

Prevalence of Psychoactive Substance use among Adults Ages of 20 to 40 Years at the Georgetown Public Hospital Corporation

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ABSTRACT

Background: Guyana is a developing nation with a population of under one million. Yet, 15 to 20 percent of the population suffer from some form of mental health condition. Oftentimes persons turn to psychoactive substances to deal with their mental health condition. This study aimed to investigate the prevalence of psychoactive substance use, as well as, to identify psychoactive substances and risk factors among adults attending the psychiatric outpatient clinic at the Georgetown Public Hospital (GPHC).

Methodology: A review of outpatient clinic charts belonging to patients ages 20 to 40 years, who were enrolled from January 1st to December 31st, 2019 at the psychiatric clinic (GPHC) regardless of their presenting complaint or diagnosis was carried out. Those that had records of psychoactive substance use were collected for analysis in this study. Sociodemographic characteristic and type of psychoactive substances were assessed using descriptive analysis.

Results: Of 200 patient charts reviewed, 150 (75%) had records of psychoactive substance use. The majority of psychoactive substance users were Afro-Guyanese (42.7%), Christians (71.3%) and male (76.7%) with an average age of 28 years. Additionally, most patients had only primary education (59.3%) and were not in a relationship (80.7%). Moreover, the majority patients experienced a major traumatic life event (60%) and were from dysfunctional families (13.3%). The findings also showed that 47.3% of persons with a previous psychiatric history

used psychoactive substances, while 36% developed a substance-induced psychotic disorder. Cannabis (78%) was identified as the most frequently used drug, followed by alcohol (50.7%) and tobacco (45.3%).

Conclusion: There was a high prevalence of psychoactive substance use among patients enrolled in the psychiatric clinic, GPHC. With the majority of patients having known risk factors for psychoactive substance use. Also, results highlighted that some patients developed psychotic disorders post substance use. This emphasizes the need for more mental health awareness strategies targeted at adults and the need for effective drug rehabilitation programs, which can help reduce the use of psychoactive substances among adults in Guyana.

Keywords: *Young Adults, Psychoactive Substance, Mental Health, Guyana*

INTRODUCTION

Worldwide, there is a growing prevalence of recreational psychoactive substance use. In recent years approximately 35.6 million persons, globally, were considered to have a drug use problem.¹ While the use of cannabis remains a significant issue for illicit substance use, tobacco and alcohol consumption are rapidly increasing and has become a burden to society.² Drug abuse can often lead to persons developing various mental illnesses and living dysfunctional lives. In 2018, there were 2.4 million young adults (7.2%) in the United States of America who were diagnosed with both a

mental illness and a substance use disorder in 2018.³

According to the Synopsis of Psychiatry and Behavioral Science, a young adult is a person whose age ranges from twenty to forty years and is expected to be at the peak of their biological development and assume major social roles.⁴ Psychoactive drugs in Guyana are common and are easily accessible among persons ages 12 to 60 years, according to the 2016 Guyana National Household Drug Prevalence Survey. Additionally, the survey revealed that alcohol had the highest lifetime prevalence (67.2 %) followed by tobacco (26.2%) and marijuana (9.8).⁵

Using psychoactive substances activates the brain's reward system, which causes the users to feel excited and full of energy, commonly known as getting high.⁶ Substances such as cocaine, cannabis, methamphetamine, alcohol, tobacco, and some pharmaceutical drugs are among these used in Guyana.⁷

According to a Nigerian Medical Journal, a similar study was done in the Psychiatric Outpatient Department of a Nigerian Tertiary Hospital for patients older than 18 years; it showed that the lifetime prevalence of substance use was 29.3%. It was apparent that the most used substances were alcohol, cannabis, and tobacco and that they were also primarily used in combination. Also, being male, married, having at least a primary education, and unemployed were found as significant risk factors for substance use in this study.⁸

There are no known studies that solely focused on the prevalence of psychoactive substance use among young adults in Guyana. Hence, the findings of this study can be used to bring awareness into the prevalence of substance use in this key group and provide specialized strategies to combat this social ill within the adult population.

MATERIALS & METHODS

This study used a retrospective cross-sectional design with outpatient chart

reviews. Outpatient psychiatric clinic charts for all adult patients from the ages of twenty to forty, of both genders enrolled from January 1st to December 31st, 2019 were selected for study review. Charts with substance use and possible risk factors associated with the same were selected for study analysis. The risk factors investigated included level of education, socioeconomic status, past medical history, dysfunctional family, unemployment, separation/divorce, death of loved one and abuse. Sample size calculation was used to determine sample size based on the confidence of 95% and margin of error of 1.96 within an estimated sample size of approximately 272.

The data from individual patient charts satisfying the inclusion criteria were recorded using a data collection tool. The researcher manually retrieved data using a pen, pencil, and paper. The data was taken from the outpatient jackets and placed in a tally format on paper and then transferred into Microsoft Excel. All data were represented on tables and graphs depicting the types of substances used and associated risk factors, along with additional information on the socio-demographics.

