

METHAMPHETAMINE USE IN A SOUTHEASTERN NIGERIA COMMUNITY: A PERSPECTIVE FROM ADOLESCENT FRIENDSHIP CLIQUES

¹ MEFOH Philip C., ² OKONKWO Uche, ¹ ADUBI Peace, & ¹ OLALERU Morenike

¹Department of Psychology, University of Nigeria, Nsukka ²Department of Sociology & Anthropology, University of Nigeria, Nsukka

Corresponding author

Philip C. Mefoh, philip.mefoh@unn.edu.ng +234 8066166656

ABSTRACT

This research examined the use of methamphetamine in two separate groups of adolescents. Study 1 employed cross-sectional design to collect data from 146 nondescript adolescents (Mean age = 15.06 years; SD = 6.86) attending a psycho-education workshop. Study 2 utilized the linear snowball sampling technique to select 14 respondents, who are members of adolescent friendship cliques. Cross-sectional design was then used to collect data from those respondents (age range = 16-17 years). In addition, qualitative procedure was used to interview the 14 respondents about the community-based cane deliverance and shaming procedure. Result of Study 1 showed that the use of methamphetamine was not common among nondescript adolescents; 93.84% of the adolescents reported they have never used methamphetamine. In contrast, the use of methamphetamine was rampant among members of adolescent friendship cliques. All the respondents had used the substance. Perspectives of members of adolescent friendship cliques about the community-based methamphetamine-reduction approach were heterogeneous; while some respondents supported the procedure, some others were against it. The research concluded that members of adolescent friendship cliques use methamphetamine much more than ordinary (nondescript) adolescents that are not members of any adolescent friendship clique.

Keywords: Adolescent friendship cliques; Cane deliverance and shaming; Methamphetamine use disorder (MUD); 'Mkpuru-mmiri;' and Psycho-education workshop

INTRODUCTION

Unlike most other stimulant drugs such as cocaine, heroin, and cannabis that are derived from plants, methamphetamine is a synthetic stimulant drug that is processed by mixing volatile solvents in usually clandestine laboratories. Methamphetamine is extremely toxic (Entringer, 2022; Schep et al., 2010), and is rated the fourth most damaging drug in many societies (Nutt et al., 2010). Methamphetamine works on the central nervous system (CNS). It increases the amount of dopamine (a 'feel-good' hormone) in the brain to promote positive feelings, including happiness and pleasure. The ability of methamphetamine to rapidly release high levels of dopamine in pleasurable reward and motivation areas of the brain produces deep feeling of euphoria that strongly reinforces the potential for the frequent use of the stimulant (Paulus & Stewart, 2020; Volkow et al., 2021). Methamphetamine is popularly referred to as 'mkpuru-mmiri' across southeastern Nigeria, which literarily translates to hailstone or chunk of ice. Methamphetamine is called 'mkpuru-mmiri' because the substance comes in clear crystal chunks or shiny bluish-white rocks. Methamphetamine is popular in Nigeria; the United Nations Office on Drug and Crime (UNODC) estimated a 32% increase in methamphetamine use and 55% increase in people having methamphetamine use disorder (MUD) in Nigeria (UNODC, 2018). The bulk of those cases may well be in southeastern Nigeria as there is perceived surge in methamphetamine use in the southeastern Nigeria (Dumbili & Ebuenyi, 2022).

Adolescence is a time many young people form peer groups (You, 2011). The period is marked by changes in behaviour, development of new identity and experience of a new form of intimacy (Ciarochi et al., 2016). One type of peer group, which is embedded within the wider network of peer group, is adolescent friendship clique. Adolescent friendship clique is a group of



adolescent friends with compatible tastes or mutual interest (Devi et al., 2017; Hallinan & Smith, 1989). Adolescent friendship clique members provide safety and preferential access to resources for their members and usually disallow other peers from joining adolescent friendship cliques. Compared to other friendship networks, adolescent friendship cliques can pressure members into using harmful drugs in order to attract approval (Molleman et al., 2022). Many adolescent friendship cliques in southeastern Nigeria use psychoactive substances without much diffidence (Dumbili, 2018; Mefoh et al., 2018). And most often, clique members use substances to heighten sensory perceptions and to significantly lower inhibition and increase libido (Early & Grundetjern, 2022; Palamar et al., 2014).

