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An Ethnographic Exploration of Self-Reported Violence Among Rural Methamphetamine Users

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Abstract

Baseline and follow-up qualitative interviews with methamphetamine (MA) users in rural Kentucky and Arkansas examined their involvement in drug-related violence. Twelve baseline participants reported MA-related violence, while 20 reported violence linked to other substances. In follow-up interviews conducted 12 to 24 months later, four participants reported MA-related violence and 3 reported violence associated with other substances. Violence was rarely connected to MA's psychoactive effects. Rather, causes of violence included disputes over MA or its use, as well as paranoia, ill-tempers, and hallucinations during MA "binges." Implications of the findings for informing additional research and interventions are discussed.

Keywords

Methamphetamine; violence; rural drug use; southern United States

INTRODUCTION

Methamphetamine (MA) is a powerful CNS stimulant linked to a potentially wide range of associated violence. For example, unlike other drugs, MA is often locally produced ("cooked") in makeshift "labs." Production involves chemicals such as anhydrous ammonia that if mishandled could result in fires and explosions. In addition, cookers are considered to be prone to violence to protect their labs (Sexton, Carlson, Leukefeld and Booth 2006a).

There are linkages between MA and propensity to violence. Clinical research suggests that MA facilitates decreased inhibition and elevated aggression (Sekine et al., 2006; Simon et al., 2002). Another study reported higher suicidal ideation (6% vs. 3%) and psychotic symptoms (7% vs. 5%) among MA users than cocaine users (Copeland and Sorensen, 2001).

MA's psychoactive and physiological effects last longer than other stimulants (Murray, 1998). MA provides energy "boosts" for work, recreation, and household chores (Sexton, Carlson, Leukefeld and Booth 2006b). So, MA users may be under its influence for long periods in "normal" settings, thus creating added risks for misadventure (Sommers and Baskin, 2006).

There are indications that MA users are commonly involved in violence. For example, research in a hospital psychiatric consultation service found that 26.6% of MA users versus 11% of non-MA users had attempted suicide (Baberg, Nelesen, and Dimsdale, 1996). A study of 641 parolees reported that 23.6% of MA-using participants (versus 6.8% of non-MA users) had committed violent crime in the previous 30 days (Cartier, Farabee, and Prendergrast, 2006).

Greater tendency toward violence in association with modes of taking MA has been suggested. In particular, there are differing perspectives on whether irrational, violent ideation and behavior are most strongly associated with MA injection than with smoking or nasal insulfation (Domier, Simon, Rawson, Huber and Ling, 2000; Matsumoto et al., 2002).

Involvement in violence among MA users is common to both sexes. Brecht and colleagues (2004), for example, reported similar percentages of men (57%) and women (56%) had been involved in MA-related violent behavior, but they did not define violence. Two other studies reported higher percentages of men than women (38% vs. 30% and 30% vs. 23%) had committed "deliberate physical harm" while under the influence of MA (Sommers and Sommers, 2006; Sommers, Baskin, and Baskin-Sommers, 2006). Another study of MA users reported that 85.4% of women and 69.6% of men had experienced interpersonal violence in their lifetime, but did not clarify how much of the violence was drug-related (Cohen et al., 2003).

It is unclear if MA users are actually more violent than other drug users. For example, one study reported that MA and cocaine users were nearly identical in manifesting paranoid ideation, and cocaine users were slightly higher in manifesting hostility and psychoticism (Booth, Leukefeld, Falck, Wang and Carlson 2006). In terms of comparisons of actual violent behavior, a study of 7,355 participants in five urban areas reported that MA users were less likely (16% vs. 28%) to be charged with a violent crime compared to other drug (not specified) offenders (Pennell, Ellett, Rienick, and Grimes 1999). Furthermore, while there are no detailed comparisons of the prevalence of MA-related violence compared to another specific drug, research indicates equally high or higher levels of violence, especially victimization of women, among urban crack users (Falck, Wang, Carlson, and Siegal 2001; Siegal, Falck, Wang, and Carlson 2000).

