

Addressing Drug Abuse on College Students

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Abstract

Substance Abuse is not a new phenomenon worldwide but experts believe that the rate at which college students are abusing drugs is so alarming to an extent that it (Substance Abuse) is now one of the major global public health concerns. The National Survey (2010), reported that more of today's college students are abusing prescription drugs than was the case in the early 1990s and that the number of students involved in the daily use of marijuana doubled to more than 4 percent. Literature review revealed that not only is there an increase of Substance Abuse among college students but also an increase of adverse effects due to binge drinking. It also revealed that higher levels of education i.e. diploma or higher was associated with greater levels of drug abuse. However, despite these concerns, very few studies have in-depth analyzed, let alone prescribe the measures of addressing the problem. A number of studies conducted in the United States of America (U.S.) have indicated that SA is becoming a serious public health problem nationwide as well as globally. However, not much has been done to address this problem. The main objective of this study was to establish the extent of the problem of Substance Abuse in order to have a basis of prescribing measures to address the issue among college students. The study brought to light the extent and effects of Substance Abuse and as such, will benefit not only college authorities and students but parents and policymakers in order to come up with mitigation strategies.

Keywords: Establishment, Substance Abuse, Addressing, College Students.

Introduction

Drug Abuse also known as Substance Abuse may be referred to harmful or hazardous use of psychoactive drugs which may include alcohol, Marijuana, Cocaine, Heroin and other illicit drugs to mention but a few (WHO, 2012). These psychoactive drugs may lead to dependence syndrome, the kind of behavior that develops after repeated use of the substance, driven by uncontrollable urge to take the substance. Even people who use drugs for pain relief may get addicted though this is quite rare especially to people with no history of addiction (Medlineplus, 2013). It is difficult to point out the reasons why people abuse these substances. However, one clear issue is that there is someone who pays for the cost. According to the National Institute on Drug Abuse (NIDA) (2012), the overall estimated costs of drug abuse in the United States (U.S.) exceeds \$600 Billion annually. These costs include productivity, health and crime related expenses. According to the National household survey on drug abuse conducted in 1996 the number of drug users in the U.S. was about 13 million (WebMD, 2012). There are several categories of people in Substance Abuse and college students are no exceptional. If college students are controlled from attention deficit hyperactive disorder, they may also be protected from Substance Abuse NIDA (2012).

Purpose of the study

The purpose of this study was to ascertain the magnitude of the problem of Substance Abuse in order to prescribe measures to address the problem among college students. It has been seen that drug abuse and addiction are preventable through education and outreach activities (NIDA, 2012). The study will therefore inform and sensitize target groups including teachers, parents and the general public which will in turn contribute to the reduction of Substance Abuse.

Significance of the study

Understanding measures of preventing Substance Abuse through studies like this one will entail reduced incidences of Substance Abuse and in the long run benefit stakeholders including college students and the community at large in reduction of health complications. Governments will also benefit through reduced costs associated with crime rates and rehabilitation of Substance Abusers. In addition, this study will form a basis for future studies by other scholars.

Literature review

Magnitude of Substance Abuse

Several studies have been conducted to show evidence and effect of Substance Abuse. A post mortem research series was conducted in Iran on patients who died within 72 hours after the accident either on the spot or at the hospital (Afzali et al., 2013). Cases were evaluated for alcohol and other potential use of drugs. Of the 106 fatalities from automobile accident during 2008 and 2009 who were autopsied, 22 (20%) tested positive for alcohol (Afzali et al., 2013). The most prevalent age group was between 21 – 30 years while the least was 50 years and above (Afzali et al., 2013). Higher levels of education (diploma and higher) was associated with higher alcohol or Drug Abuse compared to those with lower levels of education. This study showed that Substance Abuse was the major factor in traffic accidents in Iran (Afzali et al., 2013).

