeney and Noller (1990) provided questionnaire measures of attachment style and forms of love, including love addiction, to a sample

of 374 college undergraduates. They found that securely attached subjects reported trusting family relationships and stable love relationships. Avoidant subjects reported childhood separation and mistrust of people, low intensity of love experiences and fewer love experiences. Anxious-ambivalent subjects differed from the other two groups. They reported dependence on and a desire for commitment in relationships (also see Mikulincer, 1998). Yet, love relationships were the least stable among this group. Furthermore, anxious-ambivalent subjects were relatively likely to idealize romantic partners, and tended to take an extreme approach to love (obsessive preoccupation, emotional dependence, idealization, need for attention of lover). In addition, they were least likely to be interested in friendship relationships or to love someone from a similar background. Anxious-ambivalent subjects, perhaps subjected to equivocal responses to their needs from early caregivers, appeared to most closely self-report love addiction-type responses. If love addiction tends to stem from difficulties in attachment, which may occur early in the lifespan, then it is possible to observe this type of problem behavior occurring in the teenage years as well as throughout adulthood (e.g., Griffin-Shelley, 1995).

The mass media may have an impact on the development of love addiction. In teen pop music, for example, love is associated with emotional craving, longing for a beloved person, an emotional high, fantasy, idealization, obsessive thinking, and extreme dependence on the love object (Vanini & Myers, 2002). There are many mass media channels that can transmit love addictive qualities, including romance novels, greeting cards, movies, television, music, and online modalities (Anonymous, 1986; Timmreck, 1990; Yoder, 1990). Computer chat rooms, for example, permit a means of establishing intense, intimate communications while often omitting a variety of visual cues, enforcing one to take turns in interactions, facilitating fantasy about the daily lives of other parties who may live far away, and perhaps leading to expression of love with someone with whom one has had no personal contact (Weiss & Schneider, 2006).

Variation as a Function of Gender and Personality

Gender has failed to be found to be a predictor of the degree to which passionate love is experienced (Hatfield & Sprecher, 1986). Furthermore, anxious-ambivalent attachment difficulties, being as common across both genders, may suggest that love addiction is similarly prevalent across genders (Feeney & Noller, 1990; Miller, 1987). On the other hand, at the beginning of a relationship men may be relatively likely to experience passionate love for a woman than the converse (Hatfield & Sprecher, 1986). Yet, there is other work that suggests that over the course of relationships women may experience greater connections of love with desire than men (Diamond,

2004). It does appear to be the case that there is a greater relationship of love addiction with stalking among women compared to men (Purcell, Pathe, & Mullen, 2001). Perhaps, gender differences affect how love addiction is manifested as opposed to its prevalence. Much more research is needed to understand the prevalence and patterns of love addiction as a function of gender.

There are only a few empirical studies on the relations of love addiction with *personality* characteristics. Passionate love has been found to be associated with relatively higher anxiety among young teens (Hatfield, Brinton, & Cornelius, 1989), and with reporting feeling relatively more controlled by others (Winter, Duncan, & Summerfield, 2008). Individuals suffering from love addiction have been found to exhibit higher levels of impulsivity, and report being more unconventional (Sophia et al., 2009). In one study of 40 female stalkers, 45% who were stalking to try to pursue greater intimacy, 30% were found to exhibit delusional disorders, 50% were found to exhibit personality disorders (primarily dependent, borderline, or narcissistic types), and 7.5% were found to exhibit substance use disorders (Purcell, Pathe, & Mullen, 2001).

Love addicts may engage in a pattern of love seeking (a) as a reaction to anxiety or depression, (b) to reduce fear of loneliness, and (c) as a function of idealization of the objects of romantic interest, and then blame these persons for not fulfilling one's fantasies and expectations (e.g., Feeney & Noller, 1990; Weiss & Schneider, 2006; Wolfe, 2000; Young, 1990; also see www.slaa.org; accessed May 11, 2009; and Anonymous, 1986). Thus, it is not surprising that while little empirical work exists that examines the relations of personality to love addiction, several authors have suggested that the love addict may become involved in love relationships as a reflection of borderline or narcissistic personality disorders. Much more work is needed to understand the relations of love addiction with personality characteristics and mental health problems.