Understanding violence reported by MA users is complicated by various factors. Discussions of MA and violence vaguely define violence, emphasize violent crimes, or do not clarify if violence was substance related (Cartier et al., 2006; Cohen et al., 2003; Iritani, Hallfors, and Bauer, 2007; Sommers et al., 2006; Sommers and Baskin, 2006). Polysubstance use is common among MA users (Brecht, O'Brien, Von Mayrhauser and Anglin 2004; McKetin et al. 1999; Stoops, Tindall, Mateyoke, and Leukefeld, 2005; Sexton et al., 2006b). So, it can be difficult to attribute violent episodes among MA users to a given drug. The nature of MA-related violence is unclear, since recent research has downplayed a causal connection between the psychoactive effects of MA and violence (McKetin, McLaren, Riddell, and Robins 2006). In particular, it has been asserted that violence associated with MA results from complex combinations of MA use and social, personality, environmental, and clinical factors in differing contexts (Hoaken and Stewart, 2003; McKetin et al., 2006; Sommers et al., 2006).

With a few exceptions, studies of violence among MA users have been based on quantitative surveys (see, for example, Sommers and Baskin, 2006; Sommers et al., 2006). Circumstances where MA-related violence occurred and the roles of those involved are often unclear. Especially needed are self-reported case studies to better understand violence from the perspective of MA users. Thus far, surveys of violence among MA users are based on urban populations. Possible regional contrasts in patterns of violence among rural MA users remains unexplored.

This paper analyzes violent episodes described by MA users in baseline and follow-up qualitative interviews in rural areas of Arkansas and Kentucky. Violence is examined in relation to MA and polysubstance use. To explore the varied adverse behavioral consequences of MA use, violence is defined as ranging from verbal disputes to physical assault. Suggestions are then offered for further research and informing harm reduction interventions.

METHODOLOGY

Qualitative interviews used in this article were conducted with a sub-sample of participants from a large natural history study of rural illicit stimulant (amphetamine/methamphetamine and cocaine) users and health services needs in Arkansas and Kentucky (see, for example, Booth et al., 2006). The primary project included 452 participants from three rural/small town counties in each state for structured interviews at six month intervals over a three-year period. Rural indicates unincorporated and incorporated areas with populations less than 2,500. Small town indicates incorporated communities with populations of 2,500 to 20,000 in non-metropolitan areas.

The project counties ranged in population from 11,775 to 38,749. Whites predominated in Kentucky, while African Americans constituted only 0.6% to 7.7% of the county populations. African Americans were a majority in the Arkansas project area (49% to 57.2%).

Study participants were recruited using respondent-driven sampling (RDS), a modified form of snowball sampling (Draus, Siegal, Carlson, Falck and Wang 2005; Heckathorn, 1997, 2002; Wang, et al. 2005). RDS involves the recruitment of “seeds” who refer others to the project. Participants were compensated $15 for each successful referral, up to three. To be eligible, candidates had to: 1) self-report having used a stimulant in the previous 30 days; 2) be a resident of a target county; 3) be at least 18 years of age; (4) not be incarcerated; and (5) not have been in formal drug treatment in the previous month.

After baseline structured interviews, staff interviewers produced written summaries detailing participants’ sociodemographic characteristics, the primary stimulant used, and drug use patterns. Summaries included additional information such as noting participants who revealed involvement in MA cooking. Such disclosures were the result of rapport established by local project staff. To develop one of several qualitative sub-samples, summaries were used to enlist participants who reported MA as their primary stimulant. To acquire a broad range of perspectives on MA use, convenience sampling was used to aim for a diverse sub-sample in terms of gender, ethnicity, age, drug use patterns, mode of use, and involvement in MA production. Violence was not considered in the selection process, making selection bias unlikely.

