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Psychoactive substance use among children in informal religious schools (Almajiris) in northern Nigeria

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“Almajiri” is a term used to describe children in northern Nigeria who are sent to live with teachers of the Qur’an in order to receive religious instruction. Unable to cater for their needs, the teachers send the children to the streets to beg and do menial jobs. Drug use and other forms of high risk behaviour have not yet been studied among these children. A cross-sectional survey was conducted on 340 Almajiris in northeast Nigeria, using an adapted version of the WHO Student Drug Use Questionnaire. The Almajiris were all males, with ages ranging from 5 to 16 years (mean = 11.2 years, *SD* = 3 years) who had left their parents between the ages of 3 and 12 years (mean = 6.6 years, *SD* = 2.1 years). The prevalence of drug use was 66.2% and the most frequently used drugs were stimulants (49.7%), volatile solvents (21.5%), cigarettes (19.1%) and cannabis (18.5%). This study provides the first evidence of a high prevalence of drug use among the Almajiris.

Keywords: Almajiri; street children; psychoactive substances; northern Nigeria

Introduction

Street children are a marginalized group with limited access to education, health care and other services (Women’s Commission for Refugee Women and Children, 2004). They are also frequently subjected to different forms of abuse, neglect, deprivation, hazards of living on the streets and an increased risk of psychoactive substance use (Aderinto, 2000; Carlini-Cotrim & Carlini, 1988; Gutierrez, Vega, & Perez, 1992; Ojanuga, 1989; Smart et al., 1981; WHO, 1993).

It is estimated that there are about 100 million street children worldwide, especially in developing countries (WHO, 1993, 1996). There are regional estimates of 40 million in Latin America, 25–30 million in Asia, and over 10 million in Africa. However, street children are not a homogenous group but vary significantly according to their different sociocultural backgrounds and geographical locations (Ennew, 2003).

Nigeria is a culturally diverse nation with over 250 different languages. It has an estimated population of 140 million people with 48% less than 15 years old

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(Federal Ministry of Health, 1996). Similar to worldwide observations, street children in Nigeria are best understood in terms of the diversity of culture in the various communities.

Street children in southern Nigeria are more likely to be found roaming the streets as “area boys,” bus conductors, hawkers, vendors or engaged in other menial jobs, usually to augment low family incomes or to fend for themselves (Aderinto, 2000; Ebigbo, 2003; Mbakogu, 2004; UNICEF, 1996). In the northern parts of the country, they are usually found as *Almajiris*; seated in clusters on the streets for lessons on the Qur’an, begging for alms, roaming the streets, or engaged in menial jobs in exchange for food (Ebigbo, 2003; Mbakogu, 2004; Ojanuga, 1989).

Almajiri children

The term *Almajiri* originated from the Arabic word “*Al-Muhajirun*,” meaning an emigrant (Barkindo, 1983). This word has evolved to depict street children in northern Nigeria, who spend a small portion of their day learning the Qur’an and are thereafter found on the streets as beggars and street urchins (Adamu & Mohammed, 2006; Aminu, 2004; Barkindo, 1983). The *Almajiri* system started as a practice whereby children and young people from Muslim families were sent to live with reputable Islamic scholars called “*Mallams*” (derived from “*Mu’allim*” which is the Arabic word for “*Teacher*”) to acquire religious and moral training (Aminu, 2004; Barkindo, 1983; Khalid, 1997). Upon completion of their studies, they return back home as “*Teachers*” or “*Mallams*.”

This practice of sending male children (females are very rarely sent out) away from home in pursuit of religious knowledge is widespread in parts of sub-Saharan Africa such as urban areas of northern Nigeria, Chad, The Gambia, Guinea, Mali, Mauritania, Niger, Senegal, and northern Ghana (The Government of The Gambia & UNICEF, 1991).

Families that send their children away from home to learn the Quran under the tutelage of *Mallams* are highly esteemed in their communities and seen as good Muslims. There are suggestions that this practice may have commenced several centuries ago as a result of the interpretation of some sayings (Hadith) by the Prophet Muhammed (peace be upon him) such as:

If anyone travels on a road in search of knowledge, God will cause him to travel on one of the roads of Paradise. The angels will lower their wings in their great pleasure with one who seeks knowledge. The inhabitants of the heavens and the Earth and (even) the fish in the deep waters will ask forgiveness for the learned man. The superiority of the learned over the devout is like that of the moon, on the night when it is full, over the rest of the stars. The learned are the heirs of the Prophets, and the Prophets leave (no monetary inheritance), they leave only knowledge, and he who takes it takes an abundant portion.—Sunan of Abu-Dawood (n.d.)