PREVENTION AND TREATMENT

There is very little empirical work on the prevention or treatment of love addiction. The next two subsections examine assessment of risk for love addiction and potential prevention strategies, and assessment of love addiction consequences and potential treatment strategies.

Prevention

Assessment of risk for love addiction or of its symptoms is the first step to offering preventive assistance. Risk for love addiction would likely be indicated

by individuals reporting an anxious-ambivalent attachment style (Feeney & Noller, 1990). Feeney and Noller (1990) constructed 12 love addiction Likert-scale type items that were scored from strongly agree (1) to strongly disagree (5) and formed two factors, reliance on partner (e.g., “want us to be together all the time,” “happiest, most alive with partner,” and “self-worth most positive with partner”) and unfulfilled hopes (e.g., “never satisfied with partners,” “daydreaming, planning about partners,” and “pursuit more exciting than love”). Use of this self-report measure, or of interview items that indicate developing dependence on a search for ideal love for self-fulfillment, which appears consistently thwarted, could be used to screen persons for a love addiction prevention program.

Likewise, Hunter, Nitschke, and Hogan (1981) developed a 20-item 4-point “strongly agree” to “strongly disagree” closed-ended self-report “Love Scale” (e.g., “Soon after I met my partner, I knew this person was my ‘other half’ and made my life complete”) which they administered to 58 undergraduates (mean age 28 years) twice during a 2-week period, and found high test-retest reliability. Some of these types of items also are reflected in the Passionate Love Scale (PLS; Hatfield & Sprecher, 1986). Feeney & Noller’s measure, the Love Scale, and the Passionate Love Scale, failed to provide replication work, and only college undergraduate students were assessed. All three measures tap dependence on an ideal love. Examples of other, popular “yes-no” items that may be used to identify persons at risk for future, impending love addiction include: “Have you ever tried to control how often you would see someone?” “Do you get high from romance?” “Do you believe that a relationship will make your life bearable?” “Do you believe that someone can ‘fix’ you?” “Do you feel desperation or uneasiness when you are away from your lover?” and “Do you feel that you’re not ‘really alive’ unless you are with your romantic partner?” (www.slaa-arizona.org/assessment/assessment.html; accessed on June 8, 2009).

Prevention programming might include types of counseling that attempt to facilitate a secure attachment style. One may be instructed through use of role-plays or dramatizations, or direct instruction, that dependent romantic love does not contribute to a relationship and, as such, is not really love. In addition, cognitive restructuring techniques could help one separate inner speech pertaining to love-with-love versus love with love-objects. For example, one may first be made aware that their thought that “only one specific person could ever satisfy one’s needs” tends to lead one to a love addictive process. They may then practice repeating alternative self-statements such as that “there is never just one person in the world,” or “there are many fish in the sea” to provide a restructuring. Clients also might be engaged in cognitive restructuring to remove fantasy-based thinking (e.g., being rescued or being a rescuer) that could lead to later love addictive behavior. Mood management techniques might be instructed, to counteract one motive for love-seeking.

Additional types of prevention strategies might be envisioned. For example, since it is possible that development of love addiction may occur through social learning processes (e.g., exposure to the behavior of significant others, mass media influences), corrective information about healthy and unhealthy romantic relationships may be provided as part of school health curricula, or through other types of community health promotion programming. One may, for example, be presented with a set of age-appropriate love addiction relationship scenarios. One could be guided through a decision making sequence about the benefits and costs to self and others for each scenario, and learn that costs outweigh benefits to both partners. One may be instructed myths of ideal romantic love (e.g., the myth that there is only one “right” person for each and every other person; or the myth that showing obsessive thinking toward another person is definitive of love). Persons may be asked if there is a “kernel of truth” regarding the myth and then explain why it is a myth (e.g., people do get married again; people would not be able to build lives together if all they thought about was each other).

