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O IMPACTO DO CONSUMO DE *ECSTASY* EM USUÁRIOS NA CIDADE DE PORTO ALEGRE

Porto Alegre, 2013.

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**O IMPACTO DO CONSUMO DE *ECSTASY* EM USUÁRIOS
DE PORTO ALEGRE**

> Tese apresentada como requisito parcial, para obtenção do título de Doutor em Psiquiatria, à Universidade Federal do Rio Grande do Sul, Programa de Pós-Graduação em Ciências Médicas: Psiquiatria.
>
> Orientador: Prof. Dr. Flavio Pechansky
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> Coorientador: Prof. Dra. Maria Lucia Tiellet Nunes

Porto Alegre, 2013

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LYSA SILVEIRA REMY

O IMPACTO DO CONSUMO DE *ECSTASY*
EM USUÁRIOS NA CIDADE DE PORTO ALEGRE

Tese de doutorado, apresentada à Universidade Federal do Rio Grande do Sul, Faculdade de Medicina, Programa de Pós-Graduação em Ciências Médicas: Psiquiatria.

Porto Alegre, 01 de Novembro de 2013.

A Comissão Examinadora, abaixo assinada, aprova a Tese **O impacto do consumo de *ecstasy* em usuários na cidade de Porto Alegre** elaborada por Lysa Silveira Remy como requisito parcial para a obtenção do Grau de Doutor em Psiquiatria.

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"Aos meus pais, Roger Allan Remy e Nina Rosa Silveira Remy, que, por uma vida de dedicação, amor e trabalho sempre me possibilitaram crescer e realizar sonhos e conquistas. À minha avó Cecy, exemplo de vida".

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Diálogo entre Aldous Huxley e Timothy Leary, em 1960:

- "[...] Todas as drogas cerebrais produzidas em massa nos laboratórios provocarão mudanças enormes na sociedade. Isso vai acontecer independente de mim ou de você. Tudo o que podemos fazer é 'espalhar a notícia'. O maior obstáculo para a evolução, Timothy, é a Bíblia.

- Não me recordo de nenhuma discussão sobre drogas cerebrais na Bíblia.

- Você esqueceu os primeiros capítulos de Genesis? Jeová disse para Adão e Eva: 'Eu construí este refúgio maravilhoso a leste do Éden. Vocês podem fazer o que quiserem, exceto comer do fruto da árvore da sabedoria'.

- Foi a primeira substância controlada.

- Exatamente. A Bíblia começa com uma lei antidrogas."

In Flashbacks (Leary, 1983)

RESUMO

Introdução: As *club drugs* são substâncias geralmente utilizadas em contextos de música eletrônica. Seu uso tem sido associado a consequências físicas e mentais, bem como à exposição a comportamentos de risco. Estudos apontam para ligação entre características demográficas, manifestações psiquiátricas e exposição a riscos; entretanto, pouco se sabe sobre este tema no que se refere à população brasileira. Embora os prejuízos com o uso das *club drugs* estejam bem-estabelecidos na literatura internacional, estudos anteriores não relatam detalhes sobre os desafios encontrados na implementação de técnicas de amostragem para contextos culturais diferenciados, como é o caso do Brasil. Elementos do processo de recrutamento – como a cooperação e o engajamento dos participantes – nem sempre compõem as descrições dos métodos. **Objetivos:** Descrever as dificuldades e as soluções encontradas no decorrer da utilização das técnicas de amostragem *respondent-driven sampling* (RDS), *targeted canvassing* (TARC) e *ethnographic fieldwork* (EFW) para recrutar usuários de *ecstasy* e/ou de *lysergic acid diethylamide* (LSD) e avaliar as características demográficas, os sintomas psiquiátricos, os padrões de uso de substâncias e os comportamentos sexuais de risco, além de identificar os fatores associados à prática de sexo desprotegido durante os 12 meses anteriores à entrevista. **Método**: O Artigo 1 descreve a adaptação de três técnicas de recrutamento – RDS, TARC e EFW – usadas em sequência, em resposta aos desafios metodológicos encontrados, a fim de se obter número suficiente de participantes elegíveis. As estratégias utilizadas foram implementadas durante quatro meses em cada método. O Artigo 2 utiliza um desenho transversal com amostra de conveniência recrutada mediante entrevistas face a face, realizadas em bares e festivais de música eletrônica. A amostra foi composta por 240 homens e mulheres jovens que usaram *ecstasy* e/ou LSD nos 90 dias anteriores à entrevista e que não estavam recebendo tratamento para uso de drogas. Após algumas adaptações realizadas na coleta de dados (referenciadas no Artigo 1), anexou-se um pequeno estudo etnográfico (artigo em preparação) com 20 participantes (10 homens e 10 mulheres). Na ausência de dados coletados de forma progressiva, visou-se examinar a história de vida dos pacientes, sobretudo no que tange à progressão de uso de drogas e às consequências associadas à saúde. O foco principal das entrevistas diz respeito a obter informações relativas ao início do uso de *ecstasy* e outras drogas, à progressão do uso ao longo do tempo, ao envolvimento dos participantes com a cena *rave/clubber* de Porto Alegre e aos problemas sociais e de saúde acarretados. Acredita-se que essas entrevistas foram apropriadas às diretrizes do estudo, tendo em vista as peculiaridades que acompanham tal população. **Resultados**: No Artigo 1, a amostra final incluiu 174 participantes (64,36% do sexo masculino), dos quais 8 (4,6%) foram selecionados por meio de RDS, 26 (14,94%) por TARC e 140 (80,45%) por EFW. O método RDS recrutou participantes com nível de escolaridade superior, com vínculo empregatício e com renda mensal maior do que dois salários. Entre os participantes selecionados via EFW, por sua vez, observou-se de forma evidente maior frequência de uso de drogas e maior número de drogas já utilizadas. Análise de dados sociodemográficos revelou que, embora os participantes selecionados por meio de diversas técnicas tenham idade semelhante, foram recrutados perfis diferentes de sujeito. No Artigo 2, dos 240 participantes (média de idade: 22,9 ± 4,5), 57,9% eram homens e, desses, 52,5% referiram prática de sexo desprotegido nos últimos 12 meses. Do total da amostra,

63,33% referiram o mesmo comportamento. Após análise de regressão multivariada, duas variáveis apresentaram correlação com a prática de sexo desprotegido, a saber: prática de sexo anal, 1,26 (IC95%: 1,044-1,543) e uso de álcool ou drogas para prolongar o sexo, 1,430 (IC95%: 1,181-1,732). **Conclusões**: No Artigo 1, o método EFW garantiu acesso a maior número de participantes elegíveis. Conhecer pessoalmente os sujeitos, nos seus ambientes naturais, favoreceu a compreensão dos padrões de consumo e tráfico de drogas e promoveu empatia e credibilidade ao estudo, propiciando o recrutamento dos participantes. No Artigo 2, os indivíduos que relataram prática de sexo anal e uso de álcool ou drogas para prolongar o sexo apresentaram menor prevalência quanto à prática de sexo desprotegido quando comparados com aqueles que não relataram esse comportamento. A compreensão dos fatores associados a comportamentos sexuais de risco tem implicações importantes tanto para a implementação de estratégias de prevenção primárias quanto para intervenções destinadas à redução de tais comportamentos, observando características específicas dos usuários de drogas e incluindo o desenvolvimento de habilidades de negociação de sexo seguro (anal e vaginal).

ABSTRACT

Introduction: Club drugs are substances usually consumed in electronic music contexts. Their use has been associated with physical and mental consequences, as well as with exposure to risk behaviors. Studies report on the association between demographic characteristics, psychiatric symptoms and risk exposure, but little is known about it among the Brazilian population. Although problems associated with the use of these substances have been well established in international literature, previous studies have not reported on details about the challenges in the implementation of sampling techniques in different cultural contexts, such as in Brazil. Elements of the recruiting process, such as participant cooperation and engagement, are frequently not found in method descriptions. **Objective:** To describe difficulties faced and solutions found during the use of respondent-driven sampling (RDS), targeted canvassing (TARC) and ethnographic fieldwork (EFW) in recruiting users of ecstasy and LSD and evaluating demographic characteristics, psychiatric symptoms, pattern of substance use and sexual risk behaviors, and to identify the factors associated with the practice of unprotected sex during the 12 months before the interview. **Method:** Study 1 describes the adaptation of the three recruiting techniques, RDS, TARC and EFW, used sequentially as a response to the methodological challenges faced to obtain a sufficient number of eligible participants. The strategies used were implemented one after the other, in a period of 4 months for each method. Study 2 used a cross-sectional design and a convenience sample recruited by means of face-to-face interviews in and electronic music dance events and festivals. The sample comprised 240 young men and women that had used ecstasy, LSD or both in the 90 days before the interview and who were not under treatment for drug abuse. After some adaptations made in the performance of data collection (referred to in Study 1), the results of a small ethnographic study (complementary results) with 20 participants (10 men) were attached to the study. As there were no data collected longitudinally, our purpose was to examine the life history of participants, particularly in terms of drug use progression and consequences to health. The main focus of these interviews was to gather information about the onset of use for ecstasy and other drugs, use progression along time, involvement of the participants with the rave or club scene in Porto Alegre and social and health problems. The interviews were in agreement with this study guidelines considering the particularities of the study population. **Results:** In Study 1, the final sample comprised 174 participants (64.36% men). Eight (4.6%) were selected using RDS, 26 (14.94%), TARC, and 140 (880.45%), using EFW. RDS recruited participants with a higher level of education, who had a job and a higher monthly income. In contrast, a more frequent use of drugs and a larger number of drugs already used were found in the group of participants selected using EFW. The analysis of socio demographic data revealed that, although participants selected using different techniques were about the same age, each approach recruited individuals with a different profile. In Study 2, of the 240 participants (mean age: 22.9 ± 4.5), 57.9% were men, and 52.5% of them reported having had unprotected sex in the last 12 months. Of the total sample, 63.33% reported this same behavior. After multivariate regression, two variables were correlated with the practice of unprotected sex: anal sex, 1.26 (95% CI: 1.044-1.543) and use of alcohol or drugs to prolong sex, 1.430 (95%CI: 1.181-1.732). **Conclusions:** In Study 1, EFW ensured access to a greater number of eligible participants. Knowing the

subjects personally and being familiar with their natural environment, favored the understanding of the patterns of drug consumption and trafficking, promoted empathy and credibility and favored recruiting. In Study 2, the individuals that reported the practice of anal sex and the use of alcohol or drugs to prolong sex had a lower prevalence of unprotected sex than those that reported those behaviors. The understanding of factors associated with sexual risk behaviors has important implications for the implementation of both primary prevention strategies and interventions to reduce these behaviors, which should take into consideration the specific characteristics of drug users and the development of skills to negotiate safe sex (anal and vaginal).

LISTA DE ABREVIATURAS E SIGLAS

AFSS – Anxiety/Fear Symptom Scale

CDC – Centers for Disease Control and Prevention

CPAD – Centro de Pesquisas em Álcool e Drogas

DJ – disc jockey

DSM IV – Manual Diagnóstico e Estatístico de Transtornos Mentais 4ª Edição

DSS – Depressive Symptom Scale

EFW – ethnographic fieldwork

EMCDDA – European Monitoring Centre for Drugs and Drug Addiction

GAIN – Appraisal of Individual Needs

GBL – ácido gamabutil-lactona

GHB – ácido gama-hidroxibutírico

HCV – vírus da hepatite C

HIV – vírus da imunodeficiência humana adquirida

IDU – intravenous drug injector

LSD – lysergic acid diethylamide

LSD-25 – dietilamida do ácido lisérgico

MDA – 3,4-metilenodioxianfetamina

MDEA – 3,4-metilenodioxietilanfetamina

MDMA – 3,4-metilenodioximetanfetamina

NIH – National Institute of Health

PCP– fenciclidina

PMA – parametoxianfetamina

PMMA – parametoximetilanfetamina

RDS – respondent-driven sampling

TARC – targeted canvassing

TDS – Traumatic Distress Scale

2CB – 4-bromo-2,5-dimetoxifenetilamina

2-CT-7 – 2,5-dimetoxi-4-(n)-propiltiofenetilamina

4-MTA – 4-metilanfetamina

5-HIAA – ácido 5-hidroxindolacético

5-HT – serotonina

SUMÁRIO

PREFÁCIO

Este material compõe a Tese de Doutorado apresentada ao Programa de Pós-Graduação em Ciências Médicas: Psiquiatria, em 2013, como requisito parcial à obtenção do título de Doutor em Psiquiatria.

Essa tese se divide em diferentes seções: introdução, objetivos, artigos, resultados complementares e suas conclusões, além de considerações finais.

A introdução expõe a visão geral acerca do uso de drogas sintéticas, cujos pareceres são apresentados desde os primeiros achados na Antiguidade até a disseminação do seu consumo e a popularização desse grupo de substâncias. A seguir, é abordado especificamente o consumo de *ecstasy*, apresentando-se suas particularidades e consequências. Tal seção tem continuidade com as estratégias de intervenção e as considerações sobre os métodos de recrutamento da população consumidora dessa droga, considerada bastante peculiar.

São apresentados os objetivos da tese e dois artigos produzidos a partir desse trabalho. Os artigos são provenientes do projeto de pesquisa realizado pelo Centro de Pesquisas em Álcool e Drogas (CPAD) do Hospital das Clínicas/Universidade Federal do Rio Grande do Sul (HCPA/UFRGS) em parceria com os pesquisadores norte-americanos James Inciardi *(in memoriam)*, à época Diretor do Center for Drug and Alcohol Studies da University of Delaware*,* além de Steven P. Kurtz e de Hilary Surratt, da Nova Southeastern University.

O Artigo 2, aceito, trata de estudo descritivo sobre diferentes métodos de recrutamento de homens e mulheres usuários de *ecstasy* e de *lysergic acid diethylamide* (LSD). O objetivo principal desse trabalho é descrever os problemas encontrados e resolvidos no decurso da utilização das técnicas de amostragem *respondent-driven sampling* (RDS), prospecção em alvo (TARC, de *targeted canvassing*) e trabalho de campo etnográfico (EFW, de *ethnographic fieldwork*) para recrutar pessoas que fazem uso de *ecstasy* e/ou de LSD. Esse estudo está incluído em um projeto maior, cujo objetivo é investigar o perfil de usuário de drogas, seus comportamentos sexuais de risco e as comorbidades psiquiátricas que acometem os 240 participantes das entrevistas.

O Artigo 1, submetido, refere-se a um estudo transversal, que utiliza, como técnicas de amostragem, o EFW e a TARC. Seu objetivo é apontar características demográficas, sintomas psiquiátricos, padrões de uso de substâncias e comportamentos sexuais de risco em uma

amostra de usuários de drogas sintéticas para identificar os fatores associados à prática de sexo desprotegido ao longo de 12 meses anteriores à entrevista.

Em continuidade aos artigos, optou-se por inserir uma seção intitulada Processo posterior. Nessa subdivisão, descreve-se um projeto de desenvolvimento e assistência proveniente do estudo de doutorado, com a finalidade de oferecer tratamento para usuários de drogas sintéticas de Porto Alegre. Além disso, nessa seção, também está inserida a descrição de um sub estudo qualitativo, com 20 entrevistas individuais realizadas com usuários de *ecstasy*e LSD, que objetiva aprofundar informações sobre comportamentos sexuais de risco, padrões de uso de drogas e presença de sintomas psiquiátricos.

Por fim, são apresentadas as conclusões e as considerações finais. Os resultados dos artigos e dos estudos complementares são discutidos em conjunto. Além disso, possíveis implicações clínicas são avaliadas, bem como perspectivas e contribuições para estudos futuros.

1 INTRODUÇÃO

1.1 Visão geral do uso de drogas sintéticas

Desde a Antiguidade, o homem conhece inúmeras utilidades para muitas drogas psicoativas naturais (Almeida; Bizeto; Silva, 2007). As primeiras experiências humanas de que se têm notícia com esse grupo de drogas deram-se por meio do consumo de plantas, datam-se em meados de 250 a.C. e estão registradas em livros chineses. A primeira sistematização desse conhecimento ocorreu há, aproximadamente, 5 mil anos, com a experiência do imperador chinês Shen Nung, que experimentou mais de 300 plantas entre ervas medicinais e psicoativas e descreveu suas preparações, seus efeitos e suas aplicações. Alguns o consideram o primeiro farmacologista da história e o fundador da Medicina Herbária Chinesa. No Egito Antigo, também se utilizavam remédios de ervas; houve perto de 2 mil doutores em ervas, praticando sua arte por volta do ano 2.000 a.C. (Saunders, 1996; Akerele,1993)

A partir do desenvolvimento da engenharia química e de outras ciências médicas, nos séculos XVIII e XIX, a medicina das ervas perdeu popularidade nos Estados Unidos e na Europa, cedendo lugar às drogas químicas ativas e à prática da quimioterapia.

Com fins medicinais, espirituais e recreativos, atualmente ainda são utilizadas as mesmas drogas usadas há milênios. Entretanto, há pouco tempo, operam-se avanços determinantes na farmacopeia humana: a produção de drogas em laboratórios e a manipulacão química das moléculas dessas substâncias, que prescindem de princípios ativos naturais.

As chamadas drogas sintéticas são o resultado da busca de substâncias mais eficazes, com menos efeitos adversos e menor toxicidade. Tal desenvolvimento proporcionou benefícios, como antidepressivos mais eficientes e substâncias psicoativas com efeitos mais prolongados e prazerozos, entretanto também causou prejuízos. Dessa forma, as drogas sintéticas incluem um grupo extenso de substâncias legais e ilegais. Assim, por exemplo, o *ecstasy* e outras drogas, como o ácido gama-hidroxibutírico (GHB), a ketamina e as metanfetaminas, constituem um subgrupo das substâncias identificadas como sintéticas, psicoativas, ilegalmente comercializadas e consumidas para fins recreativos.

Ao contrário de muitas outras categorias de substâncias psicoativas, como é o caso dos opiáceos, estabelecidas de acordo com suas propriedades farmacêuticas, as drogas sintéticas constituem-se uma "categoria de conveniência", que incluem medicamentos desde as feniletilaminas, popularmente conhecidas como *ecstasy*, até as menos conhecidas, como o 4-bromo-2,5-dimetoxifenetilamina (2CB), os inalantes (óxido nitroso e nitrito de amila [*poppers*]), os estimulantes (anfetaminas e cocaína) e os alucinógenos, como dietilamida do ácido lisérgico (LSD-25) e os cogumelos (psilocibina). Em função de seu uso em contextos específicos, como clubes noturnos e locais em que há música eletrônica, essas substâncias foram denominadas *club drugs*.

Atualmente, observa-se que a variedade farmacológica de drogas que compõe o grupo das *club drugs* não pressupõe contextos diferentes de uso. Pelo contrário, são substâncias consumidas em ambientes muito semelhantes da cena eletrônica (clubes noturnos, *raves*, festivais de música eletrônica). São exemplos dessa variedade o *ecstasy*, as diversas anfetaminas e outras substâncias, como os depressivos GHB e a dissociativa ketamina (os quais não agem como estimulantes, mas são normalmente referidos como drogas usadas em clubes noturnos). *Poppers* é o nome popular atribuído a um grupo de nitritos de alquilo simples, que são líquidos voláteis, claros, amarelados e inalados em razão de seus efeitos intoxicantes.

As consequências do consumo das drogas sintéticas não dependem exclusivamente do fármaco envolvido na sua composição, mas do contexto de uso, ou seja, da frequência, da quantidade, da circunstância e do objetivo em que são utilizadas. O interesse no uso dessas drogas está relacionado à finalidade de intensificar experiências sociais, tendo em vista suas propriedades estimulantes ou psicodélicas, proporcionando ao público maior tempo de permanência nas festas, que podem durar a noite toda ou até mesmo dias.

O LSD e a fenciclidina ([PCP], popularmente conhecida como pó de anjo) são utilizados desde a década de 1970; entretanto, o LSD foi sintetizado em 1938 (LSD-Assisted, 2011) pelo químico suíço Albert Hofmann. Esse estudioso, além de ter sido a primeira pessoa a sintetizar a droga, também foi o primeiro a ingerir e a descrever seus efeitos psicodélicos (Albert, 2008).

Passados cinco anos da descoberta dos compostos psicodélicos do LSD (1943), Hofmann intencionalmente ingeriu 250 microgramas da droga, proporcionando, nesse dia, a primeira "viagem de ácido" intencional (Feilding, 2013). A descrição de seus efeitos pode ser

encontrada em mais de 100 manuscritos, nos quais o próprio químico suíço os relatou com detalhes. Além do LSD, Hofmann também foi o primeiro a isolar, sintetizar e nomear os principais compostos dos cogumelos psicodélicos, a psilocibina e a psilocina (Hofmann *et al.*, 1959).

Já na década de 1980, o uso recreativo das drogas sintéticas, na cena musical e cultural que se iniciava, passou a caracterizar a chamada geração química. No início do verão de 1987 (apelidado de *love summer*), em Ibiza, na Espanha, o *ecstasy* passou a ser consumido por milhares de pessoas em eventos musicais. Terminada a temporada mais quente do ano, empreendedores ingleses resolveram recriar sua atmosfera, produzindo festas na beira da praia e em armazéns portuários londrinos, onde milhares de pessoas dançavam sem parar ao som ininterrupto de música eletrônica sob efeito de, particularmente, *ecstasy* e LSD. Os ideais de paz, amor e unidade, resgatados do psicodelismo que envolvia do movimento *hippie* dos anos 1960, permeavam o consumo de tais substâncias; pode-se ressaltar que, atualmente, tais ideais ainda estão presentes entre os usuários dessas drogas.

O aumento das festas regadas a ecstasy e LSD e o crescimento de seus frequentadores propiciaram o surgimento das raves, que passaram a ocorrer em locais cada vez maiores e distantes das cidades. Em função do alto consumo de drogas e do aglomerado de milhares de pessoas, em meados de 1990, a fiscalização policial restringiu a organização desses eventos, favorecendo a migração do público frequentador para os clubes noturnos das cidades (Saunders, 1996).

A cena ou cultura eletrônica, até então formada por frequentadores exclusivos de festas *raves*, agora também tinha a participação dos frequentadores de clubes noturnos, restringindo-se aos *ravers* e *clubbers*. Tal cultura reúne elementos da música eletrônica, de moda, do culto ao *disc jockey* (DJ), do uso de tecnologias contemporâneas, da cultura *gay*, da cibercultura e da busca hedonista do prazer coletivo por intermédio da música e do consumo de drogas (Souza, 2002).