The British invasion saw the northern and southern parts of Nigeria amalgamated to form a colony in 1914 along with the introduction of formal western education. This led to some debate in northern Nigeria as regards distinguishing between “religious or Quranic” education and non-religious or western colonial education, which in any case was usually championed by Christian missionaries. Most people opted to stick to the traditional religious form of education and this accounts for its widespread persistence up until now and the relative educational backwardness of northern Nigeria, when compared with the southern parts which rapidly embraced western education. However, in the northern part of Nigeria, there is now an increasing recognition of the need to broaden the definition of knowledge to encompass western or formal education and skill

acquisition; with state governments, non-governmental organizations and individuals currently collaborating in this regard (Ahmed, 2007). However, issues surrounding religion and religious practices are very delicate and are a source of recurrent debate, conflict and violence in Nigeria.

The upkeep of the children in the Almajiri system was traditionally the responsibility of the Mallams, but this was not a problem in the past, when communities were small, rural and agriculturally based (Barkindo, 1983; Khalid, 1997). Furthermore, the Mallams occupied an exalted position of respect in society and received numerous gifts in cash and kind from the community.

However, the United Nations Development Programme (UNDP, 2004) reports a rapid rate of urbanization in Nigeria, starting with the 1975 estimate of the proportion of people living in urban areas at 23.4%, growing to 46% in 2002 and is projected to be over 50% by 2015. This development, coupled with massive rural-urban migration, harsh socio-economic living conditions and a breakdown of the traditional communal way of life have culminated in the erosion of the support structure of the Almajiri system in northern Nigeria (Khalid, 1997).

The Mallams are no longer able to cope with supporting the Almajiris under their care, and many poor parents now send their children into the Almajiri system because of their inability to cater for them (Khalid, 2001; Kisekka, 1981). A Mallam may have between 50 and 200 children under their care in an informal religious school setting (on the streets, usually in make-shift tents, under trees or attached to a mosque) known as a "tsangaya" (Adamu & Mohammed, 2006; Imam, 2004).

These children are usually from remote villages, towns and states of northern Nigeria; thus they live on the streets with their Mallams, depending on the goodwill of neighbours, passers-by and the proceeds of begging for their sustenance.

All these factors have culminated in the current situation where the Almajiris now spend very few hours in actual lessons on the Qur'an but spend the major part of their days on the streets, begging for alms or engaged in menial labour (Barkindo, 1983; Khalid, 2001; Shettima, 2008).

They are usually poorly fed, ill-clad in dirty and tattered clothes, and are exposed to a lot of deprivation and hazards on the streets with the attendant high risk for the use of psychoactive substances (Blake, 2007; Ebigbo, 2003; Ojanuga, 1989).

There are suggestions that the evolution of the Almajiri system of Qur'anic education into the current situation of street children and beggars stem largely from poverty, ignorance and harsh socioeconomic realities, rather than religious reasons (Shettima, 2008). Barkindo (1983) has argued that the Almajiri system as practised now does not enjoy the support of authentic sources of Islamic law (Quran and Hadith) which teaches that children are the responsibility of their parents until they attain maturity and get married. These explanations may be supported by the fact that the Almajiri practice of Qur'anic education is limited almost exclusively to the lower socioeconomic classes while it is practically non-existent among the middle and high socioeconomic groups in contemporary northern Nigeria.

The Almajiris also lack access to formal education and are not engaged in learning a skill or trade of any sort. These children not only constitute a major loss of a productive human resource for the Nation but have also become ready tools in the hands of criminal elements for unleashing violence and looting during episodes of political, religious or ethnic riots; which have been quite frequent in northern Nigeria (Awofeso, Ritchie, & Degeling, 2003; Federal Government of Nigeria Report, 1980; Imam, 2004).

The Almajiri children may be psychologically helped to put up with much adversity and deprivation by the Islamic teaching they receive from the Quran. Good Muslims are encouraged to be patient in adversity as seen in this passage from the Quran:

And most certainly shall We try you by means of danger, and hunger, and loss of worldly goods, of lives and of [labor's] fruits. But give glad tidings unto those who are patient in adversity—who, when calamity befalls them, say, “Verily, unto God do we belong and, verily, unto Him we shall return.” It is they upon whom their Sustainer’s blessings and grace are bestowed.—Quran 2:155–157.

