Use of psychoactive drugs among patients visiting outpatient clinics in Karachi, Pakistan

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ABSTRACT

Introduction: This study was conducted to determine the proportion of usage of psychoactive drugs, and to identify factors associated with its use among patients visiting outpatient clinics of a tertiary care hospital in Karachi, Pakistan.

Methods: A cross-sectional study was conducted involving 461 adult (age 18 years and above) patients, who were surveyed by using interviewer-administered questionnaires. All interviews were conducted by a medical students. Out of the total number of participants, 242 (52.5 percent) were males and 219 (47.5 percent) were females.

Results: In all, 118 (25.6 percent) of the respondents were using some sort of psychoactive drugs, however, only 20 (4.3 percent) study subjects were diagnosed with any psychiatric illness. Factors found to be significantly associated with usage of psychoactive drugs included belonging to the female gender (p-value equals 0.019), older (more than 50 years) age (p-value is less than 0.001), being married (p-value equals 0.004), having formal schooling of up to 12 years (p-value equals 0.001) and physical inactivity (p-value equals 0.004). In addition, those whose family members were using psychoactive drug(s) or who suffered from non-communicable diseases were more likely to use psychoactive drugs in comparison to others (p-value is less than 0.001).

Conclusion: The use of psychoactive drugs is quite common in our patients regardless of having any psychiatric disease. Efforts are required to control and prevent the abuse of these drugs. Education and awareness programmes for doctors and patients may help to prevent the inappropriate use of psychoactive drugs. Regulatory intervention to control use of these drugs is also recommended.

Keywords: drug use, irrational drug use, psychoactive drugs, psychiatric illness

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INTRODUCTION

Psychoactive drugs are agents that exert powerful influence and on the mental state and behaviour of an individual. These drugs affect mood, perception and/or thought, effecting changes in both mind and body.[1] Psychoactive drugs are the main mode of treatment for psychiatric illnesses. Most commonly-used psychoactive drugs are anxiolytics, hypnotics and antidepressants.[2] It must be noted, however, that these drugs can effect undesirable side reactions. There has been a rise in the consumption of psychoactive drugs in many parts of the world.[3,4] Due to the possible physical and mental repercussions, as well as negative economical and social impact, from the consumption of psychoactive drugs, health providers have a resposibility to ensure the appropriate use of the prescribed medication. Over-prescription and non-medical abuse of psychoactive drugs are major issues of consideration in various countries.[5-7] Over-the-counter availability of psychoactive drugs is therefore another problem to be considered in this regard. In Pakistan, all medicines, including psychoactive drugs, are easily available over-the-counter without a prescription from the doctor. This can incur health and social hazards at a considerable level. For example, benzodiazepine abuse has been reported in 84% of cases of self-poisoning in Pakistan.[8] Qidwai et al reported tranquilisers as one of the three most commonly-used over-the-counter medications in Karachi, Pakistan.[9]

All drugs are potential chemical poisons, thus they must be used with utmost caution. A large number of studies have documented the prescribing practices and indiscriminate use of different types of medications from various parts of the world, including Pakistan.[10-13] However, very little work has been conducted to assess the prescribing practices and use of psychoactive drugs. Thus, we embarked on a

study to assess the proportion of psychoactive drug usage among patients attending outpatient clinics affiliated to a tertiary care teaching hospital in Karachi, Pakistan, and to identify the factors associated with psychoactive drug usage. This study provides an estimate of the usage of psychoactive drugs and their associated factors, which will be helpful in formulating and implementing further work and large-scale research in this area.

METHODS

This was a cross-sectional study conducted in outpatient clinics (Family Medicine, Internal Medicine and its subspecialties) affiliated with a tertiary care teaching hospital in Karachi, the largest city and economic hub of Pakistan, with an estimated population of over 14 million, representing different ethnic and socioeconomic groups of people from all over the country.

10 to 12 patients were interviewed daily (Monday to Saturday). The questionnaire, which was developed as a data collection tool, was anonymous, pre-tested and structured. It consisted of 16 questions, with most (10) items requiring a yes/no reply. Before administering the questionnaire, the data collector (medical student) explained the purpose of the study and gave an assurance of confidentiality. In all, 510 adult (age 18 years and older) patients, who came to visit the outpatient clinics of the study hospital for consultation for any reason during the months of June and July 2003, were approached. 461 patients agreed to participate in the study, with the refusal rate being 9.6% (49/510).

