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The impact of methamphetamine (“*tik*”) on a peri-urban community in Cape Town, South Africa

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Abstract

Background—Over the last decade, South Africa’s Western Cape has experienced a dramatic increase in methamphetamine (“*tik*”) use. Our study explored local impressions of the impact of *tik* use in a peri-urban township community in Cape Town, South Africa.

Methods—We conducted individual in-depth interviews with 55 women and 37 men who were regular attendees of alcohol-serving venues. Interviews were recorded and transcribed. A content analysis approach was used to identify themes related to the impact of *tik* use based on levels of the socio-ecological framework (individual, inter-personal and community).

Results—*Tik* use was reported to be a greater issue among Coloureds, compared to Blacks. At an individual level, respondents reported that *tik* use had adverse effects on mental, physical, and economic well-being, and limited future opportunities through school drop-out and incarceration. At an inter-personal level, respondents reported that *tik* use contributed to physical and sexual violence as well as increased rates of sexual risk behaviour, particularly through transactional sex relationships. Respondents described how *tik* use led to household conflict, and had negative impacts on children, including neglect and poor birth outcomes. At a community level, respondents linked *tik* use to increased rates of crime, violence and corruption, which undercut community cohesion.

Conclusions—Our results highlight the negative impact that *tik* is having on individuals, households and the overall community in a peri-urban setting in South Africa. There is a clear

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need for interventions to prevent *tik* use in South Africa and to mitigate and address the impact of *tik* on multiple levels.

Keywords

methamphetamine; South Africa; qualitative

BACKGROUND

Methamphetamine is the second most widely abused illicit drug worldwide (UNODC, 2012). It is a highly addictive synthetic psychostimulant that increases energy and feelings of euphoria, among other physiological effects (Panenka et al., 2013). In South Africa, methamphetamine is primarily smoked using improvised glassware, and is known in South Africa as *tik* due to the “ticking” sound produced when smoked (Peltzer, Ramlagan, Johnson, & Phaswana-Mafuya, 2010). Methamphetamine first emerged in South Africa in the early 2000s, fuelled by economic, social and political changes after the end of apartheid (Peltzer et al., 2010; UNODC, 2012). Its use has increased steadily in the past decade, showing only a slight decline in recent years (Dada et al., 2012; Pluddemann, Dada, et al., 2010). The prevalence of methamphetamine (“tik”) use is highest in the Western Cape province, with its epicentre in the city of Cape Town (Peltzer et al., 2010).

Clinical and epidemiological research in the United States (U.S.) has documented the deleterious physiological impact of methamphetamine use. Acute symptoms of use typically include increased wakefulness and physical activity, decreased appetite, hypervigilance, arousal, restlessness, aggression and violent behaviour, sleeplessness and reduced appetite (Darke, Kaye, McKetin, & Duflou, 2008; Panenka et al., 2013; Romanelli & Smith, 2006). Methamphetamine is highly addictive, and over time many methamphetamine users become dependent (Barr et al., 2006). Chronic methamphetamine use has been associated with physical effects including extreme weight loss, severe decay and loss of teeth (Curtis, 2006; Hamamoto & Rhodus, 2009; Shaner, Kimmes, Saini, & Edwards, 2006), cardiopulmonary complications (Fronczak, Kim, & Barqawi, 2012; Tashkin, 2001; Wijetunga, Bhan, Lindsay, & Karch, 2004; Yeo et al., 2007; Yu, Larson, & Watson, 2003), and complications related to pregnancy and childbirth (Oro & Dixon, 1987; Sithisarn, Granger, & Bada, 2012). Additionally, methamphetamine use has been associated with increased risk of mental health problems, including anxiety, depression, and psychotic symptoms, and global neuropsychological impairment, particularly of memory, attention, and executive functioning (Chen et al., 2003; Cherner et al., 2010; Gonzalez et al., 2004; Marshall & Werb, 2010; Mehrjerdi, 2012; Scott et al., 2007; Ujike, 2002; Woods et al., 2005). Studies have also documented behavioural and affective changes associated with methamphetamine use, including increased libido and impulsivity and reduced inhibition, which may lead to risky sexual behaviour and increase vulnerability to acquisition of HIV and other sexually transmitted infections (Carrico et al., 2012; Freeman et al., 2011; Lineberry & Bostwick, 2006; Payer, Lieberman, & London, 2011; Salo et al., 2002; Semple, Zians, Grant, & Patterson, 2005).

