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Crack cocaine craving: behaviors and coping strategies among current and former users

ABSTRACT

OBJECTIVE: To understand crack cocaine craving among users and describe craving behaviors and coping strategies.

METHODOLOGICAL PROCEDURES: Qualitative study with a non-random criterion sample consisting of 40 current and former crack cocaine users conducted in São Paulo, southeast Brazil, in 2007 and 2008. Respondents were selected using snowball sampling technique. In-depth semi-structured interviews were conducted until theoretical saturation was attained. All interviews were transcribed and content analysis was performed to construct inferences and hypotheses based on the narratives.

ANALYSIS OF RESULTS: The respondents showed a similar gender distribution, were 18 to 50 years of age, and had different levels of education. Most were from low-income background. In addition to craving resulting from crack cocaine withdrawal and environmental and emotional cue effects, it was found that crack cocaine itself triggers craving. The latter appeared to be a strong trigger of binge episodes. Binge episodes made them lose their moral values, and act dangerously to get more drug. The most common ways reported to get crack cocaine or money to buy it were: prostitution, manipulation of other people, go into debt, sell personal belongings to buy drug and theft. The respondents reported strategies to overcome their cravings as well as pharmacological and behavioral approaches to prevent cravings such as eating, having sex, playing soccer, working, avoiding social situations of crack use and taking depressants.

CONCLUSIONS: Crack cocaine binges are caused by a craving induced by the effects of crack cocaine itself. Users develop self-control strategies to cope with their cravings that may help improve their drug use and treatment effectiveness.

DESCRIPTORS: Crack Cocaine. Substance-Related Disorders, psychology. Behavior, Addictive. Obsessive Behavior. Qualitative Research.

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INTRODUCTION

Craving is defined as a strong desire for a substance,¹ a critical factor for the development of compulsive use and drug dependence and relapse after periods of withdrawal.

Heavy continuous and repetitive crack cocaine use is called crack binge,¹⁹ and is caused by craving and may last for days until there is no more drug or the user is exhausted.¹² These intermittent cycles of repeated doses of crack cocaine followed by an abrupt discontinuation of its use are associated with signs and symptoms of withdrawal characterized by physical and psychological discomfort.⁷

Crack urge and having no means to afford it leaves the user vulnerable making him/her adopt risky strategies to get the drug such as drug trafficking, unsafe sex and violent behaviors (thefts, fights).¹⁴

A recent household survey on the use of psychotropic drugs in Brazil showed that 22.8% of the population has used any psychotropic drug during their lifetime. Marijuana was the most reported drug used (8.8%), followed by solvents (6.1%) and benzodiazepines (5.6%). Cocaine was the sixth leading drug reported (2.9%) and crack cocaine the eleventh (0.7%) together with barbiturates and followed by anticholinergics (0.5%), mescal (or merla) (0.2%) and heroin (0.09%).⁵

Although crack cocaine is not among the most used illicit drugs in Brazil, crack urge and intensity of craving effects make its use high risk and a public health concern. It is mainly associated with violence and sexual risk behaviors that cause social and health harms to users and the environment they live in. Violence and sexual risk behavior affect not only crack cocaine users but the whole society, increasing the spread of sexually transmitted diseases and compromising people's safety.

The Brazilian administration is now discussing the crack cocaine issue in Brazil through the "Integrated Plan to Fight against the Use of Crack Cocaine and Other Drugs" (Decree No. 7179 of 20/May/2010).^a The actions devised in the plan include: "to disseminate quality information on crack cocaine and other drugs" in response to warnings from the scientific community stressing the need for in-depth studies on the crack cocaine user population in Brazil.¹⁴

In the light of that and taking into consideration that crack craving is a determinant of compulsive use and drug dependence and can cause potential problems, it is vital to understand this phenomenon from the user's perspective to address it.

This study aimed to comprehend crack cocaine craving among users and describe craving behaviors and coping strategies.

