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## The mental health experiences and needs of methamphetamine users in Cape Town: A mixed methods study

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### Abstract

**Background**—South Africa has a burgeoning problem of methamphetamine use, particularly in the Western Cape. Although methamphetamine has been associated with elevated psychological distress, there has been little examination of the mental health needs of out-of-treatment methamphetamine users in South Africa.

**Objective**—To describe the mental health experiences and needs of out-of-treatment methamphetamine users in Cape Town.

**Methods**—Active methamphetamine users were recruited using respondent driven sampling techniques. Eligible participants (n=360) completed a computer-assisted assessment and clinical interview, where they provided data on mental health symptoms and treatment seeking behaviour. A subset of 30 participants completed qualitative in-depth interviews where they provided narrative accounts of their mental health experiences and needs. Analysis of the mixed-methods data was conducted using a concurrent triangulation strategy, whereby both methods contributed equally to the analysis and were used for cross-validation.

**Results**—About half of survey participants met screening criteria for depression and traumatic stress, and there were some indications of paranoia. Using substances to cope with psychological distress was common, with participants talking about using methamphetamine to numb their feelings or forget stressful memories. One-third of women and 13% of men had previously tried to commit suicide. Despite the huge mental health burden in this population, very few had ever received mental health treatment.

**Conclusion**—The data indicates a need for integrated care that addresses both substance use and psychiatric needs in this population. Mental health and drug treatment services targeting methamphetamine users should include a concerted focus on suicide prevention.

## Keywords

South Africa; Methamphetamine; Mental Health; suicide

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## INTRODUCTION

Since early 2000, there has been an exponential rise in the use of methamphetamine, locally called 'tik,' in the Western Cape. Studies consistently show that methamphetamine use is associated with poor mental health, including depression, psychosis and suicidality.<sup>[1]</sup> In South Africa, research has demonstrated increased risk of mental health problems among methamphetamine users, including aggressive behaviour<sup>[2]</sup> and symptoms of depression and anxiety.<sup>[3]</sup>

The relationship between methamphetamine and mental health is complex. On the one hand, poor mental health may be a risk factor for the initiation of substance use, as people may 'self-medicate' as a way to deal with psychiatric distress.<sup>[4]</sup> On the other hand, substance use results in numerous psycho-social sequelae, including isolation, family breakdown, and loss of employment, which can contribute to mental health problems. Chronic methamphetamine use is associated with structural and functional changes in the brain that may account for the higher rate of psychiatric disturbance in this population.<sup>[5]</sup> Furthermore, the cycle of addiction (including intoxication, bingeing, withdrawal and craving) may lead to depressed mood, lethargy, and anhedonia.

Regardless of whether psychiatric disturbances precede or follow the initiation of methamphetamine use, understanding the mental health experiences and needs of methamphetamine users in South Africa is important, as poor mental health may be a barrier to drug cessation and harm reduction efforts. Psychological distress impacts motivation to initiate drug treatment services,<sup>[3]</sup> and on-going distress may contribute to attrition from treatment. In addition, mental health problems may serve as barriers to reducing harms associated with continued substance use such as risky sexual behaviours. Despite the potential impact of untreated mental disorders on treatment seeking and outcomes, there has been little research on how methamphetamine users experience symptoms of psychological distress. This gap needs to be addressed so that appropriate intervention programmes can be developed for methamphetamine users in South Africa.

## METHODS

### Overview

The results presented here come from a mixed-methods study that included a cross-sectional survey of 360 current methamphetamine users and in-depth interviews (IDIs) with a sub-set of 30 participants. Data collection was completed between May and October 2013 in Delft, a township in the Cape Flats.

## Sample

Participants were recruited into the cross-sectional survey using a respondent driven sampling strategy, described elsewhere.<sup>[6]</sup> Individuals were eligible to participate if they were 18 years old and positive for methamphetamine use on a urine drug screen. A sub-set of 30 participants were selected to participate in IDIs to explore the study topics in greater depth. The IDI participants were purposively selected to provide a balance of race and gender representation and to include individuals whom the staff felt would be articulate and reflective.

