

DETERMINANTS OF PSYCHOACTIVE SUBSTANCE USE AMONG INCARCERATED DELINQUENTS IN NIGERIA

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ABSTRACT

The objective of the study was to identify the prevalence of psychoactive substance use among incarcerated delinquents in Nigeria and its determinants. The total inmate population of 401 individuals were interviewed over a period of four weeks using an interviewer administered questionnaire that assessed for socio demographic, forensic, and drug use history among other variables. All the respondents were males, with a mean age of 20.6 ± 3.1 years, ranging from 12 to 39 years and had spent an average of 16.1 ± 9.9 months. The average age of first use was 12.6 ± 5.9 years. The prevalence of lifetime and current use of any substance was 88.0% and 64.3% respectively. Prior arrest, being sexually active and family drug use significantly ($p < 0.05$) predicted lifetime use of any substance while being raised in a monogamous family was protective. Prior arrest, family drug use, and being sexually active significantly ($p < 0.05$) increased lifetime use of illicit substances while being raised from a monogamous home significantly ($p < 0.05$) reduced same. Prior arrest and substance use before incarceration significantly ($p < 0.05$) predicted current use of any substance. Being sexually active and substance use before incarceration significantly ($P < 0.05$) predicted current use of illicit substances while high self esteem and being the first born was protective. Since substance use prevalence is high among incarcerated delinquents, the incorporation of substance abuse screening and treatment as part of their programme is advocated.

Key Words: Substance use, delinquents, incarceration, Nigeria,

INTRODUCTION

Many young people in the criminal justice system have a substance use disorder (Atkins et al., 1999; Gray & Wish, 1998; Marsteller et al., 1997; Teplin et al., 2002). While it cannot be claimed that the relationship between

substance use and delinquency among juveniles is causal in nature, both behaviours are certainly strongly correlated. In Nigeria there has been relatively little empirical work on juvenile delinquency and drug use.

The objective of this study is to evaluate the prevalence of substance use among young

people incarcerated at a juvenile correctional institution (Borstal) in Nigeria. This study also aims to evaluate any possible correlations between drug use and variables such as socio-demography, religiosity, family member use of drugs, parenting style, self esteem and assertiveness

Many researchers agree that the foundation of adolescent delinquency is rooted in the kind of home the adolescent is brought up (Odeunmi, 2007; Otuadah, 2006; Okpako, 2004). These studies claim that the behaviours of adolescents are as a result of the parenting style which is often defined by the way youths perceive their parents and thus react to the authority of their parent.

Researchers have conceptualized four parenting styles namely: authoritative, authoritarian, permissive and uninvolved (Glasgow, Dornbusch, Troyer, Steinberg, & Ritter (1997). Others categorize parenting into two major broad forms: "Demandingness" and "Responsiveness"(Ang & Goh, 2006; Chen & Wu, 2005)

Authoritative parenting is usually warm and supporting with the parents being both demanding and responsive and the child's opinion are recognize as he is part of the decision making process. This parenting style appears to produce children who are less influenced by negative peer pressure (Collins, Macoby, Steinberg, Hetherington & Bornstein, 2000). The parents, according to Ang and Goh (2006), are flexible and responsive to the child's needs but still enforce reasonable standards of conduct. Steingberg, (1996), reported that juveniles raised in authoritative households were more self confident, more responsible and less likely to engage in substance abuse and delinquent behavior. A significant relationships between high levels of parental warmth and low levels of externalizing problem behaviours in children of authoritative parents have been observed (Garber, Robinson & Valentine, 1997).

Authoritarian parenting which is referred to as "demanding" focuses on controlling the child and influencing them to comply with rules. The basis of parent-child relationship is obedience to strict rules and "worshipful"

respect for authority with little or no responsiveness to the child's needs. Apart from being strict and harsh, authoritarian parents are said to be restrictive and punitive when directions are not followed (Ang & Goh, 2006; Baumrind 1971, 1991) While some insist that such parenting yield positive effects in adolescents, for example in Asians and Indians(Ang & Goh, 2006), others conclude that parenting characterized by hostility, criticism, punishment and coercion is associated with antisocial behavior(Rutter Giller & Hagell, 1998). Juveniles from authoritarian households were observed to lack self confidence and responsibility but were less likely to engage in substance abuse and delinquent behavior (Steinberg, 1996). Children whose parents are authoritarian may perceive them as being mean and punitive and are likely to score high on aggressive scale while children in less punitive households scored lower (Thomas, 2004)

Permissive parenting is usually indulgent, exercising little control over the child's behavior and generally allow the child have more freedom. The parents are very responsive and extremely committed to the child with few restrictions, rules, limits or demands on their children. One study observed that parents of children with antisocial behavior are likely to be less positive, more permissive and inconsistent (Reid, Webster-Stralton & Baydar, 2004).