Another research conducted by Rhodes, Singleton & McMillan, et al., (2005) explored alcohol policy in black colleges with the aim of gaining an understanding of how awareness of the drinking policy affected their drinking habits. Those that were unaware were more likely to drink more than their colleagues who were aware. Rhodes et al., (2005) mentioned that binge drinking and heavy episodes of alcohol use and other resulting problems have been pointed out to be some of the major public health problems affecting college students. Rhodes et al., (2005) further stated that information on drinking among college or college aged individuals is based on large scale surveyed with various design and methods. These data shows that drinking among students occurs at an alarming high rate and demographic data show that men drink more than women and that white students drink more than black and Hispanics (Rhodes et al., 2005). Environmental characteristics have also been associated with college Student College drinking (Rhodes et al., 2005)

Costs and economic effects due to Substance Abuse

Wickizer (2012) stated that Substance Abuse causes substantial economic burden on society through indirect costs which is associated with lost to productivity. Data gathered through national survey showed that 22 billion people above the age of twelve years were drug or alcohol dependent (Wickizer, 2012). Substantial economic loss is translated from adverse behavior which comes as a result of Substance Abuse. One approach to understand this issue is by the use of Cost of Illness (COI) this approach estimates the maximum amount that could be saved if Substance Abuse related illnesses were eliminated. One COI study that was conducted had an estimated alcohol abuse cost at \$148 billion and drug abuse was estimated at 98 Billion (Wickizer, 2012). Drug and alcohol use interfere with work, school and other developmental activities. Reduced productivity due to Substance Abuse brings about negative effects on the economy because its demand on health care is quite huge (Wickizer, 2012). Another study that was conducted 2005 on the cost of both direct and alcohol related conditions were 29 384 cases representing 4.8 percent of all hospital discharges related to Substance Abuse were recorded and out of these 76 percent were conditions that were related to alcohol use and that \$600 million was incurred during this period due to Substance Abuse (Wickizer, 2012).

Early detection of substance abuse

About 5 percent of the population globally, about (200 million people) consume illicit drugs and in most cases this is associated with skin lesions and alterations (Fink, Landthaler & Hafner, 2011). And because of these skin effects due to drug abuse, there is yet a chance of specialist to come up with a mechanism to identify drug abusers early. To this effect, a research was conducted to draw particular attention to typical skin lesion which may be associated with drug abuse (Fink, Landthaler & Hafner,

2011). The study concluded that skin alterations in illicit drug abuses are diverse; however, they are not always pathogenic but do exist because of Substance Abuse. The study also concluded that Skin specialist can therefore help in identifying drug addicts at an early age and refer them for specialist treatment (Fink, Landthaler & Hafner, 2011). This study showed the link between association of drug abuse, the effects and detection of Substance Abuse. Over the years, multiple studies have shown that adolescents prevention programs can produce short and long term reduction in Substance Abuse and that sexual risk behavior among teens include failing to use condoms, having sex with multiple partners and having sex while under the influence of alcohol (Lisha et al., 2012).

Drug Abuse and risky sexual behaviour

Other studies have shown that sexual risk behavior among adolescent are a major concern to public health. Centers for Disease Control and Prevention estimates high risk sexual contact was responsible for approximately 30 percent of the reported HIV infection in 2007. It also stated that roughly about half a million of cases which were reported were youths between 15 – 19 years (Oshri, Tubman, & Burnette, 2012). It has also been shown that significant associations do exist between the use of alcohol and other Substance Abuse and risk sexual behaviors in adolescents. Further, Oshri, Tubman, & Burnette, (2012) stated that adolescents receiving treatment for Substance Abuse reported early ages of sexual debut, more sexual partners and less consistence of condom use. However, it was further mentioned that both sexual risky behavior and substance are influenced by other environmental risk factors (Oshri, Tubman, & Burnette, 2012).

Reasons behind college substance abuse

Studies have shown that nearly half of the 5.4 million full-time American college students reported that they abuse drugs, and also agreed to engage in alcohol binges at least once monthly. Another study that was conducted by The National Center on Addiction and Substance Abuse (CASA) at Columbia University found that college students had a higher rate of Substance Abuse and addiction than that found within the general population, and that as many as 22.9% actually met the criteria for addiction to alcohol or other drugs. The study further indicated that students tend to use drugs as a result of depression caused by stress of coping with new environment, accepting other responsibilities while worrying about how to perform well academically as a result they involve themselves in heavy episodes of binge drinking which result in major public health problems (Rhodes et al., 2005).