Methamphetamine can be taken by smoking, swallowing (pill), snorting, or by injecting the powder when it is dissolved in water. Depending on how the drug was used, the effect can last for 6 to 24 hours (Davis, 2018). Oral ingestion can produce pleasurable effects within 20 minutes, while smoking or injecting the drug causes an immediate, intense bliss (Wang et al., 2016). The preferred intake procedure for most adolescent friendship cliques in southeastern Nigeria is by snorting the substance (Dumbili & Ebuenyi, 2022). A clique member first wraps the substance inside a foil; then, uses a lighter to melt it. The individual then makes a small hole on the foil and inserts a straw into the hole, through which the individual sniffs the drug. Sniffing (or snorting) does not produce immediate pleasurable effect; however, a euphoric high is energized within 3 to 5 minutes of use (Curtin et al., 2015; Logan, 2002; Wang et al., 2016).

The social control theory (Hirschi, 1969) provides an effective model to explicate adolescents' involvement in illicit substances, such as methamphetamine use. Adolescents are naturally attracted to pleasure, self interest, and deviant behaviours (Behr et al. 2005; Sawyer et al. 2012). Hirschi's social control theory posits that adolescents are constrained from deviant behaviours by being tied or bonded to conventional society. The weakening or severing of social bond frees adolescents from the constraints and places them in a position where they can (but not necessarily will) engage in substance use and related deviant behaviours (Krohn et al., 2016). The social control theory posits that there are four elements of social bond which, when strong ought to constrain adolescent substance use. These are: attachment to others, commitment to conventional lines of action, involvement in conventional activities, and belief. Attachment refers to the affective relationships that one has with other people. The theory focuses on the parentadolescent relationship, suggesting that the stronger the attachment between adolescents and their parents the lower the probability of adolescent substance-using behaviour. When attachment is strong, the adolescent is likely to take parental views into account before acting and, therefore, the likelihood of substance use is reduced. Similarly, adolescent who show commitment to conventional goals such as schooling is likely to refrain from substance use; adolescents who spend substantial amount of time (i.e., involvement) in conventional activities (e.g., schooling) will also not have time to engage in using substances; and adolescents who believe in the moral validity of the law and the right of their parents to set rules are less likely to use substances or engage in other delinquent behaviours while holding those beliefs. These four elements of the social bond are expected to act in an additive fashion, the weaker these four elements are, the more likely it is that substance use will occur and vice versa (Hirschi, 1969).

Methamphetamine is a highly addictive stimulant drug and its effects stay with the user long after use of the substance. People who use methamphetamine are prone to violent and neglectful behaviours and they might often inflict physical and psychological harm to themselves, their families and/or other members of the community (Bassindale, 2012). Ojiego (2021) narrated how a secondary school student, aged fifteen years, murdered his father simply because the man refused to give him the money he asked for. There was another report of a school boy who attacked his mother with a machete and chased her away from her home. Also, another young adolescent was caught committing bestiality with a goat. All these behaviours were traced to the use of 'mkpuru-mmiri' (or methamphetamine). Eleke (2021) described the upsurge in the use of



the substance as having reached a worrisome crescendo. Eleke argued that Igbo youths are going insane; and since the youths are the future of the society, methamphetamine use is causing existential problems. The fact that even 11 year olds can easily access methamphetamine like it is vitamin C makes it more worrisome. Ojiego (2021) described the 'mkpuru-mmiri' or methamphetamine menace as a ravaging epidemic. Ojiego asserted that "an epidemic has hit Igbo land" (Igbo land refers to the southeastern region of Nigeria).

With increased rise in many anti-social behaviours such as kidnapping, cultism, robbery, gambling, and rape in several communities in southeastern Nigeria, the community and youth leaders have risen to fight the menace of methamphetamine or 'mkpuru mmiri' (Onu et al. 2021). Some community leaders deployed their local or vigilante security outfits into the forests to lay ambush and apprehend marketers of methamphetamine to break the supply chain. The vigilante security team also arrest adolescents who use methamphetamine or other mood changing substances. Community leaders in the region have criminalized methamphetamine, and anyone caught using the substance would be severely punished with cane deliverance and shaming treatment. This procedure involves tying the user to a pillar or a tree at the civic center, and the individual is flogged mercilessly in full glare of the people to shame the offender. The aim of this procedure was to dissuade users from the use of 'mkpuru-mmiri' and to discourage non-users from contemplating starting the practice. This community-based measure has been criticized, especially with the report of death of an adolescent following the administration of the cane deliverance and shaming treatment in one community in Anambra state (Eleke, 2021). Notwithstanding, several community leaders are continuing with the treatment despite the outcry. Onu et al (2021) quoted a community leader as saying: "we are talking about the future of our land. If we allow our youths to be destroyed by 'mkpuru-mmiri,' we would be the ultimate losers. We must continue to use cane to whip out the evil spirit in them."

