HHS Public Access

Author manuscript

*Drug Alcohol Rev*. Author manuscript; available in PMC 2018 January 01.

Published in final edited form as:

*Drug Alcohol Rev*. 2017 January ; 36(1): 97–106. doi:10.1111/dar.12420.

# Intimate partner violence among men and women who use methamphetamine: A mixed-methods study in South Africa

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## Abstract

**Introduction—**The prevalence of methamphetamine use has risen dramatically in parts of South Africa. Globally, methamphetamine has been linked to intimate partner violence (IPV) and other forms of aggression. The aim of this mixed-methods study was to examine the experiences of physical IPV and its contextual factors among methamphetamine users in an urban community in Cape Town, South Africa.

**Methods—**Active methamphetamine users were recruited using respondent driven sampling. All participants (n=360) completed structured surveys, and a subset (n=30) completed in-depth interviews with discussions of personal IPV experiences. Quantitative data were examined separately by gender, and regression models were used to identify factors that were associated with physical IPV victimisation and perpetration. Qualitative data were analysed to provide contextual understanding.

**Results—**In the past 3 months, 47% of women and 31% of men reported being a victim of IPV, and 30% of women and 28% men reported being a perpetrator of IPV. Victimisation and perpetration were highly correlated, and both were significantly associated with histories of other traumas. Although the survey data suggests gender equivalence in IPV, the qualitative data provides a more nuanced context, with female victimisation by male partners being particularly frequent and intense. In narratives, IPV was a product of male aggression while using methamphetamine, norms around sex trading, and gender-based attitudes endorsing violence against women.

**Conclusion—**Addiction to methamphetamine creates heightened risks of IPV, especially among those with previous traumas. The findings emphasise the importance of identifying and addressing IPV among methamphetamine users in South Africa.

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The authors declare no conflicts of interest.

**Keywords**

South Africa; methamphetamine; intimate partner violence; addiction; drug abuse

## Introduction

Methamphetamine is a highly addictive psychostimulant that is consistently associated with a wide array of negative physical, behavioral and psychiatric effects, including mental illness, violence and sexual risk [1, 2]. Studies have shown that methamphetamine use is closely linked with various forms of violence and aggression, including intimate partner violence (IPV) [1, 3]. Historically, levels of methamphetamine and other amphetamine use have been low throughout Africa [4]; however, in the last decade, widespread use of this drug has emerged in South Africa [5]. At the same time, South Africa is widely recognised to have one of the highest rates of IPV in the world [6, 7], and there is potential that these two public health problems of methamphetamine and IPV may create a vicious, destructive cycle.

The Western Cape Province in South Africa has been an epicenter for the abuse of methamphetamine, which is locally known as “tik” for the sound produced when smoked [8, 9]. Whereas less than 1% of patients in drug treatment reported methamphetamine as their drug of choice in 2002, just four years later 42% of those in treatment reported methamphetamine as their primary drug [10]. High rates of methamphetamine use have also been noted among community samples, with 10% of some populations reporting recent methamphetamine use [11, 12], and methamphetamine being more common among men than women [13]. Studies in the Western Cape have found that methamphetamine places a large burden of harm on community health, social well-being and economic development [14]. Methamphetamine users in this setting have been shown to be more likely than non-methamphetamine users to engage in high-risk sexual behaviors such as sex trading and unprotected sex [12, 15, 16], and to have high risk of mental health distress and aggression [14, 17], all of which have important implications for the wellness of the greater community.

Physical intimate partner violence is defined by behavior within a relationship that results in physical harm to a romantic or sexual partner partner [18]. South Africa has high rates of IPV, with epidemiological research suggesting that up to half of South African women will be a victim of violence in an intimate relationship in their lifetimes [6, 7, 19-22]. Although the vast majority of research has focused specifically on female victimisation of IPV by male perpetrators, a few studies have examined bidirectional violence. One such study in South Africa found that women were significantly more likely than men to report being victimised, but rates of perpetration of IPV were approximately equal for men and women [20].