For study purposes, we used the following definitions:

- Psychoactive drugs: group of drugs that alter mental function by altering the endogenous chemotransmitter system.[14] The drugs we have included for our study purpose were: antidepressants, anxiolytics, sedative hypnotics and antipsychotics.
- Family system: those patients who lived together with their parents, siblings and their families were labelled as "joint", whereas those patients who lived alone or with his/her immediate family only (spouse and children) were labelled as "nuclear".
- First language: Urdu is the national language of Pakistan and is the first language of those Pakistanis who had migrated from India during the partition of India in 1947 and onwards. There are a number of other first languages used by Pakistanis from different ethnic backgrounds, like Sindhi, Panjabi, Balochi, Pashto and others. All these languages were grouped together and labelled as "Non-Urdu" for the purpose of this study.
- Physically active: on average, doing at least 30–40 minutes of brisk walking and/or any type of aerobic exercise more than five days in a week.
- Smoking history: current smoker, or ex-smoker, who on an average smoked at least one cigarette for more than 20 days in a month for three months or more in the past.
- Use of psychoactive drug(s) by other family member(s): use of any psychoactive drug by any family member who is living within the same house and/or first-degree relatives (father, mother, sibling(s) and spouse).
- Study participant having non-communicable disease(s): having diabetes mellitus and/or hypertension diagnosed by physician and was taking medications (anti-diabetics and/or anti-hypertensives) for its management.

The Statistical Package for Social Sciences version 14.0 (SPSS Inc, Chicago, IL, USA) was used to analyse the data. Proportions and percentages were calculated for patients who were using psychoactive drugs and other variables as associated factors. Chi-square test was used to calculate the association of psychoactive drug usage and its associated factors. p-value of less than 0.05 was considered as significant.

RESULTS

General characteristics of the study subjects are given in Table I. There was a slight preponderance of males (52.5%), compared to females (47.5%). Overall, 34.3% of study subjects were in the age group of 18–30 years, 36.6% were in age group of 31–50 years, and 29.1% were of older

Table I. General characteristics and psychoactive drug usage of study subjects (n = 461).

Characteristics	Number (%)
Gender	
Male	242 (52.5)
Female	219 (47.5)
Age (years)	
18–30	158 (34.3)
31–50	169 (36.6)
> 50	134 (29.1)
Marital status	
Unmarried	107 (23.2)
Married	354 (76.8)
Family system	
Nuclear	180 (39.0)
Joint	281 (61.0)
First language	
Urdu	254 (55.1)
Non-Urdu	207 (44.9)
Educational status (years of schooling)	
≤ 5	99 (21.5)
≤ 12	216 (46.8)
> 12	146 (31.7)
Psychoactive drug users	118 (25.6)
Having psychoactive illness	20 (4.3)

age (> 50 years). Over three-quarters of the study subjects were married and 61.0% lived in a joint family system. 55% of study subjects spoke Urdu, while the remaining 45% spoke "other local languages" as their first language. In all, 21.5% of study subjects were either illiterate or had schooling of up to five years, while 46.8% had schooling of up to 12 years and 31.7% had over 12 years of education.

Overall, 118 (25.6%) of the respondents were using some sort of psychoactive drugs. However, only 20 (4.3%) study subjects were diagnosed to have any psychiatric illness by their physicians (Table I). Factors associated with use of psychoactive drugs are given in Table II. Older age (> 50 years), use of psychoactive drugs by a family member, and suffering from non-communicable diseases were found to be highly significant factors associated with the usage of psychoactive drugs ($p < 0.001$). In addition, other factors, viz, being a female ($p = 0.019$), married ($p = 0.004$), having had schooling of up to 12 years ($p = 0.001$) and being physically inactive ($p = 0.004$), were also found to be statistically significant variables associated with psychoactive drug usage among the study population. However, family system, primary language and smoking history were not found to be statistically significant factors for the use of psychoactive drugs.

DISCUSSION

Psychoactive drugs are the main mode of treatment for psychiatric illnesses. However, indiscriminate use of

Table II. Factors associated with use of psychoactive drugs among the study subjects (n = 461).

Factor	Total (%)	Psychoactive drug used (%)	p-value
Gender			
Male	52.5	21.1	0.019
Female	47.5	30.6	
Age (years)			
18–30	34.3	9.5	< 0.001
31–50	36.6	28.4	
> 50	29.1	41.0	
Marital status			
Unmarried	23.2	15.0	0.004
Married	76.8	28.8	
Family system			
Nuclear	61.0	24.4	0.650
Joint	39.0	26.3	
First language			
Urdu	55.1	27.2	0.393
Non-urdu	44.9	23.7	
Educational status (years of schooling)			
≤ 5	21.5	27.3	0.001
≤ 12	46.8	32.4	
> 12	31.7	14.4	
Physical activity			
Yes	46.4	19.2	0.004
No	53.6	30.9	
Smoking history			
Never smoked	75.2	24.0	0.155
Ever smoked	24.8	30.7	
Psychoactive drug used by family member(s)			
No	69.8	16.9	< 0.001
Yes	30.2	46.0	
Having non-communicable disease			
No	69.6	15.6	< 0.001
Yes	30.4	48.6	

these drugs poses a significant threat to the health, and social and economic fabric of families and communities at large. There are several studies which reported the prescribing practices and pattern of use of different types of drugs among different age groups and in different clinical specialties.[9-13] However, so far, no work has been documented from Pakistan to assess the use of psychoactive drugs among patients visiting their healthcare providers. Thus, to the best of our knowledge, this is the first study from Pakistan which documents the frequency of psychoactive drug usage and factors associated with its usage among patients attending outpatient clinics affiliated to a tertiary care teaching hospital in Karachi, Pakistan.