Beyond the individual user, methamphetamine use has been associated with problems at the inter-personal and community levels. Given the psychological effects of methamphetamine, combined with the behavioural and lifestyle characteristics of users, methamphetamine use has been associated with violence, including intimate partner or domestic violence (Baskin-Sommers & Sommers, 2006; Boles & Miotto, 2003; Sommers & Baskin, 2006). In addition, methamphetamine use has been associated with social stigma and isolation (Pluddemann, Flisher, McKetin, Parry, & Lombard, 2010a; Semple, Grant, & Patterson, 2005; Sorsdahl, Stein, & Myers, 2012); in one study, half of users reported negative effects of

methamphetamine on their inter-personal relationship (Sommers, Baskin, & Baskin-Sommers, 2006). At a larger societal level, the financial burden of methamphetamine use on communities is significant. In the U.S., the average cost of healthcare per methamphetamine user was 9% higher than that for non-users, and methamphetamine users were less likely to be insured compared with non-users (Swanson et al., 2007). Beyond direct health care costs, resources forgone because of reduced productivity among methamphetamine users may pose a bigger economic burden on a community. Other broader effects include the social impact on children and families, including child neglect and injury, and the increased burden on law enforcement and the justice system (Parry, Pluddemann, Louw, & Leggett, 2004; Sommers et al., 2006; Watanabe-Galloway et al., 2009).

In South Africa, community-based work and substance use treatment data point to the need to understand the impact of a quickly growing epidemic of methamphetamine use, hereafter referred to as *tik*. In street intercept surveys in one Cape Town township, 18% of men and 12% of women reported ever having used *tik* (Simbayi et al., 2006), and in a neighbouring township, 58% of out-of-school substance-using adolescents reported *tik* use (Wechsberg et al., 2010). Admission data from substance abuse treatment centres in Cape Town confirms the burden of *tik* use. During a four-year period (2002–2006), the proportion of patients reporting *tik* as their primary substance of abuse increased steadily from 0.3% to 42.3%, representing the fastest increase in admissions for any particular drug ever noted in the country (Pluddemann, Myers, & Parry, 2008). While this proportion has tapered in recent years, to 39% in 2011 (Dada et al., 2012), over half of patients in treatment continue to report *tik* as either their primary or secondary substance of abuse. Based on data collected in 2010, the mean age of patients in treatment centres for *tik* abuse in Western Cape was 26 years, and *tik* was the second most abused drug (after marijuana) among treatment patients younger than 20 years (Pluddemann, Dada, et al., 2010). Overall, *tik* use is most common among young, male and ‘Coloured’ persons (an ethnic group of historically mixed race people, unique to South Africa) (Dada et al., 2012; Wechsberg et al., 2008).

Despite increasing concern about *tik* use in South Africa and anecdotal evidence of its impact on society as a whole (Parry, Myers, & Pluddemann, 2004; Sorsdahl et al., 2012), there is a dearth of research on perceptions and experiences related to the impact of *tik* in South Africa’s most hard-hit communities. Such knowledge is important in order to inform locally appropriate intervention strategies to prevent and treat *tik* use and mitigate its impact on local health and development goals. The aim of this study therefore was to explore qualitatively local impressions of the impact of *tik* use at the individual, inter-personal and community levels in a peri-urban township in Cape Town.

METHODS

The qualitative data presented in this paper are part of a larger mixed-methods study that examined substance use and related risk behaviours in the context of alcohol-serving venues in one South African township. For this paper, the data were analysed to examine the perspectives around the impact of *tik* at multiple levels of influence.

Setting

This study was conducted in Delft, a township located 15 miles from Cape Town’s city centre. The township was established in 1990 and is currently home to over 75,000 residents, including a fairly even mix of both Black African and Coloured persons. The terms Black and Coloured originate from the apartheid era and refer to demographic markers that do not necessarily signify inherent characteristics. The terms refer to people of African and mixed (African, European and/or Asian) ancestry, respectively. Delft has high levels of unemployment, poverty and crime, and there is little commercial infrastructure. According

to the 2001 South African census, 45% of residents in the area were unemployed, and the majority of adults who were employed were unskilled and manual labourers (South Africa Census Bureau, 2003).