Efforts to reduce the use of methamphetamine in local communities through communitybased approaches have yielded better results in western, educated, industrialized, rich and democratic (WEIRD) societies (Henrich et al., 2010) than in low-income countries like Nigeria. In New Zealand, for example, shortage of treatment services and resources for people with methamphetamine use disorder (MUD) desiring to stop using the drug led to community action by individuals living within the affected communities (Fallon, 2016). In many western industrialized countries, community-based treatment for methamphetamine use disorder is often integrated in the continuum of care within the communities' health and social services and run essentially on an outpatient basis. Such interventions are easily accessible and cost-effective; they are also designed to reduce institutionalization and stigmatization. In a systematic review on communitybased programs aimed at tackling the use of methamphetamine across the globe, Orjiakor et al. (2023) maintained that there are several individuals involved in efforts to reduce methamphetamine use in communities, such as community leaders, drug enforcement agents, influential persons in the community, and so on. The study called on all stakeholders to integrate different efforts, so that outcomes can be better monitored and evaluated for greater effectiveness in reducing methamphetamine use. This point needs to be reemphasized, a situation where a community handle methamphetamine-related problem on its own is counterproductive. Birckmayer et al. (2008) and Orjiakor et al. (2023) argued that some dominant actions taken by communities across several countries to reduce the use of methamphetamine were typically psycho-education, awareness, and/or information campaigns.

The use of methamphetamine or 'mkpuru-mmiri' across many communities in southeastern Nigeria has reached a worrying height (Eleke, 2021), and this has become a major source of concern for many parents and community leaders. The present research examined methamphetamine use across two separate groups of adolescents to gain some insights about methamphetamine use in Abatete community. Study 1 examined methamphetamine use in a group of nondescript adolescents attending a community-organized psycho-education workshop



to sensitize young people about the dangers of using 'mkpuru-mmiri' (or methamphetamine). Study 2 examined methamphetamine use among members of adolescent friendship cliques; the study also describes members of adolescent friendship cliques' perception about the community's use of cane deliverance and shaming procedure to confront the menace of 'mkpuru-mmiri' or methamphetamine use in the community. Thus, this research has three objectives. The first aim was to examine methamphetamine use among a group of nondescript adolescents in Abatete community. The second purpose was to investigate methamphetamine use among members of adolescent friendship cliques; and the third objective was to narrate members of adolescent friendship cliques' perception about the use of the community's cane deliverance and shaming method. Three questions guided the present research:

- 1. What is the rate of methamphetamine use in a sample of nondescript adolescents attending a workshop in the community?
- 2. What is the rate of methamphetamine use among members of adolescent friendship cliques?
- 3. Would members of adolescent friendship cliques have positive or negative perception about the community-based cane deliverance and shaming procedure?

METHOD

Study 1 Participants

One hundred and forty-six nondescript (ordinary) adolescents comprising 87 females (59.59%) and 59 males (40.41%) completed the measure to examine the use of methamphetamine (or "mkpuru-mmiri") among the sample. The participants ages ranged between 13 and 21 years (mean age = 15.06; standard deviation [SD] = 6.86). 121 (82.88%) of the participants were in secondary school, 18 (12.33%) participant report they were learning a trade (apprentice), while the remaining 7 participants (4.79%) were students in tertiary schools.

Measure

The Psychoactive Substance Use Questionnaire (PSUQ) (Eze, 2006) was the instrument used in the present study. The instrument assesses the frequency of psychoactive substance use on a scale of four degrees: 'never used it,' 'have not used it more than two times,' 'uses it less than three times in one week,' 'uses it more than three times in one week,' and 'used it frequently in the past but has stopped'. The specific psychoactive substance included in the questionnaire was methamphetamine (or 'mkpuru-mmiri'). Participants were required to give rating between 0 and 4 to the substance according to the degree of their use. The instrument has a content validity, and test-retest reliability index of r = 0.61 (N = 55) (Eze, 2006).

Procedure

Data for this study were collected at a psycho-education workshop organized by the community to sensitize young people about the dangers inherent in the use of "mkpuru-mmiri" or methamphetamine. Adolescents who attended the workshop were asked to fill the PSUQ. There was no compulsion whatsoever; only adolescents who were willingly to complete the measure were given copies of the questionnaire to fill. Anonymity was maintained by not asking respondents questions relating to their personal identification, like their names or names of the schools they attend, etc. One hundred and eighty-seven copies of the questionnaire were distributed, but 163 copies were returned (i.e. 87.17% response rate). Out of the 163 completed copies of the questionnaire, seventeen copies were discarded for improper filling, leaving the remaining 146 copies for analysis. The conduct of this research was approved by the Ethics



Board, Department of Psychology, University of Nigeria, Nsukka. Permission to carry out the research in the community was however obtained from the Chairman of the Abatete Development Organization (ADO).

Design and data analysis

The design of the study was cross-sectional design in which data were collected once at the psycho-education workshop. Descriptive statistics was used to examine the rate of use of methamphetamine or 'mkpuru-mmiri' in the sample.