Substance use has been consistently identified as a risk factor for both victimisation and perpetration of IPV [23, 24]. All substances of abuse have some physiological effects that can impair judgment and lower inhibitions. Methamphetamine, in particular, induces neurophysiological effects that impact social and cognitive functioning, which can make individuals more vulnerable to IPV victimisation and more likely to perpetrate IPV towards

as sex partner. Methamphetamine use results in a sudden increase in dopamine, which produces feelings of euphoria, hypersexuality, increased energy, disinhibition and feelings of grandiosity [25, 26]. Withdrawal from methamphetamine is characterised by intense craving for the drug, along with irritability and potential aggression [27]. With long-term use, methamphetamine use can cause cognitive impairment and even psychosis [27, 28], which may create paranoia and suspicion in relationships and further contribute to IPV. In addition to the physiological effects of drug use, there are contextual factors that make IPV experiences more common among drug users. Individuals who use drugs have disproportionately high rates of other lifetime traumas and trauma-related symptomatology [29, 30], which contributes to the cyclical relationship between violence and drug abuse. In addition, drug users may engage in sex trading relationships to procure drugs, in which there are differential power dynamics and risks for violence [31].

Despite increasing concern about methamphetamine use in South Africa and evidence of its relationship with IPV globally, there is an absence of research examining IPV among methamphetamine users in South Africa's most hard-hit communities. The aim of this paper is three-fold: (i) to examine experiences of physical IPV among methamphetamine users recruited from a township community in Cape Town, South Africa; (ii) to identify factors associated with being a victim or perpetrator of IPV; and (iii) to qualitatively examine the broader context of IPV in this population. The findings from this study can help to inform the development of integrated interventions to address IPV and methamphetamine use in the South African context.

## Methods

### Overview

This paper utilises a mixed-methods approach, a method designed to integrate quantitative and qualitative techniques into the interpretation of data in order to offer a multidimensional exploration of the issue under study [32]. This approach was taken because it adds important depth to our understanding of IPV, a complex phenomenon that varies greatly by individuals and involves many layers of interaction not easily illustrated through quantitative or qualitative methods independently.

Quantitative and qualitative data were collected simultaneously between May and October 2013 through a combination of clinical interviews, computerised assessments and in-depth interviews. Quantitative questionnaires and clinical interviews were conducted with 360 participants, and individual in-depth qualitative interviews were conducted with a sub-set of 30 individuals selected from the larger sample. All study activities were conducted in participants' preferred language (Xhosa, Afrikaans or English). The study was approved by the Institutional Review Boards at Duke University and the University of Stellenbosch.

### Study setting

The study was conducted in Delft, a peri-urban township located outside of Cape Town's city center. Delft is home to over 150,000 residents who are primarily either Xhosa-speaking Black African (46%) or Afrikaans-speaking Coloured (52%) background. In Delft, only

27% of adult residents have completed secondary school, and 68% of households have a monthly income of less than R3200 (approx. $320 US) [33]. Delft has high rates of crime and drug usage. In 2012, 3383 drug-related crimes were reported in the township, representing a more than ten-fold increase since 2004 [34].

## Quantitative procedures

A chain referral sampling strategy, informed by respondent driven sampling, was utilised to recruit 360 research participants between May and October 2013. The methodological details, with details on the respondent driven sampling procedures, has been described elsewhere [35]. This approach is particularly effective in recruiting "hard-to-reach populations" such as methamphetamine users who are difficult to recruit due to the illegal nature of their drug use [36]. After completing the study, eight initial recruits ("seed participants") distributed recruitment tickets to other methamphetamine users in the community. Recruited individuals presented to the study site with their recruitment ticket. In order to be eligible, participants had to be age 18 years or older, reside in Delft township, and currently use methamphetamine, as confirmed by a urine test. The vast majority of the recruited individuals (96%) tested positive for methamphetamine. Once enrolled, participants completed an audio computer-assisted self-interview (ACASI), followed by an in-person clinical interview. The entire visit took approximately 2 hours, and participants were compensated R70 (approx. $7 US) in the form of gift cards to a local grocery store.

## Quantitative measures

### Outcomes

**Victimisation and perpetration of physical IPV:** Experiences of physical IPV were assessed in the ACASI using items that were informed by the physical violence sub-scale in the Conflict Tactics Scale [37]. Three questions were asked to assess victimisation of physical IPV: (i) "Has a sex partner ever threatened to hit or throw something at you?"; (ii) "Has a sex partner ever hit, kicked, or beat you?"; and (iii) "Has a sex partner ever used a knife or gun against you?". Participants were also asked whether they had ever perpetrated these same acts against a sex partner. Items were asked for both lifetime and past three months (recent). Four dichotomous variables were created for any endorsement of victimisation and perpetration of physical IPV, separately by lifetime and past three months.

