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ORIGINAL ARTICLE

Crack Cocaine Users Seeking Treatment in Brasília

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ABSTRACT - Aiming to identify the profile of outpatients seeking treatment for crack cocaine-related problems in Brasília, 132 clients receiving psychological services completed the Profile of Crack Consumption Questionnaire and the Cocaine Craving Questionnaire-Brief. Most participants were male (83.6%), single (38.8%), and housed (100%). First use was motivated predominantly by curiosity (65.9%), peer influence (58.3%), and easy access (50.8%). Most (65.2%) reported polysubstance use. The longest period of abstinence attained was four years (1.5%), and most (46.2%) reported less than 30 days of abstinence. The stereotypes of extreme social vulnerability of crack users and high lethal and addiction potential of the crack were challenged by this study. Efforts are needed to better serve those missed by the treatment system.

Keywords: crack cocaine, substance-related disorders, substance abuse treatment centers

Usuários de Crack que Buscam Tratamento em Brasília

RESUMO - Objetivando identificar o perfil de pacientes ambulatoriais que procuram tratamento para problemas relacionados com crack em Brasília, 132 usuários que recebem serviços psicológicos preencheram o Questionário sobre o Perfil de Consumo de Crack e o *Cocaine Craving Questionnaire-Brief*. Os participantes eram homens (83,6%), solteiros (38,8%) e possuíam residência (100%). O primeiro uso foi motivado pela curiosidade (65,9%), influência dos pares (58,3%) e fácil acesso (50,8%). A maioria (65,2%) relatou poliuso. O mais longo período de abstinência foi de quatro anos (1,5%) e a maioria (46%) relatou menos de 30 dias. O poder letal, dependência e contextos de vulnerabilidade social associados ao crack foram questionados neste estudo. São necessários esforços para melhor atender aos que não acessam o sistema de tratamento.

Palavras-chave: crack, transtornos relacionados ao uso de substâncias, centros de tratamento de abuso de substâncias

Since 1990, the consumption of crack cocaine has grown across the world. Existing few data suggest that crack cocaine consumption is a problem in Brazil (Dunn, Laranjeira, Silveira, Formigoni, & Ferri, 1997; Ferri, Laranjeira, Silveira, Dunn, & Formigoni, 1997; Guimarães, Santos, Freitas, Araujo, 2008; Kessler & Pechansky, 2008). A small number of studies show that there are no regional differences in consumption and that crack users belong to different socio-economic classes (Freire, Santos, Bortolini, Moraes, & Oliveira, 2012; Kessler & Pechansky, 2008).

A small number of studies suggest that crack cocaine is used mostly by men between 18 and 35 years old (Balbinot, Alves, Amaral Junior, & Araujo, 2011; Sleghim & Oliveira, 2013) and by individuals who reported being single, unemployed, with low educational and income attainment, and with origins in dysfunctional families (Borini, Guimarães, & Borini, 2003; Duailibi, Ribeiro, & Laranjeira, 2008; Freire et al., 2012; Kessler & Pechansky, 2008; Nappo, Galduróz, & Noto, 1994; Oliveira & Nappo 2008).

There is also evidence showing crack cocaine consumption by street children in Brazil (Kessler & Pechansky, 2008; Nappo et al., 1994; Oliveira & Nappo 2008). Modes of crack cocaine consumption include smoking and injection (Borini et al., 2003; Duailibi et al., 2008; Kessler & Pechansky, 2008; Nappo et al., 1994; Oliveira & Nappo 2008). Most consume crack for the first time during adolescence (Duailibi et al., 2008; Guimarães et al., 2008).

Evidence from other Brazilian studies suggests that crack users are often polysubstance users (Mombelli, Marcon, & Costa, 2010; Sanchez & Nappo 2002; Sleghim & Oliveira, 2013) and many also report psychiatric comorbidities such as depression and anxiety disorders (Duailibi et al., 2008). Chronic crack cocaine use can also interfere with affective bonds, relationships with family and friends, employment, and motivation to undertake projects (Dalgalarrondo, 2010). Lung problems, edema, pneumonia, bronchospasm, and alveolar hemorrhage are also commonly linked to crack cocaine use (Gazoni et al., 2006; Ramachandaran, Khan, Dadaparvar, & Sherman, 2004; Terra Filho, Yen, Santos, & Muñoz, 2004), as well as central nervous system vasculitis (Volpe, Tavares, Vargas, & Rocha, 1999).

