



Commentary

Is addiction to love a real addiction?

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Abstract

Love addiction is a controversial and highly debated condition and, even today, not recognized by DSM-5 as a specific diagnosis, although there is enough literature to support its characterization as an addictive disorder. Love addiction, also called pathological love, can be defined as a pattern of behavior characterized by a maladaptive, pervasive, and excessive interest towards one or more romantic partners, resulting in lack of control, renounce of other interests, and other negative consequences. This focused review uses the evidence from recent studies to compare the neural alterations in romantic love and drug addiction; moreover, we also compare the behavioral alterations in romantic love and drug addiction. From the behavioral comparisons, we found that there are many similarities between the early stage of romantic love and drug addiction, and this stage of romantic love is considered a behavioral addiction. At the same time, significant differences exist between the later stage of romantic love and drug addiction, and this stage of romantic love eventually develops into prosocial behavior. The diagnosis and management of love addiction may be a controversial but promising area of research.

Keywords: Love, Addiction, Drug addiction, Behavior

Introduction

Most of us are aware of addiction to alcohol or other drugs. However, the reality is that

the brain is the organ involved in any addiction, which makes an individual addicted to anything that satisfies the characteristics of addiction. It can be an addiction to a substance or a person. The addiction to sex or love can be overlooked than addiction to a substance mainly because of its harmless nature compared to addictive substances.

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The broader view

Addiction can be considered a spectrum of

motivation that pushes the person to repeatedly take the substance for any rewards such as pleasure and excitement that arises due to drugs, gambling, food, and sex. This is mainly because of the essential nature of humans and other animals that they learn to behave in survival and reproduction enhancing ways that are sustained by reward conditioning. This behavior does not always lead to the evolutionary outcome for humans because of the modern environment we have adopted for ourselves.

Our appetite for reward runs parallel to our appetite for food, which can wax and wane over our life. At times, these behaviors fall ahead of the level that suits our needs, values, and preferences. This emphasizes that addictions are simply appetites that can be satisfied temporarily, but if someone abstains from fulfilling it can find himself/herself in an urgent and distracting situation.

Arguably appetites are soft addictions; at least on this account, everyone is addicted to food, sex, or other substances to such a degree that not to cause significant harm or distress or not to be eligible for a psychiatric diagnosis and treatment.

A similar approach can be adapted to the concept of addiction to love. The essence of this approach is that to love someone is like to get addicted to them but weakly. The universal experience of a romantic relationship starts from falling in love, go through an ultimate separation, and ends on subsequent withdrawal. Initially, both experience a rush of euphoria, each time more excited than the previous one. Other interests suddenly become less important, as most of the time will be spent in pursuance of these joyful encounters. The duration of encounters gradually gets longer, and separation in between encounters filled with painful longing and desire. These euphoric

states wane over the period and are replaced with feelings of contentment, calm, and happiness (Sussman, 2010). When this journey ends abruptly, grief and desperation ensue. Surprisingly this journey matches with the journey of addictive behavior. Burkett and Young argued that this journey describes both aspects equally (Burkett and Young, 2012).

Evidence from animal models and researches on human attachment and neurobiology of substance abuse concludes that the brain regions and neurotransmitters involved are similar in social attachment and substance addiction (Burkett and Young, 2012). Substance dependence and everyday romantic bonding have more in common than just matching psychological profiles. At the level of the brain, this also involves reward learning and addiction (Wise, 1996). This involves the processing of dopamine (Kelley and Berridge, 2002; Burkett and Young, 2012), oxytocin (Insel, 2003; Mc Gregor et al., 2008), and serotonin at various neurochemical regions. However, with dopamine, both sex and addiction elicit very similar neurochemical activity, more active on the reward circuit of the brain in which these activities stimulate the release of high levels of dopamine from the nucleus accumbens (Burkett and Young, 2012; Kirsch et al., 2006; Di Chiara et al., 2004). Dopamine involves numerous other processes like eating, drinking, having sexual intercourse, and love (Burkett and Young, 2012). Finally, neuroimaging supports the overlap of love addiction and drug addiction based on a study on exposing the participants to images of their romantic partners before neuroimaging. Reportedly, these images evoke self-reported feelings and show the heavy activation of the brain's reward regions (Aron et al., 2005; Bartels and Zeki, 2000; Fisher et al., 2006). There are just a few neurochemical and functional similarities

between love and drug addiction. However, it can be argued that similar phenomena at the neural and behavioral levels do not always mean that they are strictly equivalent.