## Data collection

**Quantitative procedures and measures**—Participants completed an audio computer-assisted self-interview (ACASI), followed by a clinical interview. Data collection was conducted by trained staff in a private room. The visit took approximately two hours, and assessments were completed in the language of participants' choice (Afrikaans, Xhosa, or English).

**Mental health symptoms:** The nine-item Patient Health Questionnaire (PHQ-9) measured frequency of depressive symptoms in the past two weeks. Scores range from 0 to 27, and a dichotomous measure was created for moderate depression ( $\geq 10$ ).<sup>[7]</sup> The seven-item Breslau PTSD screener was used to capture traumatic stress symptoms in the past month. The yes/no responses were summed to create composite scores ranging from 0–7; a recommended cut-off of four was used as an indication of PTSD symptoms.<sup>[8]</sup>

**Addiction Severity Index Lite (ASI-L):** The ASI-L is a semi-structured interview for substance-abusing populations that assesses several different areas of functioning, including substance use and mental health.<sup>[9]</sup> Participants reported the number of days they used methamphetamine in the past 30 days, as well as the number of years they have used methamphetamine regularly. They also reported the number of days they experienced psychological problems in the past 30 days, whether they have ever experienced particular psychiatric symptoms, including hallucinations, suicidal ideation, suicide attempt, and aggressive behaviour, and whether they experienced those symptoms in the past 30 days. Participants were asked whether they had ever received treatment for psychological problems, whether they had ever been hospitalized for psychological problems, and whether they had ever been prescribed psychiatric medications. Participants rated how troubled they were by psychological symptoms and how important they perceived psychiatric treatment to be for them (with responses ranging from 'not at all' to 'extremely').

**Substance use coping:** Participants responded to the 4-item substance use sub-scale of the COPE<sup>[10]</sup> to assess how often they use substances as a coping mechanism. Response options ranged from 'never or rarely' to 'almost always.'

**Qualitative procedures**—The IDIs were conducted by local interviewers with extensive training on qualitative methods. The IDIs were conducted in the language of the participant's choosing and lasted approximately 60–90 minutes. A semi-structured interview guide included broad opening questions and more specific follow-up probes. The mental

health content included questions and probes about chronic and acute stressors, areas of emotional distress, distress symptoms including suicidal ideations and suicide attempts, coping behaviours, and any mental health treatment sought or received.

### **Ethical concerns**

Given the sensitive nature of the interviews, the team received extensive and on-going training by a local clinical psychologist on how to support participants, how and when to offer active referrals to local service agencies, and how to assess for risk of suicide. A list of referrals was provided to all participants, and the interviewer offered to make active referrals when participants were in distress. The psychologist was on call to advise staff on steps that needed to be taken with distressed participants. The study protocol was approved by ethical review boards at Stellenbosch University and Duke University.

### **Analysis**

Analysis was conducted using a concurrent triangulation strategy, whereby qualitative and quantitative data contributed equally to the analysis and were used for cross-validation. For the quantitative analysis, descriptive statistics were used to characterize the mental health symptoms, needs, and treatment seeking behaviour of the sample. For the qualitative analysis, audio-recordings of the interviews were transcribed and translated into English. Narrative memos were written to organise the content of the transcripts, make connections across the transcript content, and begin to make meaningful insights into the data. NVivo software was used to conduct content analysis. The quantitative and qualitative data were then combined to provide a full picture of the mental health experiences and needs of the population.

## **RESULTS**

The sample included 201 men and 159 women, described in Table 1. The 17 men and 13 women who completed IDIs had demographic and drug-related characteristics similar to the full sample.