In addition, the study mentioned that there is a role that genetics and biology play in the determination of who will be a casual alcohol or drug user and those that will eventually become addicted (Rhodes et al., 2005). Professionals in Substance Abuse have reported that alcoholics and addicts tend to have alcohol and drug using family members as well other than them. However, it is also mentioned that individuals learn from families, friends and are also influenced by the environment. According to the U.S. Department of Education's Higher Education Center for Alcohol and Other Drug and Violence Prevention, access to alcohol is facilitated with availability and low cost. This causes an increased consumption of alcohol by college students.

However, there are also protective factors that influence some individuals not to indulge in Substance Abuse such as sports, school extracurricular activities; church and/or service work in their school. Such students are less likely to abuse drugs or alcohol. However, Rhodes et al., (2005) stated that policies vary among institutions and that institutions that allow alcohol intake are likely to have less students who are involved in binge drinking. This study therefore sought to come up with ways on how to identify problems associated with Substance Abuse in order to come up with appropriate strategies that can contribute to Substance Abuse.

Methodology

Data set

The research used secondary data sets under National Survey on Drug Abuse, 2000 (ICPSR 3262) which falls under United States Department of Health and Humans Services. Substance Abuse and Mental Health Service Administration, Office of Applied Studies found on: <http://www.icpsr.umich.edu/icpsrweb/SAMHDA/series/64/studies?q=data+set+address>.

Explanation of secondary data set used

As mentioned above, the research used secondary data sets under National Survey on Drug Abuse, 2000 (ICPSR 3262) (Iannotti, 2000). This falls under United States Department of Health and Humans Services. Sampling was done to support three overlapping studies, probability sample designs and target population (Iannotti, 2000). The respondents included catholic and private school students and their equivalent in 50 states. Methodology included sampling which was done in three stages and was stratified within each census division (Iannotti, 2000).

Data collection for the data set

Data collection was done by administering a questionnaire and included variables such as nutrition, violence, bullying, and relationship with friends, physical activity, and perception of school as supportive environment, alcohol, tobacco and marijuana use (Iannotti, 2000). The four types of questionnaires were explained to students and were administered. Data was cleaned by reviewing individual variables for consistencies and was edited as necessary. Some variables were removed to protect individuals as well as school confidentiality. The questionnaire was divided into subsections including; identification, survey information, demographics, family affluence, physical activity, eating habits and substance use. These subdivisions had a list of corresponding variables as well (Iannotti, 2000).

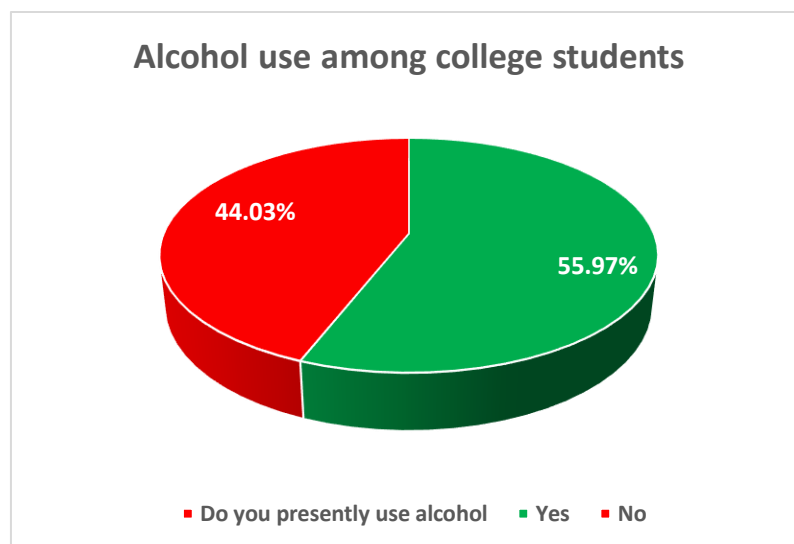
Data Analysis

Data analysis process

The study conducted univariate data analysis to examine descriptive variables and to summarize data. Bivariate data analysis was used to correlate data and to establish a relationship between variables (Neuman, 2000).

