Relationships as determinants of substance use amongst street children in a local government area in south-western Nigeria

Adebiyi AO, MPH, FMCPH
Owoaje O, FWACP
Asuzu MC, MBBS, DOH & S, MSc, FMCPH, FFPHM

Department of Community Medicine, College of Medicine, University College Hospital, Ibadan, Nigeria

Correspondence to: Akindele O Adebiyi, e-mail: adebiyi20012002@yahoo.com

Abstract

Background: Unrestrained exposure to street life often makes the street child vulnerable to psychoactive substances. In other settings, the social relationships of the substance user with those around him or her and family norms of parenting have been documented to modulate use. However, there is a dearth of literature on the role of relationships in substance use in Nigeria.

Methods: A cross-sectional analytical study of street children was conducted in a local government area of south-western Nigeria between November 2004 and March 2005, with data analysis being undertaken in April 2005 and November 2006. A cluster sampling method was used to recruit 360 consenting street children into the study. Information was collected on socio-demographic characteristics, parental and friend connectedness, familial stress and current psychoactive substance use.

Results: The mean age was 16.2 ± 1.3 years, and there were more males (58.3%) than females. Most of the respondents (65%) were still living with their parents. Fifty-three per cent of the respondents were current psychoactive substance users and the five commonest substances used were kola nut (58.6%), alcohol (43.6%), tobacco (41.4%), marijuana (25.4%) and "sokudaye" (24.9%). Of the respondents who live alone and of those whose fathers work outside of the town, 84% and 57.9% respectively were more likely to be current users at $P < 0.05$. Similarly, low connectedness with mother and friends and low parental presence were significantly associated with current substance use (75.7%, 77.5% and 58.3% respectively at $P < 0.05$). On logistic regression, only low connectedness with mother (OR 2.4, 95% CI 1.194.98) and friend (OR 3.1, 95% CI 1.705.72) predicted current substance use.

Conclusion: The study documented the important role of positive relationships between street children and their friends/mothers in preventing psychoactive substance use

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Introduction

The declining socio-economic condition in developing countries has been a major contributing factor to the increasing number of children on the streets. In this population of children, poverty and financial needs have often been cited as reasons for being on the streets.[1] Apart from poverty, other factors that have been implicated in this increasing trend are family problems, dysfunctional families, work demands of parents at home and the children's desire to be with friends.[2]

A fundamental problem associated with this trend is the lack of parental or adult supervision while the children are on the street. Thus, these groups of children are vulnerable to a lot of hazards, including the use of psychoactive substances. A review of the existing literature puts the prevalence of psychoactive substance use among street children in Nigeria at 45%.[3] However, differentials may occur in the patterns of substance use due to factors like the social relationships of the user to those around him or her and family norms of parenting.[4,5] Research from developed countries has demonstrated that parent-family connectedness provides protection against the early initiation of sexual activity as well as the use of substances such as cigarettes and alcohol.[6] Thus, it could be said that connectedness with school and family fosters strong associations, with safer behaviours, including avoidance of the use of psychoactive substances and better health outcomes during adolescence.[7,8,9] Other factors that have been demonstrated to have an effect on adolescent behaviour include school stress, peer relationships and frequency of family meals.[7,8,9,10] Amongst Scottish adolescents, a study found that school stress was the factor that most accurately predicted a student's likelihood to try alcohol.[11] In addition, a longitudinal study found that children who, at the age of nine, had problems with peer relationships as measured by peer rejection, social isolation and perceived social incompetence were up to nine times more likely to use substances by the age of 18 than those students with the fewest peer interaction problems.[12] Furthermore, the frequency of joint family activities such as meals has also been found to be protective against the use of tobacco, alcohol and marijuana.[10] Although various studies have been conducted on the prevalence of psychoactive substance use in Nigeria, there is a dearth of literature on the role of the relationships between the abovementioned factors. Therefore, this study was conducted to fill this knowledge gap.

Methods and materials

Study design and location

This study was part of a large cross-sectional analytical study of street children in the Kajola local government area of Oyo State in the south-western region of Nigeria. The local government area (LGA) contains six towns and 117 villages. The LGA is also divided into 11 political wards. It has a population of 158 698.[13] The National Demographic and Health Survey indicates that young people aged 10 to 24 years constitute 31.2% of the Nigerian population.[14] Therefore, the population of young people in the LGA was estimated at 49 513. The main occupations of the people in the LGA include farming, cloth weaving, pot making and trans-border trade.