One may also consider policy actions that could serve a preventive effect. For example, warning statements might be placed on some media outlets (e.g., “This movie portrays fantasy material and does not reflect healthy real-life love relationships”). Certainly, some persons might view such action as extreme. However, if there is evidence that the media promotes love addiction, and if love addiction prevalence is sizable (e.g., 5% or greater of the population), then such action would seem justified. There is much research needed regarding types of prevention programming that could be developed.

Treatment

Assessment of need for treatment is administered to persons that report consequences associated with romantic love. Examples of popular love addiction-type “yes-no” items that indicate experience of consequences include: “Do you find yourself unable to stop seeing a specific person even though you know that seeing this person is destructive to you?” “Do you make promises to yourself concerning your romantic behavior that you find you cannot follow?” “Do you find that you have a pattern of repeating bad relationships?” “Do you find yourself in a relationship that you cannot leave?” “Does your romantic behavior affect your reputation?” “Do you have relationships to try to deal with, or escape from life’s problems?” “Are you unable to concentrate on other areas of your life because of thoughts or feelings you are having about another person?” “Do you believe that your life would have no meaning without a love relationship?” and “Do you find yourself obsessing about a specific person even though these thoughts bring pain, craving, or discomfort?” (www.slaa-arizona.org/assessment/assessment.html; accessed on June 8, 2009). Certainly, much assessment work remains to be completed.

Some work exists regarding the *treatment* of love addiction, though most of this work is clinical/non-research. Therapeutic options discussed by some authors include: use of self-help books, 12-Step organizations, and individual or couples therapy (Weiss & Schneider, 2006). There are numerous self-help books and several 12-Step fellowships that pertain to love addiction. Self-help books exist on gaining awareness and cognitive restructuring of love addiction-related disturbances (e.g., Gordon, 2007; Yoder, 1990). Means of insight include learning to be aware of and discriminate between current love relationships and childhood love relationship inadequacies. Discerning between passion, tenderness (caring), and commitment aspects of love may be essential to understanding the degree of health in one's love relationships one may have (Fisher, 2006; Gordon, 2007).

Sex Love Addicts Anonymous (SLAA) is the 12-Step group that most closely pertains to the romantic/emotional aspects, though other groups include Codependents of Sex Addicts (COSA), Sex Addicts Anonymous (SAA), and Sexaholics Anonymous (SA) (see Yoder, 1990). In SLAA, members learn to surrender, one day at a time, their whole life strategy of, and their obsession with, the pursuit of romantic and sexual intrigue and emotional dependency; they learn to take care of their own needs before involvement with others; become willing to ask for help, be vulnerable, and learn to trust and accept others; work through the pain of low self-esteem and fears of abandonment and responsibility; and learn to feel comfortable in solitude (Anonymous, 1986).

While 12-Step organizations may be helpful, they could serve to be overly inclusive of persons who might not demonstrate extreme love or sexual behaviors in some cases (e.g., Speziale, 1994), or may label as sick some behavior which may be a function of political-social conditions (e.g., racism, Salnier, 1996). Therapy for love addiction (outside of 12-Step organizations) appears in the literature, and also may be helpful. Various individual-level therapy options might be considered. Motivational interviewing may help love addicts understand maladaptive functions of love objects. For example, one may learn through motivational interviewing techniques that their romantic relationships involve an ongoing pattern of equivocation about issues of trust and intimacy (Sussman & Ames, 2008). One may then try to reduce the discrepant feelings by deciding to enter relationships more slowly.

Fisher (2006) suggested that it may be most prudent to avoid all contact with the objects of the love addiction, particularly rejecting partners, and for one to become exposed to novel environments to facilitate new more healthy experiences. Timmreck (1990) suggested that the sufferer should learn how to construct a self-support system through the use of guided healthy self-talk. This self-talk might guide one toward getting used to less intense, more constructive feelings toward self and others (Timmreck, 1990). He also mentioned that self-management training should be considered to help one redirect one's behavior. The therapist may establish short-term goals with

a love addict that could include signing up for community courses (e.g., photography), participation in meditation or exercise, and making same sex non-sexual, non-romantic friends (Weiss & Schneider, 2006; Wolfe, 2000).