Antes, quando permeada pelo conceito *underground*, a cultura eletrônica era divulgada por meios independentes da mídia e considerada "fora dos padrões sociais" conhecidos, mediante de *flyers*, celulares, *sites*, *chats* e listas de discussão na internet. Nos dias atuais, os elementos *raves*, moda e música são produtos de consumo e, por isso, têm espaço em mídias tradicionais. Ao transpor a cena eletrônica para o mercado musical, empresários (*promoters*) transformaram o caráter *underground* dessa cultura em *mainstream* (Souza, 2002).

O *ecstasy* foi, de certa forma, o precursor das drogas sintéticas. Em seguida, sua família foi aumentando, associando antigas substâncias, esquecidas ou em desuso, ao surgimento de novas (LSD, GHB e ácido gamabutil-lactona [GBL], 2CB e 2,5-dimetoxi-4-(n)-propiltiofenetilamina [2-CT-7], 4-metilanfetamina [4-MTA], parametoxianfetamina [PMA] e parametoximetilanfetamina [PMMA], ketamina, nitratos, fentanil, flunitrazepam, anfetaminas e metanfetaminas).

Entre os motivos da popularidade crescente das *club drugs,* estão a facilidade de compra –realizada, frequentemente, via internet – e a distribuição em pequenas pílulas, pós ou líquidos. Essas drogas são, geralmente, ingeridas por via oral, em combinação com álcool ou outros compostos psicoativos utilizados para intensificar seus efeitos. Trata-se de substâncias populares entre jovens instruídos sobre os perigos das drogas injetáveis, os quais acreditam, de forma errônea, que essas drogas são produtos farmacêuticos seguros para o consumo.

1.2 O *ecstasy*

O *ecstasy*, nome popular dado à substância quimicamente identificada como 3,4-metilenodioximetanfetamina (MDMA),foi desenvolvido pelo laboratório Merck, em 1914, como um inibidor de apetite; entretanto, só foi utilizado no final dos anos 1960, quando o professor Alexander Shulgin, da Universidade de Berkeley, passou a usá-lo como auxiliar psicoterápico. Em 1965, a droga começou a ser prescrita como medicamento para romper as defesas psicológicas, um "agente da empatia", método para reduzir a inibição, favorecendo a aproximação entre paciente e terapeuta em pacientes submetidos à psicanálise, proporcionando, assim, elevado estado de ânimo nas psicoterapias (Moro; Ferraz, 2006).

A MDMA tornou-se o estimulante mais comum encontrado em boates nos anos 1970(Johnston; O'Malley; Bachman, 2002). A droga, normalmente, era vendida em pequenos comprimidos de cores variáveis, impressos com ícones populares ou palavras (Almeida; Silva, 2002). A partir de então, o *ecstasy* tornou-se popular em meados dos anos 1980, em ambientes destinados às *raves*, conforme já relatado. Em 1985, laboratórios ilegais estavam produzindo a droga para uso recreativo.

Muitos comprimidos de *ecstasy* contêm enorme variedade de componentes, incluindo 3,4-metilenodioxietilanfetamina (MDEA) e 3,4-metilenodioxianfetamina (MDA); no entanto,

seu principal constituinte é a MDMA (de acordo com o apresentado na Figura 1) (Green *et al.*, 2003).

A MDMA é um composto derivado da metanfetamina, que apresenta propriedades estimulantes e alucinógenas, derivadas da mescalina (Xavier *et al.*, 2008; Gahlinger, 2004); contudo, não é tão estimulante ou dependógena quanto as anfetaminas e é considerada muito menos propensa a causar psicose do que o LSD e outros alucinógenos potentes (Cami *et al.*, 2000).

Figura 1. Estrutura química do MDMA (êxtase), MDEA, MDA e neurotransmissores.
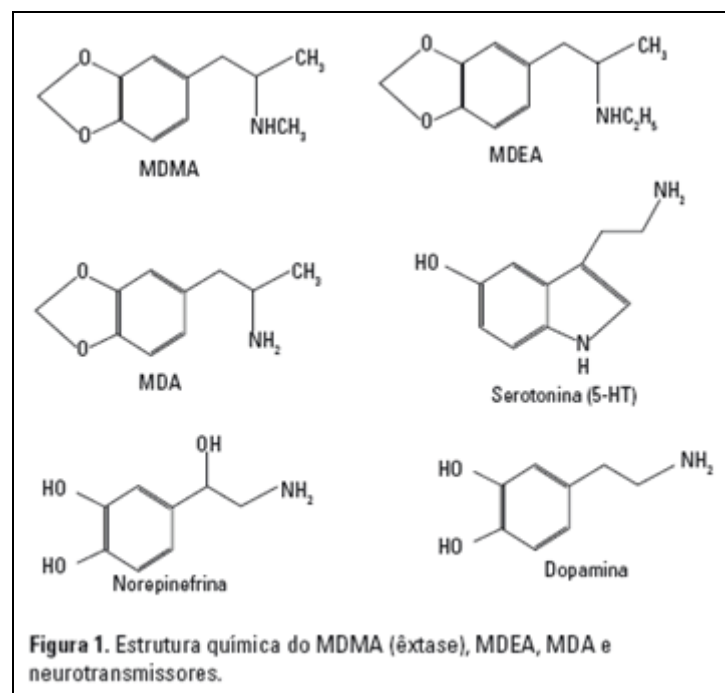
1.3 Uso de *ecstasy* e suas consequências

As *club drugs* – como a maconha, o LSD, a metanfetamina e os opiáceos – são a preferência de muitos usuários, pois a eles são creditadas melhorias na interação social. Essas substâncias são descritas como entactógenas, pois proporcionam sensação de proximidade física, empatia e euforia(Cami *et al.*, 2000).

Para alguns autores, ainda não há provas de que o *ecstasy*cause sequelas severas em seres humanos; a despeito dos relatos de seus efeitos adversos agudos, o número de casos documentado na literatura ainda é surpreendentemente pequeno em relação à quantidade de usuários (Creighton; Black; Hyde, 1991; Grob *et al.*, 1996).

Estima-se que o uso recreacional do *ecstasy* envolva o consumo de apenas 1 comprimido para usuários recentes; nesses casos, seus efeitos aparecem em 30 a 60 minutos após a ingestão e duram algumas horas (Burgess; O'Donohoe; Gil, 2000; Gouzoulis-Mayfrank; Daumann, 2006; Lasmar, 2007); quanto a usuários tipicamente regulares, há administração 2 a 3 comprimidos; já consumidores mais experientes utilizam 10 a 25 comprimidos por noite (Burgess; O'Donohoe; Gil, 2000; Gouzoulis-Mayfrank; Daumann, 2006). É interessante ressaltar que, em razão de sua meia-vida biológica de aproximadamente 8 horas, são necessárias cerca de 40 horas para que 95% da concentração plasmática de *ecstasy* seja eliminada do organismo (Lasmar, 2007).

Estudos de Murphy, Wareing e Fisk (2006) citado por Lasmar (2007) demonstraram que a diferença de gênero exerce influência no número de comprimidos de *ecstasy* consumido. Os autores concluem que os homens geralmente ingerem mais comprimidos (em média, 4) do que as mulheres (em média, 2,9) em uma mesma noite. De maneira geral, os usuários utilizam a droga por um período de aproximadamente 6 anos e, somente depois, há avaliação de eventual risco-benefício.

O perigo e a incerteza em relação ao *ecstasy* estão relacionados tanto à composição de seus comprimidos quanto à mistura que frequentemente seus usuários fazem com outras drogas – estimulantes, canabinoides, opiáceos e álcool – com o intuito de aumentar seus efeitos. Muitas vezes, os comprimidos de *ecstasy* são deturpados, adulterados ou totalmente compostos por outras substâncias sem que os usuários saibam, o que resulta em risco extremamente elevado de efeitos imprevistos e de overdoses(Drug Abuse Warning Network, 2000).

Uma alta proporção de comprimidos de *ecstasy* é adulterada, utilizando-se substâncias como cafeína, dextrometorfano, pseudoefedrina (Graeme, 2000; Baggott *et al.*, 2000), ou potentes alucinogenos, como LSD, PMA, MDA, N-etil-3, MDEA e 4-bromo-2, 2CB(National Institute on Drug Abuse, 2000). Muitas dessas substâncias são *designer drugs*, ilicitamente fabricadas e variantes de produtos farmacêuticos com efeitos esperados pelos usuários e adversos. Por exemplo, MDEA ("Eva"), 2CB e PMA ("morte") são substitutos das anfetaminas com efeitos alucinógenos, acarrentando, muitas vezes, consequências adversas desagráveis. A mistura dessas substâncias, contribui para o aumento do potencial de perigo, de toxidade e do risco de efeitos adversos agudos(Drug Abuse Warning Network, 2000). É importante salientar que a toxicidade de qualquer droga depende da dose consumida, da

frequência de uso, da vulnerabilidade individual e das condições externas ambientais (Huether; Zhou; Ruther, 1997 apud Almeida; Silva, 2000).

Segundo estudos de Gouzoulis-Mayfrank e Daumann (2006), os efeitos relacionados ao consumo de MDMA iniciam-se com o aumento da liberação de serotonina (5-HT), caracterizado por relaxamento, euforia, ansiedade, sentimentos de empatia e aumento de comunicação. Essa droga é capaz de provocar também efeitos estimulantes, como alteração da percepção e, ocasionalmente, pode induzir a efeitos marcadamente alucinógenos, já que possui estrutura semelhante à da mescalina.

Com o consumo de *ecstasy*, ocorre aumento da liberação de 5-HT, dopamina e norepinefrina pelos neurônios pré-sinápticos. Um rápido início de ação pode ocorrer pela aspiração do pó de um comprimido triturado.

Os usuários de *ecstasy* descrevem, como principais efeitos da droga, agitação, senso distorcido de tempo e diminuição da fome e da sede, seguidos de euforia, profunda introspecção, sensação de intimidade e bem-estar(Morland, 2000). Para estimular ainda mais os efeitos sensoriais, os consumidores de MDMA costumam usar colares fluorescentes, pulseiras e outros acessórios, além de aplicar pomada mentolada nos lábios ou *spray* de mentol inalante em uma máscara cirúrgica. Os efeitos adversos do uso de *ecstasy* incluem trismo e bruxismo, que podem ser reduzidos pela ação de chupar pirulitos(Smith; Larive; Romanelli, 2002).

No que se refere aos efeitos no organismo, associam-se ao consumo de *ecstasy* aumento do hormônio antidiurético (Henry *et al*., 1998), relacionado ao calor frente ao esforço de dançar em local com muitas pessoas, além de hipertermia induzida pela droga, que pode levar facilmente à ingestão excessiva de água, e hiponatremia grave. Efeitos neurológicos incluem confusão, delírio, paranoia, dor de cabeça, anorexia, depressão, insônia, irritabilidade e nistagmo, os quais podem perdurar durante várias semanas após o uso.

Os efeitos adversos da ingestão de *ecstasy* são resultados da sobrecarga do sistema simpático do sistema nervoso central. Tais consequências incluem taquicardia, midríase, sudorese, tremor, hipertensão, arritmias(Olson, 2004; Lester *et al*., 2000), parkinsonismo(Mueller; Korey, 1998), esoforias (tendência dos olhos se voltarem para dentro) e retenção urinária(Inman; Greene, 2003).

Salienta-se que a hipertermia associada à síndrome serotoninérgica é considerada o efeito mais problemático relacionado ao uso de *ecstasy* (Teter; Guthrie, 2001). Essa

consequência se manifesta por temperatura do corpo gravemente elevada, rigidez, mioclonia e instabilidade autonômica, resultando em danos aos órgãos vitais(Mason; Morris; Balcezak, 2000). A hipertermia, entre as complicações clínicas, é a ocorrência mais frequentemente associada ao uso de *ecstasy*, quadro em que o usuário pode chegar a temperaturas corporais de 42°C (Almeida; Silva, 2000).

A 5-HT exerce papel fundamental na modulação de diversos processos fisiológicos (vasoconstrição e termorregulação) e funções neuropsicológicas (memória, aprendizado), influenciando ações comportamentais e psicopatológicas, como humor, ansiedade, agressão, comportamento sexual, apetite, necessidades e busca de sensações estimulantes, além de impulsividade (De Win *et al.*, 2006). Saadat (2006) administrou baixas doses de *ecstasy* e outras anfetaminas a camundongos e encontrou alterações comportamentais similares às observadas em doses agudas de diversos antidepressivos e ansiolíticos, decorrentes da liberação de 5-HT e de compostos relacionados.

Vários pesquisadores descreveram que a MDMA é responsável por reduções duradouras nos níveis cerebrais de 5-HT e ácido 5-hidroxindolacético (5-HIAA), os quais, em alguns casos, persistem por mais de 12 meses (Green; Cross; Goodwin, 1995; McKenna; Peroutka, 1991; Rattray, 1991). Esse dado indica a potencialidade neurotóxica da droga. Acredita-se, também, que os processos de depressão, impulsividade e agressividade correlacionam-se com baixos níveis do principal metabólito da 5-HT, o 5-HIAA, presente no fluido cerebroespinhal (De Win et al., 2006).

Em relação às funções cognitivas, um dos estudos realizados com usuários crônicos de *ecstasy* não encontrou outros problemas cognitivos além de prejuízos de memória e de atenção (Krystal et al., 1992). Embora todos os consumidores da droga possam apresentar perda de memória, os usuários crônicos de *ecstasy* apresentam maiores danos no processo cognitivo e na função neuroendócrina e serotoninérgica (Parrot, 2005). Segundo o National Institute on Drug Abuse, estudo comparativo entre não usuários e usuários habituais de *ecstasy* indicou prejuízos significativos de memória verbal e visual em usuários habituais. Os danos foram diretamente proporcionais à dose consumida e permaneceram por, no mínimo, duas semanas após a interrupção do seu uso (NIDA, 1998). Ainda com relação à memória, foi descrito um caso de síndrome amnésica em decorrência da ingestão de *ecstasy*. Após 9 meses, a paciente ainda apresentava pequeno prejuízo de memória (Spatt; Glawar; Mamoli, 1997).

Ainda são pouco conhecidos os problemas psiquiátricos associados ao uso de *ecstasy*. Entretanto, há vários casos documentados, mais frequentemente, de psicoses e psicoses paranoides (McGuire; Cope; Fahy, 1994; Creighton; Black; Hyde, 1991), além de situações de ataques de pânico que se iniciaram 30 minutos após a ingestão da droga e tiveram duração limitada (Whitaker-Azmitia; Aronson, 1989). Em usuários crônicos de *ecstasy*, foram descritas síndromes depressivas, ansiedade e episódios psicóticos, assim como elevada prevalência de outros distúrbios psiquiátricos (Gouzoulis-Mayfrank; Daumann, 2006).

Lieb *et al*., (2002) acompanharam 2.462 usuários de *ecstasy* ao longo de 4 anos e constataram que 68,7% apresentavam risco aumentado para o desenvolvimento de transtornos mentais em relação a não usuários da droga (44,5%). Mesmo quando comparados a usuários de outras drogas ilícitas, os usuários de *ecstasy* apresentaram risco aumentado para desenvolvimento de transtornos mentais (68,7 *versus* 55,5%). A despeito de transtornos relacionados ao álcool, segundo o Manual Diagnóstico e Estatístico de Transtornos Mentais 4ª Edição (DSM IV), em comparação a usuários de outras substâncias psicoativas, os usuários de *ecstasy* apresentaram risco aumentado para desenvolvimento de 52,6 *versus* 40,3%.

Segundo estudo realizado pelo Centro Médico Acadêmico da Universidade de Amsterdã (2007), bastaria usar *ecstasy* três vezes ao longo da vida para ocasionar algum dano à memória (Bock; Duarte, 2007). O consumo frequente provocaria a destruição de neurônios e favoreceria depressão e ataques de pânico (Schilt et al., 2007). Reneman *et al*. (2001), em seus achados, constataram que neurônios serotoninérgicos cerebrais podem ser permanentemente danificados após o uso de *ecstasy*, induzindo à redução na liberação de 5-HT capaz de resultar em quadros de desordens neuropsiquiátricas, como depressão, ansiedade, pânico e impulsividade.

Parrot (2005) realizou estudo de neuroimagem com usuários de *ecstasy* e constatou que o uso recreacional frequentemente indica perda serotoninérgica. Alguns dias após a ingestão da droga, essas pessoas normalmente sofrem de depressão, em função da depleção severa de 5-HT (Vollenweider *et al*., 1998; Curran; Travill, 1997). Estudo comparativo entre usuários abstinentes de álcool e *ecstasy* demonstrou que, na ausência do *ecstasy*, os usuários apresentam depressão, irritação e não sociabilidade mais severa do que na abstinência do álcool (Parrot; Lasky, 1998).

O uso repetido de MDMA tem sido associado a prejuízos cognitivos em animais e seres humanos, em particular com relação à memória permanente(Ricaurte *et al*., 2000;

Broening *et al.*, 2001). Usuários recreacionais, em abstinência, apresentam vários *deficits* funcionais ligados à perda de memória, à elevada deficiência do processo cognitivo, aos distúrbios do sono e à presença de sintomas psiquiátricos. Embora esses *deficits* possam ser exacerbados por diversos fatores relacionados ao uso de outras drogas, não se deve excluir a possibilidade de que a administração de uma única dose de MDMA pode ser capaz de causar algum dano aos neurônios.

Talvez, o aspecto mais perturbador do abuso do *ecstasy* é a possibilidade de ocorrerem efeitos psiquiátricos irreversíveis em longo prazo (Henry *et al*., 1998).

A frequência e os efeitos adversos causados pelo uso da droga,em prazo maior, sobre o cérebro humano e a função mental são, até o momento, desconhecidos; porém, em vista do seu amplo e contínuo uso, tanto os efeitos agudos quantos os crônicos merecem mais atenção. A morte, como consequência do consumo de *ecstasy*, apesar de pouco documentada, pode acontecer (Almeida; Silva, 2000).

1.4 Métodos de recrutamento de usuários de drogas sintéticas

Dados precisos e acurados sobre o comportamento dos usuários de *club drugs*, em geral, são difíceis de se obter. Em função da natureza ilegal e estigmatizada de seus comportamentos, os usuários de drogas tendem a se tornar relutantes em participar de atividades de coleta de dados mais estruturadas (Shacham; Cottler, 2010). Por essa razão, as abordagens mais personalizadas, como amostragens por alvo, têm sido utilizadas para equilibrar a eficiência de recrutamento e a inclusão na representação de subgrupos específicos (Korf; van Ginkel; Benschop, 2010). Inúmeras estratégias de recrutamento têm sido descritas na literatura sobre abuso de drogas, como: *snow ball sampling*, *respondent driven sampling* (RDS), publicidade boca a boca, anúncios na mídia, pesquisas *on-line* anônimas e anúncios em fóruns de internet. Todos esses métodos produzem resultados diferentes e recrutam diversos perfis populacionais inseridos em subgrupos das populações de difícil acesso (Heckathorn, 1997; Korf; van Ginkel; Benschop, 2010).

Amostragem do tipo "bola de neve" é uma abordagem comumente usada em pesquisas sobre o uso de drogas. Essa técnica aumenta a inclusão de populações ocultas, já que tem membros recrutados por outros membros da população-alvo (Decorte, 2001; Hinchliff, 2001; Watters; Biernacki, 1989).

Há poucos estudos com usuários de *ecstasy* que utilizam o método "bola de neve", ou *snow ball*; os estudos existentes são, principalmente, de países europeus, como Inglaterra e Holanda (Boys; Marsden; Strang, 2001; Vervaeke *et al.*, 2007). No Brasil, um único estudo realizado por Almeida (2005) relatou o uso dessa metodologia. Estudos mais recentes têm utilizado a abordagem RDS para recrutar usuários de *club drugs* (Heckathorn, 1997; Salazar et al., 2010; Wagner *et al.*, 2011; Kurtz *et al.*, 2011). Tal abordagem envolve o recrutamento direto da população-alvo pelos seus pares, um duplo sistema de incentivos e um sistema de cupom (Magnani et al., 2005; Lepkowski, 1991). Os benefícios oferecidos por essa técnica são bem-documentados, incluindo a redução do viés de seleção não aleatória.

Outra metodologia que envolve o uso de redes sociais e vem sendo cada vez mais utilizada no recrutamento de populações de difíceis acesso (Silenzio *et al.*, 2009) é a TARC. Sifaneck e Neaigus (2001) usaram essa expressão para descrever o método de publicidade através de jornais e folhetos. Apesar de não incluir fontes *on-line* (publicidade, fóruns da internet e *newsgroups*), estudo mais recente, realizado por Korf, van Ginkel e Benschop (2010), incluiu esses métodos quando utilizou a *target canvansing* (TARC). Seus resultados sugerem que essa abordagem pode efetivamente atingir a população-alvo e ser comparada a outras técnicas com base no contato face a face.

Uma série de estudos adicionais também demonstram a eficácia do *etnographic fieldwork* (EFW) como técnica de recrutamento de populações usuárias de drogas (Korf; van Ginkel; Benschop, 2010). Nessa abordagem, os investigadores procuram membros da população-alvo em seu ambiente natural (Watters; Biernacki, 1989). Tal técnica de amostragem chamada de não probabilística é, muitas vezes, empregada com populações de difícil acesso e pode ser recomendada quando os princípios estatísticos da amostragem falharem. Uma das suas premissas é o seu emprego em populações de difícil acesso com tendência a reunirem-se em locais específicos, como casas noturnas, bares, parques e alguns trechos de ruas (Lepkowski, 1991).

O sucesso dos métodos de recrutamento mencionados tem sido amplamente documentado em várias publicações e contextos; contudo, sua eficácia em países em desenvolvimento, como o Brasil, não está bem-estabelecida. Relatos isolados de grandes cidades do país indicam que o *ecstasy* e o LSD são usados principalmente entre jovens urbanos, de classe média e alta, frequentadores de clubes noturnos (Galduróz *et al.*, 2005; Andrade; Duarte; Oliveira, 2010); poucos detalhes, porém, são fornecidos sobre abordagens de recrutamento com essa população. A Universidade de Delaware e o Centro de Pesquisa em

Álcool e Drogas (CPAD) da UFRGS realizou estudo visando o recrutamento de uma amostra de usuários de *ecstasy* e/ou LSD. Seus detalhes serão descritos a seguir.

1.5 Justificativa

Apesar da reputação de se tratar de uma droga relativamente segura, com baixa capacidade dependógena e não apresentar grave perigo físico, há inúmeros relatos de reações adversas relacionados ao uso do *ecstasy*. Dados de estudos de prevalência nacionais e internacionais refletem seu uso difundido e as numerosas consequências relacionadas ao seu consumo, à expansão da sua dependência e às consequências disso.