On the other hand their difficult living circumstances may also encourage a sense of hopelessness which could promote involvement in dangerous activities such as involvement in religious riots and vandalism, and self destructive behaviours such as psychoactive substance use. Documentation of the sociodemographic profile, pattern and prevalence of psychiatric morbidity and substance use are yet to be studied among the Almajiris. A few studies have been conducted by non-governmental organizations (NGOs) but these looked solely at child abuse (Ebigbo, 2003; Ojanuga, 1989).

Furthermore, most studies of drug use among young people in Nigeria have been either school or hospital-based studies (Abiodun, Adelekan, Ogunremi, Oni, & Obayan, 1994; Adelekan, 1989; Adelekan, Abiodun, Obayan, Oni, & Ogunremi, et al., 1992; Adelekan et al., 2001; Lawoyin et al., 2005; Odejide, Ohaeri, Adelekan, & Ikuesan, 1987) with a few exceptions (Morakinyo & Odejide, 2003; Obot, Ibanga, Ojiji, & Wai, 2001; Omigbodun & Babalola, 2004). This study determines the prevalence and pattern of psychoactive substance use among the Almajiris and assesses their sociodemographic profiles and mental health.

A psychoactive substance, for the purpose of this study refers to any natural or synthetic substance (licit or illicit) which can modify or alter mental functions. Due to the availability and acceptability of traditional substances like local alcoholic brews and kolanuts, most studies of substance abuse in this environment screen for both licit and illicit substances (Lawoyin et al., 2005; Morakinyo & Odejide, 2003). These substances were defined and classified into three classes by Odejide and Morakinyo (2004) as including psychotherapeutic drugs like benzodiazepines and opiates; illicit drugs like cannabis and cocaine and lastly, socially acceptable substances like alcohol, tobacco and kolanuts.

Methods

Study Site

Maiduguri is the capital city of Borno state (one of the 36 states in Nigeria) in northeast Nigeria. This city has an established reputation as a centre of Islamic knowledge and the memorization of the Qur’an, which attracts Almajiris from all over northern Nigeria. It is made up of two districts: Jere and Maiduguri Metropolitan Council (MMC), with a combined total number of 27 wards.

Sampling

A multistage sampling approach was employed. In the first stage, Maiduguri was divided into 27 clusters (representing the total number of wards) and from this sample frame; one ward was randomly selected for the study. In the second stage, the Qur’anic “schools”

(“Tsangayas”) with collection of Almajiris in the selected ward were identified (10 in all) and three were randomly selected through balloting, from this sample frame. All the Almajiris in the three selected schools (340 of them) were interviewed. Only three “schools” were selected due to resource constraints. However, these three schools had the number of respondents required to achieve the calculated sample size.

Since there is no available prevalence rate for Almajiris, the sample size was estimated using the highest reported prevalence rate (69%) for drug use by Lawoyin et al. (2005) among secondary school adolescents in Nigeria. The prevalence rate obtained in the latter study was utilized because similar to this study, both licit and illicit substance use was determined. Furthermore, literature reveals a high prevalence of drug use in similar vulnerable groups. The sample size of 328 was arrived at using the prevalence rate of 69% at a confidence interval of 95%, and with the margin of error set at 5%. The subjects were all males.

Survey Instrument

The questionnaire had 66 items covering sociodemographic data, general welfare, personal health and hygiene, feelings and friendship and detailed alcohol and cigarette use in addition to screening for use of other drugs.

It was adapted from the Nigeria 2004 Global School-based Student Health Survey (GSHS) Questionnaire (World Health Organization (WHO) & Center for Disease Control and Prevention (CDC), 2003) and the WHO Student Drug Use Questionnaire (Smart et al., 1980), which has been validated for use in Nigeria by Adelekan & Odejide (1989).

Items assessing for feelings of loneliness, excessive worry, difficulties with sleep, appetite, concentration and feelings of sadness and hopelessness, occurring almost every day for at least two weeks, close friendships and suicidal ideation were selected from the GSHS Questionnaire and substance use items came from the WHO Student Drug Use Questionnaire. The questions were developed and modified for easy comprehension of this age group by a team of social workers and child mental-health professionals in collaboration with linguists. The questionnaire was translated into Hausa (the local language), using the back-translation method.

Data Collection

Interviews were conducted by J.O., O.A., and three psychiatric social workers who had received training on how to administer the instrument. In administering the questionnaires, the items were read out and the children chose the alternative that was relevant to them.

In order to ensure privacy and confidentiality, each interview was carried out with one Almajiri at a time and at a distance from the others. The subjects were provided with information about the study’s purpose and content, so that they could make an informed decision to participate.