There was no effort to interview a pre-determined number of MA users. Rather, participants were interviewed if they could be scheduled during the lead author’s visits to particular study sites. The principle of theoretical saturation informed sampling (Glaser and Strauss, 1967). According to this analytical principle, the baseline qualitative sample was deemed

sufficient when a number of participants thought to reflect the known diversity of the study population, as reflected in interview summaries, were interviewed and similar patterns of MA-using behavior were found repeatedly in interviews.

Follow-up interviews were intended to occur 12 months after baseline. As with the baseline interviews, there was no predetermined number of follow-up interviews and interviews occurred when they could be scheduled in conjunction with the lead author's visits. As the study progressed, some participants were not available for follow-up because of imprisonment or relocation. Furthermore, because of difficulties in locating some participants, and a number of "no-shows" that required re-scheduling, several follow-ups occurred up to 24 months after baseline interviews. Extending interviews beyond 12 months permitted completion of a sufficient number of interviews to identify recurring themes in the interview data.

The 60 to 90 minute tape-recorded baseline and follow-up interviews were conducted in project offices after participants signed an informed consent form approved by the participating university IRB. Participants were compensated $20 for their time. All names used in interviews and this article are pseudonyms.

In the baseline qualitative interviews, participants were questioned about issues ranging from drug use history to adverse consequences of drug use. Relevant to this article, baseline participants were asked if they had been involved in accidents, fights, sexual assault, injury, or "bad" arguments linked to drug use (i.e. lifetime occurrences of violence). If they responded yes, participants were asked to provide an example for each category of violence that they had experienced and the circumstances, including substance(s) involved and mode of use. The follow-up qualitative interview covered the same general topics, but asked participants to discuss them from a post-baseline perspective. One notable exception was that follow-up participants were not questioned about involvement in arguments.

Violent episodes were then sorted into the following categories: Fights/assault/injury, property damage, and arguments. Incidents could be either intentional or accidental. Each violent episode was then sub-categorized as involving MA only, MA and another substance(s), or use of another substance(s) besides MA.

A dichotomous "yes/no" variable was created to identify past violent experiences in baseline and then follow-up interviews, a technique used in other recent research on drug-related violence (see for example, Siegal et al., 2000; Falck et al., 2001). So, for example, if someone had ever been involved in a MA-related argument at baseline, only one such event was counted in that sub-category. The same procedure was repeated for non-MA related violent events.

RESULTS

Sample Characteristics

Thirty-nine baseline qualitative interviews were completed between 2003 and 2005, with 16 participants in Arkansas (8 men, 8 women) and 23 in Kentucky (14 men, 9 women). Participants ranged in age from 18 to 55. They were either poor or working class, with all participants reporting less than $30,000 in annual income, and most earning under $10,000. The only non-white participants were two African-Americans. Use of MA as a primary stimulant is rare among African Americans in the rural South (Sexton et al., 2005), so the small number of African Americans in the sample was not due to selection bias.

Eleven participants (6 women, 5 men) in Arkansas and 13 (7 men, 6 women) in Kentucky comprised the follow-up sample. The follow-up sample was similar to the baseline sample in terms of sociodemographic characteristics, MA use patterns, and involvement in violence.

In terms of modes of using MA, smoking (n=22) was most common, followed by injection (n=11), sniffing (n=4), and swallowing (n=2). There could be variation in modes of use, for instance, participants who regularly smoked MA, but who also occasionally injected it.

One participant reported using only MA, and the remainder of the sample was characterized by polysubstance use. Common availability of MA in the study areas had only occurred over the past several years, so participants regularly reported use of substances such as marijuana, alcohol, diverted prescription pills, and cocaine prior to (and following) initiating regular MA use. Also, participants commonly reported using depressants to conclude MA "binges." Archie (Kentucky), for example, said that, "Marijuana makes it easier to handle things when you're in a bad mood coming down off of meth." Martha (Kentucky) noted that after an MA binge, "I smoke a lot of pot, and sometimes I have to take pain pills or sleeping pills to get me to sleep." Joffy (Arkansas) noted taking over-the-counter medications like Tylenol PM to fall asleep after using MA.