Study 2

Sample identification and recruitment procedure

This study adopted a linear snowball sampling technique to recruit the sample (Heckathorn, 2004). The formation of the sample group started with identification of one member of adolescent friendship clique who attended the psycho-education workshop mentioned in Study 1 above. This respondent agreed to have a direct conversation with the principal researcher. The conversation culminated to the respondent providing contact details of members of the adolescent friendship clique he belonged. This procedure led to the sampling of 14 all-male respondents across some friendship cliques; their ages ranged between 16-17 years. The researchers explain the purpose of the study to the respondents and assured them of confidentiality of their responses. The assurance made the respondents to give verbal consent to participate in the study.

Interview and data analysis

Study 2 has two objectives. First, respondents (i.e., members of adolescent friendship cliques) were required to complete the PSUQ; and second, they were required to describe/narrate their perception of the community's cane deliverance and shaming procedure. The first objective adopted similar procedure described in Study 1 above. The second objective utilized the qualitative procedure, in which the 14 members of adolescent friendship cliques were interviewed. The location or venue of the interview was the community's primary school and the average time taking to conduct the interview for each respondent was between 5 to 8 minutes. The interview used unstructured interview guide, and respondents were asked questions to gain their perspectives on the community-based cane deliverance and shaming procedure. Data obtained from the interview were content analyzed using the narrative style.

Study setting

This study was conducted at a primary school in Abatete community, during the time pupils were on Christmas holidays. Abatete was originally known as Mbateghete; but over several generations, the name was corrupted to Abateghete, and then Abatete by the colonists. Abatete is a community in Anambra state, which is one of the five states that make up southeastern Nigeria. The southeastern Nigeria is one of the six geopolitical zones that Nigeria's 36 federating states are grouped. The southeastern zone is primarily inhabited by the people of the Igbo ethnic group (Odinka et al. 2018). Igbo people are predominantly Christians and are one of the three largest ethnic groups in Nigeria. The Igbo people make up more than 18% of the total Nigerian population (National Population Commission, 2007). The community lies approximately 15 kilometers east of the metropolitan city of Onitsha. Abatete community used to be an agrarian community many years ago, but today many people in the town are into commerce because of the community's proximity to Onitsha, which has one of the largest markets in West Africa (Encyclopedia Britannica, 2019). Abatete community has an estimated population of about 39, 209 inhabitants and a significant adolescent population. Some of its adolescents go to secondary schools located in the town or nearby communities. Others who are not in school become



apprentice traders or artisans in Onitsha or environs; some of those apprentices return to the town in the evenings after everyday's business. But some of them return to the town only during the weekends.

RESULTS

Study 1

The sole objective of Study 1 was to investigate the use of methamphetamine in a group of nondescript adolescents attending a psycho-education workshop. As shown in Table 1, most of the adolescents reported that they have not used the substance. Out of the 146 adolescents that participated in the survey, only 9 (6.16%) of them seem to have had contact with methamphetamine; the rest 137 (93.84%) adolescents claimed they "never used it." This result shows that though some adolescents use methamphetamine (or 'mkpuru-mmiri') in the community, they are only a small minority when compared to adolescents who do not use the substance.

Table 1: Distribution of nondescript adolescents' participants in relation to basic characteristics

Level of methamphetamine use	No of participants	/100%	Mean	Standard deviation [SD]
Never used it	137	93.84%	-	-
Have not used it more than two times	4	2.74%	-	-
Uses it less than three times in one week	2	1.37%	-	-
Uses it more than three times in one week	1	0,68%	-	-
Used it frequently in the past but has	2	1.37%	-	
stopped				
Adolescents' characteristics			-	-
Gender:			-	-
Females	87	59.59%		
Males	59	40.41%		
Education status:			-	-
Attending secondary school	121	82.88%		
Attending tertiary school	7	4.79%		
Under apprenticeship	18	12.33%		
Age	146	100%	15.06	6.86

Study 2

Study 2 has two objectives. The first goal of the study was similar to the objective examined in Study 1 above. Study 2 investigated the use of methamphetamine in members of adolescent friendship cliques. Finding on the use of methamphetamine in the sample of adolescent friendship cliques are shown in Figure 1. All the 14 male respondents examined in the study had used methamphetamine. Three respondents (21.43%) indicated that they have not used the substance more than two times; 4 respondents (28.57%) said that they frequently used the stimulant in the past, but have stopped. 5 respondents (35.71%) reported to use the substance less than 3 times in one week, while the remaining 2 respondents (14.29%) reported that they have used the drug more than 3 times in one week. This finding suggests that methamphetamine use was pervasive among members of adolescent friendship cliques in the community.