Other health risks arise from route of administration. Those who smoke crack using beverage cans, often obtained from the garbage, can be exposed to toxic substances that are released when cans are heated (Oliveira & Nappo 2008). Crack smoking using improvised and/or damaged pipes can

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lead to cuts and burns around the mouth and hands. These skins lesions are suspected to increase the risk of acquiring and/or transmitting infectious diseases (Oliveira & Nappo 2008). Chronic use can also lead to social isolation, stigma, violent victimization and perpetration of crime (Guimarães et al., 2008).

Evidence from a few studies suggests that Brazilian crack users suffer prejudice and are stigmatized as individuals who do not conform to the society's norms and values (Bard, Antunes, Roos, Olschowsky, & Pinho, 2016; Rodrigues, Conceição, & Iunes, 2015). Crack users are commonly believed to be involved in criminal activity, be unemployed, and without family ties. This stigmatized image generates exclusion and neglect of crack users by society and encourages violent approaches (Bard et al., 2016). Furthermore, crack users are portrayed in the Brazilian media as criminal or damaged individuals that deserve to be excluded and marginalized. Media reinforces prejudice and stigma that contribute to justify the use of repressive approaches (Rodrigues et al., 2015).

Little is known about crack users seeking treatment in Brazil's health system. Some evidence shows that many who start drug treatment do not complete it and there have been calls to develop policies and practices to improve retention in treatment (Duailibi et al., 2008). One study suggests that crack users seek inpatient treatment during critical moments, but there is little adherence to outpatient treatment (Cunha, Araújo, & Bizarro, 2015). Failure to complete treatment is linked to craving, treatment dropout, and relapse. Crack craving is accompanied by changes in mood, behavior, and thought. Craving for crack has been reported among current users and those who have stopped using for long periods of time (Araujo, Oliveira, Nunes, Piccoloto, & Melo, 2004; Araujo, Oliveira, Pedroso, Miguel, & Castro, 2008). Craving is linked to irritable and violent behavior and compulsive use (Dalgalarrondo, 2010; Kessler & Pechansky, 2008). Management of craving during treatment is important to prevent dropout and relapse (Zeni & Araujo, 2009).

Problems associated with crack use can lead to treatment seeking. However, little is known about crack users seeking treatment in Brasilia's public health system and if those who present for treatment reflect the heterogeneity of this group. To develop a better understanding of this issue, the aim of this study is to describe the sociodemographic profile, motivation for use, and pattern of use of the population of crack users seeking public treatment in Brasília. Characterization of the treatment seeking population is crucial for the development of effective prevention and treatment policies. We hypothesized that most crack users seeking public outpatient mental health services are male, belong to very low economic status, experience disruption in their social support systems, have their health impaired by problematic crack use, and report psychiatric cormobidities.

Method

The study was part of a multicentric research called "Assessment, case management, and follow up study of crack users under public mental health treatment in six Brazilian states" coordinated by the *Hospital das Clínicas de Porto Alegre* – HCPA of the *Universidade Federal do Rio Grande do Sul* – UFRS. A sample of 150 crack cocaine users who presented for outpatient treatment at a Drug and Alcohol Psychosocial Care Center (CAPS-ad) in a suburban area of Brasília were recruited sequentially upon arrival. The inclusion criteria for the study were age 18 years and older, use crack cocaine as the preferred drug, a diagnosis of abuse or dependence to crack in the past year, and entered treatment within that past seven days.

All patients considered for the study were evaluated and screened by a licensed clinical psychologist from the CAPS-ad. Of the 150 outpatients who met the criteria and were approached to participate, 18 refused and 132 consented to participate. Data were collected between May of 2011 and October of 2012. When this study was conducted, there were only two Drug and Alcohol Psychosocial Care Centers in the Brasilia metropolitan region.

Each participant was asked to complete a brief questionnaire with questions about personal and treatment characteristics (i.e., gender, age, marital status, ethnicity, education, and type of service sought at CAPS-ad), the Profile Questionnaire Crack Consumption (with 27 items to identify characteristics of the user's profile; Duailibi et al., 2008; Sussner et al., 2006), and the Cocaine Craving Questionnaire-Brief - CCQ--B (i.e., Likert type scale with 10 items to assess craving; Araujo, Pedroso, & Castro, 2010). Instruments were completed before or after a scheduled therapy session at CAPS-ad and took an average of 180 minutes to complete. Data were processed and analyzed using SPSS (Statistical Package for the Social Sciences) version 17.0.

This study followed ethical principles in the conduct of research with human subjects, in agreement with Resolution 196/96 of the National Health Council (BRA). All the protocols were approved by the *Hospital das Clínicas de Porto Alegre* (HCPA-CEP) Research Ethics Committee, process no. 100176.

