POLICY BRIEF
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METHAMPHETAMINE USE AND ASSOCIATED PROBLEMS AMONG ADOLESCENTS IN THE WESTERN CAPE PROVINCE OF SOUTH AFRICA:

A need for focused interventions

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Introduction

Over the past six years the Western Cape province in South Africa has emerged as one of the regions in the world with the highest levels of methamphetamine use.(1) Methamphetamine (known locally as 'tik') is considered as one of the most dangerous illicit drugs with numerous side effects, including psychosis, depression, and weight loss. The drug is also associated with increased sexual risk behaviour, increasing the likelihood of exposure to sexually transmitted infections (STIs), including HIV.(2) Life-time self-reported use of the drug in the Western Cape has ranged between 2% and 12% from various surveys conducted among high school learners between 2005 and 2011, with estimates for most of the surveys between 9% and 12%.(3-6)

Research undertaken by the MRC

Admissions to treatment

Over the last 16 years the MRC has monitored admissions to specialist substance abuse counselling and treatment centres in South Africa, via the South African Community Epidemiology Network on Drug Use (SACENDU). This project noted an increase in admissions for treatment for methamphetamine in the Western Cape, particularly among adolescents. By 2006, a peak of 73% of adolescent patients at such centres were reporting this drug as a primary or secondary substance of abuse.(7) While this percentage has tapered off to 39% among adolescents during 2011, the drug continued to be the most common primary substance among patients of all ages admitted for treatment during 2011, with 39% of all patients reporting it as a primary substance of abuse from data collected in the second half of 2011.(8)

Sexual risk behaviour

Research conducted by the MRC and University of Cape Town (UCT) among 4605 high school learners in Cape Town in 2005 found that learners who had used methamphetamine in the past 12 months were significantly more likely to have had vaginal and anal sex than those who had never used the drug.(4) A multiple logistic regression model adjusted for gender, age and smoking tobacco, showed that ever having had vaginal sex and ever having had anal sex were significantly associated ($p < 0.01$) with methamphetamine use in the past 12 months [Odds Ratio (OR) = 2.1, 95% confidence interval (CI)I: 1.5-3.0 and OR = 1.6, 95% CI: 1.1-2.2, respectively]. A further study conducted by the MRC among 1561 Cape Town high school learners in 2006 found that learners who had used methamphetamine in the past 12 months were in a higher HIV/STI risk category than those who had not used the drug.(9) A multinomial logistic regression with gender, tobacco, alcohol and cannabis use in the past 12 months, and age categories as covariates showed that methamphetamine use in the past 12 months was significantly associated with being in a higher HIV/STI risk category (Relative Risk Ratio (RR) = 2.1, 95% CI: 1.10-4.03, $p < 0.05$).

Mental health and aggressive behaviour

The MRC study of 1561 high school learners in Cape Town also found significant associations between methamphetamine use in the past 12 months and mental health problems. The study showed that methamphetamine use in the past 12 months was significantly associated with higher levels of aggressive behaviour, depression and a greater risk for mental health problems in general.(5) An ordinal logistic regression model, adjusted for tobacco, alcohol and cannabis use in the past 12 months, showed that methamphetamine use in the past year almost doubled the odds of being in a higher risk category for aggression (Adjusted Odds Ratio (AOR) = 1.81, 95% CI: 1.04-3.15, $p < 0.05$). In a second ordinal logistic regression model, adjusted for gender, age, and tobacco, alcohol and cannabis use in the past 12 months, methamphetamine use in the past year was also associated with being in a higher mental health risk category (AOR = 2.04, 95% CI: 1.26-3.31, $p < 0.05$). A third ordinal logistic regression model, adjusted for cannabis use in the past year and age, showed that methamphetamine use in the past year was a significant indicator of being in a higher depression risk category (AOR = 2.65, 95% CI: 1.64-4.28, $p < 0.001$).