METHODOLOGICAL PROCEDURES

Qualitative study comprising 40 current or former crack cocaine users aged 18 years or more conducted in São Paulo, Southeastern Brazil, during 2007 and 2008. Because craving is a subjective state, requiring to understanding it based on the description and interpretation of those who experience it, a qualitative design²⁰ was used in which the phenomenon is explored based on individual values, beliefs and representations.

The qualitative approach allowed a detailed in-depth study of the phenomenon of craving in crack cocaine users with a convenience sample¹³ with the selection of individuals who were good informers and met the study criteria. The study criteria¹⁵ included current or former crack cocaine users, both sexes, aged 18 years or more, and with no severe cognitive impairment to preclude the interview. Former users were those not using crack cocaine for at least six months.

Because it is a hidden population—the use of crack cocaine is an illegal act—there were conducted semi-structured interviews with key informants who were very familiar with the study population (health providers and scientific researchers). They provided input for preparing an interview guide and it was the first step for sample selection. This guide addressed the following topics: sociodemographic profile of users; history of crack cocaine use; effects of crack cocaine; craving experiences and their consequences; craving and related risk behaviors; compulsive crack use (binge) and violence associated with crack cocaine craving.

The sample selection was mediated by gatekeepers²⁰ (health providers, social workers and users) who facilitated access to crack cocaine users. While key informants can provide information on the population under study, they are not always part of the environment studied. For this reason, gatekeepers were required in this study as they were part of the community, and were able to mediate the interactions between users and the researcher and protect her. Some key informants also played the role of gatekeepers.

Because it was a convenience sample, subjects were recruited through snowball sampling,¹² in which the first subjects nominated others, and they in turn nominated others, and so on.

The researcher would invite openly users to participate in the study. She explained the study objectives, the requirement to have the interview recorded, and assured their anonymity. Interviews were conducted on-site in a non-governmental organization center for harm reduction, recycling shed, rehabilitation center, therapeutic community, local shelter for pregnant women and psychiatric hospital as well as in a mental care research center.

Twelve chains of on average three subjects were created, each with a particular source. Reports were collected at different places to ensure diversity of the sample.

A total of 40 subjects were studied: 31 current and nine former crack cocaine users. The sample included

^a Brasil. Decreto nº 7.179, de 20 de maio de 2010. Institui o Plano Integrado de Enfrentamento ao Crack e outras Drogas, cria o seu Comitê Gestor, e dá outras providências. *Diário Oficial Uniao*. 21 maio 2010[cited 2010 Dec 17]:43. Available from: http://www.planalto.gov.br/ccivil_03/_Ato2007-2010/2010/Decreto/D7179.htm

subjects with different gender, age, education level and socioeconomic condition but not different skin color/race. Interviews were conducted until theoretical saturation was attained, i.e., until there was redundancy of information and thus theme categories.²⁰

In-depth semi-structured interviews were conducted following a guide¹⁵ developed based on themes emerging from interviews with key informants and a literature review. Some questions were standardized to allow comparison of responses between respondents, while others were added or probed during the interview.⁶

Each respondent was identified with an alphanumeric code based on their name, age, sex (M = male; F = female), status of crack cocaine use at the time of interview (U = user; E = former user) and length of drug use. All interviews were recorded and transcribed literally and submitted to pre-analysis and coding as proposed by Bardin³ (2004). Sections of the coded narratives were entered into a software program and customized. Respondents' answers were grouped and reports on each theme were generated. The reports were analyzed using categorization³ and triangulation.¹⁵ Inferences and interpretations were constructed and hypotheses based on the content of the narratives were analyzed.³

The study was approved by the Research Ethics Committee of the Universidade Federal de São Paulo (protocol no. 0334/07).