Results

Characteristics of participants

The sample of this study comprised 132 participants (N=132). Age of patients seeking treatment for crack cocaine ranged from 18 to 54 years (M=33.6) and 83.6% were male. Most (38.8%) were never married, 30.2% were married or living common-law, another 30.2% were divorced or separated, and 0.8% were widowed. None reported being homeless at the time of admission to treatment. Just under half of those who entered treatment reported a background of Mestizo (46.2% i.e., European, African, and Indigenous ancestors), African descendant (21.5%), Caucasian (20%), Asian (3.8%), Indigenous (3.1%), and other (2.3%). A few (3.1%) opted to not disclose their background. Just over one-third (38.6%) had attended elementary school, 47.0% had attended high school, and 7.6% had attended post-secondary education. Only 6.8% reported never attending school. When asked about the treatment referral source, 81.4% identified themselves /

a family member, followed by the criminal justice system (10.1%), another drug treatment center (3.9%), a health care institution (3.1%), employer (0.8%), and a community service center (0.8%).

Onset, reasons, and frequency of crack consumption

Among those entering treatment, 51.6% (CI95% = 43.07% to 60.13%) reported age of first crack cocaine use was between 18 and 30 years, followed by 26.5% (CI95% = 18.97% to 34.03%) reporting between ages 30 and 40 years, for 12.1% (CI95% = 6.54% to 17.66%) occurred before the age of 18, and for 9,8% (CI95% = 4.73% to 14.87%) after age 40 (see Figure 1).

Curiosity (65.9%; CI95% = 57.81% to 73.99%), the influence of friends (58.3%; CI95% = 49.89% to 66.71%), and ease of access (50.8%; CI95% = 42.27% to 59.33%) were identified as the main reasons for initial consumption. The desire of immediate feeling of pleasure (42.4%; CI95% = 33.97% to 50.83%), the perception that the drugs could solve problems (44.7%; CI95% = 36.22% to 53.18%), a desire for stimulation (34.8%; CI95% = 26.67% to 42.93%), to relax (37.1%; CI95% = 28.86% to 45.34%), and to relieve negative feelings (46.2%; CI95% = 37.7% to 54.7%) were also considered reasons for the first use (see Figure 2). It is important to note that participants provided one or more reasons for first use.