### Co-variates

**Demographics:** Participants reported demographic information including their gender, age, race, education, employment, marital status and sexual orientation during the clinical interview and ACASI.

**Drug use:** The Composite International Diagnostic Interview, a structured interview developed for administration by non-clinicians, was used to classify dependence specific to methamphetamine, based on the International Classification of Diseases criteria (ICD, 10th revision) [38, 39]. The total number of criteria endorsed was summed (range from 0 to 8), and a cutoff of ≥3 is indicative of ICD-10 dependence. To characterise severity of participants' dependence, we used the 5-item Severity of Dependence, with items specific to

methamphetamine (e.g. “Did you think your use of *tik* was out of control?”, “Did you wish you could stop?”) [40]. Total scores ranged from 0 to 15 (α=0.78). Previous research suggests scores above 4 indicate problematic use [40, 41].

**Sex trading:** Experiences with sex trading in the past 3 months were assessed in the ACASI. Six questions were asked about recent experiences “selling sex”, i.e. trading sex to receive money or methamphetamine (e.g. “In the past 3 months have you had sex with someone to get *tik*?”). Six parallel questions were asked about “buying sex”, i.e. trading money or methamphetamine to receive sex. We created separate variables to represent any recent experiences of “selling sex” and any recent experiences of “buying sex”.

**Trauma history:** Childhood abuse was assessed in the ACASI using items from the Childhood Trauma Questionnaire short form [42], which has previously been used in South Africa [43, 44]. Two items assessed childhood physical abuse/neglect, and three items assessed sexual abuse experiences under the age 18. Dichotomous measures were created for any childhood physical abuse/neglect and any childhood sexual abuse. We assessed a lifetime history of adult sexual assault with a single question from the CTS: “As an adult, has someone ever used force (like hitting, holding down, or using a weapon) to make you have sex with them?”

**Gender-based attitudes:** The justification and acceptance of violence against women was assessed in the ACASI with a scale developed for the Cape Town setting [19]. Participants were asked how much they agreed or disagreed with the following five statements: (i) “A woman who talks disrespectfully to a man should expect trouble”; (ii) “Hitting a woman is sometimes necessary to keep her in line”; (iii) “It is understandable that a man will hit a woman if she is disrespectful of him”; (iv) “There are times when a man should hit a woman because of things she has done”; and (v) “A man is expected to discipline a woman.” Four-level response options ranged from “strongly disagree” to “strongly agree”. Item responses were summed to determine a total score, with higher scores indicating greater acceptance of violence toward women (α=0.80).

## Qualitative procedures

Participants who completed in-depth qualitative interviews (n=30) were identified from the larger sample using purposive sampling to ensure a diverse sample in terms of race and gender. Within these stratified categories, participants were further selected based on interviewers’ perceptions that the participant would be a good informant due to his or her willingness to share information freely.

Interviews were conducted using a semi-structured guide that covered topics related to the participant's life experiences and behaviors in the context of methamphetamine use. Areas of inquiry related to IPV included questions and follow-up probes on sexual relationships, experiences with gender and violence, life changes since methamphetamine initiation and experiences of sex trading. Local research staff were trained to conduct interviews in a way that loosely followed the interview guide, leaving room for fluidity of interviews, personal stories and the natural progression of information sharing from each unique participant. Staff

conducted interviews in the participant's language of the choice (English, Afrikaans or Xhosa). Participants were give an incentive of R70 (approx. $7 US) for completion of an in-depth interview. Interviews were audio recorded and later transcribed and translated simultaneously by the staff who conducted the interview.

### Data analysis

Quantitative analysis was conducted using SPSS 22.0 (SPSS Inc., Chicago, IL, USA). First, mean and frequency values were calculated to describe the demographic, drug-related and abuse-related characteristics, and gender attitudes of the men and women in the sample. Chi-square, Mann-Whitney U and t-tests compared the sample characteristics across gender. Second, differences by gender in recent and lifetime IPV victimisation and perpetration were examined using chi-square tests. Third, the association of physical IPV victimisation and perpetration were examined, separately for men and women, using chi-square tests. Fourth, multivariate logistic regression models were conducted to examine variables that were significantly associated with victimisation and perpetration of physical IPV in the past 3 months. Models were examined separately by gender considering the following independent variables: race, age, marital status, dependence severity, childhood sexual abuse, childhood physical abuse/neglect, adult sexual assault, sex trading (“selling sex” to predict victimisation; “buying sex” to predict perpetration) and gender attitudes. Each independent variable was examined first in a bivariate model and, if it was significant at $P<0.05$, was then included in the multivariate model. Race, age, and marital status were included as covariates in the multivariate models regardless of significance.