ANALYSIS OF RESULTS

There were interviewed 20 males and 20 females, of whom four males and five females were former users. They were between 18 and 50 years of age. Most had low socioeconomic condition. There was a wide range of education levels, from illiterate to college educated respondents, which is not consistent with other studies with similar methods that found mostly poorly educated crack cocaine users.^{12,14} Half of the respondents reported (formal or informal) work as a source of income, which contrasts with difficulty in maintaining a job for crack users reported in the literature.^{12,14}

Crack cocaine craving among users

All respondents reported crack cocaine craving and believed it had a crucial role in maintaining their drug dependence because it made it difficult, or made them fail, to stop using the drug. It could explain the typical pattern of compulsive crack cocaine use described in cultural studies in recent decades.^{12,14}

Craving was consistently defined as a negative feeling, an urge to use crack cocaine in three situations:

1. When they had a feeling or something that reminded them of crack cocaine, the so-called internal and external

cues, usually associated with anticipation of a positive reinforcement and/or mitigation of a negative state:

Inner cues: *"I stopped [smoking crack cocaine], but when there was fighting at home, I would go out and smoke."* (M25FU6)

External cues: *"Sometimes I'd take the money and say: 'I'm now going to a restaurant to eat.' But I'd pass by the drug selling point, the guys would call me and that's it. I'd buy it [crack cocaine]. I would lay right there."* (A21FU9)

2. After crack withdrawal when they would like to have the same pleasurable effects or either did not want to feel the discomfort of being without the drug:

"Craving comes when there's no longer that feeling of intense pleasure, like when you smoke and you're fucking enjoying it, it is a super great feeling. But it stops out of nowhere (...) you keep wanting that pleasure back." (G31ME13)

3. Craving as an effect of the use of crack cocaine. This type of craving seems to be strongly associated with crack binges:

"There's no such a thing as one [stone] only. (...) You are barely done with one [stone], and you're already wondering how to get the second one." (F33MU18)

During binge episodes a user often spends days on just crack cocaine, alcohol and cigarettes. Binges end only when a user collapses from physical or mental exhaustion, or has no more money for drug supply.

The association between binge and drug-induced craving was also investigated by Bruehl et al⁴ (2006) in users of "ice" (crystal methamphetamine). Known as rich man's crack, ice is a synthetic drug that can be smoked as crack cocaine and users develop similar obsessive behaviors but at a higher cost.

All respondents reported binge episodes and that after smoking the first stone drug craving was inevitable:

"(...) The more you smoke it, the more you want it. (...) Crack cocaine is a drug that never fulfils your desire. (...) When you puff the smoke out, you feel you want more." (M40FE3)

"It is an irresistible desire (...) You cannot smoke one (stone) only." (A40MU12)

These three triggering situations of craving may be interdependent and overlapping, making it difficult to discriminate an individual craving situation. The literature suggests three triggers associated with craving, as described by Bruehl et al⁴ (2006): environment cues (sight and smell of the drug, drug paraphernalia, physical surrounding of drug use); drug withdrawal; and the effect of the drug itself.

Craving for crack cocaine was repeatedly reported as an absolute need for the body that is essential for life, comparable to hunger. The inability to fulfill this need causes users great suffering and they are taken by obsessive thoughts of how to get crack cocaine and/or money to buy it. D18FU2 reported that, from the moment she wakes up, she is busy planning how to get crack for that day. F33MU18 often dreams of crack cocaine (“*I dream of smoking, I wake up puffing the smoke out*”) and even feels its taste while eating bread.

They are so anxious to smoke crack cocaine that they are unable to stand still because “*your body hurts, your mind aches, your heart chills, the pit of your stomach blocks*” (C40MU8) because “*your body calls for [the drug]*” (M35MU13) and a desire “*stronger than hunger*” (W30MU12) urges it to use crack. These narratives are in line with the literature. Baker et al² (1986) claimed that the goal of this obsessive quest of crack cocaine is not only to give the user pleasure but also alleviate his/her discomfort.