Descriptive statistics for variables of interest were represented in numbers and percentages, which were calculated based on the sample size of patients who used substances between 20 to 40 years of age, who attended the Psychiatric clinic for the first time, and those who participated in the clinic before 2019 but did follow up visit in 2019 and the universal sample size of patients between 20 to 40 years who attended the psychiatric clinic from January 2019 to December 2019 but did not use any substances. All patient names were omitted from the data collection tools to protect the patients' identities. Instead, a number system (e.g., 1, 2, 3) was used.

STATISTICAL ANALYSIS

Descriptive statistics in the form of counts, percentages and mean were presented for categorical data and continues data where

applicable and were analyzed using the SPSS 26 software.

RESULT

Table 1. Socio-demographic characteristics of patients enrolled at the psychiatric outpatient clinic with psychoactive substance use

Characteristics	n (%)
Age	
Average age (years)	28*
Maximum	40
Minimum	20
Gender	
Female	35 (23.3)
Male	115 (76.7)
Education	
Primary	89 (59.3)
Secondary	44 (29.3)
Tertiary	16 (10.7)
Other	1 (0.7)
Marital status	
Common-law	8 (5.3)
Divorced	13 (8.7)
Married	8 (5.3)
Single	121 (80.7)
Religion	
Christian	107 (71.3)
Hindu	21 (14.0)
Muslim	18 (12.0)
Other	4 (2.7)
Ethnicity	
Afro-Guyanese	64 (42.7)
Amerindian	5 (3.3)
Indo-Guyanese	41 (27.3)
Mixed	40 (26.7)
Employed	
No	68 (45.3)
Yes	82 (54.7)

*Mean value

Table 1. shows the socio-demographic characteristics of patients enrolled at the psychiatric clinic. The results found that the average age of patients was 28 years and most were male (76.7%) with primary education only (59.3%). The greater proportion of patients were single (80.7%), practiced Christian faith (71.3%), were of Afro-Guyanese ethnicity (42.7%) and unemployed (54.7%).

Table 2. Social and medical history of patients with psychoactive substance use

Characteristics	n (%)
Major life event	
No	60 (40.0)
Yes	90 (60.0)
Incarceration history	
Currently incarcerated	10 (6.7)
Previously incarcerated	18 (12.0)
Never incarcerated	122 (81.3)
Previous medical illness	
Absent	107 (71.3)
Present	43 (28.7)
Psychiatric history	
No	25 (16.7)
Yes	71 (47.3)
NR*	54 (36)
Substance-induced psychotic disorder	
No	96 (64)
Yes	54 (36)

Table 2 shows the social and medical characteristics of patients with psychoactive substance use. The findings show that 60% of patients experienced a major life event at the time of substance use, 81.3% had no history of incarceration, 71.3% had no history of a prior medical illness and only 36% developed substance induced psychotic disorder.

Table 3. Risk factors for patients with psychoactive substance use

Risk factor	n (%)
Death of a loved one	10 (6.7)
Dysfunctional family	20 (13.3)
Financial difficulties	8 (5.3)
Medical illness	8 (5.3)
Separation	15 (10)
Sexual abuse	9 (6)
Unemployment	19 (12.7)
NR*	61 (40.7)

*None Referred

Table 3 shows the risk factors of participants with psychoactive substance use. The results show that the majority of patients (40.7%) had no known risk factors for substance use. However, being a member of a dysfunctional family was the most prevalent known risk factor among participants, while having financial difficulties (5.3%) or a medical illness

(5.3%) were identified as the least prevalent risk factors.

Table 4. Drug combinations used among psychoactive drug user

Combinations	n	%
Cannabis, alcohol, tobacco	19	17.8
Cannabis, alcohol	16	15
Cannabis, tobacco	15	14
Alcohol, tobacco	9	8.4
Cannabis, ecstasy, alcohol and tobacco	7	6.5
Cannabis, cocaine	5	4.7
Cannabis, ecstasy	5	4.7
Unknown	31	29

Table 6 shows drug combination used among patients. The most known combination of psychoactive substance used among patients were cannabis, alcohol and tobacco (17.8%), followed by cannabis and alcohol (15%). Notably, cannabis was included in 86% of all combinations.