Some researchers belief that poor parental supervision is usually the strongest and most replicable predictor of offending (Farrington & Loeber, 1999; Smith & Stern, 1997). Juveniles from permissive households are observed to engage in substance abuse and delinquent behavior more frequently, but reported high level of self confidence (Steinberg, 1996). This may result from the fact that they exercise freedom to make choices of their own and express a sense of authority over themselves and their decisions. They may however be influenced more by their negative associates and delinquent peer groups because of lack of firm, clear direction and supervision by parents.

The neglectful or uninvolved parenting style does not provide adequate supervision neither does it support the child's needs. These

parents seem to focus more on their own lives and appear to be detached from the child, being neither demanding nor responsive. Juveniles from uninvolved households are more likely to engage in substance abuses and delinquent behavior and report a higher frequency of psychological problems such as depression and anxiety (Jackson & Crocket 2000; Steinberg, 1996). Research suggest that a lack of involvement as well as poor monitoring and supervision of children's activities, strongly predicts antisocial behavior (Loeber & Stouthamer-Loeber, 1986).

Severe persisting forms of antisocial behavior affects 5-10% of children in developed Western countries and are linked to future adult crime, drug and alcohol misuse, unemployment, poor physical health and mental disorder (Rutter, Bishop, Pine, Scott, Stevenson, Taylor et al., 2008; Cohen, 1998; Moffitt, Caspi, Harrington, & Milne, 2002; Odgers, Milne, Caspi, Crump, Poulton, & Moffitt, 2007).

Mann, Mckeowin, Bacon, Vesselinor and Bush, (2007), posited that: spirituality pertains to ones sense of connection to a transcendent power or purpose with or without conformity to a set of prescribed beliefs or practices while religiosity pertains to one's involvement in a system of worship and doctrine that is shared within a group. Many studies have examined the role of religiosity in preventing substance use among adolescents. Young people who are highly religious consistently report lower levels of drug use than young people who are less religious (Gorsach, 1988, 1995; Johnson Tomkins & Webb, 2002). This finding may not be unconnected with the fact that many religions prohibit the use or abuse of alcohol and other drugs among adherents resulting in the utilization of religious beliefs and practices in the treatment of and recovery from alcohol and drug abuse (Calburn, 2007; Brown, Pavlik, Shegog, Whitney, Friedman, Romero, et al, 2007). Some qualitative and quantitative research support the claim that religiosity is negatively associated with substance abuse and is useful in the substance abuse recovery process (Brown, 2006; Bazargan, Sherkat & Bazargan, 2004). Despite these findings, the assumption

that religiosity and spirituality are protective factors against deviant behavior has been criticized as spurious, lacking empirical validation (Cochran, wood & Arneklev, 1994; Evans, Cullen, Dunaway & Barton, 1995).

Many studies have rather focused on the "lack" of religion as a risk factor for increased substance use (Bry,Mckeon, & Pandina, 1982; Hawkins, Cathlano & Miller 1992; New Cump, Maddahian, Skagger & Bentler, 1987; Maddahian, New cumb, & Bentler, 1988). Despite the use of a variety of samples, research methods and measures of substance use and religiosity, the data generally suggest that young people who are more religiously engaged are less likely to use drugs than their less religiously engaged counterparts. Miller, (1998) put it simply "There is strong evidence that spirituality/religious involvement is generally associated with decreased risk of alcohol/drug use problems and dependence " (p.981).

Studies have investigated several life skills and examined their association with substance use among juveniles. Though not much has been done on the effects of self esteem on drug use, studies on substance use and area specific self esteem found high home and school self esteem to be a protective factor against the use of a number of different substances while peer self esteem was found to have little relationship with substance use (Emery, McDermott, Holcomb & Marty, 1993; Young & Werch, 1990; Young, Werch & Bakema, 1989). These studies examined each aspect of self esteem and substance use separately.