In contrast to the use of depressants at the end of MA binges, crack cocaine and powder cocaine use often occurred independently of MA use, sometimes with different drug using networks. As just one example, Kathy (Arkansas) was involved in smoking MA regularly, but with only two friends. She reported also associating with another group of friends where, "That's all we used to do; I used to snort powder [cocaine] with them." This group was not even aware of Kathy's involvement with MA use.

MA-Related Violence Reported in Baseline Interviews

Twelve participants (6 men, 6 women) reported 13 episodes of involvement in violence related to MA use, and another female participant reported an incident involving MA and another substance. Violence included 8 arguments, 3 incidents of property damage, and 3 fights/assaults/injury (See table 1). Below, a range of examples are presented to illustrate the contexts where MA-related violence occurred.

Arguments—Verbal disputes with family members were common. Fred (Kentucky), an MA smoker, for example, recalled arguments with his Father who confronted him about MA use. Disputes also occurred between significant others. For example, Carmen (Kentucky), an MA injector, stated, "And we used to fight all the time when I'm on it. [Because] He [boyfriend] said I hide more than he did, I did more than he did, I was hiding it. Just makes you suspicious." Amy (Kentucky), an MA smoker, recalled many arguments with her husband over access to the drug. She said, "It just always seemed to happen, you know. My husband, he would, when he would want it [MA], it was okay for him to get it. And then if I would want it, it was just like, 'Well you don't need any."

Property Damage—John (Arkansas) recalled an incident that occurred on his property where he had hidden a large tank of stolen anhydrous ammonia. He said that the container, "Blew up in my shed. So, if I'd stayed out here another two minutes, I wouldn't be talking to you now."

Additional damage to property, sometimes bordering on interpersonal violence, was reported by several participants. Some incidents were evidentally linked to irritability while "coming down" from an MA binge, and could involve other substances as well. For example, Ernestine (Arkansas), an MA smoker recalled:

> This is like, coming down off of it [MA]. I done been up for two days. I done been drinking tequila all day [to come down from MA use]. So, I get me a blanket and I get on the couch. I'm going to sleep. And I was living in a house with two other people. Well, this one person kept coming in, messing with me, pulling my cover back, telling me, "Go get in your bed.' I just took the blanket, set it on fire, went outside, put a board underneath the door. They couldn't get out. Back door, they couldn't get out the back door no way of that place.

Other property damage was caused by hallucinations induced by sleep deprivation during MA binges. Jim (Kentucky), an MA smoker, recounted:

> We'd been up about four days and was at the trailer, and he [roommate] went next door. I really started seeing [imaginary] shit. I seen bikers and all this shit coming at me. I ended up throwing a VCR through the window. 'Course, that didn't go over too well with the landlord. He called the law and the law came up there and asked us some questions. And they didn't do nothing the first time. They left and we thought everything was cool. And he [roommate] went and done something again after they left. Went next door and said something to somebody. Anyway, I flipped out again, start throwing some shit out the other window. And the second time they come back, they went on and took us to jail.

Fights/Assaults/Injury—One participant reported an accidental injury related exclusively to MA, in this instance while cooking the drug. As Fred (Kentucky), an MA smoker, recalled, "I got some anhydrous [ammonia] popped on me one time. It [chemically] burned my skin." Fred did not seek treatment for the injury and his reason for not doing so provided some insight into the mindset of some MA users and producers. Fred asserted, "You can't really go and get treated for it, no matter how bad it is. 'Cause when you get there, they gonna know what it is."

Some interpersonal physical violence was reported by study participants as having occurred among family members. Georgia (Kentucky), an MA smoker, said:

> I went to my mother's. My lips was chapped [perceived sign of MA use] and she [sister] started throwing off about drugs. And she'd done this in front of my kids, getting her hand up in front of my face. I said 'Mama, you better get her away from me.' And she wouldn't, so I just laid into [attacked] her. I couldn't keep myself from that, she done made me so mad.

