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A descriptive epidemiology of substance use and substance use disorders in Nigeria during the early 21st century

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This paper is dedicated to the memory of Dr. Michael Ekpo.

Abstract

Background: Several studies have examined the use of psychoactive substances among selected groups in Nigeria. Here, we extend the description to include the features of substance dependence.
Method: A stratified multi-stage random sampling of households was used to select respondents in 21 of Nigeria's 36 states (representing 57% of the national population). In-person interviews with 6752 adults were conducted using the World Health Organization Composite International Diagnostic Interview, Version 3. Lifetime history and recent (past year) use, as well as features of dependence on, alcohol, tobacco, cannabis, sedatives, stimulants, and other drugs were assessed.
Results: Alcohol was the most commonly used substance, with 56% (95% confidence interval, CI = 54, 58%) ever users and 14% (95% CI = 13, 15%) recent (past year) users. Roughly 3% were recent smokers (3%, 95% CI = 2.6, 4.2%). Next most common were sedatives, 4% (95% CI = 2.3, 4.5%), and cannabis smokers, 0.4% (95% CI = 0.1, 0.6%). Males were more likely than females to be users of every drug group investigated, with male preponderance being particularly marked for cannabis. Prevalence of both alcohol and tobacco use was highest among middle aged adults. Moslems were much less likely to use alcohol than persons of other faiths, but no such association was found for tobacco, non-prescription drug use, or illegal drug use. Features of abuse and dependence were more common at the population level for alcohol; but among users, these features were just as likely to be experienced by alcohol users as they were by other drug users.
Conclusion: Alcohol is the most commonly used psychoactive drug in Nigeria. Features associated with drug dependence and abuse are less prevalent but may require attention by public health authorities.

Keywords: Nigeria; Composite International Diagnostic Interview; Epidemiological research; Tobacco; Alcohol; Cannabis; Drugs

1. Introduction

The use of psychoactive drugs has long interested Nigerian researchers (Leighton et al., 1963). Most of this work has examined alcohol (Gureje et al., 1992). Limited work has been conducted upon the use of tobacco and cannabis (Oviasu, 1976; Asuni, 1964; Elegbeleye and Femi-Pearse, 1976; Ibeh and Ele, 2003). Use of drugs such as stimulants, sedatives, and cocaine has rarely been studied (Ebie et al., 1981; Agaba et al., 2004).

There are limits to existing work. Much of it is based on surveys of population subgroups such as students or hospital patients (Abiodun et al., 1994; Adamson and Akindele, 1994;

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Odejide et al., 1987); few have been carried out in primary care settings or in the community (Gureje et al., 1992; Gureje and Obikoya, 1990). Results of existing studies suggest that the majority of Nigerians do not drink alcohol. Its use is predominantly among middle aged males, although alcohol and tobacco consumption by women and young people may be rising (Ibeh and Ele, 2003; Alakija, 1984). Cannabis use is circumscribed, rarely occurring before adolescence and after young adulthood. About 15% of primary care attendees used over-the-counter sedatives, with many becoming long-term users; use of these drugs may be more common among females than for other drugs (Gureje and Obikoya, 1990).

Very little is known about occurrence of drug dependence in Nigeria, and no previous studies assessed a broad range of drugs with a large and representative sample of the population. Studies of representative samples addressing level of use and profile of associated problems are needed to provide empirical data upon which informed policy response to drug problems can be based. Such studies are expensive to mount and require considerable expertise, both of which are not commonly available in most research centres in sub-Saharan Africa. Surveys of illegal drug use, of alcohol consumption, tobacco use, and of use of analgesics have been conducted in localized urban areas of Benin City and Jos (Ebie et al., 1981; Obot, 1990). The study of tobacco use in the community by Obot provided data on a large sample of adult "heads of household" (Obot, 1990), but not other household residents. Thus, even though a number of authors have expressed concern about the growing rate of smoking in Africa (Taha and Ball, 1982; Yach, 1986; Jha and Chaloupka, 1999) and estimates of per capita alcohol consumption have been made by the World Health Organization (World Health Organization, 2004; Rehm et al., 1999), there is actually very little empirical basis upon which to base a categorical statement about the community profile of smoking or alcohol consumption in Nigeria.