### **Presentation of mental health symptoms**

In the survey data, 49.3% of respondents met the criteria for moderate depression, and 54.0% met the screening criteria for PTSD. On average, individuals reported experiencing 11.7 days (range 0–30, SD=12.8) of psychological problems in the past 30 days. Almost half of the sample (47.9%) reported being ‘extremely’ bothered by psychological symptoms in the past month. Women reported more days of psychological problems than men (13.5 vs. 10.2,  $p<.05$ ).

In the IDIs, most participants expressed psychological distress. Depressive symptoms included crying during the interview, loneliness, lethargy, and lack of interest in life. For men, feelings of regret and low self-worth were dominant, as this man expressed: ‘My mind is suffering, because I had my own plans, but none of them are successful.’ Several women talked about symptoms consistent with PTSD, typically related to histories of sexual or physical abuse. One woman, in recounting her sexual abuse history, said, ‘When you are

asking me about that I just feel like vomiting... I don't want to talk about my difficult memories.'

Participants spoke about the impact of methamphetamine on their psychological state. Several said that methamphetamine made them more 'emotional.' One man stated that smoking methamphetamine 'puts you more in touch with your feelings. You are not 100% in control when it comes to thoughts or actions, but you are more emotional. You feel more. You sense more.' Hallucinations and paranoia also seemed to be common during periods of methamphetamine use. When not intoxicated, people spoke about feeling extreme lethargy and lack of interest in life.

### **Methamphetamine as a coping mechanism**

Using substances to cope with stressors was common, with nearly half of the survey sample saying that they used substances to feel better, lose themselves, avoid thoughts, and get through difficult situations (Table 2). In the IDIs, participants spoke about methamphetamine as a 'comfort zone' and a way to 'calm down.' Many reported using to numb feelings, forget disturbing memories, and cope with their daily lives. A woman who had severe depression and a history of multiple traumas, said that she used methamphetamine to cope with her emotional symptoms: 'The moment I increased my daily intake (of methamphetamine), my body felt much better. I could also manage emotionally.' A man spoke about how he used methamphetamine to deal with daily stressors: 'If the pressure gets too much, or I can't handle things, then I have a fix. I do that to cut myself off from everything and not focus. I just want to be narrow minded.' Five people specifically talked about initiating methamphetamine for the first time as a way to cope with feelings or events in their lives.

### **Suicidality**

In the survey data, 32.8% of the sample said that they had ever had suicidal thoughts, and 21.9% said that they had ever attempted suicide. Women were significantly more likely to have ever had suicidal thoughts (42.8% vs. 24.9%,  $p < .001$ ) and to have ever attempted suicide (33.3% vs. 12.9%,  $p < .001$ ). In the IDIs, 10 of the 30 participants recounted suicide attempts, with many of those individuals reporting multiple attempts. The reasons that men expressed for attempting suicide were: feeling rejected by family due to drug use, breaking up with a girlfriend, and feeling in a 'dark place.' Among women, four attributed their suicide attempts to traumas (sexual abuse, partner abuse, and husband's murder), and the others spoke about general distress and problems in relationships. The most common way that people attempted suicide was via medication overdose, followed by hanging and cutting. Suicidal ideation was also common, with participants talking about feeling that they would be 'better off dead.'

### **Treatment seeking behaviour**

Only 7.2% of the survey sample had ever received treatment for a psychological problem. The majority (69%) of those who reported that they had received treatment said that they had been hospitalised for psychiatric reasons. Despite low uptake of mental health treatment, almost half (47%) said that receiving psychological treatment was 'extremely

important' to them. In the qualitative data, there was little discussion of mental health treatment. Five participants said that they received some psychiatric treatment after being hospitalised for a suicide attempt, but none had follow-up after discharge. One woman explained that she felt that providers were not interested in treating drug users: 'After I came back from the hospital (after suicide attempt), they said they would check on me sometimes, but they never did. I told you before, not everyone is interested in us.' Only one of the IDI participants had received outpatient mental health counselling, which she apparently received through the HIV clinic where she was receiving care. Notably, several participants spoke about the study contact as a therapeutic experience, indicating a desire and need for mental health counselling. As this woman explained: 'I am feeling a great relief after talking to you. A heavy weight is lifted from my shoulders.'