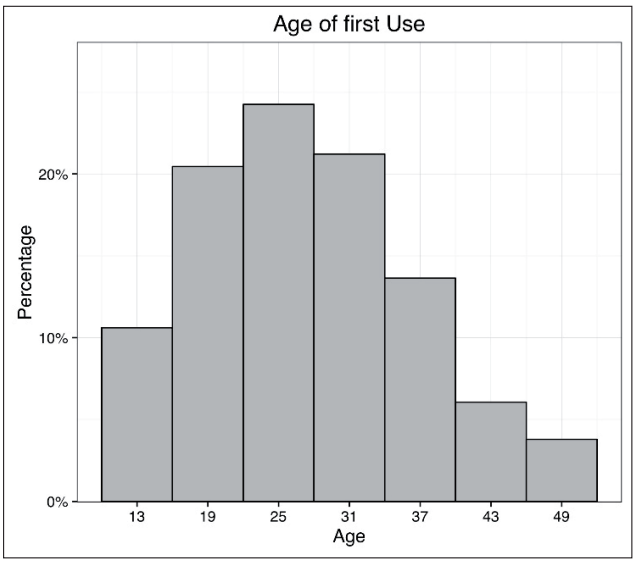

Figure 1. Age of crack use initiation

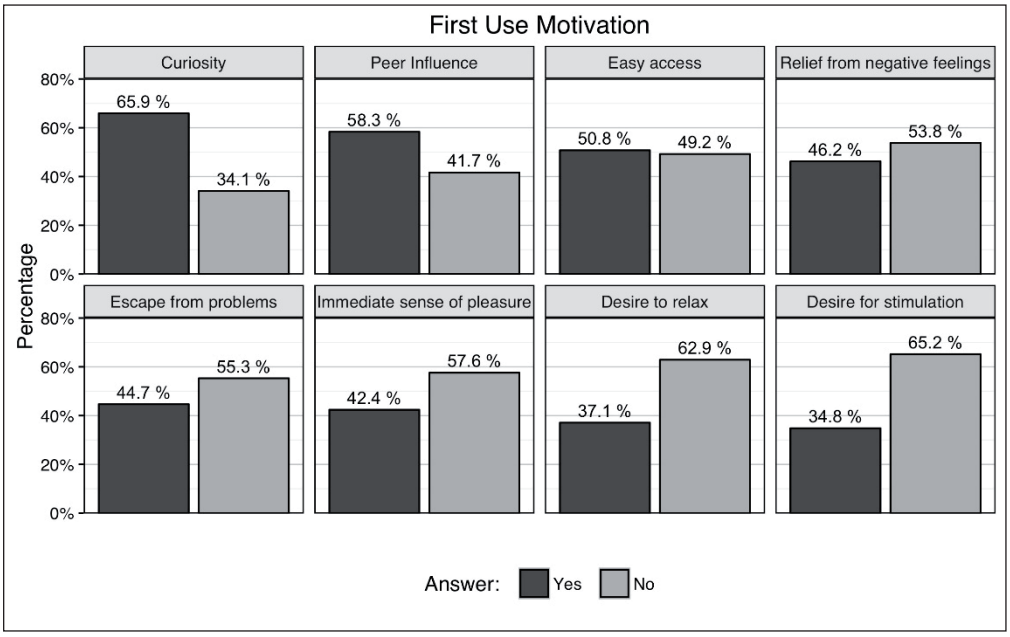

Figure 2. Reasons for crack use initiation

At entry to treatment, 59.6% (CI95% = 51.23% to 67.97%) of participants reported that they had been using crack for less than five years. Another 25.9% (CI95% = 18.43% to 33.37%) had been using crack for 5 to 10 years and 14.5% (CI95% = 8.49% to 20.51%) for 10 years or more. When asked about the frequency of use, the majority (90.9%; CI95% = 85.99% to 95.81%) indicated that this had increased since the first time they smoked and 53.8% (CI95% = 45.3% to 62.3%) reported an increase within the first month of use. Most reported that the intensity of use had increased over time (88.6%; CI95% = 83.18% to 94.02%) and 49.2% (CI95% = 40.67% to 57.73%) noted that the intensity of use increased within the first month of use.

When asked about the longest period of abstinence from crack, most clients (46.2%; CI95% = 40.67% to 57.73%) reported 30 days or less, 22.3% (CI95%= 15.2% to 29.4%)

reported 120 days to one year, another 10.8% (CI95% = 5.51% to 16.09%) reported 90 days, 7.6% (CI95% = 3.08% to 12.12%) reported 30 to 60 days, 7% (CI95% = 2.65% to 11.35%) reported one to three years, 4.6% (CI95% = 1.03% to 8.17%) reported 90 to 120 days, and only 1.5% reported four years. When asked about last time they had used crack, reports varied: 31.8% (CI95% = 23.86% to 39.74%) had not used in the past month, 16.7% (CI95% = 10.34% to 23.06%) had used within the past month, 12.9% (CI95% = 7.18% to 18.62%) within the past week, 23.4% (CI95% = 16.18% to 30.62%) in the last 2-4 days, and 15.2 % (CI95% = 9.08% to 21.32%) the day before the interview.

Reported monthly volumes consumed varied: 57.4% (CI95% = 48.96% to 65.84%) reported consuming between 30 rocks or less, 14.9% (CI95% = 8.83% to 20.97%) between 30 and 50 rocks, and 27.7% (CI95% = 20.07% to 35.33%) over 50 rocks. Most (43.4%; CI95% = 34.95% to 51.85%) reported buying crack each day. Under half (43%, CI95% = 34.95% to 51.85%) reported spending up to R$100.00 per week on crack cocaine (i.e., approximately $30 USD), 21.1% (CI95% = 14.14% to 28.06%) between R$100.00 and R$200.00 weekly, 8,6% (CI95% = 3.82% to 13.38%) between R$200.00 and R$300.00 per week, and 27.3% (CI95% = 19.7% to 34.9%) more than R$300.00 weekly. Interestingly, though 59.1% (CI95% = 50.71% to 67.49%) believed they could control their own consumption, most (75.0%; CI95% = 67.61% to 82.39%) claimed to consume more crack than what they planned.

Just under half of the participants (45.7%; CI95% = 37.2% to 54.2%) smoked crack every day. The majority (72.7%; CI95% = 65.1% to 80.3%) reported binge use (i.e., smoking crack repeatedly for many hours and/or consecutive days) and 35.1 % (CI95% = 26.96% to 43.24%) reported a binge lasting more than 48 hours. Maximum amount consumed per session reported were: more than 10 rocks per session (58.8%; CI95% = 50.4% to 67.2%), up to five rocks (26.5%; CI95% = 18.97% to 34.03%), and between five and 10 rocks per session (14.7%; CI95% = 8.66% to 20.74%). Some reported binge use to avoid sleeping (15.2%; CI95% = 13.61% to 27.39%).

