



THE IMPACT OF THE CONSUMPTION OF VARIOUS DRUGS ON STUDENTS' ACADEMIC ACHIEVEMENT IN MOGADISHU, SOMALIA: EXPLORATORY FACTOR ANALYSIS

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ABSTRACT

The aim of this study was to use exploratory factor analysis to investigate the impact of consumption of various drugs (smokeless tobacco as known as Tabu in Somalia, Tramadol, and cannabis) on students' academic achievement in light of the students' lack of discipline, poor communication skills, participation in-class activities, and GPA at secondary schools in Mogadishu, Somalia. This study applied factor analysis to advanced quantitative research methods. This study also concentrated on target respondents 266 and featured teaching and non-teaching staff who work in public and private schools. To collect and analyze the data, a questionnaire and SPSS Version 20 were used. Cronbach's Alpha The.908 indicated that the data's dependability was correct. The correlation of the variables in this article was ($r = .865^$). The KMO value of the data .869 appears to be convenient for factor analysis in terms of sample size. Also, Barlett's Test is found to be scientifically significant. Factor analysis The performed scree plot curve, the total variance explained, rotated components matrix, and anti-image values varied from 0.859 to 0.844. The main findings show that drug misuse, including cannabis, tramadol, and smokeless tobacco, has a negative effect on a student's academic achievement in terms of conduct, poor communication, participation in-class activities, and GPA in secondary schools in Mogadishu. We recommend the government of Somalia cracks down on traffickers who bring smokeless tobacco and other drugs that harm Somali students and produce rules that protect them against drug abuse. We also recommend that the Somali community, particularly teachers, school principals, and religious leaders, raise awareness about how to prevent and treat drug abuse, particularly with tabu and tramadol.*

KEYWORDS: *drug abuse, smokeless tobacco, tramadol, cannabis, students' academic achievement*

INTRODUCTION

Drug misuse among the world's young has become a major issue that affects everyone. Drug misuse is a global problem that puts people's lives, society's stability, and political and social stability in many nations at risk (Muoti, 2014).

The United States had the greatest rate of use (42.4%), compared to 41.9 percent in New Zealand (Warner 2005-2008). On school, college, and university campuses, there is a huge problem with alcohol and illicit drug usage. Because of this, doping in high schools has proliferated.

According to NIDA 2022, neurotransmitters are chemicals that send messages from one portion of the brain to another. Each neurotransmitter connects to a specific receptor, much like a key does to a lock. This ensures that messages travel through the brain in the proper direction. Drugs interfere with neurotransmitter trafficking. The chemical structure of the drugs can imitate and fool receptors, allowing them to lock on to them and alter nerve cell activity. This "change" might send messages in the incorrect direction, causing your brain to function or behave in an unanticipated way. At the end, how your brain processes and recalls facts is affected. This can result in worse grades, a greater rate of absenteeism from school, and other consequences.



According to UN figures from 2013, 37,000 people die in Africa each year from illnesses linked to drug misuse, with the UN estimating that 28 million people use drugs. Drug misuse has harmful implications not just for people, who use drugs, but also for their families and friends, as well as for organizations and government resources.

For many years, Somalia, an East African country, has been destroyed by civil conflict. Fighting among clans, warlords, and another conflict between Somali politicians resulted in the entire loss of control of the country's regions (including Mogadishu), which caused an increase in drug importation and misuse. In particular, smokeless tobacco and tramadol, which have recently been widely used by Somali students, although the Somali population is prevalently nomadic and almost 100% of Islamic faith, have been for centuries untouched by widespread and serious addiction to alcohol and drugs, are equally significant issues.

Even the use of stimulants such as smokeless tobacco (Tabu), tramadol, and cannabis is widely used throughout the country. Cannabis has a relatively low prevalence in Somalia; its use is traditional among certain communities of coastal cities. Today's consumers are often young people. In Somalia, the drug is prohibited, but it has been introduced illegally. Small plantations of cannabis are, from time to time, discovered by the police and burned. After cannabis, Tabu and tramadol are the drugs that the students are using today (22_A. S. ELM I - Substance Abuse in Somalia, n.d.).

