

Centro Educativo Jean Piaget

Romance and Addiction

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Introduction

Question in matter:

How is romance physiologically related to addiction and how does this manifest in human behavior?

Objectives:

Main objective: To understand the physiological and behavioral relationship between romance and addiction.

Specific objectives:

1. Define addiction.

2. State similarities between passionate romance and addiction.
3. State the similarities between romance rejection and addiction physiologically, acknowledging the self destructive behavior that comes after both (romance rejection and addiction).
4. Elicit the transition between romance and attachment.

Justification:

Although romance is not something we should be afraid of, understanding the neurochemistry behind it helps us explain risk behaviors which trigger after rejection. Acknowledging them may result in prevention and a healthier management of this process.

Findings among the uncanny resemblance among drug and romance neurochemistry are much too clear. However, this study may reinforce its comprehension among peers which will therefore promote emotional intelligence and rationalization of these common conducts.

Through a series of interviews, this study intends to find a repetitive pattern in the personal lives of students and inform them about the chemical processes they will undergo for the rest of their lives.

Study

Addiction

Stanton Peele and Archie Brodsky authors of love and addiction define addiction as “an unstable state of being, marked by a compulsion to deny all that you are and have been in favor of some new and ecstatic experience” (Peele, 1975).

Defining passionate love as an addiction may be deceiving. Romance doesn't seem like something dangerous to us, on the contrary most of the success perceived by society has to do with romantic relationships. They also make us feel joyful during long periods of time, triggering reward mechanism hormones. addiction (Tennov, 1979; Liebowitz, 1983; Hatfield and Sprecher, 1986; Harris, 1995; Lewis et al., 2000; Meloy and Fisher, 2005; American Psychiatric Association, 2013).

Some main concepts of addiction that relate to our topic are:

Salience

Incentive salience can be defined as a psychological process that affects the visualization of stimuli making it look more appealing (Robinson, 1993).

Cravings

The sensitization of dopamine systems is gated by associative learning. This means that incentive salience ends up being related with cravings, creating a feeling of intense craving due to the neural pathways formed.

Euphoria/intoxication

“Euphoria is the state of pleasure produced by a drug. This state is closely linked with the reinforcing effects of the drug. Euphoria is thought to relate to endogenous dopamine or endogenous a opioid release and it is determined by both pharmacodynamic and pharmacokinetic factors. This is not the only reason why addicts use drugs. “ Some of these reasons may be anxiety or psychiatric necessities.

Tolerance

This is the state in which drug reactions diminish on repeated administration. Tolerance leads to an elevated increase of drugs per dose; this increase in cost usually drives criminal activities. “Tolerance often develops at a different rate for different actions of the drug. The respiratory depression caused by opioids reduces faster than the euphoric actions, this explains why addicts can use doses of heroin that would be lethal to none addicts. A person becomes tolerant to the euphoric actions faster cardiostimulant actions, so on binge use, cardiotoxic concentrations are frequently reached.” It’s developing time is not a constant it can be in minutes (opioids), hours, days, etc.

However, when individuals face rejection they usually tend to face stages of addiction that can become self destructive or affect their conduct. This can be best defined as drug withdrawal, including protest, crying spells, lethargy, anxiety, insomnia, or hypersomnia, loss of appetite or binge eating, irritability and chronic

loneliness. A wholesome management of this process is crucial for an individual's well-being and a further growth in romantic relationships.

Similarities between romance and addiction

First of all we can recognize two different theories surrounding this resemblance: one portraying romance as an actual addiction, and the second one seeing love to be, in some sense, addicted. (Earp, 2017) This is a relevant distinction because it underlines the fact that romance should be treated and, if handled irresponsibly, it can cause serious consequences in one's behavior.

Romantic love takes place in the brain as levels of dopamine, norepinephrine, phenylethylamine (PEA), and serotonin. Dopamine feeds the characteristic restless imagination. It specifically increases in the nucleus accumbens and caudate nucleus, and clearly, in the ventral tegmental area, the region that unfolds the reward network (mesolimbic reward system). "In animal studies, increasing dopamine levels serve as a little love potion, causing the subject to fall head over heels for whomever happened to be nearby at the time."