The study recruited from twelve alcohol-serving venues in Delft. The venues were identified using an adaptation of the PLACE community mapping methodology (Weir, Tate, Zhusupov, & Boerma, 2004). Brief community intercept surveys were conducted with 210 individuals, approached at public places such as bus stands and markets. These surveys identified 88 sites where people go to purchase and drink alcohol. All sites were visited and assessed for study eligibility: reporting over 50 unique patrons per week who drank in the venue, having at least 10% female patronage, and willing to have the study team visit on multiple occasions. A total of 24 eligible venues were identified and twelve were purposively selected to provide representation of culture (predominantly Black or Coloured patronage), size (small and large venues), and geographic location in the community. The precise number of venues in the community is unknown, given that both legal and illegal venues operate in the community and frequently close and reopen. However, neighbouring townships have documented a high density of alcohol serving venues (Weir, Morroni, Coetzee, Spencer, & Boerma, 2002). Alcohol-serving venues are important social spaces in the South African township community (Eaton et al., 2013; Morojele et al., 2006), and therefore are sites where general community norms, perceptions and experiences may be assessed.

Data collection

After a week-long period of observations in the venues, fieldworkers (South Africans matched by language and ethnicity to the selected venues) approached individuals who were identified as regular patrons at the venues to invite them to participate in an in-depth interview. All individuals who were approached agreed to participate, and after written consent, interviews were conducted in a private room in the language of the participant's choice (Afrikaans, Xhosa or English). Interviews lasted approximately 60 minutes and were audio-recorded with the participant's permission. A grocery card valued at 100 Rands (approximately 15 USD) was provided as compensation.

Interviewers used a semi-structured guide with open-ended questions and possible probes (Mack, Woodson, MacQueen, Guest, & Namey, 2005). The guide included questions about both personal experience with *tik*, as well as impressions of the impact of *tik* use in the community. In addition, *tik* use was allowed to emerge in relation to discussions about other issues (e.g., the context of crime and violence in the community and broader problems facing the community).

All study procedures were approved by the ethical review boards of Duke University, University of Connecticut and Stellenbosch University.

Analysis

The interview audio-recordings were simultaneously translated and transcribed in English. Analytic memos were then written for each transcript in order to summarize emerging themes and identify *in vivo* codes, terms and interpretations in participants' own words. The memos were entered into Atlas.ti and all text related to *tik* use was coded. The textual data was analysed using content analysis (Patton, 2002), which involved both inductive and deductive analytic techniques to identify the themes related to the impact of *tik* at multiple levels of the social-ecological framework (individual, inter-personal and community) (Stokols, 1996). The coded text was reviewed and discussed by the first two authors and axial coding identified subcategories and highlighted representative text for each.

RESULTS

Description of the sample

The sample included 55 women (29 Black and 26 Coloured) and 37 men (18 Black and 19 Coloured). The ages of respondents were 18 to 59 (mean 35.2, SD 11.5). More than a quarter of Coloured respondents mentioned personal *tik* use, and almost a half (44%) mentioned *tik* use by a close friend or relative. On the other hand, among Black respondents, none reported personal use and only four individuals (9%) reported knowing a close friend or relative who used *tik*.

Description of *tik* use in the community

Respondents reported that *tik* is most often used by Coloured youth, both male and female. *Tik* was described as being ubiquitous (“everybody uses drugs”) throughout the Coloured community in Delft, and as the drug of choice among young people. *Tik* houses, where *tik* is both purchased and used, were reportedly “in every area” of the Coloured sections of the township. Respondents said that *tik* typically costs R20 – R30 (\$2.50 – \$3.50) per “packet” (enough *tik* to achieve a single high) and that individuals generally smoked several packets per day.

Respondents most often pointed to peers or older boyfriends (among women), as introducing people to *tik*. *Tik* use was described as appealing to youth because it provided a sense of belonging and community, as well as excitement and a relief from boredom in an environment where young people may feel they lack future prospects. At the same time, respondents pointed to *tik* use as a way to deal with stressors in their lives, including abuse in the home (“it drives them to do drugs”), bad relationships or unemployment. They explained that *tik* was often used in a succession of substances, following use of marijuana and alcohol, and in two cases proceeded by heroin use, which was rare in this community. For *tik* users in this sample, alcohol was often used subsequent to *tik* use as a “downer” that helped to facilitate sleep and to calm the body and mind.

