

Influence of Personal and Parental Religiosity on Drug Use among College Students in a Christian Based University

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Abstract

Alcoholism and drug abuse among college students are becoming an increasing problem in the world today according to many studies. Many of these young people eventually get addicted to drugs and alcohol which adversely affect their academic performance as well as posing a threat to their own health and safety, while creating a great economic burden on their families and society at large. An individual's participation in religious activities has been associated with decreased risky behaviors among adolescents and young adults. Studies have largely focused on the role of the individual's religiosity in delaying risky behaviors such as drug use and sexual indulgence. However, there seems to be scanty literature of analysis on specific indicators of religiosity against drug use. The objective of this study was to determine the influence of personal religiosity indicators on drug use among college students. Multistage stratified random sampling technique was used in the selection of participants. In total, 905 participants responded to a self-administered questionnaire. Composite variables for individual and parental religiosity were developed and analyzed through descriptive statistics and bivariate analysis. A higher level of personal religiosity was associated with lower drug prevalence. Higher personal religiosity (religious affiliation, active participation in church activities, and whether the correspondent spent free time worshipping) showed lower substance use. Indicators of parent religiosity had no direct significant influence on substance use. In conclusion, indicators of personal religiosity were associated with low drug use. Therefore, institutions can implement multiple forums and strategies that would ensure increased engagement in religious activities that go beyond chapel attendance and "born again" status. Similarly, the role of institutional religiosity cannot be undermined and implementing similar strategies would increase the level of religiosity among adolescents and subsequently reduce drug use.

KEYWORDS: *religiosity, drug use, bio-ecological theory, risky behavior, university students*

Introduction and Background

According to several studies across the globe, alcohol and drug abuse is a major challenge to young people. A study by National Agency for Campaign against Drug Abuse (NACADA, 2012) showed that use of alcohol and drugs continues to emerge as a strategy for most young people to cope with their prevailing problems such as unemployment, neglect, violence, sexual abuse and poor academic performance. According to Kenya's Economic Survey report (2010), in 2008 and 2009, a total of 3,795 and 4, 983 persons respectively committed offences related to use of dangerous drugs.

Substance abuse among young people in learning institutions has endangered their lives. According to NACADA (2012), the majority of students at all levels of education still abuse substances and are likely to destroy their lives before they become adults or even drop out of school. Abuse of substances has been identified as a major cause of some of the problems experienced in learning institutions in Kenya in the recent past (Maithya, 2012; Muchemi, 2013).

A study conducted by Odek-Ogunde and Pande-Leak (1999) among university students revealed that prevalence of commonly abused substances was as follows: tobacco (54.7%), alcohol (84.2%), *Cannabis* (19.7%), and inhalants (7.2%). Most studies on alcohol consumption and drug abuse have focused on primary and secondary schools (NACADA, 2006; Ngesu, Masese, & Ndiku, 2008; Oteyo & Kariuki, 2009). Some other previous studies have also analyzed trends, prevalence and effects of alcohol consumption and drug abuse among various groups such as street children, juvenile delinquents, and inpatients (Maru, Kathuku, & Ndeti, 2003; Othieno, Obondo, Kathuku, & Ndeti, 2001).

A study by Jose et al. (2000) showed that the consumption of alcohol and drugs by youth and young adults could be seen as a way of coping with problems, anxieties and uncertainties of growing up. All this would seem to suggest that universities and other institutions of higher learning need to prepare to help such students settle and avoid relying on alcohol and drugs of abuse for stress management. This approach would help to minimize the serious effects of risk factors for substance use among adolescents and young adults such as low grade points average, lack of religiosity, poor relationship with parents, lack of social conformity (deviance), sensation seeking, and perceived peer drug use, which are often cited as having universal application (Atwoli, 2011).

According to World Health Organization (WHO, 2014), there are about 2 billion people worldwide consuming alcoholic beverages and 76.3 million with diagnosed alcohol consumption. WHO further recorded that globally, alcohol consumption causes 5.9% of deaths and at least 4.0% of the disability-adjusted life years lost. In addition, alcohol consumption is the leading risk factor for disease burden in low mortality developing countries, and the third largest risk factor in developed countries (WHO, 2014). Alcohol is similarly a serious problem in developed countries, for example; in Europe, alcohol consumption was responsible for over 55,000 deaths among young people aged 15 to 29 years as noted in 1999 (Rehm & Gmel, 2003). Besides the numerous chronic and acute health effects, alcohol consumption is also associated with widespread social, mental and emotional consequences. These are reflected, for example, in absenteeism or abuse in workplaces and in relationships (Rehm & Gmel, 2003).

In Kenya, learning institutions have become a hub for drug sale and consumption. Both licit and illicit substance dealers in the communities surrounding the institutions target students for recruitment and introduction to drugs (NACADA, 2006). In addition, NACADA (2004) baseline survey on drugs and substance abuse targeting 10-24 years old youth indicated that the trend for drug and substance abuse is on the increase. The major substances of abuse are alcohol, tobacco, khat, bhang, inhalants and prescription drugs. The findings indicate that the youth consume alcohol and other drugs to the extent that these substances pose great danger to their health and ultimately to the well-being of the nation.