The authors gave serious consideration to the ethical issues involved in a study of this nature, including the need for parental consent prior to interviewing children below the age of 18 years. However, considering the remote and scattered backgrounds of these children from all over northern Nigeria, obtaining consent would have been practically impossible. Thus, on account of these difficulties and the paucity of information about

the mental-health status of these children, the need for parental consent was waived, based on the principle of “no greater than minimal risk” to the children.

The interviewers had clear guidelines on the rights of the respondents to refuse to participate, the protection of confidentiality and their right to be fully informed about the nature of the study before their consent is requested. The respondents were assured of the confidentiality of their responses, and anonymity was ensured by not including names or other identifying markers. The questionnaires were placed in a sealed box immediately after completion, in the presence of the respondents; such that they were not accessible to the Mallams or other Almajiris.

Only the Almajiri children that gave voluntary consent were interviewed. Two children declined while five who were less than 4 years old were excluded because they were unable to understand the questions. Response rate was 98% as 340 out of 347 agreed to participate. Permission was also obtained from the Mallams before the children were approached.

Statistical Analysis

The data generated were analysed using the Statistical Package for Social Sciences (SPSS-13) Software. A combination of descriptive and inferential statistics is used to present the data. Descriptive methods utilized include means, standard deviations and frequency tables. The chi square test and logistic regression analysis were also used to test the relationship and significance of association between sociodemographic variables and drug use.

Results

Demographics

A total of 340 male Almajiri children, aged 5–16 years (mean of 11.2 years; $SD = 3$ years) were studied. The number of hours spent daily in Qur’anic lessons ranged from 2–7 h (mean of 4.3 h; $SD = 1.2$ h) while the rest of the day was spent on the streets begging for food and alms.

The age range at which children left their homes and parents to become Almajiris was 3–12 years (mean of 6.6 years; $SD = 2.1$ years). The mean duration of living on the streets was 4.6 years ($SD = 3.0$; range of 0–12 years). Other sociodemographic details are presented in Table 1.

Prevalence and type of substance use

The overall prevalence of psychoactive substance use was 66.2%. The commonest substances used were stimulants, volatile solvents, cigarettes and cannabis. Opioids, smoking of dried pawpaw leaves, alcohol and sedatives were the least used substances while cocaine and hallucinogen use was not found. Figure 1 depicts the prevalence of the individual psychoactive substances used by the Almajiri children.

Kolanuts and coffee were the commonly used stimulants while petrol and a locally altered form of chloroform called “solution” were the most frequently used types of volatile solvents. Tramadol tablets were the only type of opiate reportedly used while sedatives included Diazepam (Valium, D5, and D10), Bromazepam (Lexotan) and Nitrazepam (Mogadon). Alcohol was bought in small and cheap “shots” from roadside street hawkers (available only in some areas of the city).

Table 1. Sociodemographic characteristics of the Almajiris.

| Sociodemographic variable | <i>n</i> (%) |
|---------------------------|--------------|
| <i>(N</i> = 340) | |
| Sex | |
| Male | 340 (100) |
| Religion | |
| Islam | 340 (100) |
| Region of origin | |
| North-east | 166 (48.9) |
| North-west | 174 (51.1) |
| Family type | |
| Monogamous | 112 (32.9) |
| Polygamous | 228 (67.1) |
| Status of parents | |
| Living together | 245 (72.1) |
| Divorced/separated | 63 (18.5) |
| Parent (s) deceased | 32 (9.4) |

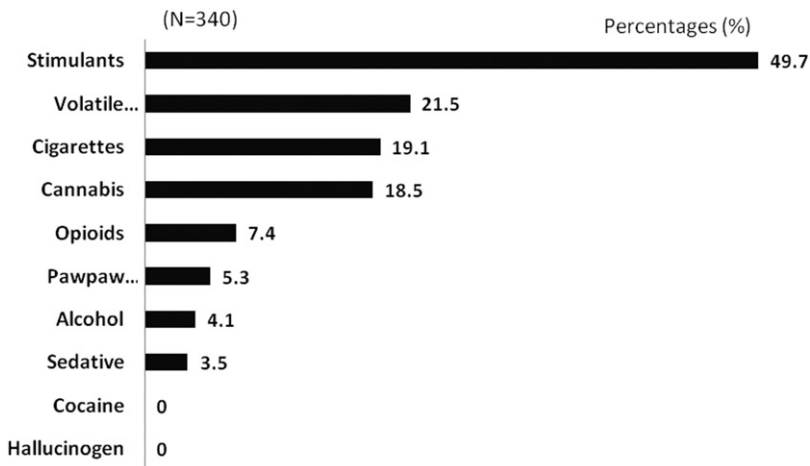


Figure 1. Prevalence of use of individual psychoactive substances.