Irritability and paranoia during extended MA use was also associated with physical conflicts within small groups of MA-using acquaintances. Archie (Kentucky), an MA smoker, recalled:

> We stayed there [fellow MA user's home] for a couple days, and we pretty much just sit in this room for two days. And the guy had some meth come up missing and he kinda got verbally abusive with me, and so I did the same thing, and it ended up in a big, big swing-out [fistfight]. Our other friends pulled us apart, tried to keep order. We were so mad, and ya know, just over nothing, 'cause he had thought that I'd stoled his dope, and then he ended up finding it. I mean just crazy stuff, that's not even worth it, and then you think totally different, after you've been up for a couple days. I'm not so sure that it's the dope [psychoactive effects of MA] as much as it is, the sleep deprivation and exhaustion as far as the attitude and the mood swings go. But either which way, if you do the meth you're gonna have that.

Non-MA Related Violence Reported at Baseline

Twenty participants (11 men, 9 women) reported involvement in 25 violent episodes linked to substances other than MA. This number included 7 (4 women, 3 men) participants who had also reported MA-related violence. The non-MA related episodes included 12 fights/assault/injury, 8 arguments, and 5 incidents of property damage (See table 1).

Arguments—Some participants linked violent episodes like arguments to specific illicit substances. Kathy (Arkansas), for example, described the affect of smoking crack on her behavior, noting, "When people talk to me [while she is high on crack] it just gets me so mad [verbally abusive] if they say the wrong thing."

Property Damages—Diverted prescription medication played a central role in one such event. As John S (Kentucky) recalled, "I hit a tree, eating Klonopins® one time. I took off driving down the road and that's the last thing I remember."

Fights/Assaults/Injury—One participant discussed being a victim of attempted sexual assault on some occasions. As Georgia (Kentucky) revealed, "I've got myself in some hellish situations. But, I usually get out of it. I ain't, haven't ever actually been raped." As an example of a drug-related fight, Axel [Kentucky] recounted, "We was doing cocaine, me and a friend of mine. Took him to get some, brought him back, and he went in the house and shut and locked the door, and locked me out and wouldn't let me in. So when he did come out, that's when we got into a fistfight."

Interestingly, beyond the use of illicit substances, participants commonly linked physical violence to alcohol use, which they often distinguished from "real" [illicit] drug use in terms of propensity for violence. For instance, when asked about her possible involvement in illicit drug-related violence, JO (Arkansas) responded matter of factly, "No, not on no drug. Now alcohol, yeah." In regard to involvement in fighting, Dwayne (Kentucky) stated, "No, not on drugs. My fighting was all alcohol related." Likewise, Kelly (Kentucky) stated, "I've been in and out jail more times than I care to even try to count. For PI's [public intoxication], disorderly conduct, assaulting. Things like that, but not [from] drug-drug [illicit drug use]… [It's] drinking."

MA-Related Violence in Follow-Up Interviews

Four participants (3 men, 1 woman) reported involvement in MA-related violence, including 2 fights/assaults/injury, and 2 property damage (See table 2). One of those instances involved MA as well as other substances. A few examples are described below.

Property Damage—John S (Kentucky), an MA smoker, reported a far more serious automobile accident than the one reported in his baseline interview. He said:

> I'd been using Lorcet®, but I'd been up about 4 days and one of those days, I was using crack cocaine, the next day I was using meth. I was eating Klonopin®. On that last day I was popping Lorcets® that night. I got in a car wreck. I passed out behind the wheel, and I hit like two cars.

At baseline, Fred (Kentucky), an MA smoker, had discussed suffering a minor injury while cooking MA, and he had been involved in verbal disputes with his father. In the follow-up interview, Fred described a more severe incident that occurred during an MA binge of several days. As he recalled:

> I got put in jail for knocking a window out of a motel and "terroristic threatening" and "disorderly conduct." I was arguing with my girlfriend, somebody was gonna

> call the law, so I was gonna go to the lobby and tell ‘em to, uh, I was gonna leave. And they locked the door, so I banged on the glass and broke [it]. I didn’t really mean to, but it shappened, and I told ‘em I’d kill ‘em if they called the law.