Statistical analysis

Figure 1. Univariate analysis



The study used univariate data analysis to summarize numerical information in order to reveal the patterns in a more systematic manner. It was found that the number of students who ever smoked was 44 % as compared to those who have never smoked (56%).

Table 1. Frequencies (statistics)

		Ever smoked Tobacco	How often smoke tobacco presently	Do you drink alcohol presently - computed
N	Valid	8889	8866	8791
	Missing	338	361	436
Mean		1.77	3.81	1.56
Std. Deviation		.421	.625	.496
Variance		.177	.391	.246
Range		1	3	1
Minimum		1	1	1
Maximum		2	4	2
Sum		15735	33785	13711

Table 2. Ever smoked tobacco

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	2043	22.1	23.0	23.0
	No	6846	74.2	77.0	100.0
	Total	8889	96.3	100.0	
Missing	Missing	338	3.7		
Total		9227	100.0		

Table 3. Ever smoked tobacco

		Ever Smoked Tobacco		Total
		Yes	No	
Gender	Male	989	3286	4275
	Female	1052	3552	4604
Total		2041	6838	8879

Table 4. Chi-square test

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.102 ^a	1	0.75		
Continuity Correction	0.086	1	0.769		
Likelihood Ratio	0.102	1	0.75		
Fisher's Exact Test				0.762	0.385
Linear-by-Linear Association	0.102	1	0.75		
N of Valid Cases	8879				

- a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 982.69.
b. Computed only for a 2x2 table

Table 5. Symmetric measures

		Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Nominal by Nominal	Phi	0.003			0.75
	Cramer's V	0.003			0.75
Interval by Interval	Pearson's R	0.003	0.011	0.319	.750 ^c
Ordinal by Ordinal	Spearman Correlation	0.003	0.011	0.319	.750 ^c
N of Valid Cases		8879			

- a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.
c. Based on normal approximation.

Data was interpreted by Chi square and cross tabulated gender and ever smoked in your life. The conclusion was that since the Pearson chi square = 0.750 > 0.05 (95% confidence), on the evidence of this data, there was no association between gender and if someone ever smoked. In other words the conclusion was that gender had no influence on peoples smoking habits.

Table 5. Multivariate analysis

		Ever smoked tobacco	Ever taken drug past 12 months: coca ine	Ho w man y frien ds: carr y a wea pon	Ever taken drug past 12 months: ecst asy	Ever taken drug past 12 months: ampheta mines	Ever taken drug past 12 months: opia tes	Ever taken drug past 12 months: glue/sol vents	Ever taken drug past 12 months: balt ok	Ever taken drug past 12 months: anab olic stero ids	Ever taken drug past 12 months: any drug - comp uted
Ever smoked tobacco	Pearson Correlation	1	-.191**	-.281**	-.190**	-.190**	-.188**	-.188**	-.187**	-.188*	-.178**
	Sig. (2-tailed)		0	0	0	0	0	0	0	0	0
	N	8889	8797	8787	8799	8798	8797	8797	8797	8795	8799
Ever taken drug past 12 months: cocaine	Pearson Correlation	-.191**	1	.075**	.997**	.997**	.997**	.997**	.997**	.997*	.992**
	Sig. (2-tailed)	0		0	0	0	0	0	0	0	0
	N	8797	9081	8739	9081	9080	9079	9079	9079	9077	9081