## DISCUSSION

While previous studies in South Africa have documented the high prevalence of mental health problems among methamphetamine users,<sup>[2, 3]</sup> none have explored how users understand the relationship between methamphetamine use and psychological distress. We combined quantitative and qualitative methods to document the mental health experiences and needs of out-of-treatment methamphetamine users from one township in Cape Town. This study yields information that could potentially inform the development of mental health services for South African methamphetamine users.

We found high rates of psychological distress in this population, with close to half of participants scoring above the cut-off for depression and more than half meeting screening criteria for PTSD. Despite the high burden of mental disorders, very few participants had ever accessed mental health services, indicating a large unmet need for mental health treatment. This is not surprising, given evidence of a 75% treatment gap for common mental disorders in South Africa.<sup>[11]</sup> Further complicating matters for a substance using population, substance abuse and other mental health services are delivered by distinct service systems, with neither system equipped to effectively address both problems in an integrated manner.<sup>[12]</sup> Yet, our findings indicate that a substantial proportion of methamphetamine users could benefit from integrated substance abuse and mental health services. Some might argue that the depressive symptomatology in this population is likely a consequence of the physiological effects of methamphetamine,<sup>[5]</sup> and might resolve after a period of abstinence. However, this explanation does not account for the high rates of PTSD observed in this sample. Our qualitative data suggests that traumatic experiences are likely to have preceded the initiation of methamphetamine use, with many participants reporting that they used methamphetamine as a way of coping with negative feelings associated with these experiences. For these participants, effective treatment requires addressing these traumatic experiences, particularly as unresolved trauma is associated with poorer drug treatment outcomes.<sup>[13]</sup>

In addition to using methamphetamine as a way of coping with traumatic experiences, participants reported using methamphetamine to handle their everyday stressors. This is likely the result of poor problem-solving and coping skills. We also observed gender differences in how methamphetamine use was used to help people cope with stressful

events. Women's narratives suggest that methamphetamine is used as an avoidance strategy to block, numb or dull negative psychological distress. In contrast, men reported that methamphetamine was used to facilitate emotional discharge or catharsis, a form of emotion-focused coping. The reliance on these maladaptive coping styles highlights the need for interventions to help methamphetamine users develop more adaptive problem-focused coping strategies.

Addressing psychological distress is particularly important because of the alarmingly high rates of suicide attempts in this population. More than a third of women and more than 10% of men reported prior suicide attempts, higher than the national prevalence rate of 3%.<sup>[14]</sup> This finding provides further evidence of the need to integrate mental health services into existing substance abuse programmes. At the very least, all patients reporting methamphetamine use should be screened for risk of suicide and programming for methamphetamine dependence should include a focus on suicide prevention.

These findings have several other implications for the prevention and treatment of methamphetamine use. First, universal prevention programmes should consider equipping young people with problem-focused coping skills to help delay initiation of substance use. Second, indicated prevention programmes for individuals who are using methamphetamine but are not yet dependent should include a focus on developing adaptive coping and problem-solving styles, particularly given emerging evidence that brief, problem-solving therapies are effective for reducing substance use involvement in high-risk South African populations.<sup>[15]</sup> Third, as mental health problems and problem-solving deficits are risk factors for poor treatment outcomes,<sup>[15]</sup> substance abuse services should screen all methamphetamine users for co-occurring mental health problems and provide patients with coping and problem-solving interventions to help them deal with life stressors. Finally, the low use of mental health services in this population indicates a need for improving community awareness of mental health problems and resources, which may hinder uptake and consistent use of available community-based services.