Fights/Assaults/Injury—Tracy (Arkansas), an MA injector, described being attacked by her MA-injecting live-in boyfriend. As she recalled:

> My wrist got broke when I was out there with him. I was at his Mom’s and we wasn’t allowed to have a home phone, but I was at his Mom’s house. She had called me over there for something. He was asleep, but when his Mom called me over there I didn’t wake him up and tell him, so he was mad and he met me at the back door. I’d blame it all on drugs [MA], ‘cause I knew him years before he ever started doing [MA] drugs. He was never that way.”

Non-MA Related Violence Reported in Follow-Up Interviews

Three participants (2 women, 1 man) reported involvement in violent encounters or accidents not linked to MA use. They included 2 fights/assaults/injury and 1 property damage (See table 2).

Fight/Assault/Injury—Stacy (Arkansas) recalled an accidental injury linked to illicit drug use. She said, “I got twelve stitches about three months ago from a accident. I had smoked some weed [marijuana], but I was trying to pull up the window, and the window was already cracked, and when I pulled it on up the glass fell on me, and I wasn’t paying no attention, I was so high.”

Alcohol featured prominently in the other non-MA related events. As it relates to interpersonal violence, Martha S (Kentucky) recalled a post-baseline incident. She said, “Drunk, on drugs, and got in a fight. I [her opponent] broke my collarbone.” In addition, G.B. (Arkansas) reported being in a minor automobile collision while under the influence of alcohol.

Avoiding MA-Related Violence

There were factors that inhibited frequency and intensity of MA-related violence. Some participants stated that their personalities made them less likely to be involved in violence while using MA. As Paula (Arkansas) said, ”I’m a mellow person. I don’t like to argue, and I don’t like to fight.” As another instance, Charlie (Kentucky) said that she had never been involved in any form of violence, even during extended MA use. Charlie stated,” You’re way too happy to fight.” She added that on occasions when her mood did worsen because of lack of sleep during MA binges, a warning from her boyfriend prevented problems. As Charlie said, “Then most of the time it’s just [her boyfriend saying], ‘okay, be quiet, you’re being a bitch.’ And then I’m like, ‘yeah, I’m sorry.’”

Some participants reported that fellow participants in MA-using group settings could intervene to prevent violence from escalating. For instance, in the fight described by Archie at baseline, two others who were present stopped the fight. As an example of someone who worked to prevent violence from beginning, Molly (Arkansas) described herself as a peacemaker. She said:

> I’m like the calm one out of the bunch. I try to take care of everybody and sometimes, some of my friends chicken flip or wig out or whatever you wanna call it. And it’s like they think people are out to get them or they’re like hallucinating, thinking the FBI or Secret Service people are in the bushes across the road or something. I tell them they need to go lay down and go to sleep.

Participants also discussed conscious efforts to avoid the irritability and hallucinations associated with MA-induced sleep deprivation that participants linked to violence. As previously described, participants used depressants to calm down and go to sleep as a conclusion to MA binges. Other strategies were noted. Tracy (Arkansas), for example, said, that to help cope with MA binges, "I've now learned where if I lay down two hours a night, if its just laying there closing my eyes. I don't have to go to sleep, just lay there, close my eyes. I'm not as agitated, I'm not upset, I'm not nervous."

DISCUSSION

Limitations

The study has obvious limitations, including the possible ambiguity of some analytical categories. For example, some fights reported by participants were obviously the outcome of an initial verbal dispute. As another example, property damage could possibly entail physical injury. However, we feel that the categories are useful analytical constructs for illustrating the wide range of violence experienced by MA users.

Another limitation is the use of self-reports from a modest-sized non-representative sample. However, other qualitative research has asserted the value of studies that target those involved in a particular drug-using behavior of interest instead of seeking statistically valid study samples from "hidden" populations (Sommers and Baskin, 2006). Therefore, the sample cannot be generalized, but it does provide interesting insights into violence as actually reported by MA users and suggests possible trends that can be explored in further research.