For most participants, crack use occurred outside of the home (61.4%; CI95% = 53.1% to 69.7%) and 90.9% (CI95% = 85.99% to 95.81%) denied using crack when they are at work. Interestingly, most (84.8%; CI95% = 78.68% to 90.92%) reported that they did not use crack at parties, used it in "dark" locations (47.7%; CI95% = 39.18% to 56.22%), and often used it alone (72.1%; CI95% = 64.45% to 79.75%). Nevertheless, more than half (56.1%; CI95% = 47.63% to 64.57%) used with friends / acquaintances and not with their spouse / sexual partner (88.5%; CI95% = 83.06% to 93.94%). Fully 72% (CI95% = 64.34% to 79.66%) denied using in front of their sexual partner. For 80.9% (CI95% = 74.19% to 87.61%), early evening was the preferred time to use crack, followed by 64.9% (CI95% = 56.76% to 73.04%) who consumed at dawn, 34.8% (CI95% = 26.67% to 42.93%) in the afternoon, 26% (CI95% = 26.67% to 42.93%) in the morning, and 24.2% (CI95% =16.89% to 31.51%) in the early afternoon. Participants provided one or more preferred time to use crack. Figure 3 shows the different settings in which crack was used by participants.

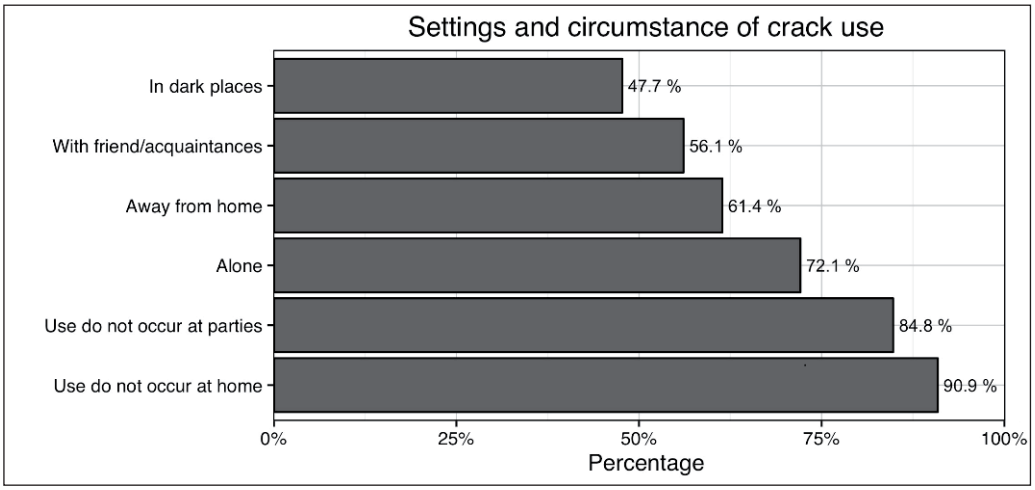

Figure 3. Settings and circumstances of crack use

The equipment or method used to smoke crack cocaine varied from beverage cans (59.5%; CI95% = 51.13% to 67.87%) to adding crack to tobacco cigarettes (54.6%; CI95% = 46.11% to 63.09%) or marijuana joints (46.9%; CI95% = 38.39% to 55.41%), foil pipes (46.1%; CI95% = 37.6% to 54.6%), and PVC pipe (27.7%; CI95% = 20.07% to 35.33%). Participants provided one or more methods of use. Most participants (65.2%; CI95% = 57.07% to 73.33%) reported frequently using crack in combination with other drugs. Marijuana and alcohol were the most common drugs used simultaneously followed by the combination of cocaine, marijuana and alcohol.

Cocaine craving

Responses to the Cocaine Craving Questionnaire-Brief - CCQ-B (Araujo et al., 2010) revealed that at the time of the interview 45.5% (CI95% = 37% to 54%) agreed with the statement "I want cocaine so bad I can almost taste it" and 54.5% (CI95% = 46% to 63%) agreed that "I have no desire for cocaine right now" at the time of the interview.

For 53% (CI95% = 44.49% to 61.51%) there is a strong desire to use crack while 47% (CI95% = 38.49% to 55.51%) reported not having a strong desire, totally disagreeing with the statement. Of the respondents, 11.4% (CI95% = 5.98% to 16.82%) would smoke crack as soon as they could and 59.1% (CI95% = 50.71% to 67.49%) disagreed with this possibility. For 72.7% (CI95% = 65.1% to 80.3%) the belief that they can resist to crack is possible (59.1% - CI95% = 50.71% to 67.49% - claim to completely agree with this possibility and 17.4% - CI95% = 10.93% to 23.87% - do not believe they can resist).