The indiscriminate abuse of drugs by both prescribers and consumers is in fact a global problem and the use of psychoactive drugs without illness has been identified in different parts of the world.[5,6] For example, a survey among Thai general practitioners found that approximately 50% of them prescribed benzodiazepines for more than 25% of their patients.[7] In our study, over a quarter of the study subjects were taking psychoactive drugs on a regular basis; however, only a small minority (4.3%) of them were diagnosed by their physician as having any psychiatric illness. We believe that these drugs were either prescribed incorrectly by physicians or were misused by the patients. There are some studies from Pakistan which have documented inappropriate prescribing practices of different types of medicine by doctors and the misuse of drugs by the studied population.[9,15] Another reason of this indiscriminate drug use might be that in Pakistan, all medicines are easily available over-the-counter without a doctor's prescription, and thus can be misused to induce sleep and relaxation. These consumption practices were also reported by Courtois et al and the reason for misuse in that study was easy availability of these drugs in the Point-Noire markets.[16]

In this study, the factors found to be highly significant with usage of psychoactive drugs were older age (> 50 years) and the presence of an underlying disease, such as hypertension and/or diabetes mellitus. There are a number of explanations for these findings. The prevalence of hypertension and diabetes mellitus increases with increased age, and mental illnesses affect and are affected by chronic diseases,[17] with no exception to hypertension and diabetes mellitus. Also, psychosocial problems among older people are common. The very high rates of psychoactive drug prescription among older people were also reported by other researchers.[4,18] Straand and Rokstad documented that one out of five prescriptions were of psycholeptics among elderly patients in the Norwegian country.[19] As with this study, in Thailand, 27% general practitioners reported use of benzodiazepines for hypertensive patients.[6] The use of a similar class of drugs by another family member was also found to be a significant factor associated with psychoactive drug usage in the Thai study. In Pakistan, the family value system exerts an important influence on the individual's behaviour and attitude, including health-related issues. Parents and older family members are supposed to be the role models for their younger family members. Khuwaja and Kadir, in a community-based survey from Karachi, Pakistan, reported the positive parental history of smoking among 38% of studied population who had smoked.[20] In addition, drugs can easily be accessed and used, if already available at home.

Women are particularly prone to misusing benzodiazepines and other anxiolytics,[21] probably due to the fact that generally they have higher prevalence rates of depression and anxiety disorders as well as psychological distress, compared to men.[22] Trifiro et al from Italy also reported that women were more likely to receive antipsychotic prescriptions from their health practitioner.[18] In our study, more females used psychoactive drugs, compared to males (30.6% versus 21.1%). In our culture, females generally live in isolation and have much less access to leisure time activities and entertainment, compared to their male counterparts. This may lead them to use psychoactive drugs more often for relaxation, especially when they are easily available without a medical prescription. Regular physical activity increases the production of endorphins which keep a person mentally fit. In this study, we found that physically inactive subjects were using psychoactive drugs more often (30.9%), than those who were physically active (19.2%).

There are some limitations of this study which need to be mentioned. First, this study was conducted in outpatient clinics affiliated with only one hospital. Moreover, the study hospital was a representative from the private sector; hence, the results may not be applicable to all the clinical practices in Pakistan. Secondly, the researchers did not check/confirm the prescriptions and drugs that were taken by the study subjects, so reporting bias could occur, where the possibility of underreporting may exist. In Pakistan, psychological illnesses and their treatment, are considered as a social taboo. Therefore, some study participants might have deliberately excluded their illnesses and treatment during the interview. In spite of these limitations, this study has yielded groundbreaking results, having documented that over a quarter of the participating subjects were using psychoactive drugs. This is a matter of concern as only a very small percentage of them were actually diagnosed with psychiactic illnesses. In addition, this study also identifies certain factors associated with psychoactive drug usage, which might help in designing future intervention to control the inappropriate use of psychoactive drugs.

We recommend intervention at different levels, like health awareness and educational sessions discussing the hazards of illicit use of drugs for the general public, and continuous medical education programmes for healthcare providers on the appropriate use of drugs in general and of psychoactive drugs in particular. The Ministry of Health should draft legislative measures to regulate the prescription of controlled drugs in order to prevent drug dependence and abuse. However, drug control regulations, if overly restrictive, can hamper access to controlled medicines for therapeutic use. A balance must therefore be struck between medical and regulatory requirements. The government's role is pivotal in balancing the conflicting concerns and interests of the various stakeholders (i.e., regulators, manufacturers, prescribers, patients, law-enforcement authorities) when legislative measures are being drafted. We suggest further research work in this area by conducting larger studies in multiple clinics which represent different sectors of the healthcare practice.

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