Key Findings

Slightly over one-third (38%) of the baseline participants reported violence associated in some way with MA, while roughly half (51%) of the sample had experienced violence linked to other substances. Eighteen percent of the participants reported instances of both MA-related violence and violence linked to other substances.

Roughly 17% of the follow-up sample reported MA-related violence, compared to 12.5% that reported violence connected to other substances. There was somewhat of an upsurge in severity of MA-related violence reported in the follow-up. However, the number of participants reporting such violence was too small to make any assumptions other than assuming that in some instances violence will escalate through time among those who have already been involved in drug-related violence.

Several overlapping factors related to career substance use patterns may explain relatively lower frequency of MA related violence compared to other substances. They indicated how both before and after the onset of MA use, there could be more opportunities for violence to occur in association with other drugs. First, widespread availability and use of MA were relatively recent at the time of baseline interviews compared to other substances used locally. Second, participants frequently mentioned the use of depressants to conclude MA binges, or the use of other illicit drugs like cocaine as activities separate from MA use. Third, a recent article reported that MA users in rural Arkansas and Kentucky reported varying trajectories of MA use though time that included periods of lighter MA use or abstinence from it. During such periods, alcohol, diverted prescription pills, and cocaine were often still used, either as MA surrogates or simply as continued usage of substances deemed less problematic and more accessible than MA (Sexton, Carlson, Leukefeld and Booth 2008). Another interesting factor in relation to the use of other substances was the extent to which alcohol-related violence may contribute to the number of violent episodes reported within a given illicit drug using population such as MA users. Participants implied

that violence was almost inevitable while under the influence of alcohol use, at least in contrast to use of MA or other illicit substances. This perspective is not surprising since research suggests that in many contexts, expectation of violence is commonly associated with alcohol use (see, for example, Sexton, 2001).

These interrelated factors suggest, albeit tentatively, that in some instances the overall lifetime frequency of violence among participants may be less an issue of MA use than the negative behavioral consequences of a longterm polysubstance (both legal and illicit) use. However, there were sufficient reports of violence specifically related to MA use to raise concern about violent scenarios linked to the drug that need to be addressed.

There did not appear to be any linkage in the sample between mode of MA use and involvement in violence. Most violent events were associated with smoking MA, but this is not a surprising finding since smoking was by far the most common form of taking the drug. The findings in this regard perhaps reflects the uncertainty in the literature about the role of mode of administering MA in relation to violence. For example, one study reported that MA injecting participants exhibited more psychotic symptoms than non-injecting (mostly "sniffers") participants (Domier et al., 2000). On the other hand, research comparing MA injectors with MA smokers found that psychotic symptoms occurred earlier among MA smokers, but it found no significant differences in overall occurrences of psychotic symptoms between samples (Matsumoto et al., 2002).

By far the most common form of violence reported was verbal disputes, although it is also necessary to note that participants may have been less inclined to admit involvement in serious violent crimes like armed robbery, rape, murder, etc. While obviously not as dramatic as physical violence, arguments can have immediate and long-term negative repercussions. Obviously, verbal disputes can eventually escalate into physical violence through time or, even in the absence of escalation to physical violence, they erode social relations and depress individual mental health (Gidycz, Warkentin, and Orchowski, 2007; Miller, 1996; Wright, Loessin, and Valadez, 2001).

Our study shows a comparatively low percentage of MA users reporting involvement in violence compared to other studies. For example, several articles indicate ranges from 26.8% to 85% in terms of MA users reporting involvement in violence, with some suggesting that female MA users were more likely to be involved in violence as victims (Sommers and Baskin, 2006; Sommers et al., 2006). However, varied definitions of violence used across studies, or the tendency in some studies to include violence that may have no connection to MA use, make such statistics ambiguous in terms of comparative value.