Respondents recounted efforts of *tik* users to seek drug rehabilitation services, with mixed results. They said that residential substance treatment was available in Cape Town, but that services were private and therefore expensive. Respondents also had the impression that attempts at treatment generally failed, with people continuing to use while in treatment, or reinitiating *tik* use when they returned to their social environment.

Impact of *tik* use

Narratives revealed that *tik* had a significant impact at three levels: 1) on the individual *tik* user, 2) on inter-personal relationships and households, and 3) on the community as a whole (Figure 1).

1) Impact of *tik* at an individual level

Physical well-being: Heightened energy and sleeplessness were the primary physiological characteristics that most respondents associated with *tik*, and respondents noted these physiological changes as the first clear sign of someone’s *tik* use. One woman described her teenage son: “That up and down, that busyness. That’s how we found out that he was using *tik*.” Respondents also talked about *tik* contributing to malnutrition and weight loss, lack of hygiene, and other physical ailments such as a “hole in the stomach” (i.e., ulcers) and the contraction of HIV and tuberculosis. A few respondents also noted that *tik* contributed to premature death, as this respondent described: “They found him (a 20 year old) in the toilet with the pipe still in his hand. He just fell over.”

Mental well-being: *Tik* users talked about how *tik* made them feel good (“nice and confident”) when they began using, but then led them to feeling “crazy,” “restless” and like a “zombie.” One woman talked about how her *tik* use made her feel depressed and suicidal. She recounted: “I just want the light to come on. I am dead inside. I think it is the *tik* that made me like this.” This woman said that her *tik* use made her incredibly lonely, because it had isolated her from her family and people close to her. She added that it made her feel that she had lost control over her life. At the same time, a few other *tik* users talked about how *tik* actually had the effect of numbing them from the emotional pain in their lives. A woman who was in an abusive relationship said she used *tik* because it “makes my mind feel at ease.”

Economic well-being: Men in particular talked about the impact of *tik* use on one’s economic standing, leading to the loss of employment and the erosion of any savings or investments. As one male former *tik* user said: “Once you have money, you do not spend it on anything positive. It goes straight to the drug dealer.” Others talked about how they sold everything they owned, including their appliances, jewellery, and phones, in order to pay for the drug. Respondents explained that *tik* use often leaves people with hardly any possessions, with one woman saying: “They (*tik* users) become so desperate that they even sell their clothes because of their addiction.” *Tik* use was also described by some as undercutting future opportunities, because *tik* users often dropped out of school or spent time in jail because of *tik*-related crime.

Sexual risk behaviours: Many respondents noted that *tik* use contributed to greater sexual risk behaviours because of both the heightened sexual energy while high, as well as the practice of exchanging sex for the drug. Some respondents described *tik* as making people “hypersexual;” one woman explained how after her sister started using *tik*, her “sex life escalated.” Women often spoke about having sex as a primary way to procure *tik*, as this female *tik* user described: “You meet a guy and you know what it’s about. It’s what you can get, no love or any other emotion. If he dangles his money and you get your share to feed your habit, you’ll sleep with that person.” The exchange of sex for drugs was also mentioned by many male respondents, who said they could get sex from female *tik* users. One man explained: “Let’s say I feel like having sex. Now I’ll see a woman who is a drug addict. I will tell her that I’m gonna buy her some *tik* in exchange for sex, and she’ll agree.”

Tik use seemed to not only increase the number of sexual partners, but also made it less likely that condoms would be used during sexual encounters. A man described how his *tik* use impacted his risk behaviour to a greater extent than his alcohol use: “With alcohol I can make rational decisions concerning sex. I will remember to use a condom. With drugs it’s a completely different case – I won’t remember to use a condom.” A few female *tik* users discussed the heightened risk of forced sex under the influence of *tik*, due to powerlessness to refuse sex from a partner, as this woman explained related to an act of coerced sex: “I was already high from the drugs, and I felt paralyzed and could not get out of the room.”