Sampling technique

Seven wards in the LGA were chosen by simple random sampling, while the areas where street children aggregate in the selected wards, like market places and garages, were identified and classified as clusters. A random sample of two places where street children gather was selected for each ward. The universe of the street child is a mobile one and, generally speaking, very difficult to determine.[3] Therefore, our inclusion criteria were based on the World Health Organization and UNICEF definitions of street children.[15,16] These criteria were: working

on the streets or spending a large percentage of their lives, including sleeping, on the street, partaking in street life, dirty or unkempt or loose appearance, language and frequent presence at aggregation points even at odd hours. We excluded those in institutionalised care and focused mainly on the categories of "children on the street and children of the street". All individuals meeting the inclusion criteria and identified with the assistance of their peer group leaders were recruited for the study after informed consent was given. With precision set at 5%, the calculated sample size was 227, and this was multiplied by 1.5 (design effect) on the basis of a previous study in the same area to give a minimum sample size of 340. However, 360 street children eventually participated in the study.

Procedure

Ethical permission was obtained from the University of Ibadan/University College Hospital Joint Ethical Review Committee. Street children were defined as either those working on the streets or spending a large percentage of their lives, including sleeping, on the street and partaking in street life. The children were identified and recruited into the study after their informed consent and that of their group leaders had been obtained. The groups of children were found concentrated around the five major motor parks and the two major markets in the local government area. The study was conducted between November 2004 and March 2005, with data analysis done in April 2005 and re-explored in November 2006. The research instrument was a pre-tested semi-structured interviewer-administered questionnaire that was used to collect data on socio-demographic characteristics, parental and friend connectedness, familial stress and current use of psychoactive substances.

Friend connectedness was assessed using responses to five statements:[17]

1. I feel close to my friends
2. I feel I am part of my circle of friends
3. I always feel happy to be with my friends
4. My friends are interested in me
5. My friends treat me fairly

Parental connectedness was assessed separately for mother connectedness and father connectedness based on responses to the following statements:[17]

1. He/She cares about me
2. He/She is warm and loving towards me
3. I feel close to my mother/father
4. I am happy with my relationship with my mother/father
5. My father/mother and I are close to each other

Parental and peer connectedness scores were rated on a five-point Likert scale, ranging from strongly agree to strongly disagree. The mean score of the responses to the five statements for each connectedness item was then computed. A score of three and above rated as high connectedness, while a score below three was taken as low connectedness.

Familial stress was defined as any factor that caused the separation of one or both of the parents from the respondent. Current substance use was defined as the use of any psychoactive substances within the 30 days preceding the study.

Parental presence was measured in terms of the presence of either parent at breakfast, the evening meal or at bedtime, with a maximum allowable score of nine.[10] The total score was computed and a low presence was taken as a score of lower than five.

The data were analysed using the SPSS package version 11.0. Frequencies were generated and associations were tested using the chi-squared test for categorical variables. The variables that were significant at the 5% level were entered into the logistic regression model using the enter method, and at a 95% confidence interval to determine the actual familial predictors for substance use.

Presentation of results

Table I shows the socio-demographic characteristics of the respondents. The mean age was 16.2 ± 1.3 years, and 320 (88.9%) of the respondents were aged between 15 and 17 years. There were more males (210; 58.3%) than females. The majority of the respondents (233; 64.7%) had education up to the secondary level, while only 14 (3.9%) had no formal education. Most of the respondents (234; 65%) were still living with their parents, while 26 (7.2%) were living with friends and 25 (6.9%) were living alone. A greater proportion (221; 61.4%) of the street children were currently attending school, and this reflects a special category that needs attention because of the bridging effects on non-street children in schools. Those falling within the unemployed category (15.8%) represented the often classical description of unruly individuals known as "area boys and girls".[2]

Table I: Socio-demographic characteristics of respondents

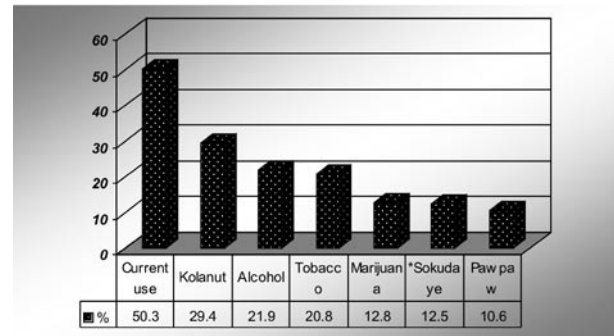| Description	n	(%) (N=360)
Age		
9–11	2	0.5
12–14	38	10.6
15–17	320	88.9
Sex		
Male	210	58.3
Female	150	41.7
Religion		
Christianity	134	37.2
Islam	226	62.8
Marital status		
Single	304	84.4
Married	36	10.0
Cohabiting*	20	5.6
Education		
No forma	14	3.9
Primary	37	10.3
Junior secondary	76	21.1
Senior secondary	233	64.7
Employment status		
Student	221	61.4
Work full time	82	22.8
Unemployed	57	15.8

* With parents, spouse, relatives or teacher

Figure 1 shows that, within the 30 days prior to the interview, 50.3% of the respondents had used at least one psychoactive substance. The most commonly used substances were kola nut (58.6%), alcohol (43.6%), tobacco (41.4%), marijuana (25.4%) and "sokudaye" (24.9%).