Qualitative analysis was conducted in two steps. First, analytic memos were written for each transcript to summarise emerging themes and identify *in* vivo codes, terms, and interpretations in participants’ own words [45]. Each memo was reviewed and discussed by at least two members of the research team in order to reach consensus about interpretations of the data and consistency in the way in which memos were formed. Second, memos were entered into NVivo, a qualitative analysis software program, and coded for IPV perpetration, IPV victimisation and general quotes on IPV. The output produced 22 single-spaced pages of text. The first author used a content analytic approach to compare and contrast data across participants, and identify inductive themes across the transcripts.

## Results

### Description of the sample

The full sample included 201 men and 159 women, with demographic characteristics that are described in Table 1. The sample reported severe methamphetamine dependence on the SDS, and almost all (90%) met ICD-10 criteria for amphetamine dependence. Sex trading was prevalent; 37% of the sample reported that they had “sold” sex in the past 3 months and 33% reported that they had “bought” sex in the past 3 months. Traumatic experiences other than physical IPV were common; 41% had a history of childhood physical abuse/neglect, 32% had a history of childhood sexual abuse, and 13% had a history of adult sexual assault. The sample endorsed negative attitudes toward women, with approximately half agreeing that it is necessary or understandable for a man to hit a woman if she is disrespectful.

The sub-set of individuals who completed in-depth interviews reflected the demographics of the full sample. They included 17 men and 13 women, who ranged in age from 19 to 44 years (M=28.47, SD=6.70). The majority were Coloured (67%), heterosexual (90%), unmarried (90%) and had not completed high school (87%).

### Experiences of victimisation and perpetration of physical IPV

A significantly higher proportion of women compared to men reported being a victim of physical IPV in their lifetime (54% vs. 40%) or in the past 3 months (47% vs. 31%). There were no gender differences for recent or lifetime physical IPV perpetration (Table 2).

Perpetration and victimisation of physical IPV were highly associated. Participants who perpetrated IPV were significantly more likely to report IPV victimisation than those who had not perpetrated, among both men (73% vs. 15%) and women (87% vs. 30%).

### Factors associated with recent victimisation of IPV

Table 3 summarises the logistic regression models predicting reported victimisation of IPV in the past 3 months, separately by gender. In the multivariate model for women, a history of childhood physical abuse/neglect (adjusted odds ratio [AOR]= 2.45, 95% confidence interval [CI] 1.10-5.46) and lifetime adult sexual assault (AOR= 5.54, 95% CI 1.96-15.67) were associated with a higher likelihood of recent physical IPV victimisation. For men, methamphetamine dependence severity (AOR= 1.11, 95% CI 1.01-1.23), childhood sexual abuse (AOR= 2.78, 95% CI 1.20-6.43), and childhood physical abuse/neglect (AOR= 2.21, 95% CI 1.13-4.32) were associated with a higher likelihood of recent physical IPV victimisation.

### Factors associated with recent perpetration of IPV

Table 4 summarises the logistic regression models predicting reported perpetration of IPV in the past 3 months, separately by gender. In the multivariate model for women, lifetime adult sexual assault was associated with a higher likelihood of recent physical IPV perpetration (AOR= 6.34, 95% CI 2.53-15.90). For men, childhood sexual abuse (AOR= 3.64, 95% CI 1.61-8.24), childhood physical abuse/neglect (AOR= 2.44, 95% CI 1.23-4.83) and lifetime adult sexual assault (AOR= 5.36, 95% CI 1.32-21.82) were associated with a higher likelihood of recent physical IPV perpetration.

### Qualitative findings

In the in-depth interviews, a majority of the women (8/13) related incidences where they had been physically abused by a sexual partner; only one man (1/17) related being in a relationship where he had been physically abused. Four men spoke about incidents of perpetrating physical IPV. No women related specific accounts of IPV perpetration, but some alluded to being “aggressive” towards partners and to acting defensively during assaults by partners. Several themes emerged to provide insight into the context and drivers of IPV among methamphetamine users.