2) Impact of *tik* at an inter-personal level

Social integration: *Tik* users were described by most as exhibiting anti-social behaviours such as unprovoked aggression, and lack of a sense of obligation and connection to others. One female *tik* user elaborated: “You feel confident, macho. You do what you want and don’t feel anything. You have no remorse.” The narratives revealed a sense that *tik* users “can’t control themselves” and will “do anything to get drugs.” As a result, *tik* users seemed to exist on the margins of society and were characterized as lacking meaningful relationships and connections with others.

Violence in relationships: Many women who were in relationships with *tik* users discussed abuse and controlling behaviours by their partners. A woman described what happened when her boyfriend used *tik*: “He swears at me. He wants to hit me and threatens that he is going to kill me.” The respondent then explained that when she uses *tik*, the abuse is often bi-directional, because she feels empowered from *tik* to fight back. A woman who uses *tik* with her husband explained how their relationship is marked by physical abuse: “I will always start fighting first when I don’t get my way. He will choke me so that no one will see the marks, but I will take a knife to stab him.”

Erosion of family structures: Many respondents recounted stories of how their families or other families they know have been devastated by *tik* use. Homes where *tik* is used were described as sites of “chaos.” A woman said that the drug makes her sister, a *tik* user, “very aggressive; she doesn’t even have respect for my mother.” Many respondents recounted how *tik* users steal from their families, including a young man who said that he took his father’s car and sold it in order to pay for his drug use. There were also accounts of *tik* users physically abusing other members of their household. In one case, a woman reported how her teenage son tried to burn her with a hot iron after she told him he could not sell *tik* from their home. Through these stories, it is clear that the aggression, lack of respect, and theft of *tik* users against their families can result in a breakdown of trust and cohesion of the family unit. Parents in particular were torn between their love for their son or daughter who uses *tik*, and their sense of hurt and anger toward their child. One father explained: “I think of my household things disappearing. If that was a stranger, I would have killed him. In this case it’s my child. I raised him and loved him.”

Narratives highlighted that *tik* use in the family has an additional effect of reducing the economic and social well-being of households through poverty and unemployment of the family members, and in many cases ostracizing those families from the larger social fabric. The accounts suggested that families from a range of backgrounds in the community are experiencing *tik* use, and despite the ubiquity of *tik*, families that are personally impacted by *tik* use are stigmatized. As a result, families are often reluctant to admit to *tik* use in their household because, as one participant said, “you don’t want to be put in a bad light.”

Parenting: Several respondents talked about the impact of *tik* use on young children through poor birth outcomes, neglect, and exposure to drug use and violence that may produce a potential inter-generational cycle of behaviour. In this setting, because *tik* use is most common among young people and is associated with sexual risk behaviours, accounts of pregnancy among female *tik* users was not uncommon. One woman talked about how her child was born prematurely due to her *tik* use, and later died. Respondents explained that children of *tik* users are often neglected, primarily due to the long cycles of intoxication of the parents. They explained that *tik* users often spend money on the drug before spending money on food for their children. In many cases, grandparents take up the role of caring for children of *tik* users. Active *tik* users in the sample were in many cases acutely aware of the impact of their *tik* use on their children, saying that they “want the best” for their children and desire to do more to “set good examples” for their children in order to prevent the inter-generational continuation of drug use behaviour.

3) Impact of *tik* at a community level

Crime and violence: Almost all respondents, both Black and Coloured, attributed rampant crime in the community to *tik* users. Multiple respondents talked about *tik* users stealing “everything in sight,” including washing that is hung out to dry or shoes that are left on the front steps. Reports of theft of metal, including metal gates, corrugated metal roofing, pipes and wires, was common; *tik* users take the metal to scrap yards to get cash to buy drugs. In

addition, many respondents talked about the constant fear of being mugged by *tik* users who steal wallets or cell phones. The narratives indicated that this rampant crime by *tik* users impacts the community's economic well-being and the capacity to build wealth. As one man said: "It breaks [us] to see the stuff that [we] worked hard to buy, get stolen and sold for almost nothing."