Almost all of them (83.3%; CI95% = 76.94% to 89.66%) did not want to smoke at the time of the interview and only 9.1% (CI95% = 4.19% to 14.01%) wanted to. At that time, 56.8% (CI95% = 48.35% to 65.25%) reported not feeling desire for the crack, while 25% (CI95% = 17.61% to 32.39%) said they felt this desire. Most (78%; CI95% = 70.93% to 85.07%) totally disagreed that smoking at the moment would make things seem perfect while 6.8% (CI95% = 2.51% to 11.09%) considered that the drug would make things perfect. Most, 68.8% (CI95% = 60.9% to 76.7%), reported that they would not smoke if they had a chance while 12.1% (CI95% = 6.54% to 17.66%) said they would consume it as soon as they could. Almost all of them (91.7%; CI95% = 86.99% to 96.41%) believed that there are better things than smoking crack and 81.1% (CI95% = 74.42% to 87.78%) totally agree with this statement.

Negative consequences of crack use

When asked about negative physical health problems experienced as a result of using crack, over half reported the following: decreased energy (77.3%; CI95% = 70.15% to 84.45%), weight loss (90.2%; CI95% = 85.13% to 95.27%), insomnia (83.3%; CI95% = 37.2% to 54.2%), burning in the hands and lips (62.9%; CI95% = 54.66% to 71.14%), cough (82.6%; CI95% = 76.13% to 89.07%), tremor (64.4%; CI95% = 56.23% to 72.57%), palpitations (62.9%; CI95% = 54.66% to 71.14%), and vomiting (58.3%; CI95% = 49.89% to 66.71%). Due to crack consumption, 71.2% (CI95% = 63.48% to 78.92%) reported that they had lost over 3kg of weight (see Figure 4). Participants also linked the following directly or indirectly to their use of crack cocaine: seizures (N=21), pneumonia (N=7), HCV hepatitis (N=5), and tuberculosis (n=2).

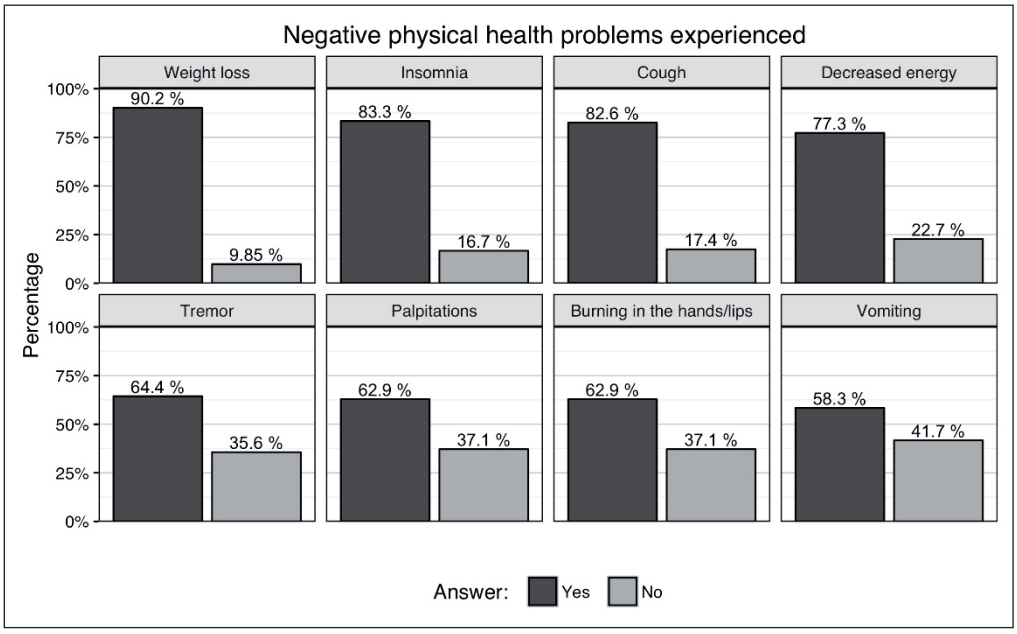

Figure 4. Physical health problems associated with crack use

Many also reported the following mental health problems experienced as a result of crack use: anxiety (85.6%; CI95% = 79.61% to 91.59%), paranoia (78%; CI95% = 70.93% to 85.07%), forgetfulness (72.7%; CI95% = 65.1% to 80.3%), feeling depressed (71.2%; CI95% = 63.48% to 78.92%), irritability (63.6%; CI95% = 55.39% to 71.81%), outburst of anger (55.3%; CI95% = 46.82% to 63.78%), decreased sexual interest (58.3%; CI95% = 49.89% to 66.71%), and panic attack (50%; CI95% = 41.47% to 58.53%). Another 41.7% (CI95% = 33.29% to 50.11%) reported feeling more impulses towards violence as a result of their crack use. Many (78.8%; CI95% = 71.83% to 85.77%) felt guilt, sadness or shame because their crack use. In fact, 31.7% (CI95% = 23.76% to 39.64%) admitted attempting suicide.