Craving, losing one’s moral values and engaging in dangerous behaviors

The obsessive features of craving for crack cocaine makes users lose their judgment and ability to choose, and focus their life on getting more drug, despite being aware of their remarkable physical and moral deterioration. It reinforces the significance of craving in crack addiction. Modell et al¹¹ (1992) suggested that drug dependence and obsessive compulsive disorder share similar symptoms and may have a common etiology.

Once crack cocaine is central to one’s life, the urge for the drug makes users change the values that guided his/her behaviors, i.e., they engage in risk behaviors that threaten their physical and moral integrity with the exclusive focus of getting more drug. Losing their family, spending large amounts of money (C40MU8 reported he spent R\$ 9,000 during seven days of heavy crack use), neglecting their own body—nothing seems as bad as not using crack cocaine.

As users lose their values, a window of opportunities is opened up for getting crack cocaine and/or money to buy it, including illegal acts.

The effort they make to get crack cocaine is disproportionate to their return. L28FU8m reported that she took her wardrobe apart and took it on her back to the drug selling point in exchange for two stones of crack.

Losing one’s values eventually lead to a series of moral losses. “Shame” was a term often used to describe their craving-related behaviors.

Prostitution

Almost all women craving for crack cocaine engage in prostitution, though it is not exclusive of them.

Two male heterosexual respondents (W30MU12 and J29MU8) reported having sex with other men during craving episodes.

In a recent study by Schönnesson et al¹⁸ (2008), a group of crack cocaine users with the highest rates of risk sexual behavior (multiple partners, prostitution, and inconsistent condom use) also engaged more in illegal means to get money and had higher prevalence of crack binge. This is consistent with that found in the current study; while some respondents reported condom use, others made it clear that safe sex was not their main concern. “*I was concerned about making money. Sometimes I did not have condoms but my craving was stronger,*” said a 19-year-old female user (J19FU6).

E36MU18 has been HIV-positive since the 1980s, and reported not using condoms during sex with prostitutes:

“(…) if they are prostitutes, they are [HIV-positive] too, because whores (…) if they did not bother to use a condom, then they are also HIV-positive. They got it [HIV], see?” (E36MU18)

Kalichman⁹ (2000) estimated that nearly 33% of HIV-positive people are still having unsafe sex. The high rate of sexually transmitted infections among crack cocaine users can increase the transmission of other diseases because they are less likely to seek care and to comply with treatment.⁸ In addition, the presence of cocaine in the bloodstream can increase HIV replication,¹⁷ increasing viral load and the risk of HIV transmission.⁸

Manipulation of other people

Crack cocaine users become manipulative during craving episodes. Lies and deception were the most frequently reported forms of manipulation. The respondents showed to be aware of this personality change and becoming less trustworthy. Even after discontinuing crack use former users reported not regaining close people’s trust. “*Nobody trusts me. It hasn’t changed in years*” reported a 47-year-old car keeper, a former crack user who has been abstinent for five years (S47ME16).

Going into debts

In addition to the risks of using an illicit drug (hanging around in violent places, risking being caught by the police), users suffering from craving are often indebted to traffickers and at serious risk of death if they do not pay their debts on time. I31MU9 had two guns pointed at his face because of a 10-real debt.

According to some respondents, traffickers tend to encourage the use of crack cocaine. Crack craving is so strong that they will have a loyal clientele.

Selling personal belongings to buy crack

Another way to get the drug is to sell personal belongings to buy it. Respondents reported heavy losses.

F33MU18 reported selling his car in exchange for 200 stones of crack. As he regretted it later the next day he tried to undo the deal by taking the amount of money corresponding to 200 crack stones to the drug dealer but he did not accept it. Repentance was common among respondents.