Alcohol use

All the children taking alcohol started its use between the age of 8 and 11 years (mean of 9.5 years; *SD* = 1 year). They reported taking alcohol on fewer than 9 days in a month and did not report ever getting drunk or running into trouble on account of alcohol use. They also never experienced refusal of alcohol sale to them on account of their age, and they usually drank in the company of their friends.

Nicotine use

Concerning cigarette smoking, 97.5% of children who smoke (*n* = 65) had started by the age of 11 years. The majority of them (66.1%) did so for less than 10 days in a month while

33.9% smoked for an average of 10–19 days monthly. Most of the smokers (96.7%) had never tried stopping the habit.

Overall, majority (55%) of the 340 children interviewed believed that smokers are more likely to have friends than non-smokers. Others (20.9%), thought smokers were no different from non-smokers while 24.1% opined that smokers had fewer friends than non-smokers. Most of the children (64.1%) did not think that other people's cigarette smoke was harmful while 35.9% thought it was harmful.

Relationship between Almajiri children's characteristics and drug use

There was a uniform pattern depicting higher proportions of older children (≥ 10 years) using psychoactive substances than younger ones (< 10 years). This was significant for all the drugs with the exception of cigarettes ($p=0.749$), opioids ($p=0.149$) and pawpaw leaves ($p=0.632$). The relationship between psychoactive substance use and the characteristics of the children is shown in Table 2. Yates correction was applied where values were too small for analysis.

Children from polygamous homes had higher prevalence of drug use compared with those from monogamous unions. This finding was true for all the drugs but was significant for volatile solvents ($p < 0.001$), pawpaw leaves ($p=0.002$), cannabis ($p < 0.001$), sedatives ($p=0.011$), cigarettes ($p=0.002$) and alcohol ($p=0.007$).

Almajiris whose parents were separated or who had lost one or both parents, had higher rates of drug use when compared with those whose parents lived together. Parental separation or death was found to be significantly related to the use of volatile solvents ($p < 0.001$), cannabis ($p < 0.001$), sedatives ($p=0.001$), cigarettes ($p < 0.001$) and alcohol ($p < 0.001$).

Subjects whose fathers had no formal education had higher rates of use of all the substances except sedatives and alcohol. However, this was significant for only cannabis and volatile solvents (see Table 2). Mothers' level of education was not significantly related to drug use. Age at which the children left their parents was also not significantly related to use of any drugs.

Almajiris with depressive symptoms (felt sad and hopeless for two or more weeks) were more likely than others who were not depressed, to use volatile solvents ($p < 0.001$), cannabis ($p < 0.001$), sedatives ($p < 0.001$), cigarettes ($p < 0.001$) and alcohol ($p < 0.001$). Children who reported going hungry always (or usually) were more likely to use cannabis than children who reported never (or rarely) going hungry ($p < 0.001$). Those who reported being unable to initiate sleep also had significantly higher use of volatile solvents, pawpaw leaves, cannabis and sedatives. Feelings of loneliness were significantly associated with use of volatile solvents, pawpaw leaves, cannabis, and cigarettes.

Logistic regression revealed that children from polygamous homes were about four times more likely to use volatile substances than those from monogamous ones while those whose parents were not together had about two and half times the risk. Children who reported feelings of loneliness were three and a half times more likely to use volatile solvents than children without these feelings. Cannabis use was strongly and independently associated with polygamous family type and reporting frequent feelings of loneliness; and children who reported feeling worried, had a threefold increased likelihood of cigarette smoking (see Table 3).

Table 2. Relationship between Almajiri characteristics and psychoactive substance use (N = 340).