**Physiological impact of methamphetamine—**Respondents consistently talked about how methamphetamine increased their energy levels, which often contributed to them feeling “aggressive”, “forceful and daring”, and “careless”. One man explained this feeling:

> “*Tik* makes you aggressive. I'm speaking of my own personal experience. Let's say I had a hit, I'll have an argument with someone. I'll be more aggressive towards that person, as opposed to being sober minded.” (22 year old, Coloured male)

For men, these feelings of aggression were often channeled toward their female partners, with a tendency to initiate arguments, often related to jealousy and accusations of infidelity, which may escalate into physical violence. One man, in describing an incident where he hit his girlfriend, said that he now tries to avoid being with her when he is using methamphetamine, because he recognises his tendency to be violent when intoxicated:

> “She came to my house and I asked her what is going on. She was confused, and to me it was like she was making me look like a fool more and more. I started beating her up so badly her whole face was swollen, then I just left because I was angry.... I really regretted doing that to her, because she told me she was innocent, but my mind told me my own stuff (because of methamphetamine). And now she is scared of me and I don't like that because I get angry, very easy, not with her only I just get angry. So I don't want her to see me when I have been smoking (methamphetamine).” (25 year old, Black male)

A few women also noted the physiological impact that methamphetamine had on their behavior, making them “aggressive” and “rude” and quicker to start arguments. However, none of these women reported perpetrating violence against their partners.

**Role of addiction—**Participants talked about how the addictive properties of methamphetamine contributed to a culture of violence in intimate partnerships, because methamphetamine took priority over healthy functioning in the relationship. In a context of high poverty, there was often a feeling of desperation to procure the drug. Both women and men talked about stealing from their partners to get money, and men in particular talked about becoming violent when a partner stood in their way of getting money for methamphetamine.

> “I had a fight with my girlfriend about money for *tik*. My sister brought her money, and I asked for *tik* money. She came up with all forms of excuses – we have to do this, we have to do that. I wouldn't understand, and that's when I hit her.” (40 year old, Coloured male)

> “Like there's this house on my street where the father of that house is on *tik*. So he is selling all the stuff to get money. When the wife is talking to him about it, he will beat her up.” (22 year old, Black female)

**Physical violence in the context of sexual assault—**Women's experiences of IPV often occurred in the context of sexual assault by a partner. Multiple women described being coerced to have sexual intercourse by their husbands or boyfriends, and being physically beaten when they did not comply with their partner's sexual advances. Men explained how methamphetamine use heightened their sex drive, and altered their rational thinking about

pursuing sexual relationships. One man described: “If the drug is in your system... you are just thinking that I want sex and I want it now.”

Physical IPV also occurred in the context of sex trading, where expectations of sex in exchange for methamphetamine seemed to be universal among men. (Detailed analysis of this data has been presented elsewhere [31]). Almost all participants explained that sex was expected when a man provided methamphetamine to a woman, as one man characterised: “When men and women smoke together, sex is inevitable”. Many participants explained that women should expect physical or sexual violence if they resist sexual advances from men who provided them with methamphetamine. One male participant explained that women should avoid resisting so as to avoid physical assault: “If [women] don't want (to have sex) they know maybe the guy will hit them, so they might as well do what the guy wants to keep the peace”.

**Derogatory attitudes toward female methamphetamine users—**Finally, men expressed negative gender attitudes, with high levels of distrust, blame and objectification towards female methamphetamine users. Both men and women described the ways that women who use methamphetamine were negatively labeled, including terms such as “dirty”, “snake”, and “20 Rand” (an indication of how much methamphetamine they must buy in order to get a girl to have sex with them, approximately equal to $2 USD). One male participant explained that men see women who use drugs and alcohol as “worthless”:

> “That's how women are labeled. They are worthless. That's how [men] use women. They instruct them to stand in a certain way, or lay in a certain way. This is all a joke to them.... [Women] don't know their rights. The drug removes all of that. It strips them of their humanity. It strips them of everything.” (45 year old, Coloured man)

## Discussion

In this study of active methamphetamine users in Cape Town, we sought to understand experiences of physical IPV and the contextual factors that may influence these experiences. Both male and female participants reported markedly high rates of both perpetration and victimisation of IPV, with great overlap between perpetration and victimisation. Although the quantitative data suggests gender equivalence in IPV experiences, the qualitative data provides a more nuanced context. Women reported that methamphetamine contributed to feelings of irritability and aggression; however, there were no accounts of violence by women perpetrated against male partners. Instead, the narratives shed light on unequal gender power in intimate relationships, and women's frequent and violent experiences of IPV from their male partners. The bi-directional violence we noted in the quantitative assessment may reflect a broader context observed across multiple research studies, whereby men are more likely to use violence to demonstrate dominance and power, and women are more likely to use violence as a form of self-protection [46]. Although violence in relationships may appear in quantitative surveys to be mutually bi-directional (e.g. [20, 47]), the motivators and consequences of violence may not be the same [48, 49].