In addition, another significant and commonly cited threat to the general safety of the community was gangs who controlled the distribution of *tik* in the community. Several respondents talked about how "wars" often break out between rival gangs who are fighting for control of territory within the township. A male respondent explained: "The one owner will build up his followers; the other one will build up his followers. That's how the two gangs are formed, and they end in gang wars. Kids are shooting guns, and that is how many parents lose their kids to drugs." Stories indicated that young people who use *tik* often become caught up in the system of distributing *tik* for a gang leader or a *tik* dealer. Refusing to be part of this system can result in violent reactions, as this woman explained: "[My friend's] boyfriend was told to sell *tik*. When he refused he was killed, shot."

Police corruption: Many respondents expressed feeling helpless to respond to *tik* use and its consequences because of a perception of corruption in the police system that protects *tik* dealers. Respondents talked about how police are "friendly with the drug lords" or "working with the drug dealers," and a perception that the police alert *tik* dealers if a raid is coming so that "the real dealer is never caught." This perception of not only corruption, but also complicity in the drug trade, makes people "scared to go to the police."

Community cohesion: The feelings of helplessness and hopelessness that participants expressed toward responding to *tik* use in their community seemed to undermine a sense of community identity and cohesiveness. As one respondent said, the community is "changed totally... [it] was a very quiet place and had respectable people, but since the drugs came in, a lot of people changed a lot." Respondents described pervasive *tik* use and its consequences as "a problem no one can solve," and said they feel "depressed and tired" in dealing with it. *Tik* also seemed to create and deepen divisions by race and age in the community. In speaking about *tik* users, respondents often referred more generally to "the Coloureds" or "the children," as if they were solely and all responsible for *tik* use.

The lives and identities of young people seem to be most strongly impacted by the presence of *tik* in the community. In a context of poverty and unemployment, the *tik* merchants and "gangsters" often rise to the status of role models for young people—a glorified symbol of opportunity and prosperity. One respondent noted that young people look to *tik* merchants because they are "the ones wearing the Nikes and the different brand names." At the same time, some former drug users described taking initiatives to help prevent *tik* use in their community or mitigate the impact of *tik* use. One former *tik* user explained how he had taken it upon himself to work with young people to help them to stop using *tik*: "They stopped [using *tik*] by themselves because I spoke a lot to them. I told them, just see how I looked when I was using, and see how you guys look now." These older, former drug users said that their strategy in talking with young *tik* users is to encourage them to look towards the future and to begin to build a life for themselves that is not mired with drugs. These individuals said they felt motivated to do this because of the personal benefit they experienced rehabilitating from drug use.

DISCUSSION

Our results highlight the impact that the growing *tik* epidemic has had on a peri-urban township in Cape Town, South Africa. Similar to other small epidemiological studies

(Simbayi et al., 2006; Wechsberg et al., 2010), *tik* use in our sample was most common among Coloured respondents, and *tik* was seen as having the most negative impact on the Coloured community. However, in a mixed-race township like the one of our study, *tik* also has a significant impact on the Black community, particularly as it related to crime, violence and community cohesion. The impact of *tik* was evident at the levels of the individual, inter-personal relationships and community, suggesting that interventions and policy approaches are needed to target multiple levels of the social-ecological framework.

At the individual level, *tik* use in this community clearly has an impact on the lives of individual users, whose health, well-being, social integration and future prospects are impacted by their substance use. At the same time, the physiological impacts of *tik* (e.g., mania, hypervigilance, aggression and sleeplessness) contribute to a cascade of consequences beyond the individual user. Our data show that the impacts are perhaps most striking at the household level, where relationships appear to be typified by aggression, including intimate partner violence (in many cases bi-directional), and violence towards other family members. Despite the household impact, perceived and experienced stigma against substance users may prevent families from seeking assistance for themselves or for the family member who is using *tik* (Sorsdahl et al., 2012). Young children in the household appear to be particularly impacted by the influence of *tik* use, with our findings suggesting that children of *tik* users suffer from parental neglect and may be vulnerable to abuse. In U.S. settings, studies have clearly shown that exposure to illicit substance use in the home is associated with worse academic performance, emotional and behavioural problems, and future substance use disorders (Solis, Shadur, Burns, & Hussong, 2012), highlighting the importance of identifying and providing services to children in households where *tik* is being used. At a larger societal level, participants saw *tik* as closely linked to crime and violence in the community, and in turn to economic decline and social disintegration in a setting already heavily burdened by poverty and other social problems. The relationship between methamphetamine and property crime has been identified in other settings (Gizzi & Gerkin, 2010), but the descriptions in our study of the ubiquity of opportunistic *tik*-related crimes in this setting (e.g., multiple respondents talked about their clothes being stolen when they are hung out to dry or metal roofing being stolen from their homes) speaks to the pervasiveness and depth of this impact.