Table II shows the results of a univariate analysis of the determinants of current psychoactive substance use. Out of respondents whose mothers were dead 12; (80.0%) were more likely to be current users of psychoactive substances users (P = 0.01).

In terms of parental mobility as a result of occupation, children whose fathers worked outside town reported a higher prevalence of

substance use (57.9% versus 42.5%). Similarly higher proportions of children whose mothers worked outside town – 52.0% compared to 48.0% – were current substance users. Regarding family structure, those whose parents were separated were also more likely to be current substance users, with a reported prevalence of 25 (54.3%; P = 0.59). A higher percentage of those living alone (21; 84.0%) were current users of psychoactive substances. Parental separation and the mother's usual place of work were not significantly associated with current psychoactive substance use at P < 0.05, which suggests that the father's presence possibly is associated more with the non-use of psychoactive substances, and that living alone may be a risk factor for psychoactive substance use.

Figure 1: Current psychoactive substance use

■%	Current use	Kolanut	Alcohol	Tobacco	Marijuana	*Sokudaye	Paw paw
	50.3	29.4	21.9	20.8	12.8	12.5	10.6

*Literal meaning: make a dead person come alive (a methanol-based product said to clear throats that sells for ≤USD 0.08)

Table II: Familial stress and current psychoactive substance use

Indicators of familial stress	Current substance use		P value
	Yes	**No**	
	n (%)	n (%)	
Which of your parents is dead?			
Both alive	139 (46.6)	159 (53.4)	
Mother dead	12 (80.0)	3 (20.0)	
Father dead	16 (57.1)	12 (42.9)	0.01**
Both parents dead	14 (73.7)	5 (26.3)	
Father's usual place of work			
Within town	91 (43.5)	118 (56.5)	
Outside town	62 (57.9)	45 (42.1)	0.02**
Mother's usual place of work			
Within town	104 (46.0)	122 (54.0)	
Outside town	53 (52.0)	49 (48.0)	0.3
Parental marital status			
Married and together	105 (46.7)	120 (53.3)	
Separated but not divorced	25 (54.3)	21 (45.7)	0.59
Divorced	14 (51.9)	13 (48.1)	
Place of residence			
With parents	109 (46.6)	125 (53.4)	
With friends	12 (46.2)	14 (53.8)	
Alone	21 (84.0)	4 (16.0)	0.01**
˙Others	39 (52.0)	36 (48.0)	

* Spouse, relatives, parents' acquaintances; ** P value significant

Table III shows the univariate analysis of connectedness factors as risks for psychoactive substance use. Respondents who had a low connectedness with their mothers (75.7%) were more likely to be current psychoactive substance users compared to those with a high connectedness. Similarly, those with a low connectedness with their fathers (26; 56.5%) were more likely to be current substance

users, although this was not statistically significant. Those with a low connectedness with friends (77.5%) were also more likely to be current substance users. A low parental presence at meals had a higher association with current substance use, at 58.3% versus 41.7%. This suggests that bonding with the mother may have a more stabilising effect beyond chance on children's behaviour than bonding with the father. In addition, having a sense of belonging among friends, measured by friend connectedness, is also strongly associated with not using psychoactive substances. Parental presence at meals, which reflects family togetherness, follows this same pattern.

Table III: Connectedness and current psychoactive substance use

Connectedness variables	Current substance use		P value
	Yes	No	
	n (%)	n (%)	
Connectedness with mother			
Low level	53 (75.7%)	17 (24.3%)	
High level	98 (40.3%)	145 (59.7%)	0.00*
Connectedness with father			
Low level	26 (56.5%)	20 (43.5%)	
High Level	126 (47.8%)	141 (52.2%)	0.24
Connectedness with friends			
Low level	86 (77.5%)	25 (22.5%)	
High level	95 (38.2%)	154 (61.8%)	0.00*
Parental presence			
Low	35 (58.3%)	25 (41.7%)	
High	104 (43.7%)	134 (56.3%)	0.04*

* P value significant

The predictors for psychoactive substance use are shown in Table IV. We entered the variables that were significantly associated with the current use of psychoactive substance at the 5% level into the logistic regression model. The predictors that remained significant after regression were low maternal connectedness and low connectedness with friends. This shows that the risk of using psychoactive substances increases 2.4 times in street children with low maternal connectedness in comparison to those with high maternal connectedness. Similarly, the risk of using psychoactive substances increases 3.1 times in street children with low connectedness with friends in comparison to those with a high connectedness with friends.