| | Volatile solvents n (%) | Opioids n (%) | Pawpaw leaves n (%) | Cannabis n (%) | Stimulants n (%) | Sedatives n (%) | Cigarettes n (%) | Alcohol |
|------------------------------|----------------------------|------------------|------------------------|-------------------|---------------------|--------------------|---------------------|----------|
| Age (years) | | | | | | | | |
| <10 | 13 (3.8) | 12 (3.5) | 5 (1.5) | 6 (1.8) | 65 (19.1) | 0 (0) | 23 (6.8) | 0 (0.0) |
| ≥10 | 60 (17.6) | 13 (3.8) | 13 (3.8) | 57 (16.8) | 104 (30.6) | 12 (3.5) | 42 (12.4) | 14 (4.1) |
| p value | <0.05 | 0.149 | 0.632 | <0.05 | <0.05 | <0.05 | 0.749 | <0.05 |
| Family type | | | | | | | | |
| Monogamous | 7 (2.1) | 7 (2.1) | 0 (0.0) | 2 (0.6) | 53 (15.6) | 0.0 | 11 (3.2) | 0 (0.0) |
| Polygamous | 66 (19.4) | 18 (5.3) | 18 (5.3) | 61 (17.9) | 116 (34.1) | 12 (3.5) | 54 (15.9) | 14 (4.1) |
| p value | <0.05 | 0.745 | <0.05 | <0.05 | 0.616 | <0.05 | <0.05 | <0.05 |
| Father's level of education | | | | | | | | |
| No formal education | 42 (12.4) | 22 (6.5) | 12 (3.5) | 35 (10.3) | 131 (38.5) | 0 (0.0) | 48 (14.1) | 2 (0.6) |
| Some formal education | 31 (9.1) | 3 (0.9) | 6 (1.8) | 28 (8.2) | 38 (11.2) | 12 (3.5) | 17 (5.0) | 12 (3.5) |
| p value | <0.05 | 0.269 | 0.430 | <0.05 | 0.944 | <0.05 | 0.602 | <0.05 |
| Status of parents | | | | | | | | |
| Living together | 32 (9.4) | 17 (5.0) | 11 (3.2) | 22 (6.5) | 120 (35.3) | 3 (0.9) | 33 (9.7) | 3 (0.9) |
| Separated or late | 41 (12.1) | 8 (2.4) | 7 (2.1) | 41 (12.1) | 49 (14.4) | 9 (2.6) | 32 (9.4) | 9 (3.2) |
| p value | <0.05 | 0.812 | 0.427 | <0.05 | 0.757 | <0.05 | <0.05 | <0.05 |
| Feelings of loneliness | | | | | | | | |
| Present | 47 (13.8) | 3 (0.9) | 11 (3.2) | 46 (13.5) | 45 (13.2) | 6 (1.8) | 44 (12.9) | 8 (2.4) |
| Absent | 26 (7.6) | 22 (6.5) | 7 (2.1) | 17 (5.0) | 124 (36.5) | 6 (1.8) | 21 (6.2) | 6 (1.8) |
| p value | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | 0.298 | <0.05 | 0.078 |
| Felt sad for 2 or more weeks | | | | | | | | |
| Present | 38 (11.2) | 5 (1.5) | 4 (1.2) | 37 (10.9) | 51 (15.0) | 12 (3.5) | 39 (11.5) | 14 (4.1) |
| Absent | 35 (10.3) | 20 (5.9) | 14 (4.1) | 26 (7.6) | 118 (34.7) | 0 (0.0) | 26 (7.6) | 0.0 |
| p value | <0.05 | 0.263 | 0.510 | <0.05 | 0.533 | <0.05 | <0.05 | <0.05 |

Note: Yates correction effected.

Table 3. Logistic regression analysis of drug use on children's characteristics.

| Drug type by variables | Odds ratio | 95% CI OR | <i>p</i> value |
|--------------------------|------------|-------------|----------------|
| Volatile solvents | | | |
| Family type | 3.68 | 1.53–8.85 | 0.004 |
| Status of parents | 2.51 | 1.35–4.67 | 0.004 |
| Loneliness | 3.57 | 1.48–8.62 | 0.005 |
| Worry | 0.65 | 0.91–4.07 | 0.089 |
| Pawpaw leaves | | | |
| Loneliness | 3.31 | 0.71–15.39 | 0.126 |
| Worry | 2.86 | 0.76–10.87 | 0.122 |
| Cannabis | | | |
| Family type | 15.2 | 2.90–71.43 | 0.001 |
| Loneliness | 22.73 | 4.81–111.11 | <0.001 |
| Age | 4.57 | 1.57–13.33 | 0.005 |
| Parents | 3.57 | 1.73–7.41 | 0.001 |
| Worry | 1.63 | 0.66–4.02 | 0.289 |
| Hunger | 2.00 | 0.86–4.67 | 0.109 |
| Cigarettes | | | |
| Worry | 3.05 | 1.34–6.90 | 0.008 |
| Status of parents | 1.90 | 1.01–3.58 | 0.047 |
| Family type | 0.577 | 0.27–1.23 | 0.153 |
| Loneliness | 0.779 | 0.32–1.89 | 0.580 |
| Hunger | 1.571 | 0.81–3.04 | 0.180 |

Discussion

The high prevalence of psychoactive substance use (66.2%) found in this study is in keeping with universal (United Nations, 1999) and local (Abiodun et al., 1994; Odejide et al., 1987) reports of the vulnerability of young people to drug use. The risk is significantly increased for street children and marginalized youth, such as the study population, who use psychoactive substances for various reasons such as having to keep awake, trying to get to sleep, reducing physical and emotional pain, improving self-esteem and alleviating feelings of hunger (United Nations, 1999; WHO, 1998).