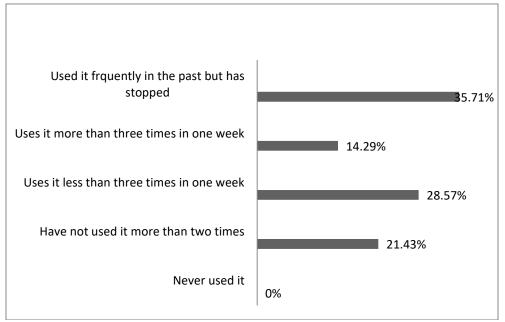


Figure 1: Bar chart showing the rate of methamphetamine use amongst members of adolescent friendship cliques

Perspectives of members of adolescent friendship cliques on cane deliverance and shaming

The other objective of Study 2 was to narrate the perspectives of members of adolescent friendship cliques' perception about the community's adoption of the cane deliverance and shaming procedure to tackle the methamphetamine menace in the community. Methamphetamine or 'mkpuru-mmiri' has become a ravaging epidemic in most communities in southeastern Nigeria (Ojiego, 2021). Following the upsurge in the use of the substance, community leaders in the region mobilized resources to stop, or at least reduce the use of the substance, especially among young people. One notable measure community leaders adopted was the cane deliverance and shaming approach. Although some people had described this community-based intervention measure as barbaric, inhuman and unacceptable (Dumbili & Ebuenyi, 2022; Ojiego, 2021), no study has attempted to find out how adolescents who use 'mkpuru-mmiri' or methamphetamine would perceive the practice? Thus, the present study asked members of adolescent friendship cliques about their views on this subject and other matters. One reason clique members give about how they made their first contact with methamphetamine was that they were introduced to use the substance by their close friends. One often hears statements like "my best friend introduced me to 'mkpuru-mmiri," "my friend offered me 'mkpurummiri' when I asked him," "I was with my friend when we were asked to use 'mkpuru-mmiri," and so on. Some adolescents who use the stimulant drug said they merely used the substance to experience what the sensations of being inebriated are like. There seem to be a link between how a clique member was initiated into the use of methamphetamine and the perception the individual holds about the cane deliverance and shaming practice. Most respondents who use the drug as a result of peer influence seem to have positive perception about the cane deliverance and shaming than others who said it was their personal decision to get involved or use the substance.



Chinedu (not real name) was one of those who got into using 'mkpuru-mmiri' through a close friend. He disclosed that the cane deliverance and shaming was yielding the intended result. Chinedu adjudged the community's intervention process to the menace as capable of reducing the use of "mkpuru-mmiri" in Abatete community. He has a very positive perception about the practice. Chinedu narrated how the vigilante security team stormed one of their hideouts - an abandoned uncompleted building located around a bush path. His friends escaped the raid, but he was caught and handed over to the Chairman of the community. After some preliminary investigations, Chinedu was tied to a pillar and caned mercilessly. He was flogged over eightyfive strokes of cane. The strokes he would have received was one hundred strokes of the cane. but when the community leaders observed that he was slipping into coma, they directed his tormentors to stop. Today, Chinedu is back to school. But one of his friends, one of those who escaped the raid that day has not. Chinedu said regrettably: "Paul (not real name), my friend started behaving abnormally and his father took him to a drug rehabilitation center at Nnewi for treatment." Another respondent who claimed he used the 'mkpuru-mmiri' before but has stopped also supported the use of cane deliverance and shaming in the community. He said that though he was neither caught nor flogged throughout the time he used the stimulant, but he believes that flogging young people who use the substance would help to bring sanity to them. He argued that many young people who are not using "mkpuru-mmiri" now may well have use it had it not be for the cane deliverance and shaming, which the community wisely adopted. He argued that many adolescents who refrain from the stimulant drug do so for fear of being caught and given the treatment.

One respondent who stated that using 'mkpuru-mmiri' was his own choice claimed that cane deliverance is evil and needs to be set aside. The respondent said that he had used other stimulant drug such as cannabis or 'Indian hemp', cocaine etc' before, until they became so expensive. The respondent said that affordability of 'mkpuru-mmiri' was one of the reasons that made him to use the substance. He argued that with just five hundred naira, one can buy a dose of "mkpuru-mmiri". It even sells cheaper in some other communities. The respondent's stand on the cane deliverance was that the community leaders have no right to interfere in people's life. Everyone has a right to eat what he or she wants and can afford, provided the individual did not steal it. The respondent concluded that, "the community leaders are acting against the law and hopes that someone who knows the law can educate them.