It has also been observed that self esteem serves as the mediator between mental health and peer attachment while low levels of self esteem have been correlated with increased risk behavior such as deviant social behavior, poor health and depression (Wilkinson, 2004; Daane, 2003; Donnellan, Trzeniewski, Robins, Moffitt & Caspi, 2005; Trzeniewski, Donnellan, Moffitt, Robins, Poulton & Caspi, 2006). Additionally Donnellan et al, (2005) found that adolescents with low self esteem tended to increase aggressive behavior with age and had a higher chance of antisocial behavior and delinquency including substance use.

Boisvert, Beaudry and Bittar, (1985) defines assertiveness as a bold behavior that enables a person to act on his or her own benefit without neglecting the right of others. Some have argued that there is a strong connection between external locus of control and addictive behaviours (Bernett, Norman, Murphy, More, & Tudor-Smith, 1998). Others posit that the lack of self esteem and assertiveness and poor family relationships increases the risk of substance use by adolescents. (McNeal & Hansen, 1999; Rhodes J., & Jason L, 1990).

METHOD

Study setting and participants

This study was carried out in a juvenile prison in Barnawa, Kaduna, situated in Kaduna city in Northern Nigeria. There are just two of such prisons in Nigeria under the Nigerian Prisons Service and administered like a school. Inmates undergo academic and vocational experience and it has a capacity for about 300 persons.

Permission to carry out the study was obtained from the Nigerian Prison Authority and ethical approval was gotten from the Research and Ethics committee of Federal Neuro-Psychiatric Hospital, Barnawa, Kaduna. A total population of the inmates were studied.

Instrument

An Interviewer administered questionnaire was used in the study which had four sections. Different parts of this questionnaire has been validated and used in similar settings. The first section documented socio-demographic variables while the second sections assessed the type, pattern and frequency of substance use by both inmates and their family members. It also assessed the current and lifetime use of these substances and the age of initiation of each of them. Section three contained items regarding the criminal justice system and type of offences committed.

Section four assessed parenting style as perceived by the inmates and their religiosity. The fifth section was concerned about the rating of

their personal life skills like self esteem, and assertiveness and it also assessed risky behaviours like fighting under the influence of drugs, and having unprotected sex.

A pilot study was carried out to prefect the instrument among 15 inmates who were excluded from the main study. It provided an idea of the estimated time of completing a questionnaire and the inclusion of some substances of abuse that were left out.

Data collection was carried out over a period of 8 weeks (March-April 2011) by trained volunteers. Confidentiality was maintained as no prison staff was present and they were assured of anonymity. The purpose and nature of the study was explained to them and they were given opportunity to ask questions. Their names were not requested and they were informed of their right to refuse participation.

RESULTS

Socio-demographic characteristics

A total of 401 (94.04%) inmates were studied comprising of all males with a mean age of 20.6years \pm 3.1, age range 12-39years. The mean time spent was 16months \pm 9.9 with a range of 1-38months and the mean age of initiating drug use by respondents was 12.6years \pm 5.9.

Christians constituted 52.9% of inmates while Muslim made up 45.4% and traditional and other religions made up the remaining 1.7%. The majority (73.8%) of respondent's parents were still married and 59.1% were from monogamous family.

Family and respondents' substance use

Family members in this study refers to the respondent nuclear family and other family members he grew up with in the same house. Respondents reported that 57.6% of family members used drugs out of which 39.9% used illicit drugs. Licit drugs in this study referred to only cigarette and alcohol.

Lifetime use of substances was 88% with 75.3% of respondent having used illicit substances which could be one or a combination

of marijuana, cocaine, heroin, codeine, and solution. Prior to their incarceration, 78.1% had used drugs. 64.3% of respondent were currently using substances with 25.9% using illicit substances. The majority (65.3%) of respondent were introduced to drugs by friends.

Predictors of substance use

Family type ($\chi^2= 5.70, p=0.02$), family drug use ($\chi^2= 18.06, p<0.001$), prior arrest ($\chi^2=26.25, p<0.001$), religiosity $\chi^2= 4.51, p=0.05$ and being sexually active ($\chi^2= 17.7, p<0.001$) was associated with lifetime use of any substance. Marital status ($\chi^2= 6.2, p=0.05$), family type ($\chi^2= 4.0, p=0.05$), family drug use ($\chi^2= 14.11, p<0.001$), prior arrest ($\chi^2= 14.11, p<0.001$), assertiveness ($\chi^2= 5.27, p=0.02$) and being sexually active ($\chi^2= 20.3, p<0.001$) was significantly associated with lifetime use of illicit drugs. Significant association of current use of any drug was found with marital status($\chi^2= 6.14, p=0.05$), family type($\chi^2= 7.01, p<0.01$), prior arrest($\chi^2= 19.92, p<0.001$), birth order($\chi^2= 6.41, p=0.04$), self esteem($\chi^2= 3.77, p=0.05$), drug use before incarceration($\chi^2= 15.48, p<0.001$) and being sexually active($\chi^2= 3.97, p=0.05$). Prior arrest($\chi^2= 5.32, p=0.02$), birth order ($\chi^2=6.91, p=0.03$), self esteem($\chi^2= 5.98, p=0.02$), drug use before incarceration($\chi^2= 7.31, p<0.01$) and being sexually active($\chi^2= 8.13, p<0.01$) was significantly associated with current drug use.