Worldwide, the most frequently reported drugs of abuse by street children and young people are the cheapest and most readily available in their environment (Abiodun et al., 1994; Adelekan, 1989; Adelekan et al., 1992; Omigbodun & Babalola, 2004; United Nations, 1999; WHO, 1993). This was confirmed by findings here, as the drugs with the highest prevalence of use were stimulants, volatile solvents, cigarettes, and cannabis, which are readily and cheaply available in the study environment.

The prevalence of alcohol use (4.1%) found here is low and at variance with earlier reports of youth in different settings in the Nigerian community whose alcohol use rates ranged from 12 to 55% (Abiodun et al., 1994; Adelekan, 1989; Fatoye & Morakinyo, 2002; Gureje et al., 2007; Lawoyin et al., 2005; Makanjuola, Daramola, & Obembe, 2007; Obot et al., 2001; Odejide et al., 1987). The recently concluded nationwide survey of psychoactive substance use among adults by Gureje et al. (2007) also reported alcohol to be the most commonly used substance, followed by cigarette smoking, sedatives and cannabis.

However, Gureje et al. (2007) reported that Muslims were less likely to use alcohol than persons of other faiths. This association was true for only alcohol and not for the use

of other substances, but it may explain the low prevalence of alcohol obtained in this study. The study setting is in a predominantly Muslim community, with a public ban on alcohol sale and consumption and it is only available in restricted areas of the city.

It may be postulated therefore, that the strong Islamic religious teaching on the prohibition of alcohol may have resulted in the low prevalence of alcohol use unlike other substances such as cigarettes and stimulants, which are commonly used. This finding may have some utility for the design and formulation of strategies for health education programs targeted at this group of children. However, despite the prohibition of alcohol sale in the study setting, none of the children who used alcohol reported difficulties buying it. Thus, the low prevalence may be more likely due to low demand as a result of religious beliefs and not problems of supply.

Majority of the earlier studies reporting a higher prevalence of alcohol use were from the southern parts of the country, with the two exceptions being reports from Ilorin and Jos which are both major cosmopolitan cities in the north (Abiodun et al., 1994; Adelekan et al., 1992, 2001; Obot et al., 2001).

Obot et al. (2001) reported that 38.7% out of school adolescents in Jos with an average age of 13.2 years used alcoholic drinks. Although Jos is a city in northern Nigeria, it is multiethnic and predominantly non-Muslim with no prohibition of alcohol use; unlike the study setting of Maiduguri. Furthermore, the indigenes of Jos traditionally enjoy local alcohol brews which are often offered to children too, thus making it socially and culturally acceptable to drink alcohol (Obot, 1993).

On the other hand, the studies from Ilorin were all surveys of adolescents and young people in high schools and colleges with populations drawn from different parts of the country and therefore may not be truly representative of northern Nigerian youths.

This study also confirms some sociodemographic correlates of drug use in young people such as poverty, unstable or separated families (Lawoyin et al., 2005; WHO, 1993), early age of initiation (Abiodun et al., 1994; Fatoye & Morakinyo, 2002; Odejide et al., 1987) and polygamous backgrounds (Lawoyin et al., 2005).

The extent to which family variables such as separated parents and polygamous backgrounds impact on drug use habit of these children is difficult to ascertain because they live on the streets and not with their families; with mean age of leaving home as 6.6 years ($SD = 2.1$ years).

Surprisingly, the duration of stay on the streets was not found to be significantly associated with the use of psychoactive substances, unlike the study by Morakinyo and Odejide (2003) carried out in southwest Nigeria which reported strong correlation between duration of stay on the streets and use of psychoactive substances. The reasons for this may be varied as the studies took place at opposite ends of the country (south-west Nigeria vs. north-east Nigeria) with different sociocultural and religious backgrounds. The study by Morakinyo and Odejide (2003) was among older street children who were not receiving any form of religious instruction, whereas the current study was among street children who were receiving some form of informal religious (Quranic) instruction hence the reasons for being on the streets would be somewhat different.