How many friends: carry a weapon	Pearson Correlation	-.281**	.075**	1	.074**	.073**	.072**	.072**	.072**	.073*	.064**
	Sig. (2-tailed)	0	0		0	0	0	0	0	0	0
	N	8787	8739	8826	8741	8740	8739	8739	8739	8737	8741
Ever taken drug past 12 months: ecstasy	Pearson Correlation	-.190**	.997**	.074**	1	.999**	.999**	.999**	.998**	.998*	.995**
	Sig. (2-tailed)	0	0	0		0	0	0	0	0	0
	N	8799	9081	8741	9083	9082	9081	9081	9081	9079	9083
Ever taken drug past 12 months: amphetamines	Pearson Correlation	-.190**	.997**	.073**	.999**	1	.999**	.998**	.998**	.998*	.995**
	Sig. (2-tailed)	0	0	0	0		0	0	0	0	0
	N	8798	9080	8740	9082	9082	9081	9081	9081	9079	9082
Ever taken drug past 12 months: opiates	Pearson Correlation	-.188**	.997**	.072**	.999**	.999**	1	.999**	.999**	.998*	.995**
	Sig. (2-tailed)	0	0	0	0	0		0	0	0	0
	N	8797	9079	8739	9081	9081	9081	9080	9080	9078	9081
Ever taken drug past 12 months: glue/solvents	Pearson Correlation	-.188**	.997**	.072**	.999**	.998**	.999**	1	.999**	.998*	.996**
	Sig. (2-tailed)	0	0	0	0	0	0		0	0	0
	N	8797	9079	8739	9081	9081	9080	9081	9080	9078	9081
Ever taken drug past 12 months: baltok	Pearson Correlation	-.187**	.997**	.072**	.998**	.998**	.999**	.999**	1	.999*	.996**
	Sig. (2-tailed)	0	0	0	0	0	0	0		0	0

	N	879 7	907 9	873 9	908 1	9081	908 0	9080	908 1	9078	9081
Ever taken drug past 12 months: anabolic steroids	Pearson Correlation	-.188**	.997**	.073**	.998**	.998**	.998**	.998**	.999**	1	.995**
	Sig. (2-tailed)	0	0	0	0	0	0	0	0		0
	N	879 5	907 7	873 7	907 9	9079	907 8	9078	907 8	9079	9079
Ever taken drug past 12 months: any drug - computed	Pearson Correlation	-.178**	.992**	.064**	.995**	.995**	.995**	.996**	.996**	.995*	1
	Sig. (2-tailed)	0	0	0	0	0	0	0	0	0	
	N	879 9	908 1	874 1	908 3	9082	908 1	9081	908 1	9079	9083

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

Multivariate analysis

Correlations coefficients show the strength of the relationship between 2 variables. The coefficients range from -1 to 1 with the symmetry at 0 showing no relationship. As you move from 0-0.5, the relationship improves from no relationship to weak positive relationship. The relationship becomes stronger as we approach +1 with a perfect positive relationship at 1 and perfect negative relationship at -1 (Sullivan, 2012).

The study looked at various variables to do with drug use among college students over a period of 12 months and one variable to do with carrying of weapons. These included use of tobacco, cocaine, ecstasy, amphetamines, opiates, glue/solvents, baltok, anabolic steroids and other drugs and carrying of a weapon. Pearson correlation coefficients showed stronger relationships between variables to do with Substance Abuse. From the table above, the relationship between ever taken drugs past 12 months: Cocaine and Ever taken ecstasy, amphetamines, opiates, glue/solvents, baltok, anabolic steroids and other drugs in the past 12 months: ranged between 0.992 and .997 which is a very strong positive relationship. This means that the relationship between those who took cocaine in the past 12 months was highly correlated with those who took ecstasy, amphetamines, opiates, glue/solvents, baltok, anabolic steroids and other drugs in the past 12 months. The relationship was also highly significant with the p-value less than 0.001. On the other hand, there was poor or no relationship between those who used drugs in the past 12 months: ecstasy, amphetamines, opiates, glue/solvents, baltok, anabolic steroids and other drugs and carried a weapon. The study therefore concluded that college students who use drugs were highly likely to use another types of drugs and that those who used drugs were less likely to carry weapons.

Conclusion and recommendations

This study examined the extent and adverse effects of Substance Abuse among college students and confirmed that Substance Abuse occurs at an alarming rate among college students. The study revealed that 44% of all the students that were interviewed, reported to have ever used drugs. Though this number is smaller than those who reported not to ever have used drugs, the magnitude of the problem is quite high such that there is need to come up with strategies on how to reduce the issue of Substance Abuse in colleges. The research also concluded that there is an association between one substance use to the other i.e. students who smoked marijuana also used other substances such as cocaine, heroin or anabolic steroids. The study outcomes are in line with other studies that have been conducted in the past and

have confirmed the magnitude of the issue of drug abuse among college students. However, knowing the magnitude of Substance Abuse in colleges is not adequate to come up with mitigation strategies. Further studies to ascertain the reasons behind Substance Abuse among college students should be undertaken to assist in coming up with clear and specific prevention strategies.