In Somalia, five or six years ago, khat, cigarettes, shisha, and tobacco were widely known, but more and more different drugs came into the country, in the form of simple, easy-to-use, and addictive drugs. Smokeless tobacco (Tabu) is a contemporary synthetic tobacco that is believed to have first appeared in the early 1930s and has since spread to several nations. As they employ their physical prowess and vigor, Somali students frequently use tabu. Some do not have a full understanding of the consequences. In Somalia, the most commonly used Tabu sites are educational institutions. Students are the users of this Tabu, which the medical community has called the mysterious killer.

Business centers close to educational institutions sell this hot filter khaini (Tabu), making it easier for students to find them. A student at one of the public schools in Mogadishu city said I started the Tabu in May 2019. The student, who is in his early twenties and is in the 11th grade of high school, said I learned about the Tabu through his friends and it had an impact on his learning.

The teacher, who has worked in Mogadishu schools for 18 years, claims that the use of Tabu in secondary schools has resulted in poor knowledge in the schools. For instance, the student's biggest difficulty is that he does not hear what the teacher says, and so he interrupts him in class. He also claims that when it comes to national examinations, most Tabu users fail more often than others. Also, the teacher said, when an examination is taken in the school; the lowest grade students are most likely to use Tabu. (Abdi, 2020)

That is why the researcher investigated the impact of the consumption of various drugs on students' academic achievement.

Objectives of the study

1. To analyze the influence of smokeless tobacco (Tabu) on students' academic achievement among students in secondary schools in Hodan district, Mogadishu, Somalia
2. To examine the effects of tramadol on students' academic achievement among students in secondary schools in Hodan district, Mogadishu, Somalia.
3. To determine the impact of cannabis on students' academic achievement among students in secondary schools in Hodan district, Mogadishu, Somalia

LITERATURE REVIEW

Smokeless tobacco (Tabu)

Today, more than at any other period in history, drug usage is at an all-time high. The use of drugs in educational institutions, especially secondary schools, has resulted in poor attendance in class, a high percentage of absenteeism, and exam failure, all of which have led to poor academic performance (Marygorett & Adhiambo, 2021).

The study examined the impact of drug consumption on students' academic performance in Masaka Town senior high school, which is part of the Masaka municipality. The study's goal was to determine the impact of drug addiction on students' academic performance at Masaka Town high school. The data for this study was acquired utilizing researcher questionnaires and a cross-sectional survey approach. The survey also discovered that students had access to guidance services and that substance addiction had an impact on their academic performance (ATUBASIISE DICK 2010).



In Somalia, students have recently been heavily using smokeless tobacco (Tabu) and this has affected the quality of education and development. For example, according to the rules and regulations of Mogadishu's secondary schools, students who use smokeless tobacco (Tabu) do not obey school rules, are regularly late for class, and have a high rate of absenteeism. The student is always absent from school.

The effects of smokeless tobacco (Tabu) use on secondary schools in Mogadishu include fighting amongst classmates and disrespectful treatment of teachers and administrators; they are creating conflict between students in the class to stop the explanation of the lesson. The students that use the smokeless tobacco (Tabu) drugs always leave school uniforms behind, and their hygiene is deteriorating. Students who are learning in schools in Mogadishu who use Tabu do not follow the explanation of the lesson and do not understand it well; questions that the teacher asks students are not answered; homework does not work; and most students who use Tabu are passive. All these factors cause low grades, failing tests, and, lastly, dropping out of school. (Ahmed, M., 2021).

Somalia's Ministry of Education has announced the country's 2019-2020 Secondary School Leaving Examination, which has seen the largest number of students since the introduction of the National Unified Examination. The total number of students who took the test was 33,727, and 25,177 passed. The total number of students affected is 8,550 [male: 5,231; female: 3319]. The ministry also announced the top 100 students for the 2019-2020 examination. According to the ministry, 7,000 students failed the exam in the Banadir region, making it the region with the most failed students. The Minister of Education said that Tabu and tramadol abuse have affected education in the Benadir region, which has resulted in students failing the high school examination because most of the students used the Tabu drug. (Ministry of Education, 2020).