Algumas repercussões do consumo de *ecstasy* já estão bem-estabelecidas na literatura. Efeitos somáticos e psicológicos tanto imediatos ao seu uso quanto tardios são foco de atenção de vários estudos na área.

A importância de se identificar correlações existentes entre consumo de *ecstasy*, exposição a comportamentos de risco sexual e a manifestações psiquiátricas está no caráter preventivo fornecido por esse conhecimento, mediante prevenções primária, secundária e terciária, a partir de adequada investigação das condições correlacionadas ao uso da droga e à sua extensão. Já é claro, na literatura, que as comorbidades psiquiátricas não tratadas favorecem uso, abuso e dependência de substâncias, o que dificulta, também, resultados satisfatórios em tratamento. Ainda são pouco conhecidas as morbidades psiquiátricas associadas ao consumo do *ecstasy*.

Observa-se que os achados não são conclusivos na medida em que aspectos importantes são observados ao longo dos estudos, dificultando resultados mais precisos. A incerteza na composição dos comprimidos e a mistura que frequentemente os usuários fazem com outras drogas exercem forte influência sobre os dados levantados, aumentando o potencial de perigo do *ecstasy*.

Pouco se sabe sobre a população de usuários de *ecstasy* em Porto Alegre, sua extensão e as consequências relacionadas ao uso; entretanto, uma variedade de locais do gênero existe na capital gaúcha, incluindo desde festivais de música eletrônica muito bem organizados e a céu aberto até clubes noturnos menores, especializados em música eletrônica.

Logo, a importância desse estudo está embasada no potencial de perigo que acompanha o *ecstasy* e na carência de dados que quantifiquem as consequências de seu uso. Muito embora seu consumo seja emergente no Brasil, não existem estudos na literatura com a população usuária na cidade de Porto Alegre que quantifiquem seus comportamentos de risco sexual, suas manifestações psiquiátricas e seu perfil de uso de drogas. A possibilidade de implementarem-se futuras intervenções e tratamentos de forma adequada à demanda dessa população, considerada por muitos autores como população de risco, depende de estudos aprofundados sobre o tema.

2   OBJETIVOS

2.1   Objetivo Geral

Avaliar o padrão de uso de substâncias e suas conseqüências físicas e mentais em 240 usuários de *ecstasy* e /ou LSD.

2.2   Objetivos Específicos

a) Investigar a quantidade, a freqüência, os tipos e a duração do abuso de álcool e drogas em usuários de *ecstasy* e / ou LSD.

b) Investigar comportamentos sexuais de risco, prejuízo nas atividades diárias, problemas na saúde física e mental e problemas legais;

c) Avaliar a relação entre identidade de gênero e problemas sociais e de saúde em usuários de *ecstasy* e / ou LSD.

3 ARTIGOS

3.1 Changes in method for obtaining higher rates in recruiting synthetic drug users

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Hilary Surratt, Steven Kurtz, Flavio Pechansky

Abstract

Objective: To describe the problems encountered and resolved in the course of using respondent-driven sampling (RDS), targeted canvassing (TARC), and ethnographic fieldwork (EFW) to recruit êxtase and/or LSD users. **Method:** This study is nested within a larger project designed to investigate the course of drug use, sexual risk behaviors, and psychiatric comorbidities in 240 êxtase/LSD users. Eligible participants were males and females ranging from 18-39 years, who reported êxtase and/or LSD use at least once during the 90 days prior to interview and were out of treatment for drug and alcohol problems. Strategies were implemented sequentially, over 4-month time frames for each method, aiming at fulfilling study objectives. **Results:** The final sample included 174 participants (64.36% males). Eight (4.6%) were selected using RDS, 26 (14.94%) with TARC, and 140 (80.45%) using EFW. RDS recruited participants with a higher education level, employed, and with a higher monthly income. Conversely, a higher frequency of drug use and a higher number of drugs ever used were evident among participants selected via EFW. **Conclusions:** Different recruitment techniques reached different types of sample. EFW showed the best performance, granting access to the largest number of participants and with a higher number of drugs ever used. Both RDS and TARC required more time to recruit participants and yielded a lower number of eligible subjects. Participants recruited via RDS had a higher socioeconomic level but also a shorter lifetime history of drug use.

Key words: Drug users; Club drugs; Synthetic drugs; Methodology; Fieldwork.

INTRODUCTION

Precise and accurate data on the behaviors of club drug users are difficult to obtain. Due to the illegal and stigmatized nature of their behaviors, drug users may be reluctant to participate in structured data collection activities (1). For this reason, more tailored approaches, such as targeted sampling, have been used to balance recruitment effectiveness and an adequate representation of specific subgroups (2). Numerous recruitment strategies have been described in the drug abuse literature, e.g., snowball sampling, respondent-driven sampling (RDS) (3), word-of-mouth advertising, media advertisements, anonymous online surveys, and announcements in online drug user forums, all with varying results (2).

Snowball sampling is a commonly used approach, and its main advantage is to reach hidden populations by having members recruiting other members of the target population (4-6). This technique is one of the most commonly used methods to investigate êxtase users (7,8). Several studies have been conducted worldwide, especially in developed countries such as United States and European countries (8-10). In Brazil, one single study conducted by Almeida and Silva has reported the use of this methodology (11).

More recent studies have used a related approach, called respondent-driven sampling (RDS), to recruit club drug users (3,12-14). This approach involves direct peer-to-peer recruitment, a dual system of incentives, and a coupon system (15,16). The benefits of this method are well-documented, including a reduction of non-random selection biases that can possibly impact standard chain-referral sampling methods (17).

Another technique involving the use of online social networks has been increasingly used in the recruitment of hard-to-reach populations (18). Sifaneck and Neaigus have used the term targeted canvassing (TARC) to describe the method of advertising in newspapers and flyers (11). Although those authors did not include online sources in their TARC approach, a more recent study by Korf et al. included website announcements as part of their strategies and reported interesting results (2). Both studies have suggested that the TARC approach can effectively reach subjects who might be overlooked by the use of face-to-face sampling approaches (2,11).

Finally, a number of studies has demonstrated the efficiency of ethnographic fieldwork (EFW) as a recruitment technique for drug-using populations (2). In this approach, investigators themselves seek out members of the target population in their natural environment (6). This non-probability sampling technique is often employed with hard-to-

reach populations and may be recommended when statistical sampling principles fail. One of the premises of EFW is that hard-to-reach populations tend to gather in specific places, for example nightclubs, bars, parks, and certain stretches of streets in the case of club drug users (16).

The success of the above-mentioned recruitment methods has been widely documented; however, reports on their effectiveness in developing nations such as Brazil are scarce. Isolated reports from large cities in Brazil indicate that êxtase and LSD are used mostly among urban, young, middle- and upper-class club goers (3,13,19, 20). However, few details are available on the recruitment methods adopted in this population (21,22).

At present, êxtase (3, 4-methylenedioxymethamphetamine [MDMA]) is among the most popular recreational drugs used in the club scene, especially as a result of its specific psychotropic effects (23). Increased energy, euphoria, and hypersociability are among the many positive expected or perceived effects of êxtase use (24). Conversely, there is also evidence of specific neurotoxicity and negative psychiatric effects of the drug, including memory deficits, increased psychiatric symptoms, and changes in eating, sleeping, and sexual patterns (25,26). Parrott et al. (27), for example, observed physical and mental health problems among 36 heavy recreational users (+ 100 occasions), including depression, memory problems, mood fluctuation, and poor concentration. In addition, recent studies have connected the use of êxtase with specific sexual risk behaviors, such as inconsistent condom use and multiple sexual partners (28,29).

This article describes and analyzes some of the problems encountered and resolved in the course of using RDS, TARC, and EFW to recruit êxtase and/or LSD users, as well as the solutions obtained while adapting the method to obtain better outcomes in the recruitment of such hard-to-reach subjects.

METHOD

General study design

The present study is nested within a larger project conducted by the University of Delaware and the Center for Drug and Alcohol Research at Universidade Federal do Rio Grande do Sul and Hospital de Clínicas de Porto Alegre, designed to investigate urban, young, LSD and/or êxtase users living in Porto Alegre, a large metropolitan area (state capital) in southern Brazil. The overall goals of the larger study were to select and interview

240 individuals in order to document the extent of êxtase/LSD and other substance use as well as sexual risk behaviors and psychiatric comorbidities in this population. The original project was approved by both the University of Delaware Institutional Review Board and the Research Ethics Committee of Hospital de Clínicas de Porto Alegre.

Eligible participants were males and females aged 18 to 39 who reported having used êxtase and/or LSD at least once during the 90 days prior to the interview. The only exclusion criterion was being under treatment for drug or alcohol problems. In order to identify eligible participants, a brief screening form was developed, based on U.S. forms designed for similar populations (29,30). In addition, a short version of the Global Appraisal of Individual Needs (GAIN) instrument was adapted to the Brazilian contextand used as the primary data collection instrument (31). Adaptations focused on shortening the instrument, to adequately meet the demands of brief intercept interviews in street locations.

The project staff was trained to collect data with particular emphasis on elements of rapport, street terminology of drug use, and confidentiality and privacy of the information obtained.

A description of the three recruitment approaches is presented below. Strategies were implemented, as a response to the challenges faced while trying to obtain enough subject representation, until a sufficient number of eligible participants were selected. We analyzed the four initial months of each strategy. However, the consecutive use of the methods was not originally planned; rather, it was implemented in response to adaptations that were deemed necessary so that the ultimate goals of the larger study could be achieved, as described below. The present study reports data collected over the first 4-month time frames using each technique, for the first 174 cases.

Respondent-driven sampling (RDS)

Prior to the initiation of data collection and with the assistance of key informants from the club scene in Porto Alegre, the research staff mapped primary spots where the target population was known to congregate (bars featuring electronic music, nightclubs, and rave parties). All interview appointments with potential participants (seeds) were arranged by telephone, and conducted at the research office and these received the equivalent of US$ 10 as a compensation for their time, as well as the opportunity to recruit other potential participants. Each seed received three coupons which were to be delivered to three acquaintances. Some of

these new candidates, in turn, referred knowing other potential participants and agreed to refer them, but these individuals neither enrolled nor were eligible for the study.

Targeted canvassing (TARC)

The unsuccessful results observed with RDS led the research team to adjust the recruitment methodology and invest in advertising. As a recruitment strategy, aiming at disseminating information about the project and favor access to potential participants, cards and flyers were distributed in clubs, parties and music events, dealing with online advertisements were posted on the website that was specifically created for this purpose. The main aims of these strategies were to disseminate detailed information about the project, and to offer easy access of potential participants to the project e-mail and blog, so that they could easily leave messages or obtain more information.

Taking into consideration participant anonymity, the research team developed a web-based screening questionnaire (32) to allow participants to complete the study questionnaire online. However, in the two last months of the first time frame, recruitment results dropped significantly.

Ethnographic fieldwork (EFW)

In this approach, the research staff mapped specific areas and explored settings where current or former club drug users might be found – their 'natural settings'. Then, the researchers themselves, sometimes working with field assistants (key informants), sought out members of the target population in club venues, conducting face-to-face interviews, e.g., in lines in front of nightclubs, at rave parties, and at parks during the weekends. Potential participants were approached on Fridays, Saturdays and Sundays.

In the two previously described approaches (RDS and TARC), the research team confronted significant resistance and mistrust from potential participants. Many participants believed that the research team was working with the police to rebuke drug use. EFW, in turn, was used to gain trust and build rapport through face-to-face contact in club settings. This approach was supported by key informants, so that potential participants would have personal knowledge of the research team and the study objectives.

All eight interviewers were experienced with both hard-to-reach samples and EFW methodology. Specific elements of rapport building, drug-related street terminology, confidentiality, and privacy were emphasized in the interviewers. Interviews were face-to-face, anonymous, and employed the same instrument adopted in the two previous methods.

RESULTS

The first 4-month time frames using each of the recruitment methods assessed yielded a total of 174 participants, as follows: 8 (4.6%) were recruited with RDS, 26 (14.94%) with TARC, and 140 (80.45%) with EFW.

Socio demographic data analysis revealed that, although the participants selected with different techniques had similar age (Table 1), each approach recruited a different profile of subjects.

Table 1. Characteristics of respondents according to recruitment method (N=174)

Variables	RDS n=8 (%)	TARC n=26 (%)	EFW n=140 (%)	Total N=174 (%)
Gender				
Male	4 (50)	18 (69.2)	90 (64.3)	112 (64.36)
Female	4 (50)	8 (30.8)	50 (35.7)	62 (35.64)
Age	24.13±2.41	22.92±2.77	23.18±4.47	23.18±4.18
Education				
Up to 8 years (elementary school)	0	0	9 (6.4)	9 (5.20)
Up to 11 years (middle/Junior high school)	2 (25)	13 (50)	98 (70)	113 (65.31)
Up to/at least 12 years (high school)	5 (75)	13 (50)	33 (22.9)	51 (29.47)
Occupational status				
Student and employed	0	0	30 (21.4)	30 (17.24)
Student	0	8 (30.8)	41 (29.3)	49 (28.16)
Employed	7 (87.5)	13 (50)	46 (32.9)	66 (37.93)
Other*	1 (12.5)	5 (19.2)	23 (16.4)	29 (16.66)
Monthly individual income				
No income	1 (12.5)	0	23 (16.4)	24 (13.79)
Up to U$ 602.80**	3 (37.5)	19 (73.1)	68 (48.6)	90 (51.72)
More than U$ 602.80	4 (50)	7 (26.9)	49 (35)	60 (34.48)
Frequency of attendance at parties or bars				
Once per week	4 (50)	11(42.3)	42 (30)	57 (32.75)
Twice or thrice per week	4 (50)	13 (50)	73 (52.14)	90 (51.72)
More than 3 times per week	0	2 (7.69)	25 (17.85)	27 (15.51)
Frequency of use of êxtase and/or LSD in the last 90 days				
1 to 3 occasions	5 (62.5)	9 (42.85)	78 (55.71)	92 (54.43)
4 to 6 occasions	0	10 (47.61)	33 (23.57)	43 (25.44)
More than 6 occasions	3 (3.5)	2 (9.52)	29 (20.71)	34 (20.11)
Number of drugs ever used ***				
1 to 3	8 (100)	14 (53.84)	60 (43.47)	82 (47.12)
4 to 6	0	12 (46.15)	76 (55.07)	88 (50.57)
More than 6	0	0	4 (2.89)	4 (2.29)

* Informal work.

** Equivalent to R$ 1,020.00 or 3 monthly minimum wages in Brazil (U$ 1 = R$ 1.69)

*** Types of drugs ever used: alcohol, marijuana, cocaine, inhalants, methamphetamine, crack, mushrooms

DISCUSSION

In our study, EFW showed the best performance, granting access to the largest number of eligible participants taking into consideration the profile of the subjects selected and the study schedule. Although all three recruitment methods were important in framing the data collection process, EFW promoted contact with the largest number of subjects. Several factors contributed to this outcome; in particular, meeting participants in person, in their natural settings, allowed the research staff to better understand patterns of drug consumption and drug dealing (33) and helped promote empathy and interaction with participants. Moreover, the detailed ethnographic work adopted facilitated rapport building among participants and researchers, consequently increasing study credibility.

According to Moore et al. and Lindsay, credibility is an essential component in the recruitment of hard-to-reach populations, since it allows participants to develop greater trust in the experiment, promoting adherence to the study (34,35). Moore et al. have concurred that hard-to-reach populations with a high degree of suspicion may require detailed ethnographic work. In addition, ethnographic sampling may be especially useful in repressive environments, e.g., in countries with repressive policies towards drug users, as is the case with Brazil. Finally, EFW allowed ineligible candidates to be excluded faster and encouraged the inclusion of a greater number of respondents. Among the limitations of EFW, it seems relevant to mention the high logistics costs involved in data collection and staff exposure to risk situations, considering the venues visited for data collection.

In line with the findings reported by Korf, van Ginkel & Benschop (2), we also observed that the use of different methodologies grants access to different profiles of subjects and allow a more detailed knowledge of the target population, in addition to the development of credibility among study participants. In our case, it is also important to mention that this helped refine the strategies used in the recruitment of this population, allowing investigators to experiment and find out the best approach to reach potential subjects. However, different sampling methods allow for reaching different types of participants. Heavy drug users are probably more easily recruited using EFW, whereas RDS and TARC seem adequate for the recruitment of mild drug users (36). In line with the findings of Rhodes et al. (36) in our study RDS and TARC granted access to participants with a shorter lifetime history of drug use, higher education levels, and a better employment/income status. Participants recruited using EFW, showed a longer lifetime history of drug use and lower education levels, in addition to informal work and lower monthly income. We could speculate that the variables number of

drugs ever used, education level, occupational status, and monthly income may be somehow related.

RDS has proven to be effective in generating a representative sample of targeted hidden populations (1) and has been used successfully with club drug users in the U.S. (13,29). However, in our study, RDS showed a poor performance, which may potentially be explained by two main factors. First, our seeds failed to produce a sufficient number of referrals, a phenomenon that can occur with different hidden populations, according to Semaan (37). We believe that the number of seeds recruited was not sufficient to access club drug user networks (21,22). Second, there was a strong sense of mistrust among participants with regard to the study and the researchers, i.e., participants probably feared being identified as êxtase/LSD users by participating in the research project. This type of mistrust is likely to affect research in settings where participation in studies has not been normalized to the extent that it has in the U.S. In addition, the repressive policies towards drug users in Brazil reinforces the sense of distrust among participants. Repression and control have proven inadequate for drug addiction issues (38), so we have reason to believe that this aspect had direct impact on recruitment results.

Despite the fact that most club drug users are members of large social networks, a very limited number of participants were recruited in our study using TARC. We speculate that, feelings of mistrust and lack of credibility regarding the study and the researchers continued to be present, once again hampering participation., The concern of participants regarding anonymity was apparently not unique to our study: in a Brazilian online survey conducted by Almeida et al., out of 412 participants, only 38 provided an e-mail address, and only two informed telephone numbers (39). Similar findings have been reported by Korf, van Ginkel & Benschop (2). Notwithstanding, RDS has been shown to perform well with heavy drug users, homeless-starving people, desperately addicted crack smokers, and methamphetamine users, who are attracted by the US$ 10 referral incentive fee (36).

Overall, our study showed that club drug use in Brazil is a very sensitive topic, which clearly affects recruitment and data collection procedures in this population. In particular, our study highlights several barriers faced with RDS and TARC in our setting. Future studies are warranted to further investigate the efficacy of different sampling methods for the recruitment of hard-to-reach populations in general and of club drug users in particular, bearing in mind the limitations and difficulties here described with Brazilian êxtase and LSD users.

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3.2 Correlates of unprotected sex in a sample of young club drug users

Correlates of unprotected sex in a sample of young club drug users

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Abstract

Objectives: To assess demographic characteristics, psychiatric symptoms, substance use patterns, and sexual risk behaviors in a sample of club drug users to identify factors associated with unprotected sex during the 12 months prior to the interview. **Method:** This cross-sectional study used the targeted sampling and ethnographic mapping approaches, via face-to-face interviews conducted at bars and electronic music festivals using an adapted, semi-structured version of the questionnaire entitled Global Appraisal of Individual Needs (GAIN). The sample comprised 240 male and female young adults who used êxtase and/or LSD in the 90 days before the interview and who were not receiving treatment for alcohol or drug abuse. **Results:** Out of the 240 subjects selected (mean age: 22.9±4.5), 57.9% were men; of these, 52.5% reported having had unprotected sex in the past 12 months. Of the total sample, 63.33% reported having had unprotected sex. Following multivariate regression analysis, two variables presented significant prevalence ratios (PR) for unprotected sex, namely, having had sex with anal intercourse, 1.26 (95% confidence interval: 1.044-1.543),andhaving used alcohol/drugs to make sex last longer, 1.430 (95% confidence interval: 1.181-1.732). **Conclusions:** The implementation of intervention strategies aimed at reducing sexual risk behaviors should take into consideration the specific features of drug users and include the development of safer sex negotiation skills.

Keywords: drug users; unsafe sex; risk behavior; sexual behavior.

Introduction

Club drug use has increased dramatically over the last two decades in both developed and developing countries (1). This particular subgroup of psychoactive substances, typically associated with "the club scene," is most commonly used by young (18 to 25 years old), predominantly heterosexual, sexually active polydrug users (2). Notwithstanding, over the past few years, the use of club drugs has expanded beyond the club scene – where it is still popular – and can now be found in different environments, such as college campuses and home parties.

This group of substances is frequently associated with multiple effects, including euphoria, dehydration, increased energy and sensitivity to interpersonal connectedness, greater sexual arousal, and increased cognitive impairment (3-5). The combination of impaired cognitive functioning, such as poor decision-making and diminished judgment, and a heightened sexual arousal is particularly problematic inasmuch as it induces sexual risk behaviors (6-11). Specifically, previous studies have pointed towards a higher prevalence of inconsistent condom use and multiple sexual partners among club drug users when compared with the general population (12-14).

Recent epidemiological research indicates that 64% of individuals infected with HIV have used an illicit drug (15,16). In spite of the large number of studies reporting an association between drug use and sexual risk behaviors, only a few authors have examined the association between such behaviors and club drugs specifically: the first article dates from 1986 (17). A recent meta-analysis conducted by Hittner and Schachne (18) found that, between 1986 and 2011, only 14 studies assessed the association between êxtase use and sexual risk behaviors; of these, 12 are American, one is Australian, and one Chinese (18).

Given the increased incidence of, and problems associated with, êxtase use (15), and considering the well documented connection between substance use and sexual risk behaviors, a need has emerged to better understand the association between these two phenomena. In particular, the fact that most of the studies available have been conducted in the United States and Europe underscores the need to investigate the topic in developing countries.

South America shows higher prevalence rates of engagement in anal sex when compared with other regions. These findings become particularly relevant if we take into consideration that Brazilians account for about one third of all people living with HIV in

Latin America, and also that unsafe sex is responsible for about 50% of all cases of sexual transmission of HIV in Brazil (19,20). A Brazilian online survey conducted by Almeida et al. (21) to assess êxtase use patterns and associated harm showed a positive correlation between severity of êxtase use and risk behaviors in this population, especially between unsafe sex and polydrug use. According to data obtained from the Brazilian Ministry of Health (22), HIV infection is already considered an epidemic in southern Brazil: the number of people with HIV in the southernmost state capital, Porto Alegre, is twice as high as the national mean. Some of the reasons believed to explain this difference include a higher rate of drug use and engagement in unprotected sex (22). In this sense, a better understanding of the factors determining such behaviors could probably help produce more effective prevention strategies, with more significant outcomes.

The aim of this study was to identify factors potentially associated with unprotected sex (demographic characteristics, psychiatric symptoms, substance use patterns, and sexual risk behaviors) over a 12-month period in a sample of young club drug users.