Dopamine triggers the fantasy and sexual desire. It does this by involving two other chemicals, testosterone (associated with sexual desire) and norepinephrine, by metabolization of dopamine, supporting these continuous imaginative scenarios providing increased energy and a sense of euphoria. Norepinephrine also imprints the experiences with the lover in long-term memory. (Howard, 2006)

This chemicals working together lower serotonin levels usually associated with that of the obsessive compulsive disorder, giving the lovers an obsessive tone-dreams arise, romance persists, and business as usual is forgotten. This neural network works an likeness with spirituality, giving way to a secondary consciousness losing your orientation and being overtaken by the focus of your will or attention. (Howard,2006)

Now, even if romance follows a correspondence with the neurochemical patterns of alcohol, heroine, or even cocaine (Frascella et al. 2010), the main difference between these is that one seeks romantic relationships, whereas one does not seek to be addicted to these self-destructive drugs. Not only because they may intrinsically be rewarding, but also because of the social extrinsic motivation that comes from them. A nourishing romantic relationship has a strict relationship with self realization and happiness. As a result, an individual could experience a significant growth in other sectors of his personal or even professional and academic life.

Similarities between romance rejection and addiction

On the other hand, rejection is related with an opposite and painstaking outcome. As mentioned beforehand, dopamine is intimately involved with the brains reward system, and failure to achieve someone's romantic love interests serves rise dopamine levels even more, resulting in the cravings becoming more intense. (Howard,2006). Burkett and Young (2012), describe:

“At first, each encounter was accompanied by a rush of euphoria—new experiences, new pleasures, each more exciting than the last. Every detail became associated with those intense feelings: places, times, objects, faces. Other interests suddenly became less important as more time was spent pursuing the next joyful encounter. ...When everything was brought to an abrupt end, desperation and grief followed, leading slowly into depression.”

This represents a drug withdrawal structure- including protest, crying spells, lethargy, anxiety, insomnia, or hypersomnia, loss of appetite or binge eating, irritability and chronic loneliness. They often find themselves in risky situations to bring back their lover (Meloy, 1998; Lewis et al., 2000; Meloy and Fisher, 2005), these situations may even include suicide and homicide (intense passionate romantic love). In 2011, over 10% of murders in the United States were committed by the victim’s lover (FBI, 2011)

In fact, when everything seems to be over, just like drug addicts, rejected individuals tend to relapse (with a song, a sight, a place) going through the rejection phases LI over again, even if they understand they may have a negative result.

From romance to attachment

Attachment may proceed with or without lust or romance. The hormones related to it are vasopressin (found in males) and oxytocin (found in females), hormones

linked attachment and pleasure. These hormones define the exclusivity of a relationship and are also affected by genetics, monitoring the number of vasopressin receptors. Both hormones are released after intercourse (creating a sense of closeness), during childbirth and during breastfeeding.

Interesting enough, these hormones do not go along with testosterone (defining sexual arousal) in men when in a study animals were injected with testosterone they lost sense of attachment with their mates.

On the other hand, other studies showed that those in longer partnerships (8-17 months as opposed to 1-8 months) began to show activity in the ventral pallidum, associated with attachment in animal studies, while continuing to show activity in the VTA and caudate nucleus associated with passionate romantic love (Howard, 2006). Thus, with time, feelings of attachment begin to accompany feelings of passionate romantic love.

Method:

Subjects:

During the interview, there will be approximately between 25-35 subjects in hand. These subjects in matter will be high school students (15-19 year olds), who have had romantic relationship of any type with someone. These students will be chosen randomly.

Materials:

These individuals will answer a questionnaire individually, which has been specifically designed for the study. Every questionnaire will ask the same questions which will be either multiple choice or open questions.

Procedure:

Subjects will answer a questionnaire electronically that must be answered individually. These task must take between 3-5 minutes. There should be no stimuli from the examiner, but they surely can ask questions if needed.