According to the report of the Minister of education, 2020, that we mentioned above it seems there is some negative effect between the Tabu abuse and students achievement in Mogadishu.

Tramadol

According to 2017 UNODC research, tramadol usage is common among younger individuals and peaks before the age of 15. Opioids are used by around 35 million people worldwide. Global statistics show a rise in opioid usage, with Europe reporting a 5% prevalence rate. They are thought to have the biggest harmful influence on one's education.

Due to social and economic circumstances, tramadol usage causes personality problems, psychological problems, and social estrangement. The majority of undergraduates, particularly those at tertiary institutions, view drug users as tough, courageous, powerful, sensitive, and clever. Students who are high on tramadol or other illegal substances lose all inhibition and engage in acts that are contrary to the institution's laws and regulations. Undergraduates utilize medicines such as tramadol to stay awake and sharp throughout exams. (Jonathan & Samuel, 2018).

Tramadol

Secondary students use tramadol to stay awake and sharp during exams. Furthermore, the most common reason for drug abuse (including tramadol) among students is curiosity and approval from peers (peer pressure). The abuse of tramadol results in poor academic performance among undergraduates and youth who have developed a high level of dependency and steady degradation of physiological and mental health. The students under the influence of tramadol and other illicit drugs shed all inhibition and produce behaviors that are inconsistent with the institution's rules and regulations, resulting in personality problems that lead to a high level of school drop-out and increased failure or below-average performance. (Anoi, 2022).

Tramadol usage will be on the rise and impacting lives in Mogadishu, according to the Ministry of Women and Civil Liberties Development in Mogadishu. The rise is attributed to the city's huge population of unemployed youths and freelance gunmen, who "had nothing better to do." It is estimated that tramadol or other narcotics are involved in roughly half of all crimes committed in Mogadishu. There has been an increase in the number of tramadol-selling outlets in the city recently. More concerning is the rising tendency of poor and uneducated teenagers to use locally made drugs, especially tramadol, which is a huge burden for city youth and can be fatal. (Women and Civil Liberties Development in Somalia)

In Somalia, students who use tramadol often have headaches that result in being absent from class as well as not being able to read lessons. Students who use tramadol often do not participate in activities in the class and have very poor coordination. Tramadol usage may cause students to become irritable, or have other unusual symptoms. It may also lead some students to suicidal thoughts and desires or to give depressing speeches. Students who use tramadol often have headaches that result in being absent from class as well as not being able to read lessons. Also,



in Mogadishu, students who use Tramadol without a prescription do so in large doses, which are considered abuse of the drug in many cases. They also mix Tramadol with other substances to boost its effect. This is a violation that has a bad impact on the student's behavior. It can lead to chaos and breaking all the rules after school, which can have a negative impact on the student's education. (Ali, 2021).

Cannabis

Cannabis is one of the world's most commonly used illicit narcotics. An estimated 147 million people use cannabis in the world (2.5 percent of the world's population). Cannabis is frequently associated with popular "young culture" since the beginning age for cannabis is typically considerably lower than for other substances (WHO, 2012).

Cannabis is one of the banned drugs in Somalia and was also enshrined in the Somali Penal Code of 1971. Students that use cannabis regularly have lower grades, more truancy, and are more likely to drop out of high school. According to studies, students who used marijuana daily before the age of 17 had a lower rate of high school graduation and a lower chance of achieving a graduate degree than those who never used marijuana. Regular cannabis users under the age of 17 have a 60% lower chance of graduating than their peers.

Because cannabis's negative effects on a teen's attention, memory, and learning can last for days or even weeks, a student who uses marijuana on a regular basis may be operating at a lower mental capacity at school. Cannabis use has been related to missed classes, less studying, and a higher chance of dropping out, particularly among young people. Concerns regarding marijuana use on campus have grown as the popularity of vaping and edibles among teens has grown. Although cannabis has not been widely used by Somali students lately, there are very few grade four and five secondary students who use it occasionally, which can cause failure in their exams. (Ministry of education office, 2022).