References

- [1].Afzali, S., et al (2013). Frequency of Alcohol and Substance Abuse Observed in Drivers Killed in Traffic Accidents in Hamadan, Iran. Arch Iran Med. 2013; 16(4): 240 - 242.
- [2].Fink, B., Landthaler, M., & Hafner, C., (2011). Skin Alterations due to Abuse of Illegal Drugs. DOI: 10.1111/j.1610-0387.2011.07699.x
- [3].Gillespie et al., (2012). The Brisbane Longitudinal Twin Study: Pathways to Cannabis Use, Abuse, and Dependence Project—Current Status, Preliminary Results, and Future Directions Volume 16 Number 1 pp. 21–33 C _ The Authors 2012 doi:10.1017/thg.2012.111
- [4].Iannotti, R. J., (2000). Health Behavior in School-Aged Children (HBSC), 2005-2006ICPSR 28241. United States Department of Health and Human Services. National Institutes of Health. Eunice Kennedy Shriver National Institute of Child Health and Human Development from: <http://www.icpsr.umich.edu/icpsrweb/SAMHDA/series/64/studies?q=data+set+address>
- [5].Kim et al. (2012). Validation of key behaviorally based mental health diagnoses in administrative data: suicide attempt, alcohol abuse, illicit drug abuse and tobacco use. BMC Health Services Research 2012, 12:18 <http://www.biomedcentral.com/1472-6963/12/18>
- [6].Linskey, et al., (2012). An Australian Twin Study of Cannabis and Other Illicit Drug Use and Misuse, and Other Psychopathology Volume 15 Number 5 pp. 631–641 C _ The Authors 2012 doi:10.1017/thg.2012.41
- [7].Lisha et al. (2012). An Evaluation of Immediate Outcomes and Fidelity of a Drug Abuse Prevention Program in Continuation High Schools: Project towards no Drug Abuse (Tnd) J. Drug Education, Vol. 42(1) 33-57, 2012
- [8].MedlinePlus (2013) Drug Abuse from: <http://www.nlm.nih.gov/medlineplus/ency/article/001945.htm>
- [9].MedlinePlus (2013) Drug dependence from: <http://www.nlm.nih.gov/medlineplus/ency/article/001522.htm>
- [10].National Institute on Drug Abuse (NIDA) (2012). Understanding Drug Abuse and Addiction from <http://www.drugabuse.gov/publications/drugfacts/understanding-drug-abuse-addiction>
- [11].Oshri, A., Tubman, G. J., & Burnette, M. L., (2012). Childhood Maltreatment Histories, Alcohol and Other Drug Use Symptoms, and Sexual Risk Behavior in a Treatment Sample of Adolescents. Supplement 2, 2012, Vol 102, No. S2
- [12].Rhodes, W. A., Singleton, E., & McMillan, B. T., et al., (2005). Does Knowledge of College Drinking Policy Influence Student Binge Drinking? Journal Of American College Health, Vol. 54, No. 1
- [13].Samouei, R., (2013). Why Some Previous Drug Abuse Preventive Programs Had Low Effectiveness? DOI: 10.5455/medarh.2013.67.68-72 Med Arh. 2013 Feb; 67(1): 68-72 Received: January 01st 2013 | Accepted: February 20th 2013
- [14].WebMD (2013). Mental Health. Substance Abuse downloaded from <http://www.webmd.com/mental-health/substance-abuse>
- [15].Wickizer, T., (2013). State-Level Estimates of the Economic Costs of Alcohol and Drug Abuse Health Care Finance 2013; 39(3):71–84 Copyright © 2013 CCH Incorporated
- [16].World Health Organization (WHO) (2012), Substance Abuse retrieved from: <http://www.who.int/topics/substance+abuse/en/>