Methods

Participants and methodological procedures

This study is part of a larger naturalistic project that recruited 240 club-goers from Porto Alegre, a state capital and large metropolitan area in southern Brazil. Participants were recruited from March to July 2010 using targeted sampling and ethnographic mapping. The research staff, in conjunction with "key informants" in the club scene, mapped the main nightclubs, rave parties, and parks where potential participants were known to congregate. They were approached by the project staff and invited to participate in the study. Initial face-to-face interviews lasting for 15 minutes on average were conducted *in loco* to assess inclusion criteria. Interviewees who met all criteria were invited to participate in a more detailed interview and other data collection procedures.

Field interviewers were trained with a particular emphasis on elements of rapport, street drug slang, and confidentiality/privacy of the information obtained. At the end of the interview, participants received a lunch voucher as a compensation for their participation. Inclusion criteria were use of êxtase and/or LSD at least once in the 90 days prior to the interview, and no current treatment for drug or alcohol problems.

Interviewed club drug users who reported having had unprotected sex were compared with club drug users with no episodes of unprotected sex in the 12 months prior to the interview in terms of demographic characteristics, psychiatric symptoms, substance use patterns, and sexual risk behaviors. Unprotected sex was defined as at least one episode of sexual intercourse without the use of protective device, oral barrier, or other barrier protection against infection or pregnancy. This study was approved by the University of Delaware Institutional Review Board and by the Research Ethics Committee of Hospital de Clínicas de Porto Alegre. All participants signed an informed consent form prior to their inclusion in the study.

Instruments

In order to identify eligible participants, a brief screening form was developed based on previous studies conducted in the U.S. with similar populations (12,23). Subsequently, the primary data collection instrument (among selected individuals) was a questionnaire created based on an abbreviated version of the Global Appraisal of Individual Needs (GAIN) instrument (24). The original instrument has been used in both adolescents and adults, in a variety of settings, and has been the main clinical and research measure adopted in many NIDA-funded multicenter studies.

The original version of this instrument comprises eight sections covering specific information on 1) demographic characteristics, 2) substance use, 3) physical health, 4) risk behaviors, 5) mental health, 6) environment, 7) legal aspects, and 8) vocational aspects. The adapted instrument used in this study focused on: 1) substance use, 2) mental health, 3) risk behaviors, and 4) vocational aspects. In the sections covering mental health and substance use, data were collected based on symptoms described in the Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV). Basic demographic data included age, gender, education, and monthly individual income. Risk behavior and mental health questions were dichotomous and covered periods of both 90 days and 12 months prior to the interview.

Substance use was assessed by asking participants how many times a particular substance was used during the 90 days prior to the interview and also during their lifetime. Substances included a comprehensive list of both illicit and prescription-type drugs.

Psychiatric symptoms were assessed using the mental health section of the questionnaire, comprised of three subscales focusing on anxiety, depression, and traumatic

distress. Depressive symptoms were assessed using the nine items of the Depressive Symptom Scale (DSS) (e.g., "During the past 12 months, have you had significant problems with feeling very trapped, lonely, sad, blue, depressed, or hopeless about the future?"). Anxiety symptoms were assessed using the 12 items of the Anxiety/Fear Symptom Scale (AFSS) (e.g.,"During the past 12 months, have you had significant problems feeling very anxious, nervous, tense, scared, panicked or like something bad was going to happen?"). Finally, traumatic distress was assessed using the 13 items of the Traumatic Distress Scale (TDS) (e.g., "Sometimes you used alcohol or other drugs to help yourself sleep or forget about things that happened in the past."). All items of the psychiatric symptom scale were dichotomous (yes/no questions). Total scores obtained in each of the subscales were additive.

Data analysis

Categorical variables were expressed as absolute and relative frequencies, and quantitative variables as means and standard deviation or as medians and interquartile range (first and third quartiles). Psychiatric symptoms (depression, anxiety, and traumatic distress) were categorized as mild, moderate, or clinically relevant, according to the number of symptoms experienced in the 12 months before the interview. Not significant depression corresponded to 0-1 symptom, moderate depression to 2-5 symptoms, and clinically relevant depression corresponded to > 6 depression symptoms. For anxiety, categories were as follows: Not significant, 0-1 symptom; moderate, 2-6 symptoms; and clinically relevant, 7-12 symptoms. Not significant traumatic distress was determined when no symptoms were experienced in the 12 months prior to the interview; moderate distress corresponded to the presence of 1-4 symptoms, and clinically relevant distress, 5-13 symptoms over a 12-month period.

The chi-square and T tests were used to analyze the subset of individuals reporting engagement in unprotected sex according to gender. Variables showing p<0.05 were considered significant.

Univariate Poisson regression was used to identify independent variables significantly associated with the study outcome. Variables showing a p value below 0.10 in the univariate model were considered eligible to enter the multivariate model. Both models were adjusted for gender and sexual orientation (homosexual, bisexual, or heterosexual).

Results

Demographic characteristics

Out of the 240 subjects selected (mean age: 22.9±4.5), 57.9% were male and 42% female. Age ranged between 18 and 39 years. Regarding education level, 69% of the subjects had completed high school; 42.1% were employed and 60% had a mean monthly income of up to US$ 602.80 (US$ 1 = R$ 1.63 at the time of the study), about three times the monthly minimum wage in Brazil at the time. Moreover, 63.33% of the participants reported having had unprotected sex in the 12 months prior to the interview (62.5% males and 37.5% females). The characteristics of this subset of subjects is described below. With regard to sexual orientation, the majority of participants was heterosexual (71.3%), followed by homosexuals (17.1%) and bisexuals (11.7%). When comparing club drug users with and without a history of unprotected sex, no statistical differences were found for demographic characteristics (Table 1).

Tabela 1. Sample characteristics

Variables	Unprotected Sex		p
	Yes (n = 152)	No (n = 86)	
Age	23.24 ± 4.61	22.58± 4.28	0.286
Gender			
Female	57 (37.5)	42 (48.8)	0.117
Male	95 (62.5)	44 (51.2)	
Income			
No Income	30 (19.7)	12 (14.0)	
Up to US$ 602.80**	85 (55.9)	57 (66.3)	0.281
More than US$ 602.80	37 (24.3)	17 (19.8)	
Occupation			
Student and Employed	29 (19.1)	19 (22.1)	
Student	48 (31.6)	28 (32.6)	0.847
Employed	66 (43.4)	33 (38.4)	
No study/no work	9 (5.9)	6 (7.0)	
Education level			
High school	32 (21.1)	25 (29.4)	
Middle/junior high school	109 (71.7)	55 (64.7)	0.347
Elementary school	11 (7.2)	5 (5.9)	
Orientação sexual			
Bissexuais	18 (11.8)	10 (11.6)	
Homossexuais	27 (17.8)	14 (16.3)	0.954
Heterossexuais	107 (70.4)	62 (72.1)	
Depressive symptoms			
Not significant	42 (27.6)	34 (39.5)	
Moderate	81 (53.3)	38 (44.2)	0.166
Clinically relevant	29 (19.1)	14 (16.3)	
Anxiety/fear symptoms			
Not significant	45 (29.6)	36 (41.9)	
Moderate	91 (59.9)	46 (53.5)	0.079
Clinically relevant	16 (10.5)	4 (4.7)	
Traumatic distress			
Not significant	14 (9.3)	18 (20.9)	
Moderate	72 (47.7)	40 (46.5)	0.029
Clinically relevant	65 (43.0)	28 (32.6)	
Had sex with IDU			
Yes	3 (2.0)	1 (1.2)	>0.999
No	149 (98)	85 (98.8)	
Had anal sex (insertive or receptive) †			
Yes	69 (45.4)	25 (29.1)	0.019
No	83 (54.6)	61 (70.9)	
Ever exchanged sex for money			
Yes	12 (7.9)	3 (3.5)	0.286
No	140 (92.1)	83 (96.5)	
Had sex with MSM†			

Yes	28 (18.4)	11 (12.8)	0.345
No	124 (81.6)	75 (87.2)	
Ever exchanged money for sex			
Yes	21 (13.8)	4 (4.7)	0.046
No	131 (86.2)	82 (95.3)	
Number of sex partners (>2 vs. ≤2) ††			
Yes	103 (67.8)	48 (55.8)	0.089
No	49 (32.2)	38 (44.2)	
Used alcohol/drugs to make sex last longer†			
Yes	32 (21.1)	5 (5.8)	0.003
No	120 (78.9)	81 (94.2)	

Two participants did not answer ; **US$ 1 = R$ 1.63 at the time of the study. † in the past 12 months; †† in the 90-day period; IDU = intravenous drug user; MSM = men who have sex with men.

Psychiatric symptoms

With regard to psychiatric symptoms in the 12 months preceding the interview, 50% of the participants reported moderate depression and 18% clinically relevant depression. In the analysis of anxiety symptoms and traumatic distress, 58% presented moderate anxiety, 47% showed moderate traumatic distress, and 40% showed clinically relevant distress.

Sexual risk behaviors

Sexual risk behaviors were assessed using several variables (Table 1). Of the 240 participants, 80% reported having used alcohol/drugs to make sex last longer, 40% reported having had anal sex in the past 12 months, 63% reported having more than two sex partners in the 90-day period and 15% had exchanged money for sex or sex for money (sex trading). Finally, 84% reported having had sex with a man who probably had sex with another man (MSM), and 2% had had sex with intravenous drug injector (IDU).

Drug use

With regard to substance use, the drugs most frequently used in the participants' lifetime in the overall sample were alcohol (99.6%) and marijuana (95.4%). LSD use was reported by 88.3% of the total sample, and êxtase use by 83.2%; 33.3% reported to have used both êxtase and LSD. In addition, 56.3% reported the use of inhalants and 23.2% of amphetamines. The median number of days of use of any drug in the 90-day period assessed was 21 days (interquartile range: 12.56 to 32.37). Cocaine use was reported by over half of

the participants (55%), and 44% of these had used the drug in the 90 days prior to the interview.

Unprotected sex according to gender

Of the 152 participants who reported engagement in unprotected sex, stratification according to gender (62.5% males and 37.5% females) revealed that women showed lower education level (p=0.011) and more severe anxiety/fear symptoms (p=0.047). Women also less frequently reported having had anal sex (p=0.048) and having had sex while intoxicated (p=0.025).

Among men, no significant association was observed between unprotected sex and any of the variables assessed.

Univariate analysis

Unprotected sex was regressed in a univariate model. Table 2 shows the prevalence ratios (PRs) and the respective 95% confidence intervals (95%CI) for the variables analyzed in the Poisson regression model. Of all variables assessed, those showing p<0.10 were considered candidates for inclusion in the multivariate model, namely, gender, anxiety/fear symptoms, having had anal sex, having exchanged sex for money or money for sex, number of sex partners, and having used alcohol/drugs to make sex last longer.

Tabela 2 - Análise univariável das variáveis candidatas ao modelo multivariável associadas a prática de sexo desprotegido

Variables	Univariate		p
	OR	IC 95%	
Age	1.011	0.976-1.046	0.263
Gender			
Female	0.837	0.679-1.032	0.096
Male	1		
Income			
No Income	1.043	0.802-1.358	0.751
Up to US$ 602.80**	0.875	0.698-1.097	0.246
More than US$ 602.80	1		
Occupation			
Student and Employed	1.00	0.624-1.611	0.993
Student	1.05	0.668-1.643	0.839
Employed	1.11	0.712-1.717	0.654
No study/no work	1		
Education level			
High school	0.808	0.540-1.210	0.302
Middle/junior high school	0.959	0.678-1.357	0.812
Elementary school	1		
Orientação sexual			
Bissexuais	1.021	0.599-1.637	0.892
Homossexuais	1.016	0.643-1.543	0.903
Heterossexuais	1		
Depressive symptoms			
Not significant	0.819	0.610-1.099	0.182
Moderate	1.00	0.790-1.288	0.946
Clinically relevant	1		
Anxiety/fear symptoms			
Not significant	0.685	0.503-0.932	0.016
Moderate	0.821	0.630-1.069	0.142
Clinically relevant	1		
Traumatic distress			
Not significant	0.623	0.411-1.944	0.025
Moderate	0.916	0.757-1.110	0.372
Clinically relevant	1		
Had sex with IDU			
Yes	1.185	0.665-2.111	0.565
No	1		
Had anal sex (insertive or receptive) †			
Yes	1.284	1.064-1.548	0.009
No	1		
Ever exchanged sex for money			
Yes	1.275	0.969-1.679	0.083

No	1		
Had sex with MSM†			
Yes	1.232	0.879-1.729	0.226
No	1		
Ever exchanged money for sex			
Yes	1.370	1.112-1.688	0.003
No	1		
Number of sex partners†† (>2 vs. ≤2)			
Yes	1.221	0.982-1.518	0.072
No	1		
Used alcohol/drugs to make sex last longer†			
Yes	1.448	1.224-1.718	<0.001
No	1		

†† in the 90-day period; † in the past 12 months
**US$ 1 = R$ 1.63 at the time of the study.
IDU = intravenous drug user; MSM = men who have sex with men;

Multivariate analysis

Figure 1 shows that, of the variables included in the multivariate model, the following remained associated with unprotected sex: having had anal sex, having used alcohol/drugs to make sex last longer and anxiety/fear symptoms. In relation to anxiety/fear symptoms, we observed that the outcome of interest was less prevalent in individuals with not significant anxiety/fear symptoms when compared with those with Clinically relevant anxiety, our reference category.
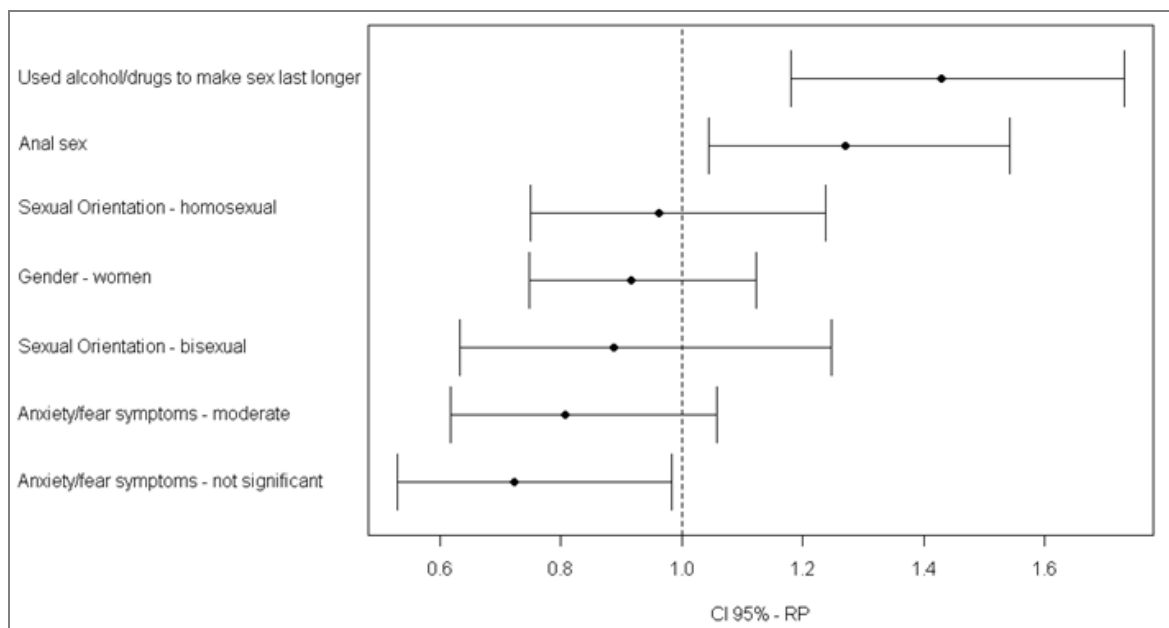

Figure 1 - Multivariate analysis shows that anal sex (PR=1.27; 95%CI: 1.044-1.543; p=0.017), alcohol/drugs to make sex last longer (PR=1.430; 95%CI: 1.181-1.732; p<0.001), and anxiety/fear symptoms (PR=0.724; 95%CI: 0.532-0.983; p=0.039) are associated with unprotected sex.

The prevalence of subjects who engaged in unprotected sex and reported having had anal sex was 27% higher in relation to those who did not have anal sex. Also, the prevalence of using alcohol or drugs to make sex last longer was 43% higher in the unprotected sex group. Conversely, subjects with not significant anxiety symptoms showed a 28% lower prevalence of engagement in unprotected sex when compared with those with clinically relevant symptoms. Both the univariate and the multivariate analyses were adjusted for sexual orientation and gender.

Discussion

In the present study, subjects who had had sex involving anal intercourse and those who had used alcohol or drugs to make sex last longer used protection devices less often than participants who did not report these behaviors. No association was found between unprotected sex in the 12 months preceding the interview and the demographic variables sex, income, education, and occupation, which is in line with a previous study conducted with êxtase users in Brazil (21). Conversely, our sexual orientation results contradict the published literature: we did not observe significant differences among groups in relation to sexual orientation and engagement in unprotected sex (25,26). We speculate that this different results from the similar distribution of the three sexual orientation categories among participants with and without a history of unprotected sex (low statistical power).

The association between anal intercourse and engagement in unprotected sex is in line with the current literature, which suggests that participants who engage in unsafe sex are more likely to report other sexual risk behaviors, such as having multiple partners, exchanging sex for drugs/money, and having sex under the influence of drugs/alcohol, increasing the risk of sexually transmitted infections, including HIV (12,27). Also, previous studies conducted in Latin American countries have found a higher prevalence of anal sex when compared with other countries (28,29). Moreover, a U.S. study focusing on anal intercourse among substance-using club-goers found higher levels of anal sex among Latinos than in other ethnicities (12). Reasons for this difference may include a combination of cultural factors and traditional gender role norms, such as engagement in anal sex reported by Latin women because of their male partner's requests or demands (30,31).

Studies have referred to Brazil as the leading country in the prevalence of heterosexual anal sex practices (in addition to its historical position as the second or third largest AIDS

caseload worldwide) (32). Clearly, anal sex is more openly eroticized in Brazil than in most other countries; the fact that the "butt" represents a major erotic zone in Brazilian sexual culture probably contributes to that finding (33-35). An ethnographic study observed that anal sex was linked with a cultural need to subjugate women using more than one type of intercourse. Findings from a survey conducted with Puerto Rican college students suggested that pleasing the partner, in addition to contraception and virginity preservation, were among the reasons for engaging in anal intercourse in the Latin American/Caribbean culture (36). In the same vein, gender differences and an implicit power relationship has also been suggested, as pointed out by Beck and Green: 47% of heterosexual men stated that they were the ones deciding whether or not they would have anal sex, compared to 35% who regarded it as an equally negotiated decision; in turn, 80% of the female students surveyed informed that the decision was always (65%) made by their partners (36).

A major finding of our study was the use of alcohol and drugs to make sex last longer. The combination of drugs and sex is a major public health concern, once it may contribute to increase the levels of sexually transmitted infections. According to a previous study, engagement in sex under the influence of alcohol or drugs has become, for many drug users, an integral part of their strategic approach to sex, possibly altering sexual decisions and increasing the chances of unsafe and regretted sex (37).

European countries have recorded high levels of alcohol and drug use combined with sex, as well as increasing levels of sexually transmitted infections (38-41). Other studies have also described the use of illicit drugs to enhance sexual performance and pleasure (42-44). A study conducted with drug-using sex workers in South Africa revealed that cocaine, êxtase, heroin, and methaqualone were used to enhance the sexual experience and prolong sex sessions (45). The use of drugs before and during sex tends to be associated with personality characteristics such as impulsivity and sensation-seeking (46,47), and a number of authors have referred to sensation-seeking or altered judgment as an explanation for the frequent association between high-risk sexual behaviors and drug use (48-50). It is important to emphasize that both sexual arousal and sexual functioning can be affected by drug use. However,the exact mechanisms underlying this relationship appear to depend on the particular substance ingested, the dosage consumed, as well as on individual perceptions or expectations regarding drug effects (51,52).

In the present study, no association was found between unprotected sex in the 12 months preceding the interview and the demographic variables sex, income, education, and

occupation, in line with a previous study conducted with êxtase users in Brazil (21). In addition, in our sample, participants with not significant anxiety/fear symptoms also showed a lower prevalence of unprotected sex when compared with those with Clinically relevant anxiety. This finding corroborates previous studies that sugerem associa;'ao entre ansiedade e a pratica de comportamentos de risco. Apontando que quanto maior a intensidade da ansiedade maior a propensão ao envolvimento em atividades de risco tais como práticas sexuais inseguras, e busca por novidades, em resposta à tomada de decisões impulsivas (53,54).

The sample assessed cannot be considered representative of club drug users in Brazil, as individuals were selected using convenience sampling. Nonetheless, the consistency between our findings and those reported in the relevant literature suggests at least a similarity between our sample and other populations of club drug users. In this sense, particular attention should be paid to South American cultural aspects, such as the higher prevalence of engagement in anal sex when compared with other cultures and the finding of anal intercourse as a predictor of unprotected sex.

Finally, this was a self-report study, with the inherent advantage of having data collected and analyzed within a short period of time – which probably explains why this methodology is still the first choice for most studies of this nature. Conversely, self-report also has important disadvantages, such as recall bias and potential predetermination of the respondent to change or hide actual facts. Although reliance solely on self-report measures of behavior is controversial, a variety of controlled studies have documented that, in a nonthreatening environment, when questioned about drug use and sexual activities, drug users usually provide reliable information and are truthful to the best of their recollection (55,56). Therefore, we believe that the guarantee of confidentiality to our participants and the use of specifically trained staff has helped mitigate the potential deficiencies of self-report methodology.

Longitudinal cohort studies with larger samples of êxtase users are warranted. In the meantime, we believe that our preliminary findings contribute to a better understanding of the factors implicated in sexual risk behaviors and can provide guidance to future research.

Conclusions

An improved understanding of the factors associated with sexual risk behaviors has important implications for the sexual health of young adults, especially drug users. Therefore, intervention strategies aimed at reducing sexual risk behaviors should take into consideration the specific features of drug users and include the development of safer (anal and vaginal) sex negotiation skills.

Behavioral interventions are known to reduce unprotected sex practices, and our results indicate that preventive measures aimed at this population can work and should be supported. Making condoms available to the community and increasing the efficacy of self-management behaviors could contribute to promote effective personal abilities in reducing risk behaviors (e.g., reducing unprotected anal sex, having oral sex rather than anal sex, reducing the number of partners, avoiding serodiscordant partners, or reducing anal sex even with condom use). Future studies should be conducted to further clarify which messages are most effective in promoting these behaviors, as well as to identify the methods and settings in which messages can be most effectively delivered. Because most studies have been conducted with white men from the U.S. and Europe, more evaluations of interventions are needed in African American and Hispanic populations, as well as in developing countries like Brazil.