Table IV: Predictors of current psychoactive substance use

Variable	Odds ratio	95% Confidence interval	P value
Father's work			
Within town	ref	0.78–2.44	0.27
Outside town	1.4		
Parental presence			
Low	ref		
High	0.87	0.47–1.60	0.66
Connectedness with mother			
High	ref		
Low	2.4	1.19–4.98	0.02*
Connectedness with friends			
High	ref		
Low	3.1		0.00*
Residence status			
With parents	ref		
With friends	1.2	0.60–2.50	0.58
Alone	1.5	0.54–4.45	0.42
Other arrangement	0.56	0.15–2.07	

*Statistically significant

Discussion

This study shows the importance of connectedness with friends and family, as well as absence of familial stress, in fostering strong associations with the avoidance of psychoactive substance use in young people, as has been shown in some other studies.[7,8,9]

The mean age of the respondents was 16 ± 1.3 years, and this was similar to a study done in Lusaka, where 60% of the street children were aged between 12 and 16 years.[18] The finding of more males in this study is also similar to that of other studies, in which females were less than 30% of the study population.[15,18]

The strict age criteria applied in this study and the socio-geographical environment of the rural area has clearly brought forth a subgroup of street children, who are on the streets partly because of a lack of recreational amenities and interesting places to visit after school and partly because of the desire to be with friends.[17]

The current rate of substance use (50.3%) found in this study is slightly higher than the 45% found among street children in an urban local government area in Nigeria.[3] This difference may actually reflect the availability of low-cost substances like kola nuts, which are culturally acceptable within the social framework of the rural community.[18] The cultural acceptability is further highlighted by the fact that the substance used most commonly is kola nuts. The use of a methanol-based product (sokudaye) by one-tenth of the respondents in this study supports the assertion that street children are known to choose the least expensive and most readily available psychoactive substances in their environment.[15] The implications of the use of this methanol-based product for the health of these street children are a concern.

In this study, the indicators of familial stress and connectedness were significantly associated with current use of psychoactive substances. However, mother's usual place of work, and connectedness with father were not significantly associated. A previous study found parent-family connectedness to be protective against the early initiation of sex, as well as cigarette and alcohol use.[6] This was also supported by a research review that documented the protective value of parent-child connectedness in relation to cigarette and alcohol use.[19] In particular, father working outside town was significantly associated with current substance use, which may actually reflect the important moderating role played by fathers in the home. It has also been shown that high school students with high connectedness scores had significantly lower rates of substance use than those with low connectedness scores.[8] The finding that living alone was associated with the use of psychoactive substances may also reflect the unrestrained exposure and lack of adult supervision experienced by these respondents. This aspect is supported by research undertaken among homeless and runaway youth that found significant associations between living situation and the use of marijuana, cocaine and hallucinogens.[20] A low parental presence at meals was associated with current substance use, and this has previously been documented in a study showing that the frequency of family meals (including parental presence) is inversely associated with the use of tobacco, alcohol and marijuana.[10] In the logistic regression model, high connectedness with mothers and friends was protective of substance abuse, showing that connectedness with the mother and with friends is more important in modulating substance use than other factors.

The results of this study suggest that familial stress and connectedness can actually modulate psychoactive substance use. The finding that 61.4% of the street children still attend school has grave implications

for substance-use prevention programmes for the youth. These in-school street children represent a bridge between the school children and the street children and may serve as an avenue for extending bad practices learnt on the streets. As pointed out in a similar study by Morakinyo and Odejide, while some of this subset of street children may still go back home or attend school, they are at risk of eventually abandoning home to live on the streets.[3] The study has also highlighted the fact that the concept of street children may be geographically determined and is not strictly an urban phenomenon.[21] The presence of street children in the rural setting where this study was done may actually reflect the apparent lack of stimulating avenues for the youth in the form of recreational facilities in these areas. Taking account of all these factors in planning prevention programmes would be of great benefit. We therefore suggest that programmes aimed at strengthening the family unit be incorporated into substance-use prevention programmes. Special programmes targeting the "bridging population" of street children who still attend school should also be important in attempts to prevent the extension of the negative influence of street life, including substance use, to schools.

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Conflict of interest:

We declare that we have no financial or personal relationship(s) which may have inappropriately influenced us in writing this paper.

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