Group therapy also may be a helpful option. One pilot study of 8 love addicts (defined here as obsessive need to achieve attraction of partner) demonstrated greatly reduced self-reports of love addiction-related feelings over 18 group therapy sessions (Lorena, Sophia, Mello, Tavares, & Ziberman., 2008). No comparison group was identified in that study, though some data were collected and reported on these subjects other than clinical impressions. One may conjecture that group therapy techniques (e.g., use of psychodrama) may help one decrease illusions toward romantic partners, and help one understand one's feelings toward long-term significant others such as one's nuclear family. One may also learn through group interaction how to better participate in healthy romantic relationships, which may be less exciting but more rewarding in the long run (Peabody, 2005).

CONCLUSIONS AND FUTURE RESEARCH

Love addiction indicates a constricted pattern of repetitive behavior directed toward a love object that leads to negative role, social, safety, or legal consequences. It appears to involve brain neurotransmission processes similar to the effects of drug misuse, and may be a substitute addiction for drug misuse for some persons (Yoder, 1990). It appears to reflect most closely an anxious-ambivalent attachment style. It is likely depicted and promoted in the popular media as "ideal love." This arena has been studied primarily through use of clinical inference in books and theoretical articles. Very little empirical (data-driven) work has been completed.

Love addiction is a useful area to study for several reasons. First, if it is true that 5–10% of the population suffers from love addiction, its prevalence alone would be a cause of concern that needs remedy (Timmreck, 1990). Validation of this estimate is needed. Second, it is possible that it is an addictive process that arises during adolescence as with other problem behaviors, such as drug experimentation (Peabody, 2005). Teenage love addicts may romanticize the acquisition of adult romantic roles (e.g., motherhood), and may experience an anxious-ambivalent attachment style (dependence, disappointment), which might later be followed by unwanted pregnancies, broken relationships, as well as substance misuse. It is possible that certain relationship tendencies, such as interpersonal dependence on peers, idealization of peer relationships (best friendships), and disappointment regarding peers on who one is dependent, may be observed prior to adolescence and precede the development of love addiction and substance abuse disorders. As such, early assessment may serve as a screen for risk of several addictions in the future.

Third, the functional overlap between substance misuse and love addiction is striking in some ways. For example, Sussman and Ames (2008) describe the development of drug dependence as being a relationship with an object, involving pragmatic, aesthetic, communication, and expectation components. A direct analogy to the development of a love relationship is posited. That a person might be treated *as if* he or she was a drug, or the converse, highlights a potentially close association between the two types of disorders. In investigating both disorders concurrently, one may be able to learn about the underlying processes involved (e.g., impact on mesolimbic dopaminergic turnover).

Finally, the mere lack of research completed deters one from achieving conceptual clarity regarding love addiction. It may overlap with personality or other disorders such as histrionic or narcissistic personality disorders, codependence, pathological love, or sex addiction, which needs to be delineated. Indeed, there is some variation in how researchers have investigated this phenomenon. Some researchers have examined love addiction as an addictive thought-behavior pattern, and not an aspect of love per se (e.g., Steele & Brodsky, 1992; Timmreck, 1990). Other researchers have investigated it as a compulsive behavior (e.g., Wolfe, 2000), which may or may not be inherent in romantic love (Young-Breuhl, 2003). Yet others have examined it as romantic love that has become misdirected (e.g., Fisher, 2000). What constitutes love addiction may vary across different cultures, though there is almost no research on this possibility (Salnier, 1996). Social normative confusion over the boundaries of healthy romance, or a potential taboo perspective toward studying this arena, suggests there is much to be learned (Schaeffer, 1987). In particular, consensual means of self-report assessment are needed that separate love addiction from sex addiction or other disorders, and adequately tap the breadth of the contents of this disorder. Then, a better understanding of the etiology, topography, prevention and cessation of love addiction will be able to be achieved.

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