Conflicts of interest

The authors have no conflicts of interest to declare.

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4ARTIGOS EM PREPARAÇÃO

Os materiais abaixo são artigos em fase de preparação a serem submetidos após a defesa do doutorado.

4.1 Psychiatric symptoms in a sample of young non-heterosexual ecstasy and LSD users

Psychiatric symptoms in a sample of young non-heterosexual ecstasy and LSD users.

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Abstract

Background: Previous studies identified high rates of psychiatric symptoms among non-heterosexual drug users, but few studies have investigated the prevalence of mental health problems among non-heterosexual club drug users. **Objective**: This study evaluated the demographic characteristics and psychiatric symptoms of a sample of club drug users to compare findings between heterosexual and non-heterosexual participants and to identify correlations between sexual orientation and depression and anxiety symptoms in the 12 months before the interview. Methods: This cross-sectional study relied upon ethnographic mapping and targeted sampling. Face-to-face interviews were conducted in electronic music dance events and festivals using a semi-structured questionnaire, the Global Appraisal of Individual Needs (GAIN). The sample comprised 240 men and women, heterosexual (n=171) and non-heterosexual (n=69) participants that had used ecstasy, LSD or both in the 90 days before the interview and who were not under treatment for alcohol or other drugs. Results: Multivariate regression analysis revealed a positive association between being heterosexual and not having depression symptoms. The prevalence of depression symptoms was 37% higher for non-heterosexual than heterosexual participants (PR = 1.79, 95% CI: [1:03, 3:11].**Conclusions**: Depression symptoms were more frequently reported by non-heterosexual participants that used ecstasy, LSD or both. These findings may represent important markers for the future development of disorders, which underscores the need for interventions aimed at prevention and recovery in this specific population.

Keywords: Club drugs; Non-heterosexual; Sexual orientation; Psychiatric symptoms

1 INTRODUCTION

Findings in the literature have indicated that the non-heterosexual population has particular healthcare needs. When compared with the general population, this population has important physical and mental health vulnerabilities, such as unhappiness, suicidal thoughts and behaviors, self-mutilation, depressed and anxious mood, addiction to alcohol and drugs, and other psychiatric conditions, as well as a higher risk of STD and HIV infection. Their lifestyle, combined with alcohol and drug abuse, increases the risk of morbidity and suicide attempts.

Most studies in this field have been conducted in developed countries, such as the United States, European countries and Australia (1-4). A representative study showed that non-heterosexual British (5) people had anxiety and depression symptoms and greater prevalence of alcohol and drug abuse than the general population (6). A recent meta-analysis on the prevalence of mental disorders and substance abuse among lesbian, gay and bisexual populations (LGB) revealed that they had twice the risk of suicide attempts than heterosexual individuals. In addition, that study showed that the prevalence of depression and anxiety disorders was 1.5 times higher among LGB populations (7). These results are in line with the findings of a systematic review conducted by King et al. (7), who found that, in addition to increased risk of depressive and anxiety disorders and suicide attempts, they had a higher risk of drug addiction [from 1.51 to 4.00]. In a survey including Latino and Asian American individuals conducted by Cochran et al. (8), high rates of suicide attempts were found among homosexual and bisexual men and of depressive disorders among lesbian and bisexual women (8-11).

The use of club drugs among gay and bisexual men follows documented trends. Club drugs include phenethylamine, popularly known as ecstasy, some less known substances, such as 2C-B, and some inhalants (nitrous oxide and amyl nitrite "poppers") (12). The use of these substances among heterosexuals is not more prevalent than in the general population (9,13). However, most studies with non-heterosexual users of club drugs focus on the rave scene and sexual risk behaviors. A small number of studies have focused on the presence of psychiatric disorders among non-heterosexual users of club drugs in developing countries.

2. METHODS

2.1 Participants and methods

This study is part of a large naturalistic study that recruited 240 club-goers in Porto Alegre, a state capital and large metropolitan area in southern Brazil. Participants were recruited from March to July 2010 using target sampling and an ethnographic fieldwork approach. Project staff, in conjunction with "key informants", mapped night clubs, rave parties and parks where potential participants were known to congregate. Face-to-face interviews were conducted *in loco* to assess demographic characteristics, substance use practices, psychiatric symptoms, and sexual risk behaviors. The training of field interviewers emphasized, in particular, elements of rapport, street drug slang, and confidentiality and privacy of information obtained. At the end of the interview, participants received a lunch voucher as a compensation for their participation. Inclusion criteria were age between 18 and 39 years, use of ecstasy, LSD or both at least once in the 90 days before the interview, and no current treatment for drug or alcohol problems.

Sociodemographic characteristics and psychiatric symptoms of anxiety, depression and traumatic stress were compared between heterosexual and non-heterosexual club drug users. Non-heterosexual participants were defined as all those that reported having a sexual preference for partners of the same sex (gay) or for both sexes (bisexual), defined by the answers to two questions: "What is your sexual preference?" and "How many male/female partners have you had in the last 90 days?" Heterosexual club drug users were used as the reference group for subsequent analyses.

This study was approved by the University of Delaware Institutional Review Board and by the Research Ethics Committee of Hospital de Clínicas de Porto Alegre.

2.2 Instruments

To identify eligible participants, we prepared a brief screening form, based on forms developed in the U.S. for similar populations (14,15). Data about sociodemographic characteristics were collected using self-reported questions that included the following variables: age, sex, education (years of schooling), individual monthly income, and occupation. To evaluate psychiatric symptoms, we used a short adapted version of the Global Appraisal of Individual Needs scale (GAIN), used as the primary data collection instrument (16). GAIN has been used in studies with both adolescents and adults in a variety of settings;

it has strong psychometric properties and is the main clinical and research measure for many NIDA-funded multicenter studies (17). The values of Cronbach's alpha for all scales and subscales were higher than 0.7 (more details on scale development can be found at http://www.chestnut.org/LI/gain/index.html). The original version of this instrument includes eight sections that evaluate specific information on 1) demographics, 2) substance use, 3) physical health, 4) risk behaviors, 5) mental health, 6) environment, 7) and legal and 8) vocational aspects. For this study, we used the sections about mental health based on the symptoms of anxiety, depression and traumatic stress, as defined in DSM IV. This section has three subscales to assess anxiety, depression and traumatic distress.

Depressive symptoms were assessed using 9 items of the Depressive Symptom Scale (DSS), such as: ''During the past 12 months, have you had significant problems with feeling very trapped, lonely, sad, blue, depressed, or hopeless about the future?'' Anxiety symptoms were assessed using 12 items of the Anxiety/Fear Symptoms Scale (AFSS), such as:"During the past 12 months, have you had significant problems feeling very anxious, nervous, tense, scared, panicked or like something bad was going to happen?" Traumatic Stress was assessed using 13 items of the Traumatic Distress Scale (TDS), such as: "Have you sometimes used alcohol and drugs to help you sleep or to forget things that happened in the past?" All scale items had a dichotomous response format (yes/no). Total scores on each of the subscales were added.

2.3 Measures

Demographics

Demographic characteristics were self-reported age, sex, education (years of schooling), individual monthly income and occupation.

Drug Use Behaviors

Substance use was assessed by asking participants if they had used a particular substance in the last 12 months. The variable for drug use was dichotomous (yes/no). Substances were those on a list of illicit drugs, such as alcohol, marijuana, ecstasy, cocaine, inhalants and LSD.

Psychiatric Correlates

The mental health component of the instrument has subscales to evaluate different aspects within the past year: depressive symptoms, anxiety symptoms and traumatic stress. Depressive symptoms were assessed using 9 items, such as: ''During the past 12 months, have you had significant problems with feeling very trapped, lonely, sad, blue, depressed, or hopeless about the future?'' Anxiety symptoms were assessed using 10 items, such as: ''During the past 12 months, have you had significant problems with feeling very anxious, nervous, tense, scared, panicked or like something bad was going to happen?'' Traumatic stress was assessed using 12 items, such as: ''During the past 12 months, have the following situations happened to you: when something reminded you of the past, you became very distressed and upset?'' The depressive, anxiety and traumatic stress symptoms measures are subscales of the GAIN general mental distress scale. All scale items used a dichotomous response format (yes/no).

2.4 Statistical analysis

Categorical variables were described as absolute and relative frequency, and quantitative variables, as means (standard deviation). Univariate Poisson regression was used to determine which variables were independently associated with the primary outcome; those with a significance level of less than 0.10 were included in the multivariate model. Both the univariate and the multivariate models were adjusted to sexual orientation (homosexual, bisexual and heterosexual), gender and education of the participants, and heterosexual was used as the reference category in the analysis. The variables that remained in the final multivariate model were: "You have had to repeat an action, or have had recurrent thoughts" and "When you think of things you did, you wished you were dead". These variables had a higher prevalence in the non-heterosexual group than in the heterosexual group.

3 RESULTS

A total of 240 club drug users were included in the sample (mean age: 22.9±4.5).The number of heterosexual participants was higher than the number of those that identified themselves as homosexual or bisexual (heterosexual, 41.04%; bisexual, 11.7%; homosexual, 17.1%).The analysis of sexual orientation according to sex revealed that the number of heterosexual male participants was higher than heterosexual female participants (61.4% vs.

38.6%) whereas among non-heterosexual participants there were similar numbers of men and women (49.3% vs. 50.7%). The characteristics of this subset of participants are described below.

3.1 Sample characteristics

Mean age of the 69 (28.75%) non-heterosexual participants was 22.7± 4.95 years; there were a few more women than men (50.7% vs. 49.3%) in this group. Mean individual monthly income of these 69 participants was equivalent to U$ 602.08 (U$ 1 = R$ 1.63 at the time of the study). Most participants had finished middle or junior high school (76.5%); 42% and 33.3% were employed or studying at the time of the interviews (Table 1).

Table 1. Characteristics of the sample according to sexual orientation of participants

Variables	Total N = 240	Homosexual/bisexual (%)		p
		yes (n= 69)	no (n= 171)	
Age	22.99±4.54	22.70 ± 4.95	23.10± 4.38	0.545
Sex				0.115
Female	101(42.1)	35 (50.7)	66 (38.6)	
Male	139(57.9)	34 (49.3)	105 (61.4)	
Income				
No Income	42(17.5)	13(18.8)	29 (17)	0.828
Up to US$ 602.80**	143(59.6)	39 (56.5)	104 (60.8)	
More than US$ 602.80	55(22.9)	17 (24.6)	38 (22.2)	
Occupation				
Studying and working	48(20)	14 (20.3)	34 (19.9)	
Student	76(31.7)	23 (33.3)	53 (31)	0.885
Employed	101(42.1)	29 (42)	72 (42.1)	
No study/no work	15(6.3)	3 (4.3)	12 (7)	
Education level				
High school	58(24.3)	12 (17.6)	46 (26.9)	0.277
Middle or junior high school	165(69)	52 (76.5)	113 (66.1)	
Elementary school	16(6.7)	4 (5.9)	12 (7)	
Sexual orientation				
Bisexual	28(11.7)			
Homosexual	41(17.1)			
Heterosexual	171(71.3)			
Sexual abuse or non-consensual sex	61(26)	26(37.7)	35(21.1)	0.013

heterosexual participants as reference category
Two participants did not answer
**US$ 1 = R$ 1.63 at the time of the study.

Table 2. Pattern of drug use according to sexual orientation of participants

Variables	Total N=240 (%)	Homosexual/Bisexual (%)		p
		yes (n= 69)	no (n= 171)	
Days of drug use #	21.41[12.56;32.37]	24.25 [12.56;32.87]	21.12[12.56;31.65]	**0.711**
Alcohol (ever used)	239(99.6)	69 (100.0)	169(99.4)	>0.999
Age at onset of use	14[13;15]	13[12; 15]	14[13; 15]	0.775
Last use				0.676
More than 90 days	6(2.5)	1(1.4)	5(2.9)	
Within 90 days	233 (97.5)	68(98.6)	165(97.1)	
Days of use within 90 days	30[16.25; 50]	36[23; 50]	30[15; 50]	0.055
Cannabis (ever used)	227 (95.4)	66(95.7)	161 (95.3)	>0.999
Age at onset of use	15[14; 17]	15[14; 17]	15[14; 17]	0.781
Last use				>0.999
More than 90 days	53 (23.1)	15(2.7)	38(23.3)	
Within 90 days	174 (76)	51(77.3)	123(75.5)	
Days of use within 90 days	36[10; 88]	32[3.5; 88]	36[10; 88]	0.633
Inhalants (ever used)	134 (56.3)	44(63.8)	90(53.3)	0.180
Age at onset of use	16[15; 20]	17[16; 18]	16[15; 22]	0.085
Last use				0.552
More than 90 days	88(56.8)	26(56.5)	62(56.9)	
Within 90 days	44(28.4)	16(34.8)	28(25.7)	
Days of use within 90 days	3[1.0; 10]	3[1.5; 22.5]	2.5[1; 7.75]	0.527
Ecstasy (ever used)	198(83.2)	62(89.9)	136(80.5)	0.118
Age at onset of use	18[17; 22]	18[17; 20]	18.5[17; 22]	0.220
Last use				0.235
More than 90 days	51(25.1)	12(19)	39(27.9)	
Within 90 days	148(72.9)	50(79.4)	98(70)	
Days of use within 90 days	2[1; 6]	2[1; 9]	2[1; 6]	>0.999
LSD (ever used)	211(88.3)	57(82.6)	154(90.6)	0.129
Age at onset of use	19[17;21]	18[17; 20]	19[17; 21.75]	0.181
Last use				0.702
More than 90 days	31(14.3)	7(11.9)	24(15.20)	
Within 90 days	180(82.9)	50(84.7)	130(82.3)	
Days of use within 90 days	2.5[1; 5]	3[1; 10]	2[1; 5]	0.153
Mushrooms (ever used)	43(18)	11(15.9)	32(18.8)	0.734
Age at onset of use	19[16.75; 20]	19[16; 20]	18[17; 20]	0.862
Last use				>0.999
More than 90 days	38(48.1)	10(41.7)	28(50.9)	
Within 90 days	5(6.3)	1(4.2)	4(7.3)	

Days of use within 90 days	1[1; 22]	42[42; 42]	1[1; 1.75]	0.114
Methamphetamine (ever used)	56(23.5)	17(25.0)	39(22.9)	0.866
Age at onset of use	19[17; 21]	18[17; 21.5]	19[17; 21]	0.951
Last use				0.578
More than 90 days	24(26.4)	9(29)	15(25)	
Within 90 days	30(33.0)	8(25.8)	22(36.7)	
Days of use within 90 days	2.5[1; 5.25]	3[1; 6]	2[1; 5]	0.743
Cocaine (ever used)	132(55.2)	48(69.6)	84(49.4)	0.007
Age at onset of use	18[16; 21]	18[16; 20]	18[15; 21]	0.392
Last use				0.546
More than 90 days	56(37.6)	16(34)	40(39.2)	
Within 90 days	65(43.6)	23(48.9)	42(41.2)	
Days of use within 90 days	6.5[3; 24]	11[4.25; 46.50]	4.5[2; 18.75]	0.055
Crack (ever used)	19(7.9)	7(10.1)	12(7.1)	0.592
Age at onset of use	18[16; 18.5]	16.5[15; 18.25]	18[16; 19]	0.282
Last use				0.263
More than 90 days	16(27.1)	7(33.3)	9(23.7)	
Within 90 days	3(5.1)	0	3(7.9)	
Days of use within 90 days	4(3;-)	-	4(3;-)	-

Last 90 days described as median and interquartile range
p for the comparison of the drug distribution profile in the two groups (Mann-Whitney)

3.2 Main analyses

Table 3: Univariate regression analysis of psychiatric symptoms according to sexual orientation adjusted to cocaine use, sex, education, age and mean number of days of drug use.

Psychiatric Symptoms	Homosexual/Bisexual			Univariate		
	no n=171(%)	yes n=69 (%)	p	RP	95% CI	p
Have you had problems with remembering or concentrating?	77(45.0)	42(60.9)	0.032	1.47	[0.93; 2.30]	0.092
Have you had thoughts that other people did not understand you or appreciate your situation?	59(34.5)	30(43.5)	0.237	1.22	[0.80; 1.85]	0.349
Have you experienced moving and talking slower than usual?	13(18.8)	27(15.8)	0.570	1.01	[0.60; 1.70]	0.950
Have you felt tired, had no energy or felt as if you could not work things out?	64(37.4)	31(44.9)	0.309	1.10	[0.72; 1.68]	0.637
Have you lost interest or pleasure in work, school, friends, sex or other things you cared about?	49(28.7)	24(34.8)	0.357	1.14	[0.74; 1.76]	0.530
Have you felt anxious, nervous, tense, scared, panicked or like something bad was going to happen	59(34.5)	37(53.6)	0.009	1.44	[0.95; 2.19]	0.079
Have you repeated the same action several times or had recurrent thoughts in your mind?	59(34.5)	39(56.5)	0.002	1.90	[1.22 ; 2.94]	0.004
When you think about things you've done, do you wish you were dead?	10(5.9)	14(20.3)	0.002	2.30	[1.43; 3.69]	0.001
Are your dreams real to the point that you wake up in a cold sweat and try to stay awake?	22(31.9)	33(19.4)	0.043	1.62	[1.06; 2.46]	0.024
Have you been afraid of what you want?	59(34.7)	33(47.8)	0.078	1.45	[0.97 ; 2.17]	0.064
Have you entered into a series of discussions and felt like shouting, throwing things, hitting, hurting or harming anyone?	38(22.4)	23(33.3)	0.101	1.45	[0.97; 2.18]	0.064
Traumatic distress	143(84.1)	64(92.8)	0.117	1.64	[0.72; 3.72]	0.238
Anxiety/fear	110(64.3)	49(71.0)	0.367	1.02	[0.64; 1.61]	0.928
Depression	110(64.3)	54(78.3)	0.046	1.41	[0.85; 2.34]	0.183

In the last 12 months.
*Analyses adjusted for: use of cocaine, sex, education, age, and mean number of days of drug use; symptoms in the PR with p <0. 20

Table 4. Severity scores for use of substances in groups with and without symptoms of anxiety and depression.

Severity Score	Depression					Anxiety				
	no (n=76)		yes (n=164)		p	no (n=81)		yes (n=159)		p
	mean (SD)	P50[P25;P75]	mean (SD)	P50[P25;P75]		mean (SD)	P50[P25;P75]	mean (SD)	P50[P25;P75]	
Alcohol	28 (12.6)	27 [20.3; 36]	28.4 (13)	26.7[19.25; 36.15]	0.923	28.3 (10.9)	26.4 [21.1; 34.5]	28.3 (13.8)	26.8 [19; 37]	0.863
Cannabis	18.3 (18.9)	12 [0; 35.5]	20 (17.4)	16[2.5; 36.9]	0.265	21.3 (18.8)	16 [0; 40.6]	18.3 (17.3)	14 [0; 34]	0.330
Inhalants	1.1 (3.4)	0 [0; 0]	2.7 (7.3)	0 [0; 0]	0.087	0.8 (2.9)	0 [0; 0]	2.9 (7.4)	0 [0; 0]	0.003
Ecstasy	3 (4.5)	0 [0; 5.45]	5 (7.4)	2.8 [0; 7.6]	0.027	2.7 (4.1)	0 [0; 5.8]	5.3 (7.5)	3 [0; 7.8]	0.003
LSD	3.2 (3.7)	1.4 [0; 6.4]	4 (4.3)	3.2 [0; 6.55]	0.182	3.3 (3.8)	1.4 [0; 6.2]	4 (4.3)	3 [0; 6.6]	0.221
Mushrooms	0.2 (1.2)	0 [0; 0]	0.2 (1.5)	0 [0; 0]	0.692	0 (0)	0 [0; 0]	0.2 (1.7)	0 [0; 0]	0.507
Meth	0.4 (2.1)	0 [0; 0]	1.4 (5.7)	0 [0; 0]	0.192	0.6 (3.1)	0 [0; 0]	1.3 (5.6)	0 [0; 0]	0.025
Cocaine	0.5 (2.1)	0 [0; 0]	8.5 (19.1)	0 [0; 8]	<0.001	1.3 (4.6)	0 [0; 0]	8.3 (19.3)	0 [0; 4]	0.001
Crack	0 (0)	0 [0; 0]	0.2 (1.3)	0 [0; 0]	0.236	0 (0)	0 [0; 0]	0.2 (1.4)	0 [0; 0]	0.214
Total	54.6 (26.6)	51 [34.3; 70.3]	70.5 (41.5)	64.9 [38.8; 91.15]	0.009	58.3 (27.6)	55.2 [37.3; 73.8]	69.1 (42.1)	65 [38.2; 89]	0.117

4. DISCUSSION

Discussion points to be taken into consideration and later expanded.

Non-heterosexual participants were at a higher risk of having psychiatric symptoms of depression than heterosexual participants. These findings are in agreement with those reported in the study conducted by Chakraborty et al. (6), which suggested that there is a significantly elevated prevalence of depressive episodes in the non-heterosexual groups when compared with heterosexual individuals. Studies conducted in North America and Europe corroborate findings that indicate that non-heterosexual individuals are at a higher risk of mental disorders, particularly suicidal ideation, substance abuse and self-mutilation, than heterosexual individuals. These findings are not associated with cultural aspects, but, rather, with life style and the social roles defined for this specific group. This may be a reflection of the increased prevalence of societal prejudice, stigma and discrimination to which this group is subjected. A review of mental health information on gay and bisexual men seen in an American community health clinic found that they most frequently presented with depression, anxiety and relationship issues. However, the comparison between groups revealed that anxiety was not prevalent in this study, but there was a greater tendency to having anxiety in the group of non-heterosexual participants. This may be explained by the fact that anxiety disorders are the most prevalent disease in the population in general and may have been a confounding factor in data analysis.

This study also found a greater rate of substance use in non-heterosexual participants, as well as age of onset of use and number of days of use similar to that of heterosexual participants.

A few limitations impact the generalizability of this study. Given the setting, some respondents could have been under the influence at the time of the survey. However, staff were trained to avoid interviewing visibly intoxicated individuals due to concerns about both data validity and capacity to consent. The public nature of these environments also raises questions about validity in the self-report of drug use, a stigmatized behavior. As a result, the causal sequence may be difficult to assess: did the 'outcome' influence the measured exposure level, or did the exposure affect the outcome? However, it confirms studies conducted mainly in North America, as well as in Holland (8), which suggests that non-heterosexual individuals are at a higher risk of mental disorder, suicidal ideation, substance misuse and self-harm than heterosexual individuals (1). It also confirms the results of earlier studies in the United

Kingdom, which used a snowball' sampling technique and found that gay men were more likely than heterosexual men to score above threshold on the Clinical Interview Schedule. Mental health-related general practitioner consultations and community care service use were also elevated in this population. In the non-heterosexual group, discrimination on the grounds of sexual orientation predicted certain neurotic disorder outcomes, even after adjustment for potentially confounding demographic variables.