Lifetime traumatic experiences were significant correlates of both IPV victimization and perpetration. This echoes other research in South Africa, which has demonstrated that there is a clustering of traumatic experiences among individuals living in areas that have high rates of violence and historic weakening of the social support systems [50]. Perhaps most notable is the strong predictive value of adult sexual assault on women's history of IPV victimisation. The relationship between sexual assault history and IPV may be attributable in part to the risk of revictimisation after an abusive experience [51], but it may also reflect that physical violence occurs in the context of sexual assault, as supported by the qualitative data. In a more focused analysis of this data, we have documented the unique context of sexual assault among methamphetamine users, which is related to norms of reciprocity (sex for drugs) and hyper-sexuality when using methamphetamine that contributes to forced sexual experiences [31]. Although it is not possible to know whether IPV was happening in the direct context of sex trade or sexual assault, our qualitative data highlight these as possible predecessors for violence among methamphetamine users. Future quantitative studies should include data on the relationship of the participant to the perpetrator; it is possible that the term “intimate partner violence” is a misnomer if the perpetrator was a stranger or acquaintance, but not a voluntary intimate partner. This sample had high rates of drug dependence, as we have documented elsewhere [52]. Addiction can contribute to IPV both via the physiological impact of the drug, as well as through a desperation to procure drugs in a setting of high poverty and unemployment. Drug severity and regularity of drug use were fairly uniform in this population, with almost everyone meeting criteria for methamphetamine dependence. This may have prevented drug dependence from emerging as significantly associated with IPV. However, the qualitative data clearly highlights the role of addiction in IPV perpetration. We have noted elsewhere that polysubstance use was common in this sample [52], and this may have contributed to high rates of IPV. Although free government drug treatment services are available in the community where this study was conducted, the barriers to seeking treatment may be difficult to overcome [52].

The tendency for both men and women in our sample to agree with negative gender attitudes deserves attention. Negative attitudes about women were very similar across gender, and they were not significantly correlated with IPV. The in-depth interviews identified negative gender attitudes even among those who experienced IPV themselves, indicating that women may internalise negative gender attitudes as a way to cope with their abusive experiences. In addition, our qualitative work highlighted specific derogatory attitudes towards women who use methamphetamine; these attitudes appeared to justify and perpetuate IPV in this population. Research in Cape Town [53] and other settings [54], have similarly documented heightened stigma against women who use drugs, because they are seen as defying gender role expectations. Our findings of negative gender attitudes have important implications for the design of violence prevention programs that may target methamphetamine users. Although many prevention programs assume that changes in attitudes and beliefs will lead to changes in violent practices, this may not be effective for programs that work to prevent perpetration of IPV among male methamphetamine users in South Africa [55]. Instead, directly addressing addiction, and the physiological impact of methamphetamine, may be a more effective way to address IPV in this population.

Several limitations in the present study warrant mention. First, while we used a chain referral sampling approach that reached a large and diverse sample of methamphetamine users, the extent to which results generalise to the full population of methamphetamine users in this setting is unknown. It is possible, too, that participants referred their sexual partners for participation in the study, which may have impacted the accuracy of our estimates. The qualitative interviews, although not meant to be generalisable to the larger population, may nevertheless have been biased due to the purposive sampling of informants who were particularly articulate and willing to share their personal experiences. Second, because the study design did not include a comparison group of individuals who do not use methamphetamine, we are unable to conclude how rates of IPV in this sample compare to those who do not use methamphetamine in the same setting. Third, data were collected using self-report methods, therefore introducing the possibility of recall and social desirability bias, and our brief 3-item measure of IPV may have missed other forms of violence. There may have also been underreporting of IPV experiences due to social stigmas associated with reporting exposure to violence. These biases were likely reduced through the use of a computerised ACASI survey, which helps to increase disclosure of sensitive information [56], but may have contributed to under-reporting in the in-depth qualitative interviews, especially if men were reluctant to talk about IPV victimisation. Finally, the fact that we did not transcribe the qualitative interviews in the source language before translation did not allow us to verify the accuracy of the translation.