Whether MA users in general are more prone to involvement in violence, especially violent crime, than other drug users remains unclear. For example, a study of urban crack users reported that 62% of the female participants had suffered a physical attack since initiating crack use (Falck et al., 2001). The same study reported elsewhere that 52.5% of the overall sample (male and female) had been physically attacked since commencing crack use (Siegal et al., 2000). These high levels of drug-related victimization seemed to surpass the percentages reported in most studies of violence linked to MA.

Low levels of MA-related violence, especially physical violence, in the sample may reflect an urban/rural contrast. Large urban samples of drug users often include a number of women who are involved in the sex trade and thus are greater targets of victimization (Brecht et al., 2004; Falck et al., 2001). In contrast, there was little indication of regular involvement in sex trade in our modest rural sample. Furthermore, there was no evidence of organized MA trafficking, including gang activity, in the study areas. Thus, much of the violent crime that

is strongly associated with such activities in urban contexts were rare or absent within our sample.

Our data do not indicate that violent episodes experienced by MA users were directly caused by the psychoactive effects of the drug, a finding reported elsewhere. For example, it has been asserted that, “Acute intoxication with methamphetamine alone does not appear to lead to violent behavior, but it may enhance aggression in someone who is otherwise provoked” (McKetin et al., 2006: 1). In particular, most violent episodes specifically linked to MA use reported by participants, except for some arguments, occurred after extended binges of use. In these contexts, associated lack of sleep caused irritability, paranoia, and/or hallucinations which laid the groundwork for violence reported by participants. As a complicating factor, binges often occurred among couples or small groups of users in close proximity, in private settings, thus creating “perfect storm” contexts for interpersonal conflict.

As it relates to preventing violence during MA use, a wide range of philosophies and strategies were reported. Some participants indicated that their personalities were not conducive to violence during drug use and that they easily heeded the warnings of others that their behavior was becoming unacceptable. Participants also discussed measures to avoid the irritability and hallucinations resulting from lack of sleep during MA binges. Furthermore, there were indications that within the context of group MA use there were those who assumed the roles of peacemakers to prevent violence from occurring or escalating.

While MA use may not necessarily result in higher frequencies of violence compared to other substances, it may contribute to a broader range of violence. For example, the injury during an MA cooking session reported by Fred and the explosion discussed by John illustrates the dangers associated with MA that are not commonly associated with “imported” drugs. The potential for violence and injury associated with accidents in MA labs extends beyond danger to drug producers. In fact, a recent study reported that emergency responders in rural Illinois were more concerned about contamination and explosions in MA labs than encountering violent MA users (Weisheit, 2004).

Implications for Further Research and Interventions

This study has some important implications for informing further research. It suggests a need for studies that use clear, consistent, and inclusive analytical categories for defining violence. Nuanced interviews are required to disentangle MA use and violence from episodes of violence associated with other drugs, as well as distinguishing between lifetime reports of violence and violence that is actually linked to substance use. Potential correlations between modes of MA use and frequency and intensity of violence merits more exploration. Also needed is more rural research to determine if lower levels of violence, especially physical violence among MA users is, in fact, a common rural trend that contrasts with urban areas, or just a reflection of our modest sample size.

Although participants reported a broad range of violence linked to various substances, a few modest recommendations can be made for interventions and outreach to address MA-related violence. Intervention messages may consider emphasizing the adverse behavioral consequences of MA binges, including the dangers of hallucinations and short tempers from sleep deprivation. Such interventions may consider the feasibility of incorporating anger management strategies rather than conceptualizing violence as a direct outgrowth of the psychoactive effects of MA

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Table 1

Violent Events Reported in Baseline Interviews (N= 39)

	MA	MA and Other Substances	Other Substances
Fights/Assault/Injury	3	0	12
Property Damage	2	1	5
Arguments	8	0	8

Table 2

Violent Events Reported in Follow-Up Interviews (N= 7)

	MA	MA and Other	Other Substances
Fights/Assault/Injury	2	0	2
Property Damage	2	0	1