Our findings point to the need for a collection of policy and programmatic approaches to prevent *tik* use and to mitigate its impact on households and community. Youth are the most appropriate target for prevention efforts, given the propensity for *tik* use to be introduced by peer groups during adolescence (Pluddemann, Flisher, McKetin, Parry, & Lombard, 2010b). Evaluations of drug prevention efforts suggest some effectiveness of school-based, media and family-based interventions, but highlight the need to combine these approaches to have the most impact (Babor, 2010). At the same time, it is clear from our data that public health approaches in this setting must be accompanied by policy approaches that favour structural changes to provide youth with outlets for recreation and job training, where they can develop future prospects and identify alternative role models. Services for chronic *tik* users must begin with identification of users – done in collaboration with schools, community organizations, clinics and the community justice system – followed by linkage and retention in appropriate treatment programs. Government-funded out-patient treatment centres exist for *tik* users in the Western Cape, but these centres should be better promoted in the community, with barriers to access assessed and alleviated. In order to mitigate the impact of *tik* on households, family-level therapy may be particularly beneficial in homes where *tik* is used, and may support the drug user on a course of recovery (Margolis & Zweben, 2011). At the community level, adequate policing, accompanied by transparency and accountability in the police sector, is sorely needed both to directly address *tik*-associated crime, as well as to build a sense of community in responding to the problem. At the same time, the police

require training to identify *tik* addiction and implement appropriate referral mechanisms. Policies that favour getting criminal offenders into addiction treatment may ultimately result in better community outcomes than channelling these offenders through the traditional criminal justice system (Gottfredson, Najaka, & Kearley, 2003).

In a setting of high HIV prevalence like South Africa, *tik* is particularly concerning because it may further exacerbate factors that put one at risk of HIV. As our data suggest, *tik* use is associated with sex trade, multiple partners and inconsistent use of condoms, relationships that have been demonstrated quantitatively in South Africa (Meade et al., 2012; Pluddemann, Flisher, Mathews, Carney, & Lombard, 2008; Wechsberg et al., 2010). In communities such as this one, HIV intervention efforts should target *tik* users for HIV prevention, as well as HIV testing and linkage to care. Additional qualitative research with active *tik* users would help to shed more light on HIV knowledge, attitudes and risk behaviours, in order to better target HIV services to this community.

This study captured narratives of *tik* use and the impact of *tik* on a single township community in Cape Town, South Africa. The qualitative data is rich and allows exploration of context, but it is not without limitations. *Tik* was not the sole focus of the interviews, so it was not discussed with consistency across interviews. Stigma around *tik* use may have made it difficult for respondents to discuss personal experiences with *tik* use, therefore under-reporting the individual use and impact of the drug. Respondents were sampled from alcohol-serving venues, so they represent only a subset of the community. Within the venues, respondents were purposively selected due to their frequency of attending the venue, and so may not represent all venue attenders. It is impossible to ascertain whether *tik* use was over-represented or under-represented in this group. On the one hand, the sample was limited to individuals who were already engaging in substance use (i.e., alcohol), and may therefore be more likely than the general population to engage in drug use. On the other hand, current *tik* users may be less likely than the general population to attend alcohol-serving venues, given their social marginalization and lack of disposable income. Future studies should explore qualitative narratives among *tik* users who are recruited at the community level in order to examine these topics among a broader range of users.

Conclusion

The findings from our study highlight the need to focus on *tik* use in township communities in the Western Cape as an urgent matter of social development, safety and public health. Although our findings are specific to this particular region in South Africa, they offer lessons for other low-resource settings that might experience emerging and concentrated epidemics of methamphetamine. The findings highlight the potential impact of a new methamphetamine epidemic on individuals, households and communities, and the need to harness a comprehensive and multi-sectoral policy response to drug prevention and treatment, which can address the impact of use at the individual, inter-personal, and community levels.

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Figure 1.
Summary of themes related to impact of tik use