Despite its limitations, this study provides a new perspective on the experiences of IPV among methamphetamine users in South Africa. A mixed-methods approach allowed us to examine not only rates of victimisation and perpetration of IPV among methamphetamine users, but also to understand the social context in which these experiences occur. Our findings suggest that the methamphetamine using population may be at higher risk of both victimisation and perpetration of IPV than the general population, and that men and women share similarly negative gender attitudes that support and justify IPV. Additionally, our results show that traumatic experiences are significantly associated with all forms of IPV, and that sexual assault and sex trading in this population is an important contextual influence of IPV. Building upon these findings, future research should explore the temporality of intimate partner violence in relationship to methamphetamine use, and investigate in greater depth the experiences of IPV among male methamphetamine users. Finally, this study highlights the need for future interventions and policy responses to address IPV in the context of the emerging methamphetamine epidemic in South Africa. A response to IPV in this population likely needs to be multi-pronged in its approach, in order to address the range of sexual relationships in which IPV occurs. Interventions to address primary and secondary prevention of IPV may differ considerably depending on whether the IPV occurs within a steady partnership, a sex trading relationship, or a coerced act of sex. At the same time, resources should be devoted to the scale-up of community-based treatment of methamphetamine abuse, with the integration of the treatment of trauma into those programs.

## Acknowledgements

This study was supported by grants to Dr Meade (K23-DA-28660 and R03-DA033282) from the National Institute on Drug Abuse. The first author received support from the Duke Center for AIDS Research (P30-AI-064518) and the UCLA HIV/AIDS Substance Abuse and Trauma Training Program (R25-DA-035692). Dr Hobkirk was supported by a NIDA-funded fellowship (F32-DA-038519). We are grateful to all the men and women who participated in this study. We would like to acknowledge the South African research team that collected the data, specifically Mariana Bolumole, Albert Africa and Tembeka Fikizolo. We thank Stephen Kimani and Desiree Pieterse for their early contributions that led towards this manuscript.

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**Table 1**

Sample characteristics (N=360)

| | Women (n=159) M (SD) or n (%) | Men (n=201) M (SD) or n (%) | *P* |
|---|---|---|---|
| *Demographics* | | | |
| Age | 29.04 (6.95) | 28.92 (7.59) | 0.880 |
| Coloured | 138 (87%) | 125 (62%) | <0.001 |
| High School Education | 20 (13%) | 22 (11%) | 0.632 |
| Employed (full or part time) | 22 (14%) | 46 (23%) | 0.031 |
| Married | 29 (18%) | 22 (11%) | 0.049 |
| Heterosexual | 137 (86%) | 179 (89%) | 0.406 |
| *Drug-related characteristics* | | | |
| Amphetamine dependence | 143 (91%) | 180 (90%) | 0.765 |
| Severity of tik dependence | 10.16 (4.08) | 11.08 (4.08) | 0.940 |
| “Selling” sex for money/drugs | 53 (33%) | 81 (40%) | 0.175 |
| “Buying” sex for money/drugs | 35 (22%) | 82 (41%) | <0.001 |
| *Abuse history* | | | |
| Childhood physical abuse/neglect | 62 (39%) | 84 (42%) | 0.591 |
| Childhood sexual abuse | 68 (43%) | 48 (24%) | <0.001 |
| Adult sexual assault | 34 (21%) | 12 (6%) | <0.001 |
| *Gender norms* | | | |
| Agree with trouble if disrespectful | 131 (82%) | 165 (82%) | 0.582 |
| Agree with hitting is necessary | 67 (42%) | 85 (43%) | 0.935 |
| Agree with hitting if disrespectful | 82 (52%) | 111 (56%) | 0.260 |
| Agree with hitting for things done | 73 (46%) | 109 (55%) | 0.046 |
| Agree with disciplining a woman | 92 (58%) | 118 (59%) | 0.431 |
| Mean of gender attitudes | 13.13 (4.70) | 13.64 (4.41) | 0.296 |

* $P<0.05$

** $P<0.01$

*** $P<0.001$

**Table 2**

Experiences of physical intimate partner violence (IPV)

| | *Ever* | | | *Past 3 months* | | |
|---|---|---|---|---|---|---|
| | **Women (n=159)** | **Men (n=201)** | **$\chi^2$ value** | **Women (n=159)** | **Men (n=201)** | **$\chi^2$ value** |
| Victim of physical IPV | 86 (54%) | 81 (40%) | 6.79** | 75 (47%) | 63 (31%) | 9.41** |
| Perpetrator of physical IPV | 58 (37%) | 79 (39%) | 0.30 | 47 (30%) | 56 (28%) | 0.13 |