Love addiction

People with love addiction have a compelling need to be loved and go the extraordinary length to search for love and please their partners even that hurts themselves. Most of the time, they were obsessed with being in love and numerous destructive relationships. Over the period, they find it difficult to maintain a healthy relationship as they could not find a balance.

Concepts of love addiction also reflect some aspects of attachment disorder where the sufferer seeks attention from their romantic partner and is crippled with low self-esteem. They often believe that they are worthless when they are not in a relationship. At times they even tolerate the harmful behavior of their partners.

Some characteristic of love addiction are:

1. Constant urge to be in a relationship
2. Committing to a relationship even before knowing the person
3. The constant change of relationship
4. Unable to find a satisfying relationship
5. Obsessed and being reliant on a partner
6. Staying in an abusive relationship
7. Neglecting their own need to be in the relationship
8. Being jealous and possessive most of the time when a partner talks to or spend time with other people.

Differential diagnosis

Despite the argument whether love is an addiction or not, love addiction has to be distinguished from other dysfunctional behaviors of the psychopathological spectrum. These disorders include erotomania

and even psychotic symptoms like the delusion of love. There is excessive interest in making romantic relationships in erotomania, but that will usually be subsided after the psychopathology (mood or psychotic symptoms) subsides. In the delusion of love, the person experiences the irresistible need for love but is associated with delusion-like ideations that are bizarre, most often being loved by a person of higher strata and loving in return that person with no adequate evidence.

Treatment of love addiction

The addictive nature of love and its similarity with the other addictions, as discussed above, suggests that drug addiction treatment strategies can improve the symptoms of love addiction. However, there is limited evidence available to support pharmacotherapies for them. However, when the love addiction leads to depression, anxiety, or other psychiatric comorbidities, psychiatric evaluation with diagnosis and treatment is mandatory. Some studies suggested that psychosocial interventions with psychotherapy, cognitive behavior therapy, and self-help groups can hypothetically improve these symptoms (Zhang, 2016; Earp, 2017; Sanches & John, 2019).

Comparison of romantic love and drug addiction: The behavioral characteristics

The emotions related to mating and reproduction typically exhibit three primary categories: lust, attraction, and attachment (Fisher, 1998). Cravings for sexual gratification, the main characteristics of lust, motivate the individual to seek sexual union with the individual of their choice. The factors that facilitate mate choice and enhanced attention on partners are increased energy and focused attention. These are characteristics of attraction. Attachment is characterized by maintaining close social contact in mammals

and is described as feelings of calm, comfort, and emotional union between human partners.

The early phase of love lasts around 6 months and is characterized by euphoria, more attention to the person of interest, obsessive thinking about the person of interest, and emotional dependency and craving to be in union with the beloved (Marazziti and Canale, 2004; Aron et al., 2005). After a few months, these features are replaced by calm, safety, and balance (Stárka, 2007). On the other hand, the behavior of drug addicts progresses from initial self-experience to impulsive use and progress to compulsive use of the drug. With regular use, these features also become severe (Volkow et al., 2006).

Discussion

People in the early stage of love focused on their beloved (salience), feeling of rush on thinking about the beloved (intoxication), and as the relationship builds, the lover seeks more interaction with the beloved (tolerance). When the beloved breaks off the relationship, the lover experiences symptoms similar to drug withdrawal-like lethargy, anxiety, insomnia or hypersomnia, loss of appetite or binge eating, irritability, and chronic loneliness (Fisher et al., 2016). Studies reported significant changes in resting-state brain networks using functional magnetic resonance imaging between love and addiction (Song et al., 2015; Wang et al., 2016; Zhang et al., 2009, 2011; Lv et al., 2016; Wei et al., 2016). Although the early stages of love and addiction have similar characteristics, the addictive characteristics of love gradually disappear. However, love and addiction develop into different behaviors and have different effects on human development. Despite adequate treatment, the drug addiction likely to persist and tend to relapse.

Conclusion

We can safely conclude that love and addiction have many concordances and discordances. The neurophysiological basis of love is concordance with the addictive behavior and discordance with prosocial behavior. The comparisons between love and drug addiction indicate that both involve functional enhancement in the emotional regulation and reward network. Except this, love shows unique function enhancement in social cognition while drug addiction shows particular dysfunction in the cognitive control network. Thus, love addiction seems to be a real addiction, and this may be categorised as an addictive disorder.

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