DISCUSSION

This study aimed to highlight the prevalence of substance use, types of substances used, possible risk factors, and socio-demographics characteristics among adults enrolled the psychiatric outpatient department of GPHC during the year 2019. The analysis found that the average age of patients was 28 years which proves that the young adult stage is a very subtle period where the challenges of life are more prominent. More than 75% of the population who used psychoactive substances were males, which closely corresponds to the study done by the Guyana National Household, with a total of 83 % throughout the country.⁵ It was noted that 59.3% of the persons who used psychoactive substances had only a primary education. This is parallel to a similar study done in Guyana which demonstrating that 49.9 % of persons did not receive a sound education.⁵ However, this does not exclude the fact that highly educated persons can also be affected by substance use, which was shown by a minority of 10.7 %. An alarming number of 80.7 % were not in any kind of relationship, while a minimum number of 10.6% were either in a common-

law relationship or married. The research also showed that 8.7% were divorced, which suggests that single persons were more susceptible to using psychoactive substances compared to persons in relationships, this demonstrates the need for love and belonging according to Abraham Maslow's Theory of Hierarchy of Needs.⁹ Concerning religious beliefs, most patients were of the Christian faith (71.3%), followed by the Hindus (14%) and Muslims (12%). The results showed that 42.7% of Afro-Guyanese used psychoactive drugs, followed by 27.3% of Indo Guyanese and 26.7% of the mixed race. This may be due to the availability of Psychoactive substances within the geographical area where the patients live. According to data found in National Drug Strategy Plan, 2014, 57.1 % of respondents bought cannabis from the same dealer.⁵ It is important to note that even though 54.7% of the persons assessed were employed, we must consider that most of our patients did not receive a baseline education, and the majority were working as laborers. The types of work done by patients were not an objective in this research. However, the researcher thought it important to mention the same to emphasize the importance of a solid education for everyone. The remaining number of patients, 45.3%, which is still a high number, were considered to be unemployed. An easy escape from coping with unemployment has been recorded as one of the reasons for using drugs.

An assessment of the social and medical history of the young adult patients who were assessed found that 60% had a major traumatic life event that caused them to turn to substance use to cope with the situation, whilst the remaining 40% did not have any traumatic life experience but used the substance because they wanted to. According to the retrospective study, the 60% who had a traumatic life experience indicated that they used psychoactive substances because they either came from a dysfunctional family, experienced the death of a loved one, experienced financial

difficulties, were diagnosed with a medical illness, went through divorce or separation, experienced some sort of sexual abuse or due to unemployment.

According to the psychiatric history of patients assessed, the majority of 47.3% was already diagnosed with a psychiatric disorder before using substances. However, the patients themselves did not consider having a psychiatric history as the reason for their substance use but sighted other reasons for their substance usage. According to the Synopsis of Psychiatry, it is stated that persons who have a psychiatric disorder are more at risk of using psychoactive substances.⁴ It is important to note that 36% of the patients developed a substance-induced psychotic disorder due to using psychoactive substances. From experience, having a patient with SIPD is the main reason for seeking Psychiatric intervention at the facility because it is at this point where there is affectation on the mental state of the patient, which also becomes a societal concern. Additionally, 16.7% did not have any psychiatric history. It is also evident that having a criminal background or a medical record does not have any significant relation to persons who used psychoactive substances.

Cannabis was the most used psychoactive substance (78%), which corresponds with global reports of cannabis being the most used illegal substance.¹ Following is alcohol with 50.7% and then tobacco with 45.3%. The above findings are similar with reports in USA that marijuana and alcohol are by far the most used drugs within the young adults.¹⁰ Much like USA, Canada also experiences a rise in drug use. It is evident that both USA and Canada just like Guyana have a high prevalence of 42% of marijuana use while it was still considered an illegal drug with alcohol being the most used legal substances.¹¹ All other drugs, cocaine, ecstasy, methamphetamine, commonly known as ice or sugar, heroin, and other unknown substances, fall within less than 16% of the studied participants. It was noted that the majority of 38.7% used a

combination of two substances at one time, with the highest number of substances used at one time being six, with two persons having used six substances together. The most common combination was cannabis, alcohol, and tobacco, followed by cannabis and alcohol. Notably, cannabis was included in 86% of all varieties, which supports the hypothesis that cannabis would have been the most prevalent psychoactive substance among this population. According to one research in Guyana, the reason supporting the above can be due to Cannabis being cheaper than any other substances, with a cost of \$500 Guyana dollars (USD \$2.50).⁵ Unfortunately, this is the same worldwide according to the World Health Organization which shows that the cannabis market low prices coincide with high use of marijuana.¹²

Considering the limitations of this study it is important to acknowledge that the actual sample size was less than what was calculated, and this was due to an overhaul of charts that did not follow up after years but would have possibly fit within the studied population.

CONCLUSION

This study found that high percentages of adults used some form of psychoactive substance. It was observed that the male Afro-Guyanese population were disproportionately affected by psychoactive substance use. The study revealed that persons not relationships and those with the major traumatic life event had more drug use. To reduce the prevalence of psychoactive substance, use among adults' policy makers and program managers are encouraged to establish drug rehabilitation programs and institutions free of cost or at a minimal cost as well as to utilize the media to highlight the adverse effects of substance use in adults.

Declaration by Authors

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