** *P* <0.01

**Table 3**

Predictors of victimisation of physical IPV in the past 3 months, by gender

| | Women (n=159) | | Men (n=201) | |
|---|---|---|---|---|
| | **Bivariate models OR (95% CI)** | **Multivariate models AOR (95% CI)** | **Bivariate models OR (95% CI)** | **Multivariate models AOR (95% CI)** |
| Race (Ref:Coloured) | 0.79 (0.31-1.97) | 0.69 (0.22-2.12) | 2.02 (1.05-3.87)* | 1.85 (0.78-4.38) |
| Age | 1.03 (0.99-1.08) | 1.04 (0.99-1.10) | 1.03 (0.99-1.07) | 1.02 (0.97-1.07) |
| Marital status (Ref:Married) | 1.25 (0.56-2.80) | 1.25 (0.48-3.27) | 1.29 (0.51-3.25) | 1.46 (0.51-4.16) |
| Dependence severity | 1.05 (0.97-1.14) | | 1.15 (1.05-1.25)** | 1.11 (1.01-1.23)* |
| Child sexual abuse | 3.98 (2.04-7.74)*** | 2.15 (0.98-4.72) | 2.06 (1.05-4.02)* | 2.78 (1.20-6.43)* |
| Child physical abuse/neglect | 2.87 (1.49-5.56)** | 2.45 (1.10-5.46)* | 3.04 (1.64-5.63)*** | 2.21 (1.13-4.32)* |
| Adult sexual assault (lifetime) | 7.75 (2.99-20.09)*** | 5.54 (1.96-15.67)** | 4.87 (1.41-16.85)* | 3.84 (0.95-15.61) |
| Adult sexual assault (recent) | 3.09 (0.48-19.84) | | 1.00 (0.09-11.03) | |
| “Selling” sex for money/drugs | 1.58 (0.81-3.06) | | 2.06 (1.13-3.78)* | 1.61 (0.82-3.14) |
| Gender attitudes | 0.93 (0.86-0.99)* | 0.93 (0.85-1.00) | 1.03 (0.96-1.10) | |

AOR, adjusted odds ratio; CI, confidence interval; OR, odds ratio.

*$P<0.05$

**$P<0.01$

***$P<0.001$

**Table 4**

Predictors of perpetration of physical IPV in the past 3 months, by gender

| | Women (n=159) | | Men (n=201) | |
|---|---|---|---|---|
| | **Bivariate models OR (95% CI)** | **Multivariate models AOR (95% CI)** | **Bivariate models OR (95% CI)** | **Multivariate models AOR (95% CI)** |
| Race (Ref:Coloured) | 1.06 (0.38-2.92) | 1.55 (0.45-5.34) | 1.26 (0.66-2.41) | 1.58 (0.67-3.70) |
| Age | 0.97 (0.92-1.02) | 0.98 (0.92-1.04) | 1.02 (0.98-1.06) | 1.02 (0.97-1.07) |
| Marital status (Ref:Married) | 0.72 (0.28-1.81) | 0.91 (0.30-2.72) | 1.24 (0.48-3.22) | 1.53 (0.51-4.54) |
| Dependence severity | 1.07 (0.98-1.16) | | 1.07 (0.98-1.15) | |
| Child sexual abuse | 3.44 (1.69-7.00)*** | 1.97 (0.84-4.61) | 3.35 (1.69-6.64)*** | 3.64 (1.61-8.24)** |
| Child physical abuse/neglect | 2.97 (1.47-6.00)** | 1.94 (0.87-4.31) | 3.27 (1.72-6.20)*** | 2.44 (1.23-4.83)* |
| Adult sexual assault (lifetime) | 8.80 (3.78-20.49)*** | 6.34 (2.53-15.90)*** | 5.88 (1.69-20.39)** | 5.36 (1.32-21.82)* |
| Adult sexual assault (recent) | 1.87 (0.44-7.98) | | 5.00 (0.34-72.77) | |
| “Buying” sex for money/drugs | 2.16 (0.99-4.71) | | 2.06 (1.10-3.86)* | 1.65 (0.82-3.31) |
| Gender attitudes | 0.99 (0.92-1.06) | | 1.03 (0.96-1.10) | |

AOR, adjusted odds ratio; CI, confidence interval; OR, odds ratio.

*$P$<0.05

**$P$<0.01

***$P$<0.001.