Studies of street children in the southwest revealed that they had broken ties with their families and 24% were drugs couriers (Olley, 2006). Almajiris still have some degree of "supervision" in the few hours of religious instruction before they are sent out by their teachers to beg on the streets hence preventing a total break with their "carers." Moreover, the giving of alms is an encouraged practice of Islam, and the children and their Mallams therefore attempt to benefit from this through begging.

Peer influence is well established as a predictor of drug use among young people, with increased risk for alcohol when friends also drink (Obot, 2002; Odejide et al., 1987). This was corroborated by our findings, as all the children drinking alcohol did so in the company of friends who were also drinking. Furthermore, it is interesting to note that frequent feelings of loneliness significantly increased the likelihood of using some substances like cannabis, pawpaw leaves and volatile substances. This may perhaps, be a pointer to the children's attempt to self medicate to help cope with these negative feelings.

The prevalence of cigarette smoking among the Almajiris at 19.1% approximates closely, the 19% reported by Obot, Karuri, and Ibanga (2003) in the northern city of Jos. However, it is significantly higher than reports from other parts of the country (Abiodun et al., 1994; Adelekan et al., 2001; Fatoye & Morakinyo, 2002; Lawoyin et al., 2005) but still lower than the national prevalence of 22% reported among young people of Nigeria (Mackay & Eriksen, 2002).

The smoking of pawpaw leaves has been gaining increasing recognition as a substance of abuse in Nigeria in recent times (Olley, 2007). Attention was first drawn to its use as a cheap and readily available substitute for cannabis in Nigeria by the United Nations International Drug Control Programme report (UNDCP, 1999). Morakinyo and Odejide (2003) also confirmed this finding, but found a low prevalence of 1.1% in a study conducted in south-western Nigeria. However, these studies have all been cross-sectional reports describing the prevalence of pawpaw leaf smoking and the subjective experience of the users but no specific study has been reported, about the specific psychoactive ingredient(s) in the pawpaw leaves. The use of pawpaw leaves among the Almajiri children may perhaps be due to the fact that it is widely cultivated and readily available, and they therefore do not require money to obtain it.

Stimulants were the most frequently used substance, especially the local caffeine containing kola nut which is chewed. Earlier local studies in student and non-student populations had reported similar high rates of stimulant use (Abiodun et al., 1994; Adelekan et al., 2001; Fatoye & Morakinyo, 2002; Lawoyin et al., 2005; Makanjuola et al., 2007) but the cultural acceptability, low cost, and ready availability of kola nuts in northern Nigeria may have contributed to the high level of use found in this study. Use of more potent and expensive stimulants such as amphetamines was not reported among these children.

Volatile solvents such as petrol and "solution" were also commonly used. This corroborates the earlier finding of high prevalence of use of organic solvents by out-of-school adolescents in northern Nigeria by Obot and Saxena (2005). Petrol is readily available from roadside hawkers on most streets of northern Nigeria and young children and adolescents are frequently involved in this illegal but lucrative roadside sale.

Cannabis use was significantly higher than other reports from study populations in this environment (Adelekan, 1989; Obot et al., 2001, 2003). This may be a pointer to greater vulnerability of children living on the streets to this psychoactive substance.

The use of hypnotosedatives such as diazepam, bromazepam and nitrazepam and opioids such as Tramadol tablets by these children poses a challenge for the regulatory agencies. The National Agency for Food, Drug Administration and Control (NAFDAC) has made giant strides towards sanitizing the drug markets but the continuing availability of prescription drugs on the streets, is a hazard that requires urgent attention. Similar findings and recommendations have been documented over the past three decades with regards to the street availability of prescription drugs, without a significant

improvement in the situation (Abiodun et al., 1994; Lawoyin et al., 2005; Ogunremi & Rotimi, 1979).

The National Drug Law Enforcement Agency (NDLEA, 2000) reported that heroin and cocaine are becoming drugs of choice for a small but growing proportion of young people in Nigeria; but this was not the case in our findings, among these poor and disadvantaged children who could barely feed themselves. Furthermore, Obot and Saxena (2005) also concluded that cocaine and heroin use is still relatively rare except among few privileged young people in large urban areas.

Conclusion

This study documents the pattern and prevalence of drug use among the Almajiris of northern Nigeria. It reveals high rates of drug use, especially the cheap and readily available substances among this vulnerable group of children receiving religious instruction and en route to becoming religious teachers themselves. The plight of these marginalized children requires urgent attention. Concerted efforts are required to improve their socioeconomic circumstances, provide them with formal education and skills for a productive adult life, and also educate them about the harmful effects of psychoactive substances. These measures call for an urgent improvement in this form of religious instruction. There is also the need to tackle demand and supply of prescription and licit drugs.

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