DISCUSSION

Studies (e.g., Eleke, 2021; Ojiego, 2021; Onu et al. 2021) show that there has been an increase in methamphetamine use across communities in southeastern Nigeria. This research examined the use of methamphetamine in two separate groups of adolescents in order to gain insight about the use of the substance in Abatete community. Results of the study with a set of nondescript adolescents revealed that methamphetamine use was not a common behaviour among that group of adolescents. Most of them reported that they "have never used" the substance. But, with adolescents who were members of adolescent friendship cliques, the finding indicated that the use of methamphetamine was very common among the group. This findings collaborated previous studies (Eleke, 2021; Ojiego, 2021; Onu et al. 2021; UNODC, 2018), which maintained that methamphetamine use is on the increase across communities in southeastern Nigeria. However, this research show more specifically that adolescents who are members of adolescent friendship cliques are more likely to use methamphetamine than nondescript or ordinary adolescents who do not belong to any adolescent friendship clique. It then follows that one way to reduce the use of methamphetamine in adolescents would be to prevent them from joining adolescent friendship cliques. Mollen, et al (2022) and You (2011) reasoned that adolescents feel an almost desperate need for their friends to approve of their choices, views,



and behaviour. The result is often a rigid conformity to the values of the adolescent friendship clique.

The behaviour of members of adolescent friendship cliques can be understood from the social control theory perspective (Hirsch, 1969). The Hirsch's social control theory emphasizes that bond to conventional society is what constrained adolescents from deviant behaviours. The weaker those bonds are, the more likely the individual is placed in a position where he or she can engage in much anti-social behaviour, such as substance use. Most ordinary adolescents enjoy quality attachment or affective relationships with their parents and they often take parental views into account before they act; hence, the likelihood not to engage in substance use. But other adolescents, most of who belong to adolescent friendship cliques tend to enjoy heightened significance of adolescent friendship clique relations, and they disregard parental guidance. Some of these adolescent friendship clique members have conflicts with their parents and they might have weak social bonds. Such adolescents seek pleasure in many anti-social activities (Lerner & Galambos, 1998; Mollen et al., 2022). In order to gain a sense of identity and search for personal identity, members of adolescent friendship cliques use substances (e.g., methamphetamine) to experience feelings of happiness, which elude them in the family (Early & Grundetjern, 2022). Some adolescents also use substances to increase libido. Studies argue that methamphetamine has approdisiac qualities, and that is one reason why the substance is popular among young people (e.g., Logan, 2002; Palamar et al., 2014). When adolescents engage in risky or unprotected sex, the behaviour may cause other problems such as sexually transmitted disease or unplanned pregnancy.

This research also asked members of adolescent friendship cliques to narrate their perspectives about the community's decision to tie at stake individuals caught using 'mkpurummiri' (or methamphetamine), and to flog the individual mercilessly with several strokes of cane. The respondents' opinions on this objective were heterogeneous; some respondents, especially those who claimed they were initiated into use of the substance by their best and intimate friends, supported the community's use of cane deliverance and shaming procedure to confront the methamphetamine menace. They argue that the community leaders need to continue with this drastic measure to stop the use of 'mkpuru-mmiri,' so that young people can indeed become leaders of tomorrow. In contrast, other members of adolescent friendship cliques however, were filled with much indignation against the community approach. Those respondents viewed the community-based intervention procedure as unnecessarily punitive. They argue that no one has the right to interfere in another person's personal decision, especially when the decision is not injurious to another individual. But this argument is weak; for Bassindale (2012) and Oijego (2021) had shown that the use of methamphetamine predisposes a user to violence. To that extent, the individual may inflict harm to oneself and to other persons in the community; it is therefore not completely true that the substance is not injurious to other people.

Limitations of the study

This research was designed to gain some insights about methamphetamine use among adolescents in Abatete community, southeastern Nigeria, in order to inform future research. The research was based exclusively on self-report measure, which often leads to social desirability (Podsakoff et al., 2003). Social desirability according to Crowne and Marlowe (1964) refers to the "need for social approval and acceptance that it can be attained by means of culturally acceptable and appropriate behaviours" (p. 109). The use of self-report measure in this research poses a limitation because it increases the likelihood of inaccurate reporting by the two separate groups of adolescents. Again, the two samples used in the research were not representative of adolescent population in Abatete community. It is a limitation to approximate the behaviour of a few random or nondescript adolescents and a few members of adolescent friendship cliques to



the entire population of adolescents in Abatete community or even the whole of southeastern Nigeria.

Conclusion and recommendation

Methamphetamine poses a serious threat to public health and to community's peace in many communities in southeastern Nigeria. The major problems these communities face with the use of methamphetamine are addiction, criminality, cultism, and other anti-social behaviours, which seem to have negative impact on young people's development as future leaders (Ojiego, 2021; Onu et al., 2021). This research found that most adolescents who use methamphetamine are adolescents who are members of adolescent friendship clique. The conclusion therefore is that the fight against methamphetamine menace needs to be directed towards adolescent peer influence. We recommend that parents should monitor the adolescent friendship cliques their children join and what they experiment on when away from home. Parents and community leaders need to ensure that peer groups, such as adolescent friendship clique, can work in concert with, rather than in opposition to adult goals.