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4.2 Motivations for using ecstasy and its market in Brasil: using, buying and selling: A Qualitative Examination of the ecstasy Experience

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Abstract

Background: The positive reputation of ecstasy among users reinforces the idea that it is a safe drug with no or limited negative social and health consequences. This study evaluates the motivational aspects associated with the recreational use of ecstasy and LSD from the perspective of the users themselves, and examines their perceptions and experiences of selling ecstasy. **Method**: In-depth individual semi-structured interviews were conducted from January to March 2011 with 20 individuals. The interviews were transcribed and evaluated using content analysis. Participants were not currently under treatment for alcohol or drug problems. **Results**: Mean participant age was 22.92±2.77; 60% were men, 65% were heterosexual, 55% were in a steady relationship, and 55% had completed at least junior high school. All participants had friends who also used ecstasy, and all reported being polydrug users. The reasons for ecstasy use were: curiosity, desire for an altered state of mind, self-medication, desire to have fun and sensation-seeking. The reasons for selling drugs were: feel popular among friends, increase chances to hit on women, feel powerful, make more friends, have more money to buy clothes, produce parties, and feel part of the rave culture. **Conclusion:** Participants described experiences associated with the most positive aspects of the use and sale of ecstasy, but not the negative consequences of these practices. Most were unaware of the specific problems that ecstasy might cause and did not consider its potential harm. The recreational use of ecstasy should be studied from the perspective of the users themselves, as a risk behavior that may lead to future illegal activities.

 Keywords: Club drugs; Qualitative research; Drug use; illegal activities; Ecstasy;

INTRODUCTION

Club drugs are a specific group of substances originally used in the context of electronic music, although also found in dance clubs and private parties, by groups who are young, polydrug users, well educated and wealthy (1). Except for MDMA (ecstasy), which has been the most common "dance drug", they form a group that includes drugs as diverse as gamma hydroxybutyrate (GHB), ketamine (special k), flunitrazepam (Rohypnol), methamphetamine, and lysergic acid diethylamide (LSD) (2).

According to a report of the United Nations(3), the concern over rising levels of use of club drugs, such as ecstasy, among South American youths has been growing in recent years. At 0.5% to 0.7% (4) of the population, its use is close to the world average, and the highest prevalence has been reported for Brazil, Venezuela and Argentina. Ecstasy remains easily available on the drug market (5-8), which may explain the spread of its use into wider groups and more diverse settings (9,10).

Studies suggest that there is a connection between drug use and risk behaviors, (11,12), criminal activity (13), psychiatric symptoms (14-16), and relationship problems (17,18). However, most studies about drugs and criminal activities have traditionally focused on cocaine, heroin and methamphetamine users (19,20). Little scientific attention has been paid to those who use ecstasy and LSD.

A systematic review (21) of studies about behaviors associated with ecstasy use found that the use of multiple drugs, sexual risk behaviors and involvement in illegal behaviors were among the most cited aspects in the last two decades.

Study results suggest that there should be more detailed investigations about this topic, especially in Latin America, because most studies have been conducted in North America and Europe; thus, new studies should clarify what behaviors are associated with the use of these substances, especially in other cultural contexts, such as Latin America.

The development of preventive measures based on more effective behavioral interventions should aim at specific target behaviors (22). What potential behaviors related to ecstasy use should be the target of interventions? Unfortunately, although the use of ecstasy has been studied for 20 years (23,24), no qualitative studies have been conducted to identify behaviors associated with its use in Brazil specifically, or the psychological determinants that should be taken into considerations when planning interventions and treatment strategies aimed at specific behaviors.

Ecstasy consumption and its association with the involvement in illegal activities should be analyzed from the perspective of the users themselves. This study analyzed aspects associated with the recreational use of ecstasy and LSD from the perspective of the users themselves and explored their views on buying and selling drugs.

METHOD

This study used qualitative procedures, which, according to Peters and Kok (25), are useful for studies about ecstasy users when the objective is to understand this phenomenon more profoundly. To familiarize the investigators with the context and application of research methods, we completed observational studies in six phases: five interviews with key informants and a pilot study with two groups of interviewees.

The sample was composed of 20 club-goers. As usual in qualitative studies, intentional criterion sampling was used (26,27). The sample consisted of individuals over 18 years of age, with no cognitive impairment or evident psychiatric disorder that might bias the content of the interview, and who were not currently under treatment for drug or alcohol problems.

The study was conducted using the "snowball" technique, which creates a chain of potential new cases from a first interviewee. The key informants were selected at parties and electronic music dance events, and the sample was then extended according to their social networks and their involvement with the rave culture. They provided phone numbers and e-mails of potential participants, who were contacted and invited to participate in the study. If they accepted to participate, study procedures were explained in detail. Before the interviews, all participants signed informed consent forms.

From January to March 2011, face-to-face audio-taped interviews were scheduled. A single interviewer conducted all of the semi-structured, individual interviews in neutral venues under guaranteed anonymity. The interviews were conducted at mutually agreed times and in central locations, in such venues as shopping centers, coffee shops, the project office, a city park, and, if necessary, even the participant's home. The interviewer's training included particular emphasis on elements of rapport, street drug slang, and confidentiality and privacy regarding the use of the information obtained. Mean time to complete the interview was 60 minutes, and all participants received a lunch voucher (equivalent to U$ 7) as a compensation for their participation, as well as the transportation fare, when necessary.

The topics discussed in the in-depth interviews were organized around guiding lists based on the literature and on the two pilot focus groups. The topics to be covered in the interviews were: 1) electronic music culture; 2) recreational use of club drugs, including history of drug use, consumption patterns and motivations for the use of ecstasy; 3) selling and buying ecstasy and LSD; 4) perceived social and health consequences; 5) mental health; and 6) sexual behaviors. The topics listed on the interview guide were not addressed in a specific order for all participants. Instead, the participants were allowed to guide the flow of the interview. If a topic did not naturally emerge, than the interviewer would bring it up. Demographic data were collected using close-ended questions.

In this study, we analyze two of the six themes included in the interviews: recreational use of club drugs - motivations for the use of ecstasy; and selling and buying ecstasy and LSD.

We defined recreational use as "the occasional use of certain substances in certain settings and in a controlled way" (28), and understand that such use is "perceived and sometimes tolerated as an embedded social practice" (29).

Data collection for the study was completed when the interviews reached the point of theoretical saturation, i.e., the interviews became redundant regarding the topics that the study aimed to investigate (26,30).

Ethics

The study was approved by both the University of Delaware Institutional Review Board and the Hospital de Clinicas Ethics Committee and Office of Human Subjects Protection of the Federal University of Rio Grande do Sul(GPPG-HCPA – no. 07-391).

Analyses and Interpretation

Two pilot interviews were conducted to evaluate the topics to be approached and the qualitative data collection process. The interviews were transcribed by trained members of the study team, and each interviewee was identified by a corresponding alphanumeric code composed of the following sequence: sex, age and level of education. The principal author compared the entire audio transcriptions with the original audio recordings. Two senior investigators conducted the preliminary analysis and review, which evaluated the pilot study, sample size, choice of analytical categories and result coding. The senior authors made

suggestions to improve the pilot interview, which would facilitate data triangulation after collection. Informed by their qualitative research experience, they evaluated coding and categorization. The content of each transcript was clustered according to topics, interview codification and theme categorization. Categories were examined using content analysis, a common analytical method for qualitative data. In this technique, the material is encoded and organized into categories, which transform raw data into a possible representation of the contents (31). Subsequently, the categories were clustered into themes for further abstraction. The following relevant recurring themes guided the description of results: recreational use of club drugs – motivations for the use of ecstasy; and selling and buying ecstasy and LSD.

Each of the themes is described below.

Results and Discussion

Sample Characteristics

The mean age of the 20 participants was 22.92 ± 2.77, and 60% were men. Most (85%) had completed college. Most respondents had jobs that ensured their financial independence, and their mean individual monthly income was equivalent to U$ 602.8. The socioeconomic status of most participants was middle class. Over half of the sample (55%) reportednot being involved in a steady relationship, and 10% reported living with a male or female partner. Almost half (49%) of the study participants lived independently, either in a rented place or in a place that they owned. All participants had friends who also used ecstasy. All reported using more than one type of drug, marijuana and cocaine being the most common, and all of them reported lifetime use of alcohol and tobacco. Most respondents reported past use of other illicit drugs, and the range of previously used drugs was wide (including LSD and ketamine). The analysis of sexual orientation revealed that 35%, all men, were self-reported homosexuals.

Motivational Factors Associated with Ecstasy Use

The boost to energy and the desire to feel part of a group and to have a more uninhibited mood are among the reasons most often cited by participants for the use of ecstasy and LSD. Motivation, in this study, was defined as the impulse that leads to action (32). Even among users who mentioned any risk or concern about the use of ecstasy and LSD, positive

experiences while intoxicated outweighed the negative effects of its consumption (33,34), which included: muscle tension, involuntary teeth clenching, nausea, blurred vision, faintness, and chills or sweating. In addition, users also experienced confusion, depression, sleep abnormalities, and attention and memory problems, although some of these effects may be due to the use of other drugs in combination with MDMA (especially marijuana). Sexual risk behaviors (35) and increased psychiatric symptoms (36-38) are some of the most prevalent consequences of ecstasy use. A European study found that the motivation that makes people use ecstasy and club drugs is similar to that of users of other stimulants: primarily, they seek the euphoric and energetic (39) effects that these drugs provide.

"You can you enjoy 12-14 hours of partying without getting tired, and not using, you cannot stand it, you do not have the energy. The intended use is to last as long as the party lasts. You take a tablet and then take another in 2 hours". (M, 24 years old, college)

"I always thought that there is no proof, or it is not addictive. If you arrive at the party and everyone is in effect and you are not, it's boring ... you cannot enjoy it. But when you use, you don't get tired". (M, 22 years old, college)

Drug use was an alternative in the search for improved mood, while self-medication was reported by participants as an important motivation for the use of ecstasy. The self-medication hypothesis (SMH) originated in studies conducted by Edward Khantzian, Mack and Schatzberg, David F. Duncan. Such behavior within the specific context of using recreational drugs, psychoactive drugs, alcohol, and other self-soothing forms of behavior to alleviate symptoms of mental distress, stress and anxiety (40), including mental illnesses, psychological trauma (41,42) or both, is particularly unique and may be seriously detrimental to physical and mental health if motivated by addictive mechanisms.

According to Khantzian (43), drug users compensate for deficient ego functions by using a drug as an "ego solvent", which acts on parts of the self that are cut off from consciousness by defense mechanisms (44,45). According to Khantzian (46), drug dependent individuals generally experience more psychiatric distress than non-drug dependent individuals, and the development of drug dependence involves the gradual incorporation of

the drug effects and the need to sustain these effects into the defensive structure-building activity of the ego itself. The choice of drug made by an addict is a result of the interaction between the psychopharmacologic properties of the drug and the affective states from which the individual was seeking relief. The drug effects substitute for defective or non-existent ego mechanisms of defense. The addict's drug of choice, therefore, is not random.

The association between mood states and ecstasy use has been confirmed in the literature. Its potential neurotoxicity and pharmacological stress have a strong influence on the brain system that regulates mood (47,48). Some studies comparing users and non-users of ecstasy found poorer mental health among users according to self-reported measures of depression, anxiety and somatic symptoms (49-53).

These substances seem to interfere with the regulatory system that modulates mood and physiological and neuropsychological functions (54-56), such as anxiety, aggression, sexual behavior, binge eating, sensation seeking and impulsivity (57-59). Most (former) ecstasy users with increased depression reported that the onset of their mood disorder preceded their first use of ecstasy (60,61). Some authors even suggest that individuals unconsciously chose to use ecstasy in an attempt to self-medicate for their deficiency in mood regulation (62).

"People usually feel more comfortable and uninhibited. I've always been very introverted, and was depressed when I started using. At the time, I did not leave the house, stayed in my room, life did not make sense. When I came across raves and ecstasy, I felt much happier". (M, 24 years old, university)

Ecstasyproduces unique subjective effects, such as increased sociability, feelings of closeness with others, and reduced interpersonal defensiveness. These 'empathogenic' effects, cited as reasons for the recreational use of ecstasy, may contribute to its reinforcing capacity; they may also form the basis for the proposed use of MDMA in psychotherapy. However, they have yet to be characterized in controlled studies. A study conducted by Bedi et al. (63) found that although it might increase feelings of interpersonal connection, ecstasy can subtly impair interpersonal competence as well as. For example, compromised social cognition might increase social risk-taking while the user is under the influence of the drug (63). A controlled study with ecstasy and methamphetamine users evaluated the increased

sociability associated with the use of these substances and found that the use of ecstasy increased empathogenic feelings, but *reduced* accurate identification of threat-related facial emotional signals, findings that are consistent with an increased social approach behavior, rather than with empathy. This effect of ecstasy on social cognition has implications for recreational use, as acute drug effects may alter social risk-taking while intoxicated (63). Studies in several countries have found that sensation seeking and alexithymia are implicated in ecstasy addiction. According to a cognitive-developmental model of emotional experience, alexithymia is the deficit in the cognitive processing of emotion that can be seen as impairment in the ability to consciously experience feelings in the context of autonomic activation indicative of emotional arousal. According to Lillaz and Varescon (64), deficits in the communication and identification of feelings are usually observed in substance abuse. Results from a European study found significantly higher sensation seeking for ecstasy and cocaine users, particularly in the subdimensions of disinhibition and experience seeking.

Selling and Buying Ecstasy and LSD

Ecstasy is a term used for MDMA, MDA, MDEA and its combination with other substances, such as ephedrine, DXM and LSD (65). This substance is the most popular club drug (66). According to the American Drug Enforcement Agency (67), its meaning is associated with appealing logos printed on its tablets, extolling brands such as Ferrari, Toyota and Mitsubishi, in hopes of building brand loyalty, instilling confidence in the product, and ultimately promoting the use of the drug and harmless fun by creating a false impression of status for its users (68).

A study in the UK (65) found that the market for the sale of drugs in general is more closely associated with the maintenance of lifestyle than actually with the drug itself. Collins, Hubbard and Rachal (69) examined heroin and cocaine use in relation to the generation of illegal income and reported that "expensive drug use and income-generating crime might be seen as reinforcing each other". Their study outlined "lifestyle offenders," "whose crime is about sustaining a lifestyle which includes the use of expensive drugs". Other authors suggest that such youth commit numerous offenses to obtain their drugs, particularly due to their given current social and economic status (70-72). When we asked participants to elaborate on selling ecstasy, many indicated that they viewed it as an activity that promoted popularity and status among friends, rather than an illicit act that may cause them social or legal harm.

"To maintain the lifestyle, you have to sell. My friends began selling to keep the rave style: clothing brands, big car, and a pumped-up body. It's a way to belong and be part of the culture". (M, 26 years, DJ)

According to some authors (73,74), the contexts and social networks in which young adults are immersed are also implicated in the use of ecstasy. Vervaeke et al. (73) found that it is common for individuals that continue using ecstasy to remain close to other users, maintaining their social networks focused on consumption (74). Consumption is restricted to certain subcultures and compatible with collective representations of pleasure seeking, feelings of belonging and transgression.

"Those who sell have more money and girls, meet new people and end up becoming more famous. It is a world of glamour". (M, 21 years old, university)

Participants did not associate their behavior with serious negative social effects. When exploring the dimensions of ecstasy trafficking, we learned that it was less about making money and more about selling ecstasy to obtain money for personal use or to maintain the lifestyle. In fact, it appeared that someone in the network of friends had ecstasy or that the group could easily get it through a dealer, who is usually a friend. These dealers, whose market was primarily limited to raves in the early days, may now be found at local clubs and bars, or at their own homes.

The report below was made by a participant who sells ecstasy. He referred to selling ecstasy as a fine line between being a user and becoming a seller.

"You begin as a user of ecstasy, and then you meet the guys and you easily become a seller. If you get a good dealer, you buy the drug for R$ 20 and sell it for R$ 45. It's easy money and you are also popular at the party, and everyone is after you". (M, 24 years old, college)

None of the participants reported problems in getting or selling the drug. They all mentioned that the task demanded no great effort, but brought them greater popularity among friends.

"The idea is to enjoy the sale, we sell and then use. It's not like selling cocaine, which is bought in the most dangerous places to resell. This deal is for fun". (M, 21 years old, college)

"I started dating a guy, he was very popular. He used eight tablets of ecstasy per night. My friends heard that he sold and everyone wanted. I pointed him out to many people. He was getting a lot of money. He started selling drugs and doing it quietly, and suddenly he became the boss of all raves. After a while, he pulled away, and no one has heard of him again. It seems he was arrested, but not for long, because his father is a lawyer". (F, 23 years old, college)

The study conducted by Van de Wijngaart et al. (75) found that most ecstasy users obtained their pills via friends or acquaintances and that many were not sure of the composition of these pills, and their results remain true today. In the ecstasy market, tablets are distinguished by brand names. They have been stamped with various symbols over time, often spawned by popular culture and recognizable icons. The friendships between buyers and sellers seem to yield trust in the purity and quality of the ecstasy exchanged, regardless of brand (68). Media and law enforcement reports have claimed that ecstasy sellers market the drug to children by creating candy-colored pills with kid-friendly logos (76-78).

"The good pills are sold faster and everybody knows their brands. There is the Joker, the Sherk and the Ferrari ... People sell for the fame and ego. The good pills are the ones that produce more effects, and everyone wants them". (M, 21 years old, college)

Most participants did not realize that the sale of drugs was risky. They seemed to believe that ecstasy was not an illicit drug with a potential for significant danger. Selling was

seen as a way of belonging to the group and having fun due to the feeling of popularity that it granted them.

> "The access was easy, I always had a friend who had it to be sold. This was a huge network, I always had a friend who had another friend who knew someone who sold it". (F, 32 years old, university)

Other participants referred to the sale of ecstasy and LSD as a way to help friends and become well-connected, because drugs are differentiated by their cost and the social profile of their users.

> "Whoever sells it is known as a "friend of the crowd" because they make things easier. The dealer is the one with the power and money. The last I knew bought 600 pills and spent about R$ 10,000. The good pills come from abroad. They sell at parties, for example, to make more money and hire DJs from abroad". (F, 32 years old, university)

It is important to note that the internet is an easy way of access to both those who sell and those who purchase these substances. Ecstasy-related websites reveal that ecstasy users from all over the world access various websites and online bulletin boards to share information, particularly about specific brands (79,80).

In addition to the sale of club drugs over the internet and during festivals through users' friends, informal media, such as newspapers and magazines (81,82), have reported the influence of producing electronic music parties in the sale and access to drugs during parties.

> "The producers are planning a party purposefully. At many parties, the security guys are make-believe, and some are even selling. The motto that raves are peace and no drugs is very hypocritical". (M, 25 years, DJ)

"The festivals of electronic music and raves have an appeal because of both the environment and the style of music, which stimulate the effects of club drugs, such as ecstasy and LSD. The production of parties associated with the sale of these substances, both together with the tickets (Combo Ticket + 01 = bullet) and during the event itself, is a way to ensure some extra cash for companies that produce their own parties".

Electronic music parties have a special style and require, in general, characteristic decorations, such as fluorescent flags and banners and many mixed colors, which are sometimes used intentionally to promote increased distortions of visual perception, such as psychedelic effects, caused by hallucinogens.

"You can arrive at the party with someone who is selling tickets to the party and get in before, so you are not searched. The staff that organize the event also help". (M, 23 years old, university)

"One party producer sold 300 boxes of ecstasy and made lots of money to bring a DJ from abroad". (M, 26 years, university)

Although not all ecstasy pills are identified by brand or corporate logos, the essence of the ecstasy culture is apparent in its marketing of pill brands called Ferrari, Motorola and Mitsubishi. These labels appear to reflect the current state of society, in which ecstasy tablets may be seen as cultural artifacts of affluent social classes (68).

Conclusion

This study investigated factors associated with the motivation for recreational use of ecstasy and LSD from the perspective of the users themselves. In addition, we explored their views on selling and buying ecstasy. In doing so, we explored findings in the context of the club scene, focusing on the social and contextual factors, as well as the influence of knowledge about possible consequences of ecstasy use that may contribute to the users'

perception of risk. The results of this study indicated that these specific themes are in accordance with the interviewees' drug perception and experience.

A review by Peters et al. analyzed the social determinants of ecstasy consumption and found that many users have positive expectations associated with drug use (21). These aspects should be demystified so that reliable information about the unwanted effects of the drug is made available to young adults. The negative effects of the drug may be associated with contaminated pills. A Brazilian chromatography study of 25 different ecstasy batches found MDMA variations from 30.9 to 92.7 mg. This information might strategically discourage non-users from experimentation and warn current users (83). As users cannot test the pills, it is difficult to know actual pill composition.

Most respondents reported that they obtain information about the positive and negative effects of the drug through the Internet or other users. This response suggested that information enhances the perception of risk. Young individuals are searching for further information about the drug, possibly due to media coverage of deaths associated with ecstasy consumption. Information may improve harm reduction, which has been a widely used strategy for damage reduction during and after the consumption of ecstasy (84-86).

A clearer understanding of the motivations for using and selling ecstasy has important implications for the health and social lives of young adults. Our findings suggest that intervention strategies aimed at reducing the consumption of these substances should take into consideration the specific characteristics of drug users.

Theory-based behavioral interventions have successfully generated behavior change in other areas, and may likewise have beneficial effects when applied to ecstasy use. However, the development of an effective intervention requires knowledge about which modifiable determinants need to be targeted. Study results have provided information about different forms of interventions for ecstasy use. Strategies aimed at ecstasy users should be different from those developed for persistent users of other substances. Preventive public health interventions at multiple levels should be put into practice in party contexts. Environment and social network are among the most important factors for use cessation. Dissemination of information about the effects and adverse consequences of use seem to be an important strategy for prevention. Discussion of life goals, individual responsibilities and the influence of friends, as well as an emphasis on fun without ecstasy, should be considered for inclusion in interventions. The reasons for use in this Brazilian sample were similar to those found in

American and European studies. Therefore, interventions tested in other countries may be adaptable to Brazil.