Thefts

While some respondents believed that stealing has to do more with one's nature than crack craving, others blamed their cravings for changing their own nature, making them able to steal just to buy drug. These behaviors involve risks as they incite violence.¹⁴

Strategies to cope with or prevent cravings

Shifting one's thoughts away from the drug craving is a major coping strategy reported. Seeking other forms of pleasure seems an effective strategy to keep their fixed thoughts away from the drug. They try to enjoy everyday activities such as work, school, cultivate their spirituality, play soccer and have sex. M41MU17 reported studying with a friend on weekends to avoid staying out and submit to the craving. "Doing nothing is doing ill," he said. Eating is a coping strategy reported by women only. They reported binge eating, usually carbohydrates, to alleviate their crack cocaine craving.

These are behaviors that stimulate the brain's reward area, similar to the action mechanism of cocaine. In a moment of despair, when users are desperately trying to alleviate their craving, these strategies can be as obsessive as crack craving itself. But this compulsive behavior is not perpetuated and can help alleviate drug craving. Once craving is alleviated, the compulsive strategy loses its function and wanes.

Sleeping is also an effective strategy and generally induced by drug use (mainly benzodiazepines, used as a bargaining chip in *cracolândia*, a major drug selling area) and/or other psychoactive agents that cause drowsiness such as alcohol and marijuana. Respondents took depressant agents with antagonistic effects of crack cocaine. Labigalini Jr. et al¹⁰ (1999) suggested that marijuana is effective in reducing crack craving. They found that 68% of crack cocaine users were able to remain abstinent with the use of marijuana. Ribeiro et al¹⁶ (2010) showed that coping strategies of crack cocaine users are focused on trying to alleviate unpleasant symptoms caused by the drug (craving and transient paranoid symptoms), especially with the use of alcohol and marijuana.

Respondents used strategies to prevent crack craving before the onset of the first signs. When they felt a need

to discontinue crack use, they used strategies focused on behavior change that they usually learned at treatment and/or support centers to drug users such as the 12 steps of Narcotics Anonymous and harm reduction measures. Avoiding the social context of crack cocaine use, that is, keeping away from friends and the place where they use crack, is a strategy to prevent craving. In some cases, the users themselves sought care at a rehabilitation center because restricting their own freedom prevents contact with the context of use, and thus prevent the craving.

Variable self-control strategies

Self-control strategies to manage cravings are quite specific to each user and context. The same strategy may work for one user and fail for another. These are individual situations that are associated to one's values and moment in life.

The variable nature of self-control strategies means that they may help managing craving in some situations but not in others. If a user is able to control his/her craving at a given time it does not mean he/she will be always able to control it. The more they are satisfied with their own life, the less likely they will be to submit to the drug craving. A 28-year-old user who was pregnant at the time of the interview and living in a shelter for pregnant women in São Paulo said she had to "have a hold over her craving" (L28FU8m) in order to stay in the shelter because there she had food, shower and toilet.

FINAL CONSIDERATIONS

A major limitation of the current study lies in the fact that a convenience sample was used, which is often required for studying hidden populations such as crack cocaine users. However, the study results cannot be generalized and are not representative of the entire population of current and former crack users.

The current study showed that crack cocaine craving triggers binge episodes resulting from drug-induced compulsive use. Obsessive drug quest brings on risk behaviors that compromise users' health and their social relations. Understanding craving from users' perspective, knowing how it develops, what it can cause and the associated behaviors and coping strategies of users can provide significant input to professionals who provide care to this population group. The fact that some crack cocaine users are able to manage their cravings with individual harm reduction measures opens up an opportunity of identifying them and working with these self-control strategies. This approach may increase users' involvement in their care and treatment, making it more effective.

The control of crack cocaine craving suggests that crack use is not only related to its pharmacological effects but it is also affected by social, environmental and emotional factors. These issues need to be further

explored by those who work with drug users and require the formulation of public policies.

Strategies focused on the prevention of sexual transmission of HIV and hepatitis among crack cocaine

users are needed. Tuberculosis, HIV and hepatitis programs should be available at drug dependence centers providing a holistic approach so that drug users could have improved access to care and improved treatment compliance.

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