METHODS

In this study, exploratory factor analysis was used in pure quantitative research. The study was conducted in three public secondary schools and four private schools. The study was concentrated on a target population of 266 which featured 7 principals, 14 deputy principals, 70 teaching staff, and 175 non-teaching staff who work in these public and private schools.

For small populations of 200 or less, the study used a census approach to determine the sample size, as recommended by Singh and Masuku (2014), in which all elements of the entire population were used in the sample to remove sampling errors and give data for all people in the population.

The questionnaire was used to collect data for this study. The researchers employed a five-point Likert scale, to summarize the data. Using the Statistical Package for Social Sciences, the data were subjected to factor analysis. The results were then presented using graphs and tables.

Reliability and Validity

Test-retest reliability can be used to assure the reliability of this study and to preserve its consistency. The degree to which this is true is measured by test-retest reliability. Also, to verify the accuracy of this research, the pilot helps to enhance the instruments' faces and content authenticity. As a result, the researcher enlisted the support and inspection of colleagues, the supervisor, and experts to improve the content validity of the research instrument.

Gender	Frequency	Percent
Male	219	82.3
Female	47	17.7
Total	266	100.0

Table 1 shows that 82.3 percent of the respondents are men and 17.7 percent are women, so this table indicates that the majority of respondents who provided this information were men and the smallest were women.



Age	Frequency	Percent
20-30yrs	159	59.8
31-40yrs	66	24.8
41-50years	30	11.3
Over 51years	11	4.1
Total	266	100.00

Table 2 shows that the majority of individuals who provided this information were between the ages of 20 and 30 years old, with just 4.1 percent being over 51. Therefore, as a result, the majority of those who offered this information were aged between 20 and 30 years.

Qualification	Frequency	Percent
Diploma	38	14.3
B.Ed.	179	67.3
M.Ed.	33	12.4
Others	16	6.0
Total	266	100.00

As we have seen in this table 3, 67.3 percent of respondents are bachelor's degree holders and 12.4 percent are master's degree holders, although there are 14.3 diplomas and 6 percent of holdings. In addition, this table indicates that most informants have a Bachelor's degree in education.

Experience	Frequency	Percent
1-5 years	122	46.0
6-10 years	78	29.4
11-15 years	43	16.2
16 and above	23	8.3
Total	266	100.00

According to the table 4, 46 percent of respondents with experience of 1 to 5 years provided this data, although the second percent of respondents had an average of 6 to 10 years, with 16.2 of 11 to 15 years and 8.3 of 16 years and above. Hence, this data indicates that the majority of those asked had 1 to 5 years of experience.

Table 5: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.869
	Approx. Chi-Square	1852.727
Bartlett's Test of Sphericity	df	171
	Sig.	.000

The KMO value (Kaiser Meyer-Olkin Measure of Sampling Adequacy) should be .6 or above and the Bartlett's Test of Sphericity value is significant (i.e. the sig. value should be .05 or smaller). In this table 6, the KMO value of the data is .869, and Bartlett's test is significant (p = .000). Therefore, the factor analysis of this table is appropriate. In the validation stage, the KMO value of the data in Table 1 KMO .869 appears to be convenient for factor analysis in



terms of sample size. Also, the findings for Barlett’s Test are found to be scientifically significant, i.e. there are high correlations between the variables, and data is obtained from multiple normal distributions.

The "anti-image" approach is another test that may be performed in factor analysis to see if each item is appropriate for factor analysis. The scale objects' anti-image values varied from .859 to .844. Therefore, it can be concluded that the material is suitable for factor analysis. During the application of Principal Component Factor Analysis, Scree Plot was also investigated. The following chart was obtained as a result of this analysis:

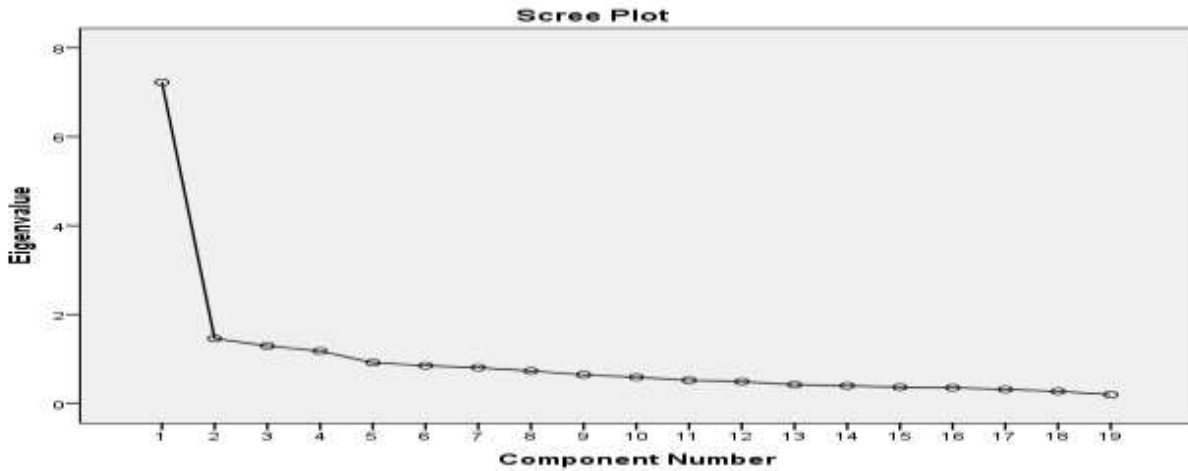


Figure 1 illustrates how the scale appears to be appropriate on the Scree Plot curve for factor decomposition. The scale was concluded to be based on four factors by investigating the Scree Plot curve, and considering the results obtained from the questionnaires and the theoretical framework of the scale.

Table 6. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% Variance	ofCumulative %	Total	% Variance	ofCumulative %	Total	% Variance	ofCumulative %
1	7.228	38.043	38.043	7.228	38.043	38.043	3.201	16.849	16.849
2	1.459	7.677	45.719	1.459	7.677	45.719	2.907	15.302	32.151
3	1.292	6.801	52.520	1.292	6.801	52.520	2.605	13.709	45.860
4	1.177	6.194	58.714	1.177	6.194	58.714	2.442	12.854	58.714

Table 3 shows that the scale was described with four components using performed factor analysis, with the eigenvalues of the factors. The exploratory ratio of total variance for these four factors was calculated as 58.714%. These findings were considered sufficient for the validity of the scale as a measurement tool.



Table 7: Rotated Component Matrix^a

	Component				
		Factor 1	Factor 2	Factor 3	Factor 4
Q9	.719				
Q15	.704				
Q18	.639				
Q2	.620				
Q19	.528				
Q4	.521				
Q1		.728			
Q3		.698			
Q7		.570			
Q6		.553			
Q12			.731		
Q14			.681		
Q13			.675		
Q5			.515		
Q16				.732	
Q11				.683	
Q17				.596	
Q10				.564	

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 11 iterations.

This table shows the loadings of the items on the four factors, Component 1 is loading six items, component 2 is loading on four items, component 3 is loading four items, and Component 4, is loading on four items. This suggests that a four-factor solution is likely to be more appropriate.



Table 8: Correlations

		Students indiscipline	Poor communicatio n	Class participation	GPA	students performance
Student indiscipline	Pearson Correlation	1	.622**	.580**	.549**	.865**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	265	265	265	265	265
Poor communication	Pearson Correlation	.622**	1	.618**	.558**	.832**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	265	265	265	265	265
Class participation	Pearson Correlation	.580**	.618**	1	.569**	.812**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	265	265	265	265	265
GPA	Pearson Correlation	.549**	.558**	.569**	1	.799**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	265	265	265	265	265
students performance	Pearson Correlation	.865**	.832**	.812**	.799**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	265	265	265	265	265

** . Correlation is significant at the 0.01 level (2-tailed).

Analyzing the findings in the table, scientifically significant correlations between each factor can be observed based on $p < 0.01$.

The highest correlation can be seen between the factors regarding drug abuse, such as Tabuu, Tramadol, and cannabis, and student indiscipline in academic achievement ($r = .865^*$). The correlation between drug abuse such as Tabuu, Tramadol, and cannabis and GPA in students' academic achievement is the lowest compared to the rest.