Finally, the motivations for the use and sale of ecstasy and LSD in this context raise important questions about the relationship between consumption and trafficking. Different cultures have different cultures of use and sale of drugs. The impact of laws and trends of availability of certain drugs according to certain times may vary significantly. However, data in this study reflect the global trend of increased consumption and trafficking of synthetic drugs in the world, confirmed in the literature. Few interviewees were concerned about being detected as engaged in an illegal behavior, either use, or selling and buying. Being members of economically advantaged families who have a higher education level fosters a sense of impunity and promotes the engagement in illegal behaviors.

This study has some method limitations, as our data were based on self-report obtained during formatted interviews, which poses a potential threat to the validity of our findings. College students are more likely to have good academic achievement, financial resources, and an educated peer group that may greatly affect the consequences of their ecstasy use. Future studies comparing young adult ecstasy users who attend college to a matched group of youths who do not attend college might help us to better understand how the unique college environment affects ecstasy use and its associated consequences.

In spite of these limitations, the findings of this study point to the need to review the current models of intervention and education for young adult drug users and the theories that guide such measures. Intervention models need to take into account the life and culture of ecstasy and LSD users from the perspective of their own experiences. Strategies adapted to achieve appropriate prevention and to promote interventions to reduce harm, such as involvement in criminal activity and sexual risk behaviors, will only be possible if there is greater proximity to their culture and better understanding of this phenomenon. Furthermore, some substance users, even informed about the risks involved in their use, are willing to live this experience. Treatments directed at these young adults should consider their willingness to accept these risks.

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5 CONCLUSÕES

Os dados dos artigos apresentados nessa tese refletem o alto custo individual e social do uso de *club drugs*.

No primeiro estudo, salientam-se estratégias de coleta de dados e aponta-se o EFW como a mais efetiva para a população e o contexto específico em que a pesquisa ocorreu. Esse método demonstrou melhor desempenho quando comparado às técnicas de amostragem RDS e TARC, garantindo acesso a maior número de participantes elegíveis, ao levar em consideração o perfil dos sujeitos selecionados. Assumindo que cada técnica de recrutamento seleciona um tipo de perfil específico de participante, usuários de drogas pesadas são, provavelmente, mais facilmente recrutados por meio de EFW, enquanto os métodos RDS e TARC parecem mais adequados para o recrutamento de usuários de drogas mais leves.

Nesse estudo, as técnicas RDS e TARC permitiram acesso a participantes com história de uso de drogas mais curta, nível de escolaridade superior e melhor situação de emprego/renda. Os participantes recrutados por meio do EFW, por sua vez, apresentaram história mais longa de uso de drogas e níveis de escolaridade inferiores; além disso, foram constatadas presença de trabalho informal e renda mensal menor quando comparada à do outro grupo. Especula-se que o número de drogas utilizadas, o nível de escolaridade, o *status* ocupacional e a renda mensal poderiam estar correlacionados de alguma forma. O EFW permite conhecer os participantes pessoalmente, em seu ambiente natural, o que possivelmente favorece a aproximação dos sujeitos com alto grau de desconfiança e mais vulneráveis.

Os achados expostos nessa tese corroboram com estudos prévios nacionais e internacionais no que tange a populações de difícil acesso. A credibilidade é essencial no recrutamento de populações estigmatizadas e marginalizadas, uma vez que permite aos participantes o desenvolvimento de maior confiança, promovendo a adesão ao estudo.

É importante salientar que populações caracterizadas por alto grau de suspeição, como são os usuários de drogas, exigem trabalho etnográfico mais detalhado.

Conhecer a população-alvo em profundidade permite que se compreendam os códigos de convivência vigentes na cultura dos usuários de drogas e, especialmente, os tipos de relações que se estabelecem. Inciardi *et al.* referem que estudos etnográficos são especialmente importantes para investigar minuciosamente resultados imprevistos sobre

assuntos particularmente sensíveis, como usuários de drogas, populações com HIV e profissionais do sexo (Kurtz; Inciardi; Pujals, 2009, Inciardi; Surratt; Kurtz, 2007). O trabalho etnográfico também representa uma forma de amostragem especialmente útil em países com políticas de repressão às drogas, como é o caso do Brasil.

É relevante mencionar que o uso de diferentes técnicas de amostragem possibilitou, nesse estudo, melhor refinamento das estratégias utilizadas no recrutamento da população, permitindo aos investigadores experimentar e descobrir a melhor abordagem para atingir sujeitos em potencial, em uma cultura peculiar, como é o caso da brasileira.

A compreensão adequada do comportamento de usuários de *club drugs*, os quais são considerados população de difícil acesso, no que tange aos seus padrões de consumo e comportamentos sexuais de risco, é crucial para que se desenvolvam estratégias de contenção da epidemia do consumo de novas substâncias e da redução da exposição a doenças sexualmente transmissíveis. Por uma variedade de razões já mencionadas, no entanto, a facilidade de estratégias tradicionais de pesquisa baseadas em coleta de dados convencionais, com amostras representativas e probabilísticas, é ineficaz para diferentes tipos de populações, particularmente aquelas cujos comportamentos são ilegais ou ilícitos – peculiaridades de pessoas que preferem não participar de estudos em que há coletas de dados.

De forma geral, esse estudo demonstrou que o uso de *club drugs* é um tema bastante sensível e ainda pouco explorado por estudos locais, especialmente no que se refere aos procedimentos de coleta de dados e recrutamento da população que utiliza tais drogas. Em particular, destaca várias barreiras enfrentadas na utilização de diferentes estratégias de coleta de dados em no contexto de pesquisa.

À luz do que foi demonstrado, os métodos de amostragem discutidos nessa tese representam os melhores esforços observados até o momento para encontrar técnicas viáveis que contribuam para a obtenção de tendências imparciais sobre a prevalência do uso de *club drugs* e comportamentos de risco relacionados ao seu consumo. Os resultados dos estudos em curso de validação de técnicas de amostragem das populações de difícil acesso, especialmente no caso de países em desenvolvimento, devem fornecer evidências sobre o quão efetivos são seus métodos de amostragem para subpopulações específicas, considerando contextos diferenciados. Sem dúvida, isso resultará em avanços para melhor monitoramento do fenômeno e acesso a informações possivelmente inalcançadas até então.

Pertinente ao segundo estudo, sugere-se que usuários de *club drugs*, que referem comportamentos de prática de sexo anal e sexo enquanto intoxicados, estão mais propensos a realizarem ato sexual sem preservativo, quando comparados aos que não referiam tal comportamento.

Os dados sobre a combinação de uso de drogas e sexo corroboram a literatura atual, a qual sugere que os participantes envolvidos em relações sexuais sem proteção são mais propensos a relatar outros comportamentos sexuais de risco, como ter múltiplos parceiros, trocar sexo por drogas/dinheiro e ter relações sexuais sob a influência da drogas/álcool, aumentando o risco de doenças sexualmente transmissíveis, incluindo infecção por HIV.

Na Europa, estudos têm registrado muitas incidências de uso de drogas combinado com o sexo, bem como níveis crescentes de doenças sexualmente transmissíveis (Bellis *et al*., 2008; Lomba; Apóstolo; Mendes, 2009; Bellis; Hughes, 2004; Castro, 2002). Outros estudos também têm descrito o uso de drogas ilícitas para melhorar o desempenho sexual e aumentar o prazer (Prestage *et al*., 2007; Benotsch *et al*., 2011; James, 2004).

Países latino-americanos referem maior prevalência de sexo anal quando comparados a outros países (Halperin, 1999; Dixon; Peters; Saul, 2003). Além disso, estudo realizado nos EUA encontrou maior prevalência da prática de sexo anal entre os latinos do que em outras etnias (Ibanez et al., 2012). Fatores culturais e papéis tradicionais de gênero podem influenciar na escolha da prática sexual. São exemplos: a prática de sexo anal relatada por mulheres latinas como forma de resposta às solicitações ou às exigências (Davila; Brackley, 1999; Marin; Gomez, 1997) do seu parceiro masculino.

Estudo etnográfico observou que a prática de sexo anal poderia estar relacionada à necessidade cultural de subjugar as mulheres mais do que a algum tipo de relação sexual. Resultados de pesquisa realizada com estudantes universitários de Porto Rico sugeriram que agradar ao parceiro, servir de método contraceptivo e preservar a virgindade estavam entre as razões para que as mulheres se envolvessem em relações sexuais anais na cultura latino-americana/caribenha (Beck; Green, 2008).

Características de personalidade, como impulsividade e busca de sensação (Zuckerman, 1979; Baldwin; Baldwin, 2000), podem estar associadas ao uso de drogas antes e durante o ato sexual. A prática de sexo enquanto intoxicado tornou-se, para muitos usuários de drogas, parte integrante da sua abordagem estratégica para o sexo, possivelmente alterando decisões sexuais e aumentando as chances dessa prática sem o uso de preservativo (Parsons *et*

al., 2004). A busca por sensação ou o julgamento alterado, especialmente, podem estar na base das explicações para associação frequente entre comportamentos sexuais de risco e uso de drogas (Mulry *et al*., 1996; Kalichman; Heckman; Kelly, 1996; Klitzman; Pope; Hudson, 2000). Mesmo que a amostra aqui exposta não seja representativa da população geral de usuários de *club drugs*, esse estudo encontra-se na mesma linha de pensamento e achados de outros autores, que também referem estudos relevantes sobre esse tema.

Analisando os dois estudos de forma conjunta, é possível observar que ambos apontam para uma população vulnerável com alto grau de comprometimento físico e mental. Possivelmente por essas razões, há dificuldades para se chegar a esses indivíduos por meio de estratégias de coleta de dados convencionais.

No que diz respeito a traçar um perfil mais detalhado do público-alvo, os aspectos relatados no segundo estudo estão de acordo com o primeiro. Os dados apontam para a gravidade desse perfil e justificam a dificuldade de acesso aos participantes. Ademais, esse estudo demonstra o quanto a melhor estratégia de coleta de dados – baseada na confiança e no contato face a face – favoreceu o acesso a informações relevantes e aprofundadas, como os resultados referentes aos padrões de uso de substâncias e comportamentos sexuais de risco.

Por fim, há que se pensar na vulnerabilidade e na gravidade dos riscos aos quais a população usuária de *ecstasy* e afins – identificada nesse estudo – está submetida, assim como deve-se ter em mente a falta de informações suficientes sobre esse grupo relativamente novo de substâncias como as *club drugs*. Além disso, pouco se sabe sobre as características regionais das substâncias utilizadas em Porto Alegre e não estão bem-estabelecidas as consequências adversas a seu consumo. Dessa forma, é preciso refletir sobre a importância, de maneira especial para esse novo grupo de drogas, da realização de análises toxicológicas, de forma a auxiliar no conhecimento das substâncias e a fornecer informações mais aprofundadas sobre seu potencial perigo.

Algumas recomendações se fazem necessárias, portanto, a partir do que foi referido. A problemática em torno do uso de *club drugs* deve ser compreendida à luz da sua singularidade, que precisa ser considerada no desenvolvimento de políticas públicas de saúde e serviços de tratamento, levando-se em conta que a população referida está exposta a comportamentos de riscos diretos, incluindo infecções por HIV e vírus da hepatite C (HCV).

A realidade aponta que os usuários estão sofrendo o impacto do uso desse grupo de substâncias sem qualquer tratamento adequado. Em geral, os serviços de atendimento para

usuários de drogas são treinados, primeiramente, para o tratamento de substâncias como álcool, cocaína e *crack*. Assim, muitos usuários de *club drugs* têm acesso a informações sobre drogas, suas consequências e o manejo de seus efeitos adversos através da internet e de amigos, intensificando o risco de comorbidades e, consequentemente, afastando-os de programas com potencial preventivo e terapêutico.

Até o presente momento, especialmente em Porto Alegre, não há atendimento especializado para a população de risco mencionada. Fica evidente, porém, que há demanda de cuidados específicos adequados ao perfil diferenciado desses usuários. A possibilidade de que intervenções sejam implementadas de forma adequada à demanda dessa população de risco depende de estudos aprofundados sobre tal tema, associados à criação de programas de assistência.

Entre os diversos tipos de tratamentos aplicados aos transtornos de adição, estão as terapias comportamentais, que têm sido aplicadas com sucesso e têm longa tradição ao integrar modelos variados para lidar com o problema. O modelo Matrix é uma ferramenta que integra uma série de técnicas para o desenvolvimento de habilidades necessárias no controle dos transtornos de adição. Esse programa de tratamento fornece as habilidades necessárias, uma vez que o indivíduo recebe a responsabilidade pela resolução do problema, e não por sua causa e seu desenvolvimento. O método também mostra ao paciente como largar um velho hábito e controlar sua ocorrência no futuro (Rangé; Marlatt, 2008).

6 MATERIAL SUPLEMENTAR

6.1 Desenvolvimento de um programa de assistência a usuários de *club drugs*

Dados europeus referem que, embora existam informações sobre os efeitos prejudiciais do uso das *club drugs* relacionados ao seu potencial de abuso e dependência, o número de tratamentos, por consumo de anfetamina e seus derivados – como o *ecstasy* – é relativamente pequeno (Observatório Europeu da Droga e da Toxicodependência, 2007). Essas substâncias raramente estão na base da procura de terapêutica na maioria dos 21 países europeus cujos dados foram disponibilizados e, quando ocorrem, os pedidos por tratamento referem-se, sobretudo, ao consumo das anfetaminas como substância principal, e não do *ecstasy*. Na Irlanda, na Holanda, no Reino Unido e na França, entre 1 e 5% dos usuários iniciam a terapêutica por consumo de *ecstasy* como substância principal. Em todos os países europeus, exceto na Grécia e na Suécia, o número de pedidos de primeiro tratamento por consumo de anfetaminas e de *ecstasy* aumentou de 6.500 para 10.000 em 6 anos. Nesses países, junto com os consumidores de maconha, os usuários de *ecstasy* compõem a faixa etária mais jovem que inicia o tratamento por toxicodependência (European Monitoring Centre for Drugs and Drug Addiction [EMCDDA], 2013).

No Brasil, embora a incidência de uso das *club drugs* ainda esteja em crescimento, poucas são as informações referentes a seu consumo. Estima-se que, no País, existam mais de 1,6 milhões de usuários; entre os universitários, a prevalência de uso em relação à população geral no País excede a 3,7% (United Nations Office on Drugs and Crime, 2013). Assim como em outros grandes centros urbanos, na cidade de Porto Alegre essa situação é preocupante. Entre os anos de 2005 e 2008, segundo dados de levantamento registrado em periódico local (ZERO HORA) (Duarte; Bock, 2008), houve aumento de 900% do público frequentador de festas de música eletrônica. Nesse mesmo ano, evidências obtidas pelo Departamento Estadual de Investigações do Narcotráfico apontaram aumento de 600% no número de comprimidos de *ecstasy* apreendido pela Polícia Federal. Estudo realizado pelo CPAD em conjunto com a Universidade de Delaware (EUA), na cidade de Porto Alegre, em 2010, com a finalidade de identificar o padrão de uso de drogas, sintomas psiquiátricos e comportamentos sexuais de risco em usuários de *ecstasy* e LSD, deparou-se com um cenário preocupante, como mostram os dados a seguir: dos 240 participantes entrevistados usuários de *ecstasy* e/ou

LSD, 57,9% eram homens, 70% possuíam, quanto à escolaridade, segundo grau completo e 42% trabalhavam em empregos formais com renda mensal de até R$ 1.200,00. O uso de álcool na vida foi referido por 100% dos entrevistados; 95% referiram uso de maconha; 88,3% relataram consumir LSD; 83,2%, *ecstasy*; 55,2%, cocaína. Do total de entrevistados, 26% reportaram ter sofrido abuso sexual (sexo sem consentimento antes dos 14 anos de idade). Quanto à presença de comportamentos sexuais de risco, 80% referiram ter praticado sexo sob efeito de álcool e drogas; 63,4% tiveram 2 ou mais parceiros sexuais nos últimos 90 dias; 36,1% referiram prática de sexo sem preservativo, 40% referiram prática de sexo anal; 60% das mulheres relataram prática de sexo vaginal sem preservativo nos últimos 90 dias anteriores à data da entrevista. A presença de sintomas psiquiátricos também foi constatada nessa população: 58% apresentaram ansiedade moderada (de 2 a 6 sintomas); 50%, depressão moderada (2 a 5 sintomas); 47%, estresse traumático moderado (1 a 4 sintomas) – em 40%, verificou-se estresse traumático severo (5 a 13 sintomas) nos 12 meses prévios à coleta de dados. Quanto à busca por tratamento, 83% referiram ter necessitado de atendimento psiquiátrico em emergência hospitalar para tratar problemas emocionais alguma vez na vida, e 77% relataram nunca ter recebido tratamento ou aconselhamento para uso de substâncias. É importante mencionar que essa é uma população resistente à busca espontânea por tratamento, apesar de identificados problemas psiquiátricos e necessidade para tal (Almeida; Silva, 2003; Battisti *et al*., 2006; Almeida; Bizeto; Silva, 2007; Almeida; Garcia-Mijares; Silva, 2009; Comis; Noto, 2012).

A importância de oferecer tratamento para a população usuária de *club drugs*, mediante desenvolvimento de um serviço de assistência, está embasada nos indicativos mencionados anteriormente e no potencial de perigo que acompanha essas substâncias, pois se trata de uma população vulnerável e de risco, que não dispõe, até então no País, de qualquer tipo de tratamento adequado às suas peculiaridades e à sua demanda. Essa população pouco busca atendimento especializado de forma espontânea para tratar o abuso de *club drugs*. A resistência à busca por tratamento fortalece a necessidade de um olhar especial, já que os serviços existentes para esses usuários apresentam pouca ou nenhuma experiência no tratamento dessa demanda.

6.2 Alternativas de tratamento a serem oferecidas

a) Terapia comportamental

As últimas três décadas têm sido marcadas por grande progresso nas terapias comportamentais para o abuso e a dependência de drogas (Carroll; Rounsaville, 2003; Carroll; Onken, 2005). A terapia cognitivo-comportamental foi desenvolvida como método para prevenir a recaída no tratamento de problemas com uso de álcool; mais tarde, foi adaptada para indivíduos dependentes de cocaína e de outras drogas. Tais estratégias são destinadas a aumentar o autocontrole, baseadas na teoria de que os processos de aprendizagem desempenham papel crítico no desenvolvimento de padrões comportamentais desajustados. Indivíduos aprendem a identificar e corrigir tais padrões problemáticos, aplicando uma série de habilidades diferentes que podem ser usadas para a modificação dos comportamentos de abuso de drogas e para tratar de uma série de outras comorbidades. Entre as estratégias utilizadas, estão técnicas específicas para explorar as consequências positivas e negativas de uso contínuo de substâncias e automonitoramento para reconhecer antecipadamente a fissura pela droga e identificar situações de risco para uso. Elemento central desse tratamento é antecipar possíveis problemas e ajudar os pacientes a desenvolver estratégias eficazes de enfrentamento.

Estudos indicam que as habilidades particulares aprendidas por intermédio de abordagens cognitivo-comportamentais continuam em vigor após a conclusão do tratamento. Estudos revelam que a maioria das pessoas que receberam tratamento pela abordagem cognitivo-comportamental mantiveram os ganhos obtidos em tratamento durante todo o ano seguinte a ele (Carroll et al., 2004; Sholomskas et al., 2005). Por exemplo, de acordo com meta-análise conduzida por sete organizações governamentais americanas, incluindo o Centers for Disease Control and Prevention (CDC) e o National Institute of Health (NIH), a proporção de abstinência relacionada à terapia cognitivo-comportamental aumentou tanto com a duração quanto com o número de sessões, chegando a ser 2,5 vezes maior com sessões de mais de 30 minutos, do que a de um grupo-controle sem aconselhamento, após um seguimento mínimo de 5 meses a partir da cessação (Department of Health and Human Services, 2000). Embora tenha sido demonstrada efetividade positiva com o uso das terapias de cessação em estudos internacionais, características próprias das populações podem afetar sua aplicabilidade. Por exemplo, sua interação com condições socioculturais específicas poderiam fazer com que sua efetividade seja diferente daquela estimada por meio de estudos realizados em outros países (Carroll *et al*., 2004).

b) Modelo Matrix

O modelo Matrix, derivado da terapia cognitivo-comportamental, fornece estrutura de tratamento diferenciada para drogas com características estimulantes, como é o caso da metanfetamina e da cocaína. Esse modelo estimula os usuários abusivos a atingir a abstinência mediante orientação de um terapeuta capacitado (Carroll; Onken, 2005). A figura desse profissional funciona simultaneamente como professor e treinador, promovendo relacionamento positivo e encorajador com o paciente e favorecendo o reforço à mudança positiva de comportamento (Rawson et al., 1995).

A interação entre o terapeuta e o usuário é direta, mas não de confronto ou parental. Os profissionais são capacitados a conduzir as sessões de tratamento de forma que favoreça o fortalecimento da autoestima. A relação positiva entre paciente e terapeuta é fundamental para a retenção dos pacientes (Carroll et al., 2004; Sholomskas et al., 2005).

Os tipos de abordagens utilizados no modelo Matrix são derivados de outros tratamentos testados e, assim, incluem elementos de terapias de recaída, prevenção e psicoeducação. Os manuais de tratamento contêm sessões individuais e outros componentes que incluem grupos de familiares, desenvovimento de habilidades iniciais de recuperação, grupos de prevenção de recaída, sessões combinadas, testes toxicológicos para monitoramento da abstinência, análise de recaída e grupos de apoio social (Rawson *et al.*, 1991).

Uma série de estudos (Shoptaw *et al.*, 1994; Rawson *et al.*, 1995; Huber *et al.*, 1997; Rawson *et al.*, 2000) tem demonstrado que os participantes tratados, utilizando o modelo Matrix, reduziram significativamente o uso de drogas, apresentaram melhorias nos indicadores psicológicos e redução dos comportamentos sexuais de risco associado com a transmissão do HIV e outras doenças sexualmente transmissíveis.

6.3 Atividades a serem desenvolvidas

A partir dos modelos de tratamentos citados, as atividades contarão com assistência ambulatorial e médica, coleta de material biológico e avaliação da efetividade do tratamento. No tratamento ambulatorial, serão coletadas informações assistenciais dos pacientes, além da realização de entrevistas individuais para avaliação, orientação e planejamento do tratamento e grupos terapêuticos, com o objetivo de desenvolvimento psicossocial, prevenção à recaída,

manejo de contingência, desenvolvimento de habilidades sociais e orientação a familiares. O tratamento médico contará com manejo medicamentoso de possíveis sequelas por uso de substância, comorbidades psiquiátricas (depressão, bipolaridade e psicoses) e desintoxicação dos pacientes. A coleta de material biológico incluirá amostras de sangue, saliva e urina para triagem toxicológica, sífilis, hepatite B e C e HIV.