Prior arrest (OR=3.30, $p<0.001$), being sexually active (OR=2.43, $p=0.01$), and positive history of drug use by family members (OR=2.8, $p<0.01$) predicted the lifetime use of any drug while being raised in a monogamous home (OR=0.42, $p=0.02$) was protective (Table 1). Prior arrest (OR=1.97, $p<0.01$), family drug use (OR=1.83, $p=0.02$), and being sexually active (OR=2.26, $p<0.01$), predicted lifetime use of illicit drugs while being raised in a family where both parents are still married (OR=0.34, $p=0.02$), was protective against lifetime use of illicit drugs (Table 2).

Prior arrest (OR=2.34, $p<0.001$) and use of drugs before incarceration (OR=2.03, $p<0.01$), predicted current use of any drug among the respondents (Table 3). Being

Table 1: Summary of logistic regression analyses for variables predicting lifetime substance use for incarcerated juveniles (n=401)

Variable	Odds Ratio	p-value	95% CI
Contact with criminal justice system	3.30	<0.001	1.69-6.45
Sexually active	2.43	0.01	1.24-4.76
Family drug use	2.8	<0.01	1.38-5.66
Religiosity	0.59	0.13	0.30-1.16
Family (monogamous)	0.42	0.02	0.20-0.88

Table 2: Summary of logistic regression analyses for variables predicting lifetime illicit substance use for incarcerated juveniles (n=401)

Variable	Odds Ratio	p-value	95% CI
Family type	0.65	0.10	0.38-1.09
Contact with criminal justice system	1.97	<0.01	1.19-3.25
Marital status (Married)	0.34	0.02	0.13-0.87
Family drug use	1.83	0.02	1.11-3.02
Assertiveness	1.60	0.08	0.94-2.70
Sexually active	2.26	<0.01	1.33-3.86

Table 3: Summary of logistic regression analyses for variables predicting current substance use for incarcerated juveniles (n=401)

Variable	Odds Ratio	p-value	95% CI
Family type	0.74	0.20	0.46-1.17
Contact with criminal justice system	2.34	<0.001	1.47-3.71
Marital status	0.62	0.19	0.30-1.26
Sexually active	1.35	0.25	0.81-2.25
Use before incarceration	2.03	<0.01	1.21-3.41
Self esteem	0.65	0.05	0.41-1.00
Birth order	1.13	0.70	0.61-2.10

sexually active (OR=2.23, $p<0.01$), and use of drugs before incarceration (OR=1.97, $p=0.05$), predicted current use of illicit drugs while high self esteem (OR=0.48, $p<0.01$), and being the first born (OR=0.42, $p=0.02$) was protective (Table 4).

DISCUSSION

This study revealed that the average age of onset of substance use was 12.6 years while some initiated substance use as early as age 7 years. It may be inferred that those who are likely to be delinquent initiate drug use at an earlier age. Conversely, those who begin the use of drug at an earlier age are more likely to become delinquent.

Lifetime prevalence of any substance use was 88% while that for illicit substance use was 75.3%. Current use prevalence for any substance and illicit substances was 64.3% and 25.9% respectively. Lifetime Prevalence of as high as 95.7% have been reported among delinquents (Frank, John, Graham, and Gregory, 2003) while prevalence rate among the general population of adolescents may be as low as 10% for illicit substance use (SAMHSA, 2010).

There seems to be an association between lifetime illicit substance use and adolescents coming from a home whose parents are divorced. Similar finding was observed with

current substance use though it was not predictive of substance use among them. Many studies have identified the nature of some family structure as a risk to adolescent's use of drugs. (e.g. Flewelling & Bauman, 1990; Needle, Su & Doherty, 1990; Turner, Irwin & Millstein, 1991; Hoffman 1993; Adlaf & Ivis, 1996; Albrecht, Amey & Miller, 1996; Suh, Schutz & Johanson, 1996; Amey & Albrecht, 1998; Gil, Vega & Biafora 1998; Aquilino & Supple, 2001). This risk is greatest when neither parent is present (Adlaf & Ivis 1996; Albrecht et al. 1996; Suh et al., 1996).