REFERENCES

- Bahr, S.J., Hoffman, J.P., & Yang, X. (2005). Parental and peer influences on the risk of adolescent drug use. *The Journal of Primary Prevention*, *26*, 529-551.
- Bassindale T. (2012). Quantitative analysis of methamphetamine in hair of children removed from clandestine laboratories evidence of passive exposure? *Forensic Science International*, 219(1-3), 179-182. https://doi.org/10.1016/i.forsciint.2012.01.003
- Birckmayer, J., Fisher, D. A., Holder, H. D., & Yacoubian Jr, G. S. (2008). Prevention of methamphetamine abuse: can existing evidence inform community prevention? *Journal of Drug Education*, *38*(2), 147-165.
- Ciarrochi, J., Parker, P., Sahdra, B., Marshall, S., Jackson, C., Gloster, A.T., & Heaven, P. (2016). The development of compulsive internet use and mental health: A four year study of adolescence. *Developmental Psychology*, *52*(2), 272-281.
- Curtin, K., Fleckenstein, A.E., Robison, R.J., Crookston, M.J., Smith, K.R., & Hanson, G.R. (2015). Methamphetamine and amphetamine abuse and risk of parkinson's disease in Utah: A population-based assessment. *Drug Alcohol Dependence*, *146*, 30-38. https://doi.org/10.1016/j.drugalcdep.2014.10.027
- Davis, K. (28 June, 2018). Methamphetamine: What you should know. https://www.medicalnewstoday.com
- Devi, A.N., Baruah, J., Pradhan, N., & Borah, T. (2017). Parent-adolescent attachment as perceived by adolescents. *Indian Journal of Positive Psychology*, 8(2), 117-119.
- Dumbili, E.W. (2018). If there is no alcohol, there is no party: Social pressures, alcohol consumption and social identity construction in Nigerian students' parties. *African Journal of Drug and Alcohol Studies*, 17(1), 13-28.
- Dumbili, E., & Ebuenyi, I. (2022). Factors Influencing Methamphetamine (Mkpulummiri) Use in Eastern Nigeria. https://ssrn.com/abstract=4020039 or http://dx.doi.org/10.2139/ssrn.4020039
- Early, A.M., & Grundetjern, H. (2022). The role of sex and compulsory heterosexuality within the rural methamphetamine market. *Crime & Delinquency*, https://doi.org/10.1177/00111287221077644
- Eleke, D.C. (2021). Anambra youths and the fight against methamphetamine https://www.thisdaylive.com
- Encyclopedia Britannica, (2019). Onitsha market literature https://www.britannica.com/art/onitsha-market-literature
- Entringer, S. (2022). Methamphetamine uses, side effects, warnings. https://www.drugs.com/methamphetamine.html
- Eze, J.E. (2006). Cult membership as a determinant of psychoactive substance abuse among male undergraduates in Nigerian universities. *Nigerian Journal of Psychological Research*, *5*, 28-36.
- Fallon, V. (2016). Porirua's Wesley Community Action helping addicts quit the meth pipe. https://www.stuff.co.nz/national/health/83022514/poriruas-wesley-community-action-helping-addicts-quit-the-meth-pipe
- Hallinan, M.T., & Smith, S.S. (1989). Classroom characteristics and student friendship cliques. *Social Forces*, *67(4)*, 898-919. https://doi.org/10.2307/2579707
- Heckathorn, D.D. (2004). Sampling and estimation in hidden populations using respondent-driven sampling.