The Nigerian national survey of mental health and well-being (NSMHW) was designed to fill the existing gap in the epidemiology of mental disorders and drug use (and related disorders) in Nigeria using present day assessment tools; based upon current diagnostic classification systems, principally the American Psychiatric Association's Diagnostic and Statistical Manual (DSM-IV; American Psychiatry Association, 1994) and the World Health Organization's International Classification of Diseases (ICD-10; World Health Organization, 1992). It was carried out as part of the World Mental Health Surveys (WMH) initiative, a WHO-organized collaborative effort, now with more than 20 countries participating (Demyttenaere et al., 2004).

In this initial report on the descriptive epidemiology of substance use and substance use disorders in Nigeria, we examine two specific questions:

1. For the population of Nigeria under study, what is the estimated population prevalence of use of tobacco, alcohol, and other non-prescription drugs, and what are the prevalence estimates for features associated with dependence on these substances?
2. Are there any distinctive subgroups of the population where cases are more or less likely to be observed, with subgroups based upon demographic and social correlates of alcohol, tobacco and other drug use?

2. Methods

Detailed descriptions of the NSMHW methods have been published elsewhere (Gureje et al., 2006). Here, we provide a brief summary overview, with focus upon two aspects of the methods that are of special importance in epidemiological field research: (1) the nature of the multi-stage area probability sampling for the survey, which creates nested structures within the survey database; (2) the nature of data collection on the topics of tobacco, alcohol, and other drug consumption, as well as diagnostic assessments with respect to clinical features associated with drug dependence and other hazards of drug involvement (e.g., recurrent legal difficulties).

2.1. Sample

The research team used a four-stage area probability sample of households to select non-institutionalized adults aged 18 years and over. The survey was conducted in five of the six geo-political regions of Nigeria: south-west (Lagos, Ogun, Osun, Oyo, Ondo, and Ekiti), south-east (Abia, Anambra, Enugu, Ebonyi, and Imo), south–south (Akwa Ibom, cross-river and rivers), north-central (Kaduna, Kogi, and Kwara), and north-east (Adamawa, Bornu, Gombe, and Yobe). Collectively, these states represent about 57% of the national population. The survey assessments were conducted in Yoruba, Igbo, Hausa and Efik languages, with due attention to translation and harmonization described below.

Selection of local government areas (LGAs) within the states and geographically defined enumeration areas (EAs) within the LGAs constituted the first and second stages of the selection process. All selected EAs were visited by research interviewers prior to the interview phase of the survey and conducted an enumeration and listing of all the household units contained therein. Respondents were selected following a complete listing of all members of a household and the use of the Kish table (Kish, 1965). An eligible member of a household had to be 18 years of age and able to speak one of the languages of the study. Only one such person was selected per household. When the primary respondent was either unavailable following repeated calls (five repeated calls were made) or refused to participate, no replacement was made within the household. On the basis of this selection procedure, face-to-face interviews were carried out on 6752 respondents. The overall response rate was just over 79%.

Field work was conducted between February 2002 and May 2003. The survey was administered in two parts: part I consisted of a core of diagnoses and was administered to all respondents; part II consisted of sections for the assessment of risk factors, consequences and correlates of disorders as well as a few disorders not included in the core. Part II was administered to respondents who had a history of past or recent part I disorders plus a probability sub-sample of other respondents. A total of 6752 respondents completed part I; 2143 completed part II.

Respondents were informed about the study and provided consent, mostly verbal but sometimes signed, before interviews were conducted. Verbal consent was the norm because of widespread illiteracy and because some respondents seemed somewhat cagy about the implications of appending their signature to a document. These survey procedures were approved by the University of Ibadan/University College Hospital, Ibadan Joint Ethical Review Board.

2.2. Measures

Diagnostic assessment were those of the World Health Organization's (WHO) Composite International Diagnostic Interview (CIDI), Version 3 administered by trained lay interviewers (Demyttenaere et al., 2004; Gureje et al., 2006). The CIDI is a fully structured diagnostic interview that is lay-administered and can generate diagnoses according to the criteria of both the International Classification of Diseases, 10th edition (ICD-10) (World Health Organization, 1992) and the Diagnostic and Statistical Manual of Mental Disorders, 4th edition