Negative social impact of crack use was frequently observed. Over half (59.1%; CI95% = 50.71% to 67.49%) reported that their use caused them to become aggressive. Most (84.8%; CI95% = 78.68% to 90.92%) reported that the use had resulted in isolation from family and/or friends and 44.7% (CI95% = 36.22% to 53.18%) were involved in fights with other people. Arguments with spouses/partners and/or family members related to crack use were reported by most who entered treatment (83.3%; CI95% = 76.94% to 89.66%). Furthermore, 69.7% (CI95% = 61.86% to 77.54%) were threatened with expulsion from home and 42.4% (CI95% = 61.86% to 77.54%) had separated from the partner as a result of crack use. The majority (80.7%; CI95% = 73.97% to 87.43%) responded that they isolated themselves from contact with other people and became more suspicious because of crack use. Many (68.9%; CI95% =60.9% to 76.9%) said they had lost interest in other people.

Adverse effects of crack use on occupation and education were commonly reported. Over two-thirds (68.9%; CI95% = 61% to 76.8%) linked crack use to absences from school and/or work, decreased school performance (28.8%; CI95% = 21.08% to 36.52%), and reduced productivity at work (64.4%; CI95% = 56.23% to 72.57%). Of these, 31.8% (CI95% = 56.23% to 72.57%) had received a warning from the school and/or work, 22.7% (CI95% =15.55% to 29.85%) were expelled and/or fired, and 21.2% (CI95% = 14.23% to 28.17%) changed schools and/or work. Fights with peers at school and/or work were reported by 24.2% (CI95% = 16.89% to 31.51%).

Many also described financial and legal costs. The vast majority (81.1%; CI95% = 74.42% to 87.78%) reported spending all the money they had to buy crack. Many (72.7%; CI95% = 65.1% to 80.3%) said that they had sold/exchanged their personal belongings and 44.7% (CI95% = 36.22% to 53.18%) became involved in illegal activities to pay for crack. Over half (64.4%; CI95% = 56.23% to 72.57%) were unable to pay their bills and 72.7% (CI95% = 65.1% to 80.3%) indebted themselves because of crack use. Some reported involvement with the criminal justice system. Arrests were related to possession of drugs (22%; CI95% = 14.93% to 29.07%), other illegal activities related to consumption (17.4%; CI95% = 10.93% to 23.87%), involvement in fights (12.9%; CI95% = 7.18% to 18.62%), and drug trafficking (9.1%, CI95% = 4.19% to 14.01%). Under half (44.2%; CI95% = 35.73% to 52.67%) reported involvement with drug trafficking (see Figure 5).