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ANEXOS

Anexo A – Formulário de triagem

FORMULÁRIO DE TRIAGEM

NOME DO ENTREVISTADOR _____

DATA:_____

HORA:_____

NOME DO LOCAL DA COLETA:_____

AUTORIZO MINHA PARTICIPAÇÃO NESTE ESTUDO.*

( ) Sim

( ) Não

2) E-mail para contato_____

3) Sexo

( ) Masculino

( ) Feminino

4) Escolaridade

( ) Ensino Fundamental

( ) Médio

( ) Superior (inclusive mestrado e doutorado)

( ) Outros (pré-vestibular, supletivo e alfabetização para adultos)

5) Idade *_____anos

6) Qual a sua situação ocupacional?

( ) Não estuda nem trabalha

( ) Estudante

( ) Empregado

( ) Desempregado

( ) Autônomo

7) Contando todas as suas fontes de renda, quanto de dinheiro total você produz em um mês típico?*

( ) Não tem renda

( ) Até ½ salário mínimo (até R$ 255,00)

( ) Mais de 1/2 a 1 salário mínimo (mais de R$ 255,00 a R$ 510,00)

( ) Mais de 1 a 2 salários mínimos (mais de R$ 510,00 a R$ 1.020,00)

( ) Mais de 2 a 3 salários mínimos (mais de R$ 1.020,00 a R$ 1.530,00)

( ) Mais de 3 a 5 salários mínimos (mais de R$ 1.530,00 a R$ 2.550,00)

( ) Mais de 5 salários mínimos (mais de R$ 2.550,00)

8) Qual foi a última vez que você usou êxtase e/ou LSD?*

( ) Até 30 dias atrás

( ) De 31 a 60 dias atrás

( ) De 61 a 90 dias atrás

( ) Há mais de 90 dias atrás

( ) Nunca

9) Quantas vezes você usou alguma destas drogas – êxtase e/ou LSD - nos últimos 90 dias? Nº de vezes _____

10) Qual destas drogas você usou nos últimos 90 dias?*

( ) êxtase

( ) LSD

( ) Não usei drogas nos últimos 90 dias

11) Você participa de algum programa para tratamento do seu uso de drogas?

( ) Sim

( ) Não

12) Com que frequência você vai a festas ou bares?*

( ) 1 vez por semana

( ) De 2 a 3 vezes

( ) De 4 a 5 vezes

( ) Mais de 5 vezes

( ) 1 vez por mês

( ) De 2 a 3 vezes

( ) De 4 a 5 vezes

( ) Mais de 5 vezes

( ) Não costumo ir a festas ou bares

13) Quais são os três lugares que você mais freqüenta?

Descrição:_____

Anexo B - Global Appraisal of Individual Needs - (GAIN-I) (Univ. of Del.) - Versão [GVER]:5.4.0

S. Uso de Substâncias (Álcool, Maconha e Outras Drogas)

NOME DO ENTREVISTADOR_____N° DO SUJEITO: _____

S7d. Quando foi a <u>última vez</u> que você recebeu tratamento, aconselhamento, medicação, acompanhamento para seu uso de álcool ou qualquer tipo de droga?

Dentro dos últimos 2 dias	6
3 a 7 dias atrás	5
1 a 4 semanas atrás	4
1 a 3 meses atrás	3
4 a 6 meses atrás	2
Mais de 6 meses atrás	1
Nunca	0

R. Comportamentos de Risco e Prevenção de Doenças

As próximas perguntas são a respeito de sua vida sexual.

** R2. Quando foi a **última** vez, se aconteceu, que **você teve qualquer tipo de relação sexual** (vaginal, oral ou anal) com outra pessoa?	**(Circule um)**
Dentro dos últimos dois dias	6
3 a 7 dias atrás	5
1 a 4 semanas atrás	4
1 a 3 meses atrás	3
4 a 6 meses atrás	2
Há mais de 6 meses	1
Nunca	0 **[VÁ PARA R3a]**

Por favor, responda as próximas perguntas com SIM (1) ou NÃO (0).

SxR	R2. Durante os últimos 12 meses, você...	Sim	Não
S	a. Fez sexo enquanto você ou seu parceiro/a **estavam sob efeito de álcool ou outras drogas**?	1	0
	b. Fez sexo com um **usuário de droga injetável**?	1	0
	c. Fez sexo anal - com pênis no ânus?	1	0
	d. Fez sexo com um homem que pode ter feito sexo com outro homem?	1	0
	e. **trocou** sexo por drogas, presentes, ou dinheiro?	1	0
	f. usou drogas, presentes, ou dinheiro para conseguir sexo?	1	0
	g. teve **dois ou mais** parceiros sexuais diferentes?	1	0
	h. teve relação sexual com um parceiro do **sexo masculino**?	1	0
	j. teve relação sexual com uma parceira do **sexo feminino**?	1	0
	k. teve relação sexual **na ausência** de qualquer tipo de preservativo, barreira oral, ou outra barreira para proteger você e o seu parceiro de doenças e gravidez?	1	0
	m. teve muita **dor** durante o sexo ou após ter tido relação sexual?	1	0
	n. usou álcool ou outras drogas para que a relação sexual **durasse mais tempo ou machucasse menos**?	1	0

Durante os últimos 90 dias...

SPR	p. quantos parceiros sexuais homens você teve?	|___|___|___| Parceiros
	q. quantas parceiras sexuais mulheres você teve?	|___|___|___| Parceiras

R3. Qual a sua preferência sexual atualmente?

Não ter sexo	1
Ter sexo somente com mulheres	2
Ter sexo somente com homens	3
Ter sexo com homens e mulheres	4
Outro (Por Favor, descreva) v.	99

M. Saúde Mental e Emocional

As próximas questões referem-se a problemas nervosos, mentais ou psicológicos. Esses problemas são considerados **significativos quando você os apresenta por duas ou mais semanas**, quando eles retornam continuamente, quando eles o impedem de realizar suas responsabilidades, ou quando eles o fazem sentir-se como se não pudesse continuar vivendo.

Por favor, responda às próximas questões usando **SIM** ou **NÃO**.

	M1b.Durante os últimos 12 meses, você tem tido problemas **significativos** com...	Sim	Não
IMDS/ GMDS/ DSS **	1. sentimentos de estar sem saída, de solidão, de melancolia, de tristeza, de depressão, ou de desesperança em relação ao futuro?	1	0
	3. memória, concentração, tomada de decisões ou "brancos"?	1	0
	4. sentimentos de muita vergonha, de constrangimento ou de preocupação com o que as outras pessoas pensaram ou tem falado sobre você?	1	0
	5. pensamentos sobre as outras pessoas não o entenderem ou não perceberem sua situação?	1	0
	6. sentir-se facilmente aborrecido, irritado ou tendo problemas em controlar seu temperamento?	1	0
	7. sentir-se cansado, sem energia, ou como se você não conseguisse resolver as coisas?	1	0
	8. perda de interesse ou satisfação com trabalho, escola, amigos, sexo ou outras coisas que você aprecia?	1	0
	9. perda ou ganho de 10Kg ou mais enquanto você não estava tentando fazê-lo?	1	0
	10. mover-se ou falar mais lentamente que o usual?	1	0

	M1d. Durante os últimos 12 meses, você tem tido problemas **significativos** com...	Sim	Não
IMDS/ GMDS/ AFSS**	1.sentir-se muito ansioso, nervoso, tenso, assustado, em pânico, ou como se algo ruim estivesse prestes a acontecer?	1	0
	2.ter que repetir uma ação várias vezes, ou ter pensamentos que se mantiveram sendo repetidos na sua mente?	1	0
	3.tremer, tendo seu coração acelerado, ou sentindo-se tão inquieto a ponto de não conseguir permanecer sentado?	1	0
	4.entrar em uma série de discussões e sentir o desejo de gritar, atirar coisas, bater, ferir ou prejudicar alguém?	1	0
	5.sentir muito medo de espaços abertos, de sair da sua casa, de ter que viajar ou de estar em meio a um grande número de pessoas?	1	0
	6.evitar cobras, escuro, estar sozinho, elevadores ou outras coisas porque elas o atemorizam?	1	0

	7.pensamentos sobre outras pessoas estarem tirando proveito de você, não lhe dando crédito suficiente, ou causando-lhe problemas?	1	0
	8.pensamentos sobre alguém estar observando-o, seguindo-o, ou em busca de você para pegá-lo?	1	0
	9.ver ou ouvir coisas que ninguém mais pode ver ou ouvir, ou sentir que alguém pode ler ou controlar seus pensamentos?	1	0
	10.pensamentos sobre você dever ser punido por pensar muito em sexo ou outras coisas?	1	0
	11.ter muita tensão ou dor muscular por você estar preocupado?	1	0
	12.ser incapaz ou achar difícil controlar suas preocupações?	1	0

EPS *	**M1e.** Quando foi a última vez, se houve, em que sua vida foi **significativamente** perturbada por problemas nervosos, mentais ou psicológicos ou em que você sentiu que não podia continuar, **incluindo** aquilo sobre o que nós conversamos há pouco?	(Circul e um)
	Nos últimos 2 dias	6
	3 a 7 dias atrás	5
	1 a 4 semanas atrás	4
	1 a 3 meses atrás	3
	4 a 6 meses atrás	2
	Mais que 6 meses atrás	1
	Nunca	0

**	Por favor, responda às próximas questões usando o número de dias.	Dias
	f. **Durante os últimos 90 dias,** em quantos **dias** você foi incomodado por algum problema nervoso, mental ou psicológico?	|__|__|
	g. **Durante os últimos 90 dias,** em quantos **dias** esses problemas impediram-no de realizar suas responsabilidades no trabalho, faculdade ou em casa, ou fizeram-no sentir-se como se não pudesse continuar vivendo?	|__|__|

M1k. Qual era a sua **idade** quando você **começou** a ter esses problemas psicológicos?	Idade |___|___|

EPS **	**M2.** Quando foi a última vez, se houve, que a sua vida foi perturbada por memórias de coisas do passado que você fez, viu, ou que lhe aconteceram?	(Circule um)
	Nos últimos 2 dias	6
	3 a 7 dias atrás	5
	1 a 4 semanas atrás	4
	1 a 3 meses atrás	3
	4 a 6 meses atrás	2
	Mais que 6 meses atrás	1
	Nunca	0

Por favor, responda às próximas questões usando **SIM** ou **NÃO.**

		Sim	Não
IM DS TSS **	**M2. Durante os últimos 12 meses,** as seguintes situações ocorreram?	Sim	Não
	a. quando algo o lembrou o passado, você ficou muito angustiado e desconsertado.	1	0
	b. você teve pesadelos sobre coisas do seu passado que realmente lhe aconteceram.	1	0
	c. quando você pensou naquilo que fez, você desejou que estivesse morto.	1	0
	d. pareceu que você não tem nenhum sentimento.	1	0

	e.seus sonhos, durante a noite, foram tão reais a ponto de você acordar-se com suor frio e tentou manter-se acordado.	1	0
	f. sentiu-se como se não pudesse continuar a viver.	1	0
	g. ficou com medo do que desejava.	1	0
	h. às vezes, você usou álcool ou outras drogas para ajudá-lo a dormir ou a esquecer coisas que aconteceram no passado.	1	0
	j. perdeu a calma e explodiu com coisas pequenas, cotidianas.	1	0
	k. teve medo de dormir à noite.	1	0
	m.teve dificuldades em expressar seus sentimentos, mesmo às pessoas de que você gosta.	1	0
	n. sentiu-se culpado sobre coisas que aconteceram porque você sentiu-se como se devesse ter feito algo para preveni-las.	1	0
	p. teve algum dos problemas citados anteriormente por três ou mais meses	1	0

As próximas questões referem-se a **TRATAMENTO** para problemas mentais, emocionais, comportamentais ou psicológicos. Isso inclui fazer uso de medicações como por ex. ritalina que um médico pode ter prescrito a você para ajudá-lo a concentrar-se e a acalmar-se. Não considere tratamento **apenas** para abuso de substâncias ou problemas de saúde física. Por favor, responda às próximas questões usando o número de vezes.

** M5 .Quantas vezes**, na sua vida,** você...	Vezes
b. foi tratado em uma **sala de emergência** devido a problemas mentais, emocionais, comportamentais ou psicológicos?	|__|__|__|
c. foi internado, por ao menos uma noite, em um **hospital** devido a problemas mentais, emocionais, comportamentais ou psicológicos?	|__|__|__|

M5d. No momento, você está fazendo uso de medicação devido a problemas mentais, emocionais, comportamentais ou psicológicos? **(Por favor, descreva).** v._____	Sim	Não
	1	0

MH TI*	**M5e.** Quando foi a última vez, se houve, que você foi tratado devido a problemas mentais, emocionais, comportamentais ou psicológicos por um especialista em saúde mental em uma sala de emergência, um hospital, um ambulatório de saúde mental, ou com medicação prescrita?	**Circule um**
	Nos últimos 2 dias	6
	3 a 7 dias atrás	5
	1 a 4 semanas atrás	4
	1 a 3 meses atrás	3
	4 a 6 meses atrás	2
	Mais que 6 meses atrás	1
	Nunca	0

Vida Profissional

V7. Qual das seguintes afirmações melhor descreve sua situação profissional ou escolar? (Se mais de uma aplica-se, marque a que se aplica mais frequentemente)	
Trabalho em tempo integral, 40 horas ou mais por semana	1
Trabalho em tempo parcial, menos de 40 horas por semana	2
Tem um emprego, mas não está trabalhando devido a tratamento, doença prolongada, licença maternidade, ou greve.	3
Tem um emprego, mas não está trabalhando pois se trata de trabalho sazonal	4
Desempregado e à procura de trabalho	5
Desempregado e não está à procura de trabalho	6

Dona (o) de casa em tempo integral	7
Na escola ou no estágio	8
Na escola ou no estágio, mas atualmente não frequenta aulas	9
Aposentado	10
Na prisão ou detenção	11
Incapaz para trabalhar (Descrever deficiência) v._____	12
Serviço Militar	13
Fazendo trabalho voluntário	14
Alguma outra situação de trabalho (Por favor, descreva) v._____ _____	99
a. Há **quanto tempo** você está nesta situação? |___|___| |___|___| |___|___| |___|___| **Anos** **Meses** **Semanas** **Dias**	

XSSab. Na média de um mês, **durante os últimos 90 dias**, quanto você gastou em álcool?   R$_____
XSSac. Na média de um mês, **durante os últimos 90 dias**, quanto você gastou em drogas? R$ _____

	Álcool	Maconha	Inalantes	Êxtase	LSD	Cogumelos	Metanfetam.	Cocaína	Crack
Quantos anos você tinha a primeira vez (se ocorreu) que você usou...									
Quando foi a última vez que você usou...(1) Nos últimos 90 dias (2) Mais de 90 dias									
Nos últimos 90 dias em quantos dias você usou...									
Nos últimos 90 dias em quantos dias você usou imediatamente antes ou durante o sexo?									
Durante um mês típico, nos últimos 6 meses, quanto você usou no total? **NÃO n° DIAS – SIM n° de drinques, pílulas, papelotes, cigarros, pedras ...**									

MEDICAÇÃO PRESCRITA USO RECREACIONAL NÃO PARA TRATAMENTO MÉDICO. VERIFICAR O NOME COMERCIAL DA MEDICAÇÃO NA LISTA DE MEDICAÇÕES EM ANEXO				

Você usa alguma medicação prescrita com o intuito de diversão, uso recreacional? ( ) Sim
( ) Não

SE SIM, Qual?_____

Quantos anos você tinha a primeira vez (se ocorreu) que você usou..._____

Quando foi a última vez que você usou...   (1) Nos últimos 90 dias

(2) Mais de 90 dias

Nos últimos 90 dias EM QUANTOS DIAS VOCÊ USOU..._____

Nos últimos 90 dias EM QUANTOS DIAS VOCÊ USOU **IMEDIATAMENTE ANTES OU DURANTE O SEXO**? _____

Nos últimos 90 dias, **DE QUE FORMA VOCÊ CONSEGUIU** MEDICAÇÕES PRESCRITAS?_____

	N°s	Sim	Não	Recusa Responder
Q988. Quantos anos você tinha quando fez sexo pela primeira vez (vaginal, oral, anal)?				
Q989. Foi com o seu consentimento?				
Você já sofreu abuso sexual?				
Com que idade ocorreu?				
Q990. Quantos parceiros diferentes você já teve desde a primeira vez que você fez sexo (oral, anal, vaginal) ?				
Q991. Você atualmente tem seu primeiro parceiro sexual? **Se NÃO,vá para Q994.**				
Q992. Quanto tempo tem sido este o seu primeiro relacionamento? (anos)				
Q993. Quanto tempo tem sido este o seu primeiro relacionamento? (meses)				
Q994. Quantas vezes, nos últimos 90 dias você fez **SEXO ORAL**? Se0, pule para **Q996.**				
Q996. Quantas vezes, nos últimos 90 dias você fez **SEXO VAGINAL**? **Se 0, pule para Q998.**				
Q997. Destas, quantas vezes você usou qualquer tipo de preservativo?				
Q998. Quantas vezes nos últimos 90 dias você fez **SEXO ANAL**? **Se 0, FINALIZAR A SESSÃO.**				

Anexo C - Carta de Aceite de Publicação

Subject: CLINICS - Decision on Manuscript ID CLINICS-2013-0077.R2

Body: 17-May-2013

Dear Dr. Remy:

It is a pleasure to accept your manuscript entitled "Correlates of unprotected sex in a sample of young club drug users" in its current form for publication in CLINICS.

Thank you for your fine contribution. On behalf of the Editors of CLINICS, we look forward to your continued contributions to the Journal.

Sincerely,
Dr. Mauricio Rocha e Silva
Editor-in-Chief, CLINICS
mauricio.silva@hc.fm.usp.br

Date Sent: 17-May-2013

Anexo D - Mapa de Categorização das Variáveis Qualitativas

C I (F; %)	Subcategorias (F; tot%; cat%)	CF	Subcategorias (F)
Cena Eletrônica (328; 17.65)	Diferencial das festas (32; 1.71; 9.75)	Motivações para o uso de drogas	Droga na cena (61)
	Cena no passado (33; 1.77; 10.06)		Local das raves (34)
	Importância da música (26; 1.39; 7.92)		Motivações para o uso (146)
	Frequentadores (34; 1.82; 10.36)		Família (22)
	Local das raves (33; 1.77; 10.06)		Valores da cena (27)
	Divulgação (03; 0.16; 0.91)		Amizades no consumo (99)
	Droga na cena (61; 3.28; 18.59)		Amigos de festa (33)
	Retirada das raves (39; 2.09; 11.89)		Gostar das mesmas coisas (44)
	Cena passado/presente (25; 1.34; 7.62)		
	Valores (27; 1.45; 8.23)		
	DJ na cena (15; 0.80; 4.57)		
Drogas (745; 40.09)	Poliusuários (202; 10.87; 27.11)	Sexo e Drogas	Drogas no sexo (63)
	Motivação para o consumo (146; 7.85; 19.59)		Efeitos das drogas no sexo (53)
	Alterações de comportamento (130; 6.99; 17.44)		Preservativo (47)
	Risco do consumo de drogas (89; 4.79; 11.94)		Relações rápidas (87)
	Dependência (76; 4.09; 10.20)		Troca de parceiros (21)
	Efeitos no sexo (53; 2.85; 7.11)		Risco de uso de drogas (89)
	Afastamento da cena (13; 0.69; 1.74)		Abuso sexual (65)
	Influencia da música na droga (21; 1.13; 2.81)		Relacionar-se em festas (32)
	Substituição de drogas (07; 0.03; 0.93)		Troca sexo droga/droga sexo (13)
	Popularidade da cocaína (08; 0.43; 1.07)		Alterações de comportamento (130)
Relacionamentos (338; 8.19)	Família (22; 1.18; 6.50)	Projeto e Tratamento pessoal	Culpa por uso de drogas (05)
	Relações abertas (87; 4.68; 25.73)		Estímulo para a reflexão (02)
	Troca parceiro (21; 1.13; 6.21)		Dependência (76)
	Amigos de festa (33; 1.77; 9.76)		Internação
	Gostar das mesmas coisas (44; 2.36; 13.01)		Poli usuários (202)
	Risco relacionamento de festa (32; 1.72; 9.46)		Popularidade da cocaína (08)
	Influencia amigos para consumo (99; 5.32; 28.28)		Uso de medicação (04)
			Substituição de droga (07)
Sexo (197; 10.60)	Abuso (65; 3.49; 32.99)	A cena como estímulo ao consumo	Afastamento da cena (13)
	Drogas no sexo (63; 3.39; 31.97)		Retirada das raves (39)
	Preservativo (47; 2.52; 23.85)		Influencia da musica no consumo (21)
	Troca sexo droga (13; 0.69; 6.59)		Dj na cena (15)
	Prostituição (09; 0.48; 4.56)		Papel da música na cena (26)
			Droga na cena (61)

			Diferenças entre passado e presente (25)
			Produtoras de festas (08)
			Controle em festas (76)
			Local das raves
			Facilidade (45)
Tráfico (232; 12.48)			Prisão (18)
			Internação (07)
	Prisão (18; 0.96; 7.75)		Prostituição (09)
	Produtoras de festas (08; 0.43; 3.44)		Abuso (65)
	Funcionamento (65; 3.49; 28.01)	Consequências do uso de drogas	Substituição de drogas (07)
	Controle em festas (76; 4.09; 32.75)		Risco do uso (89)
	Motivação para venda (20; 1.07; 8.62)		Dependência (76)
	Facilidade (45; 2.42; 19.39)		Afastamento da cena (13)
			Alterações de comportamento (130)
			Motivação (20)
			Funcionamento (65)
			Influencia amigos para consumo (99)
			Amigos de festa (33)
			Gostar das mesmas coisas (44)
			Relações rápidas (ficadas) (87)
Tratamento (1; 0.59)	Uso de medicação (04; 0.21; 36.36)	O grupo como influencia para o consumo	Troca de parceiros (21)
	Internação (07; 0.37; 63.63)		Família (22)
			Popularidade da cocaína (08)
			Motivações para o uso (146)
			Alterações de comportamento (130)
			Valores da cena (27)
			Perfil dos frequentadores (34)
			Diferencial das festas (32)
Projeto (7; 0.37)	Culpa por uso de drogas (05)		
	Estímulo para reflexão (02)		

F=frequência de verbalizações;

tot% porcentagem em relação ao total de categorias; cat% porcentagem em relação a cada categoria

CI Categorias Iniciais; CF Categorias finais.

TOTAL DE UNIDADES DE REGISTRO ANALISADAS = 1858