Thus, there is a strong positive relationship between the use of various substance abuse drugs such as smokeless tobacco known as Tabuu in Somalia, tramadol, and cannabis to students' academic achievement in terms of student behavior, poor communication skills, participation in-class activities, and GPA.

Table 9: Reliability Statistics

Factors	Cronbach's Alpha
Student indiscipline	.921
Poor communication	.898
Class participation	.892
GPA	.871
General	.908

The results collected show that the scale is a trustworthy measurement device. Therefore, it may be concluded that the scale is adequately valid and dependable. This proves that the tool used to get the data for this article was accurate.

DISCUSSIONS

The aim of this study was to develop a scale to determine the impact of consumption of various drugs, including smokeless tobacco (known as Tabu in Somalia), on students' academic achievement according to four dimensions such as student discipline, poor communication skills, participation in in-class activities, and GPA. Based on a review of the literature and responses to the 'what is the impact of drug abuse on students' academic achievement?' questionnaire, the first draft of the 19-item scale was administered to a sample of 266 participants. In order to identify the validity and reliability of the findings obtained in the application of the study. After analysis, the result of Cronbach's Alpha, in general, was .898.

In this study, exploratory factor analysis was applied so as to determine the validity of the measurement scale. Factor analysis is used to find collections of interconnected variables, sometimes known as "factors."



The KMO findings, which were used to assess the sample size's appropriateness, were discovered. .869 'very good,' and the results of Bartlett's test, which was used to evaluate the association between variables, indicated that the data was ready to be analyzed and significant in the KMO table indicated that the ($p = .000$) therefore factor analysis of this was appropriate. During factor analysis, the anti-image value of the items was calculated. Normally, the anti-image value of the items is expected to be above 0.50. The obtained results indicated that the anti-image value was acceptable. During the factor analysis, the total variance explained was used. The total variance exploratory rate of these factors was calculated at 58.714%.

The application of Principal Component Factor Analysis and Scree Plot was also investigated. According to the eigenvalue, four factors in the Scree plot indicated that it is greater than one. In the plot, the exploratory ratio of total variance for these four factors was calculated as 58.714%. These findings were considered sufficient for the validity of the scale as a measurement tool. The highest correlation can be seen between the factors regarding drug abuse such as Tabuu, Tramadol, and cannabis and student indiscipline in academic achievement ($r = .865^*$). And the general Cronbach's Alpha was .908, indicating that the article was valid.

The findings established that the students who use drugs disobeyed all of the school's rules and regulations at will. The impacts of drug misuse on students themselves included incidences of indiscipline within the school. Additionally, drug users ridiculed principals, instructors, and their fellow students. They also stole and vandalized school or student property, demonstrating their disrespect for them.

The findings also indicated that the effects of drug abuse, such as tabu, tramadol, and cannabis, were manifested in poor communication cases since students' absenteeism and poor relationships between friends, parents, teachers, and principals.

The results of this study showed that students who were addicted to drugs such as smokeless tobacco, and tramadol were less likely to participate in class activities such as class work, homework exercises, answering oral questions, and assignments, and asking questions of teachers or students. Additionally, the study indicated that drug-using students were less likely to perform poorly on school and national exams.

CONCLUSION AND RECOMMENDATIONS

The students that abused drugs were mainly smokeless tobacco, known in Somalia as TABU, and tramadol. The sources of these drugs were their friends and shopkeepers at the school.

The study found that students abused drugs due to peer pressure, stress from learning, family problems, easy availability of drugs, ignorance of their harmful effects, and lack of proper guidance from their parents, teachers, and principals.

As a result, shown, there is a significant link between the use of numerous substance misuse substances, including cannabis, tramadol, and smokeless tobacco (known as Tabuu in Somalia), and students' academic success in terms of conduct, poor communication, participation in in-class activities, and GPA.

We recommend the government of Somalia cracks down on traffickers who bring smokeless tobacco and other drugs that harm Somali students and produce rules that protect them against drug abuse.

We also recommend that the Somali community, especially teachers, principals of schools, and religious leaders, raise awareness of how to prevent and treat drug abuse such as tabu and tramadol.

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