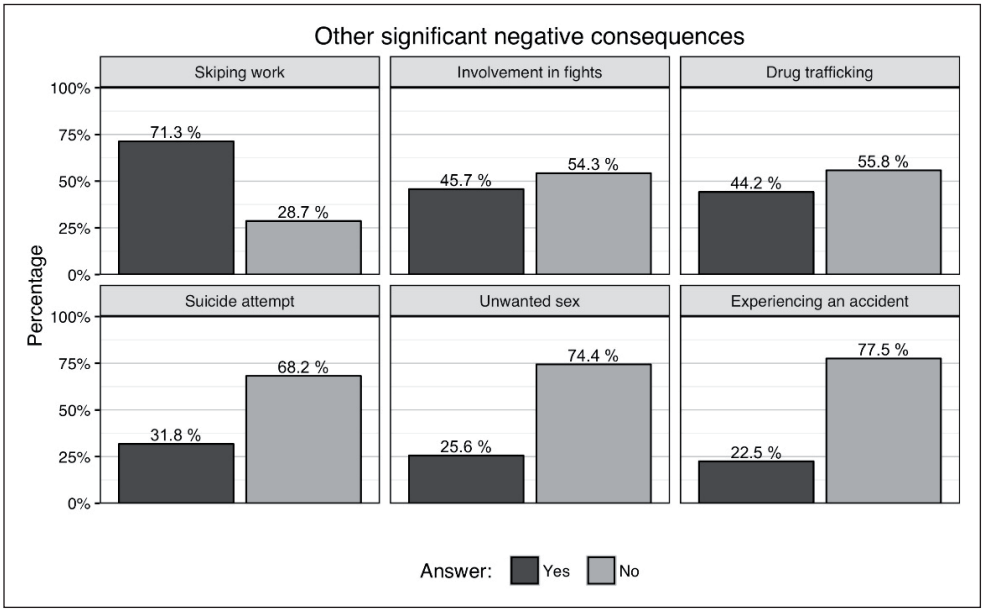

Figure 5. Other significant negative consequences associated with crack use

Other significant negative consequences linked to crack use reported were: experiencing an accident (22.5%; CI95% = 15.38% to 29.62%%), having unwanted sex (25.6%; CI95% = 18.15% to 33.05%), engaging in dangerous situations that put their life at risk (65.2%; CI95% = 57.07% to 73.33%), failing to meet responsibilities (68.9%; CI95% = 61% to 76.8%60.9% to 76.9%), and no longer valuing things that had been important to them (59.8%; CI95% = 51.4% to 68.2%). Over half (56.1%; CI95% = 47.63% to 64.57%) reported continuing to use despite problems linked to crack use.

Discussion

This profile of crack users seeking treatment in Brasília has similarities with other findings from Brazil in relation to age of crack use onset (Guimarães et al., 2008; Horta, Horta, Rosset, & Horta, 2011; Sleghim & Oliveira, 2013) and frequency of use that is described in the literature matching patterns of consumption and increased drug quantity (Costa, Soibelman, Zanchet, Costa, & Salgado, 2012; Dias, Araújo, & Laranjeira, 2011; Guimarães et al., 2008; Horta et al., 2011; Oliveira & Nappo, 2008). However, more people in

this study reported being married/common-law than in other studies (Guimarães et al., 2008; Horta, et al., 2011; Oliveira & Nappo 2008).

Our results align with other findings showing that many who present for drug treatment report many prior years of use but over half present during a period of abstinence. When presenting for treatment, many do so after experiencing a wide range and high prevalence of negative health, psychosocial, interpersonal, and criminal justice consequences of use amongst this group. Other studies in Brazil and South/Central America report a similar range of problems among treatment seekers (Cruz et al., 2013; Paim Kessler et al., 2012).

In comparison with studies describing the characteristics of those who use crack, our sample experienced few social disadvantages – most were housed, in a marital relationship and going to school or employed. We did not use a random sampling approach and this may account for this discrepancy. Likewise, crack users in Brasília may differ from others in Brazil. However, it could also be that barriers to drug treatment – access and discrimination – may reduce opportunities for the most disadvantaged and homeless to receive treatment. If this is the case, there is a need to more fully identify and eliminate barriers to drug treatment for this sub-population.

Some participants of this study sought treatment after years of crack use. Results obtained by cocaine craving also suggest that some participants were not experiencing craving symptoms. The extreme lethality and addiction potential of crack were challenged by the results obtained by this study. Among the participants of this study, feelings of guilt, shame, and sadness were frequently reported. Aligned with other findings (Duailibi et al., 2008), symptoms of anxiety and depression were also commonly observed.

Understanding common affective reactions experienced by crack users is an important aspect to be considered in treatment. Crack users should be allowed to express their feelings and learn skills to effectively manage them. Psychiatric comorbidities, such as depression and anxiety disorders, confound treatment outcomes. Effective therapeutic interventions should address the complex mental health needs of crack users with comorbid disorders. Crack users belong to different social economic classes and are not always experiencing extreme social disadvantages. Knowledge of the factual characteristics of the population as well as attention to the impact of discrimination and stigmatization are recommended for better treatment outcomes.

Our data support the call for comprehensive drug treatment strategies that address the neurobiological, social, and medical aspects of the patient's drug abuse (Penberthy, Ait-Daoud, Vaughan, & Fanning, 2010). Motivational interviewing and cognitive behavior therapy (CBT) have been shown to be effective to treat cocaine abuse (Carroll & Onken, 2014; McKee et al., 2007; Moyers & Houck, 2011). While our data are specific to the context of Brasília, similarities with other studies suggest a need for a coordinated approach to the treatment of this growing problem. Even though pharmacological, CBT, motivational interviewing, and relapse prevention are currently considered ideal drug treatment approaches in Brazil (Ribeiro & Laranjeira, 2012), there is a pronounced need of intervention research to measure effectiveness of cultural adaptation of treatments that have been empirically supported in other countries.

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