According to Clark (1970), the juveniles who are the greatest threat to the public are those who live in broken homes. This was observed more with adolescents who come from fatherless homes while the presence of a father was a protective factor for especially male adolescents in regard to delinquency (Flouri & Buchanan, 2002; Wilson, 2000). The difference in the pattern of substance use depending on family type is also seen with the age of initiation of substance use, current use and lifetime use (Suh et al., 1996; Gil et al., 1998; Albrecht et al. 1996; Adlaf & Ivis 1996). Studies have shown that compared to children with married parents, children with divorce parents are more likely to have behavior problems, such as aggression and acting out and more likely to engage in criminal behavior, (Hilton & Desrochers, 2002; Mednick, Baker, & Carothers, 1990)

Parenting style has been identified as a predictor of delinquency in adolescents (Odebimi, 2007; Otuadah, 2008; Okpako, 2004). This study revealed no association between parenting style with substance use among incarcerated adolescents.

Only 48.1% of the respondents were religious and religiosity was not associated with substance use. Many studies have shown that highly religious adolescents report lower levels of drug use than those that are less religious (Gorsch, 1988, 1995; Johnson, Tomskins, & Webb, 2002). Many assert that religion is an important factor against substance use for adolescents. (John, Tony, Jerald, Thomas, 2012). The lack of any association of religion with

Table 4: Summary of logistic regression analyses for variables predicting current illicit substance use for incarcerated juveniles (n=401)

Variable	Odds Ratio	P-value	95% CI
Contact with criminal justice system	1.59	0.10	0.92-2.74
Sexually active	2.23	0.01	1.18-4.24
Use before incarceration	1.97	0.05	1.01-3.83
Self esteem	0.48	<0.01	0.29-0.78
Birth order	0.42	0.02	0.21-0.85

substance use may not be unconnected with the over bearing majority who are not religious in the close knit company they find themselves.

The general perception in Nigeria that birth order is an important indicator of how parents treat their children and administer correction informed the assessment of birth order in this study. There are conflicting opinion as to whether the first child or the last child is most affected in terms of parental control and delinquency. In this study, birth order was not associated with lifetime use of substances. First born children were however significantly less likely to engage in current illicit substance use.

The link between substance use and delinquency resulting in frequent contact with the criminal justice system has been noted by some researchers (NIJ, 1996; Altschuler & Broustein, 1991). Among the respondents, 67.9% of them have been arrested at least once for misdemeanor ranging from possession of drugs to stealing, traffic offences and assault. Respondents who have been arrested before were more than three times as likely and almost two times as likely to use any substance and illicit substances respectively in their lifetime. Current substance use was also associated with prior arrest and they were twice as likely to use licit substances currently. This did not predict for current illicit substance use. It may be that since illicit substance use carry heavier punishment within the prison system, those who have had prior contact with the criminal justice system may be more careful to offend while being incarcerated.

Adolescents whose family members use drugs were almost three times as likely and almost two times as likely to use any substance and illicit substances respectively in their lifetime. This could mean that adolescents who live in homes where drugs are used by family members are more likely experiment with drugs.

Less than half(43.9%) of the respondents had high self esteem and among them lifetime and current use prevalence was 87.5% and 25.9% respectively. Respondents with high self esteem were significantly less likely to use illicit substances currently. It was not predictive of lifetime use of any substance or current

use of licit substances. Doglas-Pelish (2006), opined that high level of self esteem are necessary to effectively manage social and peer pressure. The majority (72.6%) scored high on assertiveness but it did not predict a less likelihood to use drugs among respondents.

Many researchers have documented the relationship between substance use and early initiation of sex and risky sexual activity (Miller, Naimi, Brewer & Jones, 2007; NHTSA, 2008). Being sexually active was predictive of lifetime use of any substance and current and lifetime use of illicit substances. Those who were sexually active were more than two times as likely than those who were not sexually active to have a history of any substance use, illicit substance use and current use of illicit substance.

CONCLUSION

In this study, variables like prior arrest, being sexually active, and drug use by family members predicted the likelihood of substance use by incarcerated delinquents. By contrast, being raised in a monogamous family and having both parents still married predicted the less likelihood of substance use.

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