While this study has several strengths, including the largest sample of community-recruited methamphetamine users in South Africa, it does have some limitations. First, findings may not generalize to the entire population of meth users or to meth users in other communities. Second, our sample may have been skewed towards regular methamphetamine users; we only included participants with a positive urine screen that detects methamphetamine in urine for 3–5 days. Although we may have excluded less frequent users, our results do reflect the need for mental health services among regular methamphetamine users. Finally, we did not do clinical interviewing to determine mental health diagnoses, but rather relied on symptom checklists.

In conclusion, this study clearly demonstrates that mental health services should be made more readily available to methamphetamine users. The high prevalence of suicide attempts and psychological distress in this sample highlights the need for evidence-based substance abuse prevention interventions that also promote mental health through developing adaptive coping strategies. Additionally, to improve drug treatment outcomes, programmes should screen methamphetamine users for suicide risk and psychological distress, deliver services

that treat their substance use and underlying mental health conditions in an integrated manner, and teach adaptive coping strategies to prevent relapse to substance use.

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**Table 1**

Characteristics of the sample (n=360)

	Men N=201	Women N=159	Statistic
<u>Demographics</u>			
Age, M (SD)	28.92 (7.59)	29.04 (6.95)	t (358) = 0.15
Race: Coloured vs. Black African, %	125 (62%)	138 (87%)	$\chi(1)^2= 27.30^{**}$
Currently married, %	22 (11%)	28 (18%)	$\chi(1)^2= 3.30$
Employed (part- or full-time), %	46 (23%)	21 (13%)	$\chi(1)^2= 5.49^*$
Completed secondary school, %	22 (11%)	20 (13%)	$\chi(1)^2= 0.23$
<u>Methamphetamine use and addiction</u>			
Years of regular use, M (SD)	7.15 (4.04)	6.95 (3.08)	t (358) = 0.52
Days of use in past 30 days, M (SD)	24.26 (8.73)	22.52 (9.05)	t (358) = 1.86
<u>Mental health</u>			
Depression symptoms (PHQ9 10)	96 (48%)	81 (51%)	$\chi(1)^2= 0.31$
PTSD symptoms (Breslau 4)	107 (53%)	88 (55%)	$\chi(1)^2= 0.11$
Days of problems, past 30 days	10.16 (12.17)	13.47 (13.23)	t (329) = 2.37*
Felt extremely bothered by problems	89 (45%)	78 (50%)	$\chi(1)^2= 0.87$
Hallucinations, lifetime	104 (52%)	63 (40%)	$\chi(1)^2= 5.24^*$
Hallucinations, past 30 days	98 (49%)	60 (38%)	$\chi(1)^2= 4.38^*$
Suicidal ideation, lifetime	50 (25%)	68 (43%)	$\chi(1)^2= 12.90^{**}$
Suicidal ideation, past 30 days	26 (13%)	25 (16%)	$\chi(1)^2= 0.57$
Suicide attempt, lifetime	26 (13%)	53 (33%)	$\chi(1)^2= 21.56^{**}$
Suicide attempt, past 30 days	9 (5%)	16 (10%)	$\chi(1)^2= 4.29^*$
Aggressive behaviour, lifetime	148 (74%)	89 (56%)	$\chi(1)^2= 12.31^{**}$
Aggressive behaviour, past 30 days	118 (59%)	84 (53%)	$\chi(1)^2= 1.25$
Treatment perceived as extremely important	91 (46%)	77 (49%)	$\chi(1)^2= 0.44$

\*\*  
<.01,\*  
<.05

**Table 2**

Frequency of substance use as a coping mechanism to deal with stressors

	Never/rarely		Occasionally		Often		Almost Always	
	N	%	N	%	N	%	N	%
Use alcohol or drugs to feel better	37	10.2	133	36.7	123	34.0	68	18.8
Try to lose myself by drinking or taking drugs	51	14.1	151	41.7	97	26.8	63	17.4
Drink or take drugs to think about it less	49	13.5	138	38.1	108	29.8	67	18.5
Use alcohol or drugs to help get through it	60	16.6	145	40.1	98	27.1	59	16.3

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