- Sociological Methodology, 34(1), 193-239. https://doi.org/10.1111/j.0081-1750.2004.00152.x
- Henrich, J., Heine, S.J., & Norenzaya, A. (2010). Most people are WEIRD. *Nature, 466*, 29. https://doi.org/10.1038/466029a
- Hirschi, T. (1969). Causes of delinquency. University of California Press
- Krohn, M.D., Loughran, T.A., Thornberry, T.P., Jang, W.D., Freeman-Gallant, A., & Castro, E.D. (2016). Explaining adolescent drug use in adjacent generations: Testing the generality of theoretical explanations. *Journal of Drug Issues*, *46*(4), 373-395. https://doi.org/10.1177/0022042616659758
- Lerner, R.M., & Galambos, N.L. (1998). Adolescent development: Challenges and opportunities for research, programs and policies. *Annual Review of Psychology, 49*, 413-446.
- Logan, B.K. (2002). Methamphetamine-effects on human performance and behaviour, *Forensic Science Review, 14*, 131-151.
- Mefoh, P.C., Ugwu, J.I., & Eze, T.E. (2018). Psychoactive substance use as a predictor of road rage behaviour in a sample of commercial drivers in Enugu, south-eastern Nigeria. *African Journal of Drug & Alcohol Studies*, 17(2), 93-103.
- Mollen, L., Ciranka, S., & Van den Bos, W. (2022). Social influence in adolescence as a double-edged sword. *Proceedings of the Royal Society B.* https://doi.org/10.1098/rspb.2022.0045
- National Population Commission (NPC) (2007). Report of Nigeria's National Population Commission on the 2006 census. *Population and Development Review*, 33(1), 206-210.
- National Broadcasting Company (NBC) News (2013). Meth's aphrodisiac effect adds to drug's allure. https://www.nbcnews.com/id/6646180/ns/health-addictions/t/meths-aphrodisiac-effect-adds-drug-allure/
- Nutt, D.J., King, L.A., & Philips, L.D. (2010). Drug harms in the UK: A multicriteria decision analysis. *Lancet*, *376*(9752), 1558-1565. https://doi.org/10.1016/50140-6736(10)61462-6
- Odinka, J.I., Nwoke, M.B., Chukwuorji, J.C., Egbuagu, K., Mefoh, P.C., Odinka, P.C., Amadi, K.U., & Moumah, R.C. (2018). Post-partum depression, anxiety and marital satisfaction: A perspective from southeastern Nigeria. *South African Journal of Psychiatry*, 24, https://doi.org/10.4120/sajpsychiatry.v24i0.1109
- Ojiego, N. (November 28, 2021). Mkpuru mmiri: Drug chaos in Igbo land escalates. https://www.vanguardngr.com
- Onu, N., Njoku, C. &Elekwachi, C. (November 28, 2021). MkpuruMmiri: NDLEA, Anambra govt, others step up fight against meth scourge. *The Nation*. https://thenationonlineng.net/mkpuru-mmiri-ndlea-anambra-govt-others-step-up-fight-against-meth-scourge/
- Orjiakor, C., Eze, J., Chinweoke, M., Ezenwa, M., Orjiakor, I., Onwujekwe, O., & Palamar, J. (2023). A systematic review of actors, actions, and outcomes of community-based efforts to prevent methamphetamine use. *Addiction Research and Theory*, https://doi.org/10.1080/16066359.2023.2167982
- Palamar, J. J., Kiang, M. V., Storholm, E. D., & Halkitis, P. N. (2014). A qualitative descriptive study of perceived sexual effects of club drug use in gay and bisexual men. *Psychology & Sexuality*, *5*(2), 143–160. https://doi.org/10.1080/19419899.2012.679363
- Paulus, M. P., & Stewart, J. L. (2020). Neurobiology, clinical presentation, and treatment of methamphetamine use disorder: a review. *JAMA psychiatry*, 77(9), 959-966. https://doi.org/10.1001/jamapsychiatry.2020.0246
- Sawyer, S.M., Azzopardi, P.S., Wickremarathne, D., & Patton, G.C. (2012). Adolescence: A foundation for future health. *The Lancet*, *370*, 1630-1640.



- Schep, L.J., Slaughter, R.J., & Beasley, D.M. (2010). The clinical toxicology of metamfetamine. *Clinical Toxicology*, 48(7), 675-694. https://doi.org/10.3109/15563650.2010.516752
- United Nations Office for Drugs and Crime [UNODC] (2018). World Drug Report. https://www.unodc.org/wdr2018/prelaunch/WDR18_Booklet_1_EXSUM.pdf
- Volkow, N.D., Chang, L., Wang, G.J., Fowler, J.S., Leonido-Yee, M., Franceschi, D., Sedier, M.J., Gatley, S.J., Hitzemann, R., Ding, Y.S., Logan, J., Wong, C., & Miller, E.N. (2001). Association of dopamine transporter reduction with psychomotor impairment in methamphetamine abusers. *American Journal of Psychiatry*, 158(3), 377-382. https://doi.org/10.1176/appi.ajp.158.3.377
- Wang, D., Zhou, C., Zhao, M., Wu, X., & Chang, Y. K. (2016). Dose–response relationships between exercise intensity, cravings, and inhibitory control in methamphetamine dependence: an ERPs study. *Drug and Alcohol Dependence*, 161, 331-339. https://doi.org/10.1016/j.drugalcdep.2016.02.023
- You, S. (2011). Peer influence and adolescents' school engagement. *Procedia Social and Behavioural Sciences*, 29, 829 835. https://doi.org/10. 1016/j.sbspro.2011.11.311