

Impulsiveness in patients with pathological love

Avaliação de impulsividade em pacientes com amor patológico

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Dear Editor,

The behavior of caring and paying too much attention to one's partner in an excessive and uncontrolled way is called pathological love (PL)¹.

Impulsiveness is a characteristic of human behavior associated with decision making that may be elevated in several psychiatric disorders². It has been observed that PL subjects are more impulsive than healthy subjects¹.

Patton *et al.*³ conceive impulsiveness as a multidimensional construct composed by lack of attention, lack of planning, and motor impulsiveness.

Another paradigm used to measure impulsiveness is the Delay Discount Task⁴ which is based on the concept that impulsive people tend to prefer immediate rewards, even if smaller, instead of choosing a greater reward to come after some time.

Twenty-five PL subjects > 18 years who felt their romantic relationship caused suffering were selected through media advertisement. A personal interview was conducted to evaluate if volunteers fit the following criteria: 1) withdrawal symptoms when far from partner; 2) caring for partner more than wanted; 3) unsuccessful attempts to reduce/control pathological behavior; 4) long time spent trying to control partners activities; 5) abandonment of interests/activities previously valued; 6) behavior maintained despite personal/family problems¹.

Thirty healthy subjects were selected among the control participants of a clinical trial using the Self-Report Questionnaire (SRQ-20)¹.

PL subjects and healthy volunteers were mostly women (n = 43; 78.2%) with 36.0 years of age (SD = 9.8) and 15 years of education (SD = 4.3). Subjects gave written consent to fulfill the Barratt Impulsiveness Scale (BIS) and the Delay Discount Task⁵. For this, subjects should choose between two imaginary monetary rewards being delivered immediately or after a certain time interval. Delay intervals investigated ranged from 6 hours to 25 years. The value of immediate rewards available ranged from R\$ 1000 to R\$ 1. They were also administered the Mini International Neuropsychiatric Interview⁵.

Subjective value of time-delayed rewards was studied by the indifference point, the value in which the preference for immediate reward equals the one of the delayed reward. When indifference points are determined to variable intervals of time, an indifference curve is obtained, which provides information about how fast the subjective value of the reward decreases with time. This curve is explained by the equation: $V_d = V/(1+kd)$, in which V_d is the current subjective value of a delayed reward (i.e. the indifference point), V is the value of the delayed reward, d is the delay length, and k is a constant proportional to the speed of reward discount (that can be obtained by the equation given that other values are known). The higher the value of k , the faster the value of a reward falls with rise of the advancement interval to obtain such reward⁵.

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Thus, higher values of k are associated with faster discount time, hence, higher impulsiveness⁵. The Student t test was used for BIS comparisons and the Mann-Whitney (U) test for k comparisons due to non-linear distribution⁴.

In PL subjects, the most frequent psychiatric comorbidities were depression ($n = 14$; 56%), anxiety disorders ($n = 4$; 16%), and social phobia ($n = 3$; 12%); 16% ($n = 4$) presented no comorbidity.

PL subjects, compared to healthy subjects, present higher scores in lack of planning [29.9 (5.1) vs. 24.0 (4.5), $t = -4.353$, $p = 0.001$], lack of attention [24.0 (6.0) vs. 18.2 (3.5), $t = -4.259$, $p = 0.001$], and motor restlessness [21.3 (3.8) vs. 17.5 (2.4), $t = -4.314$, $p = 0.001$].

As for the ability to wait for a higher reward, no significant differences were observed in the delay discounting task [30.6 (SD = 765.0) vs. 26.8 (SD = 831.0), $U = 335.000$, n.s.].

Results suggest that PL subjects may be impulsive under certain aspects (those measured by BIS), yet not under

others (as related to the delay discount paradigm), reinforcing the multidimensional nature of the impulsiveness concept. These results must be considered when developing therapeutic strategies for these subjects.

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