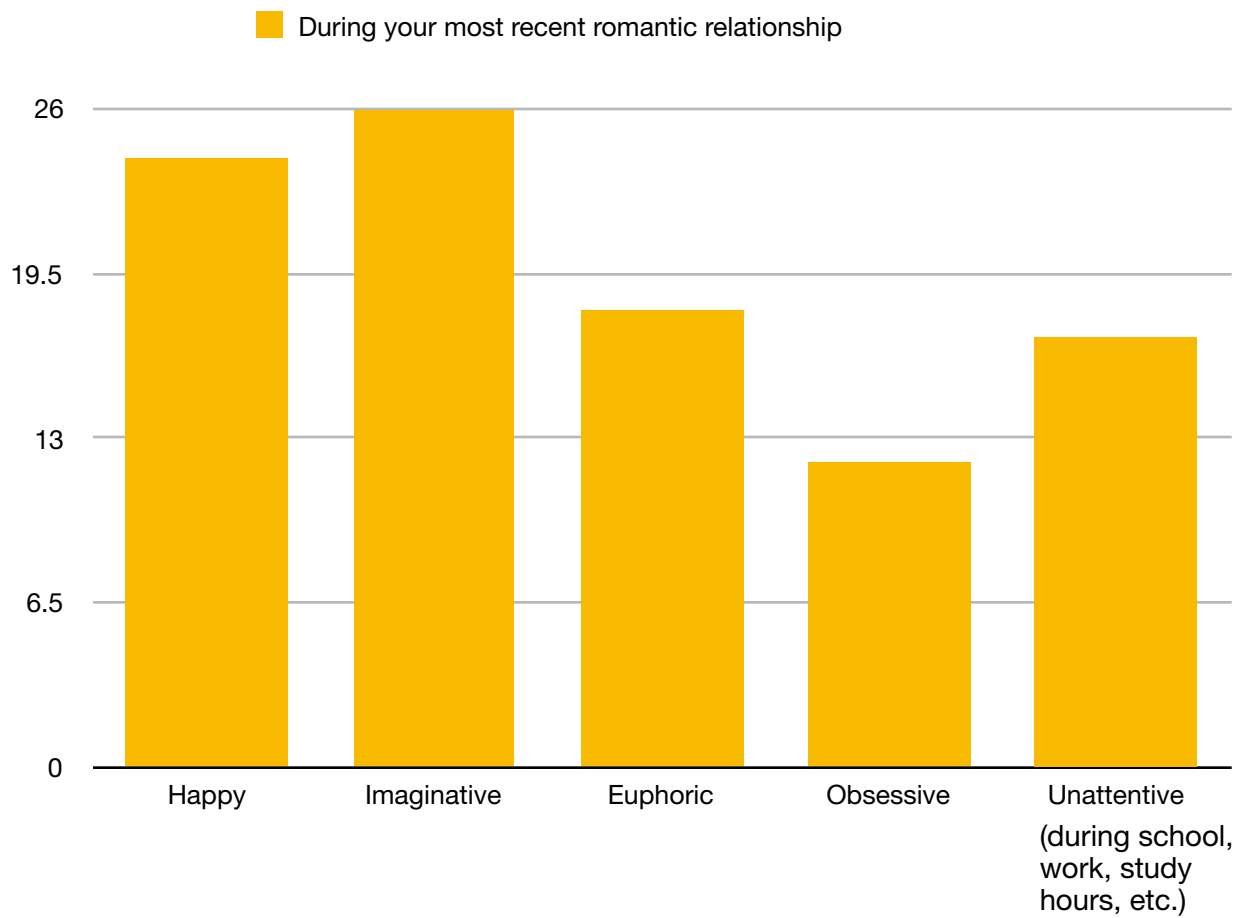
Hypothesis:

The interview should show that romance experienced by high school students has physiological similarities with addictions.

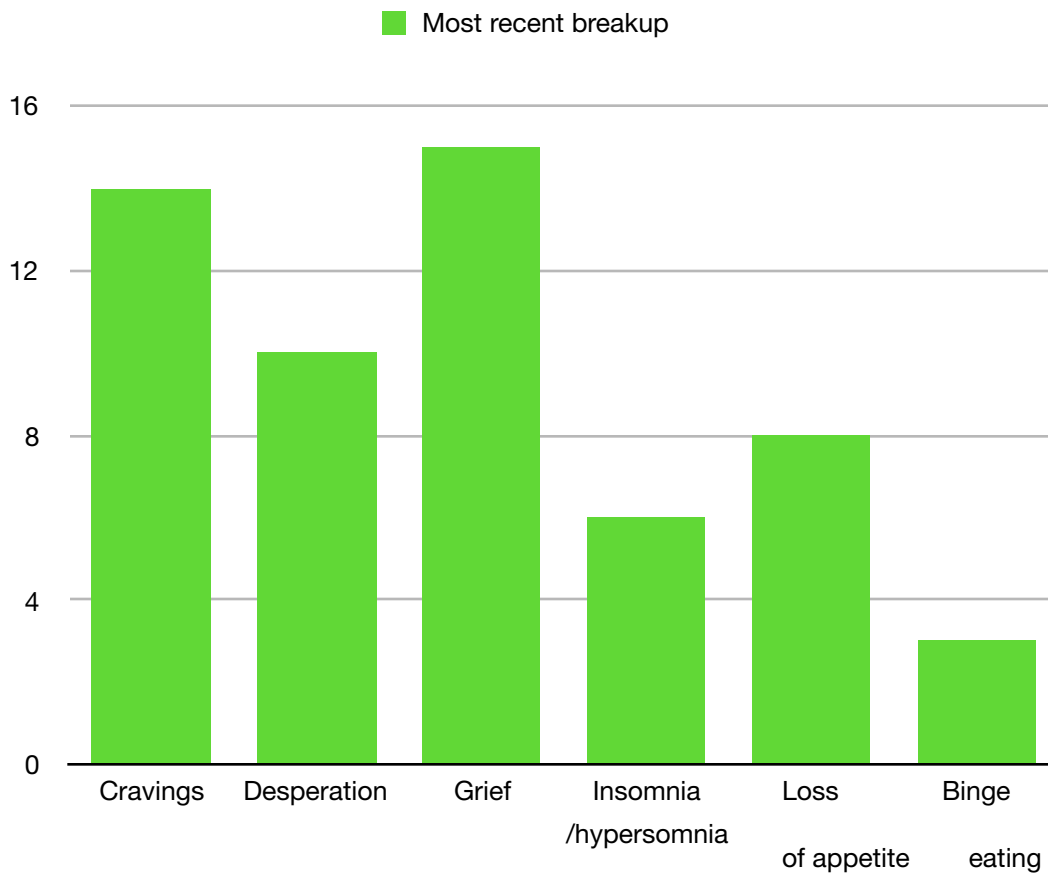
Results:

The study's hypotheses was proved with the interviews: romance among high school students is similar to drug addiction. The subjects chosen had or have had a romantic relationship of any kind. All of them at least, expressed 3 characteristics of the relationship between love and addiction and 4 characteristics between rejection and withdrawal.

The average relationship lasted about 6.5 months.



The graph shows the students' behavior in their latest relationship. Every emotional state was presented in more than half of the interviewed. Each relationship was different but they predominantly felt happy, and the entire group was imaginative.



Individuals showed less affinity with the drug withdrawal structure related to rejection. Cravings were explained to the participants as a need to go back. There were a few questions about insomnia and hypersomnia, which were immediately answered. Some students added that insomnia, loss of appetite, and binge eating seemed rather extreme.

Discussion:

Although results were predominantly what was expected, some of the characteristics analyzed during the investigation were not popular among them, this was not expected. However, these relationships were thought as likely to be different from one another, which they were.

The information obtained about recent relationship emotions matched previous knowledge. Students did or do find the pleasurable aspects in relationships.

Every participant said they were imaginative, this may be due to the fact that they were aged between 16-19 years old and may experience higher hormone levels than the ones of an adult (Spear, 2000).

The second graph's results were the least expected. On the other hand, some students did specify that they found binge eating, loss of appetite, and insomnia, rather extreme. This may be due to the relationships' short duration, or to the subjects age, which may not be having or expecting fully formal relationships. As mentioned beforehand, a comparative study between longer relationships going from 8-17 months as opposed to 1-8 months began to show activity in the ventral pallidum, associated with attachment in animal studies (Howard, 2006). This couples may not be experiencing a stronger withdrawal, and therefore negative emotions are not triggered.

Finding enough students in a relationship to conduct the study was a difficult task. The group was small and belonged to the Centro Educativo Jean Piaget's community, this study may not match results a much larger and diverse one. In addition, the group of couple that broke up was even smaller in size

Conclusions:

Findings during interviews did not entirely support a theoretically stated hypothesis. However, the participant group may have been too small or not diverse enough. In conclusion, we can observe that scientific research supports this study's hypothesis, consequently, these studies give a much stronger support that the mentioned interview could give.

On the contrary, the interviews did not completely contradict the hypothesis, in fact it did show a strong similarity between romance and addiction, but not with rejection and withdrawal.

The study does show ps that the hormonal imbalance shown during romance and addiction and rejection and withdrawal, are quite similar (Howard, 2006). It also states that not all romantic relationships are qualified for this study due to the duration of these relationships.

This study may have an informative value in the CEJP's community. This information may promote a healthier management of future or current romantic relationships, considering emotional intelligence as a central skill for problem solving and success in life (Goleman, 2006).

This study leaves a door ajar for further understanding of how to maintain a healthy romantic process which can be enriching rather than destructive and violent. This study's importance lies on its informative outcome, as a tool of knowledge on an every day worrisome topic. Reason can hopefully balance this raging passion which we call love.

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