Drop-out and absenteeism

A follow up survey of the 1561 high school learners in Cape Town 12 months after the initial survey found that a significant proportion of students (43%) had either dropped out of school or were absent. Using an adjusted logistic regression model, the study found that life-time methamphetamine use in addition to other substances at Time 1 was significantly associated with drop-out and absenteeism at Time 2. The study compared learners who had never used methamphetamine, cannabis and were not current smokers with learners who were current smokers and had used cannabis and methamphetamine at least once in their life. The latter students were two and a half times more likely to have dropped out or be absent (OR = 2.58, 95% CI: 1.24-5.36).(10)

Key recommendations for policy

Key recommendations from these research findings include the following:

- Sensitizing parents, educators, Western Cape Education Department (WCED) and other persons and organisations who work with adolescents about the risks associated with methamphetamine use among adolescents. The prevention of methamphetamine use and treatment availability for adolescents in Cape Town should be paramount to local and provincial government authorities, as there are a number of associated problems, including pressure on substance abuse treatment demand, high levels of sexual risk behaviour, and mental health problems.
- Considering routine screening of high school learners for substance use as well as mental health problems and other risk behaviours associated with substance use. This should occur in conjunction with a referral and treatment structure for those learners identified as requiring an intervention.
- Strengthening support structures in high schools to deal with students who may be at risk for developing further problems associated with methamphetamine and other drug use, could go a long way in curbing methamphetamine and other drug use and associated problems. These support structures could take the form of: (1) increasing the availability of psychological support services. This could be achieved by increasing the number of professionals available, but also training school staff and lay counsellors in basic required skills. This could form part of the National Department of Health's strategy to develop a School Health Programme.(11)
- Further efforts are needed to strengthen HIV prevention messages and these messages should include the potential role of methamphetamine use in increasing this risk. This is particularly crucial for high HIV prevalence countries, like South Africa. Messaging should also ensure that content is relevant to adolescents and appeals to their culture and issues. This communication should be incorporated into life skills curricula, community based structures including NGOs working in the field, electronic health information forums (e.g. Health-E), and government policy advisory bodies such as the South African National AIDS Council (SANAC).
- Methamphetamine and other drug abuse prevention programmes need to incorporate issues around STI risks (including HIV) and STI prevention programmes need to incorporate the potential contribution of methamphetamine and other drug use to an elevated risk of exposure to STIs.
- Monitoring the prevalence of methamphetamine use through regular high school surveys is also recommended, to complement treatment centre data. Mechanisms of monitoring prevalence among out-of-school youth should also be implemented given a higher drop-out rate among adolescents using methamphetamine.

A number of the above recommendations are in line with guidelines developed by the U.S. National Institute on Drug Abuse for preventing drug abuse among children and adolescents.(12) These principles suggest three levels of prevention:

- Universal programmes which are designed for all learners in a school,
- Selective programmes which target at risk groups, and
- Indicated programmes which are designed for those already experimenting with drugs.

Thus finding methods for screening learners who are at risk for methamphetamine (and other substance) use or at the experimentation stage is important in order to be able to target the **selective and indicated programmes**. These screening methods should go beyond drug testing and short assessment instruments like the Problem Oriented Screening Instrument for Teenagers (POSIT) could be considered for this purpose. The development of selective and indicated programmes is of particular importance for methamphetamine use due to the wide array of associated problems and side effects. These programmes could include the Screening, Brief Intervention and Referral to Treatment (SBIRT) model currently advocated by the U.S. Substance Abuse & Mental Health Services Administration (SAMHSA). Brief interventions have been developed, encompassing only two to three counselling sessions for learners using alcohol or other drugs.(13) A recent audit of substance use prevention programmes in Cape Town found that most current programmes are unfortunately universal in nature, and tend to focus on once-off or short-term awareness raising activities in schools.(14) Programmes designed for learners at risk and intervention programmes for those already experimenting with drugs are required, which follow an integrated approach including mental health and behaviour issues, as well as attempting to deal with environmental and family issues. Where necessary an accessible referral network for treatment should be part of the overall intervention approach.

Strengthening psychological and social services support to schools is a key component in the implementation of these recommendations.

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