Most institutions of higher learning have well-established counselling departments, an indication of efforts being put in place by such institutions to curb the problem of alcoholism and drug abuse. However, consumption of alcohol and drug use is still rampant among students. In view of that, there is need to analyse trends and prevalence of alcohol consumption and drug abuse and to examine the influence of personal and parental religiosity on drug use among college students. The results of this could inform institution of learning in identifying appropriate activities and social engagements that may reduce exposure and risks of indulging in alcohol and drug use.

Several studies and reports have revealed an alarming increase in use of alcohol and drugs among college students which have resulted in deviant behavior. Use of alcohol and drugs may lead to addiction which could, in turn, hinder academic progression and impose an economic burden on the families of the drug addicts and society in general. The society's

resources tend to be diverted to cater for rehabilitation programs and curb drug trafficking. Apart from that, alcohol and drug abuse have serious health effects on the major organs of the body, and in other cases led to poor academic performance, absenteeism, violence, unwanted pregnancies, road accidents, HIV and AIDS and drug addiction. While a lot of research related to drug and substance abuse among students in Kenya has been done in secondary schools, there appears to be paucity of research on the same in institutions of higher education which play a key role in training the critical manpower for the country.

The transition from boundaries at home to a more self-directed life in the university increases the chances of students to indulge in drugs with alcohol and tobacco seen as the most commonly used drugs (Atwoli, Mungla, Ndung'u, Kinoti, & Ogot, 2011). At the university level, students experience levels of independence and freedom away from their parents and caregivers (King & Boyatzis, 2004). A study conducted in a US university showed a high prevalence of substance use with alcohol leading at 85%, followed by Marijuana at 43% (West, Graham, & Temple, 2017).

A similar study done on university students in Sudan indicated an overall prevalence of substance use at 31% with 48% and 54% single and multiple users respectively (Osman et al., 2016). Higher figures were recorded in Ethiopia where approximately 62% of university students were using at least one drug with alcohol taking the lead at 50% (Tesfaye, Derese, & Hambisa, 2014). The story is not any different in Kenya with studies showing even higher prevalence on drug use at 70% (Atwoli et al., 2011).

Religion has been extensively accepted as a protective factor in deterrence from drug use (Bartkowski & Xu, 2007; Gomes, Andrade, Izbicki, Almeida, & Oliveira, 2013). Highly religious youth were associated with lesser drug indulgence (Shek, 2012). These studies focused on the religiosity of individuals who were assessed on their commitment to church activities (Edlund et al., 2010). Generally, when it comes to late adolescents (most of the university undergraduates fall in this age group), some researchers have argued that their religiosity is a direct product of their parents' religiosity and hence this context must be considered (Martin, White, & Perlman, 2003).

Although the religiosity indicator list is extensive, there is need to assess how each of the indicators influences drugs use among university students (Gorsuch, 1995). This paper assessed indicators of religiosity and how they influenced drug use among university students. University

administration could benefit from this study to develop strategies that would go beyond church attendance but which would enhance individual commitment as determined by the religiosity indicator index.

Defining Religiosity

Hodge, Cardenas, and Montoya (2001) defined religiosity in three dimensions: conservativeness, involvement in church activities, and level of importance attributed to these activities. Other researchers explored the attitudes of the individual towards religion and to what level a person expresses truthful and intense regard for religion. Although there are those that have defined religion purely in terms of behavioral aspects such as frequency of church attendance, religious activities such as prayers and worship; it is now clear that religiosity has to be defined in a broad aspect covering both behavior and attitude (Marsiglia, Kulis, Nieri, & Parsai, 2005).

Individual religiosity can be distinguished in two forms, private and public religiosity. According to Hill (2000; as cited in Regnerus, Smith, & Smith, 2004), private religiosity is characterized by the individual's commitment to live by the standards set by his religion, personal prayers and devotions. On the other hand, public religiosity is defined as attendance of church and participation of group religious activities (Regnerus, Smith, & Smith, 2004). For purposes of this paper religiosity was considered as a component of both behavior and attitude.

Bronfenbrenner's Ecological Theory and Religiosity

According to Barrett (2014) personal values can be understood from an ecological perspective as the meaningful interaction between the individual and the environmental conditions of value rich religious experiences. This reinforces the argument in Bronfenbrenner's ecological theory which states that the well-being and holistic development of an individual is determined by the environment in which the person was raised (Regnerus et al., 2004; Senefeld & Perrin, 2014). Interaction between a child and the environment is assessed in five main sections referred to as systems; microsystems, mesosystem, exosystem, macrosystem and chronosystem (Berk, 2000).

The ecological theory places religion, family and school at the immediate system referred to as the Microsystems. Generally, children are directed into various social setups based on the religious expectations and attitudes of the parents (Martin et al., 2003; Worthington, Hook,

Davis, & McDaniel, 2011). Similarly, adolescents are seen to model their parent’s religious behaviors as a result of family expectation and social learning (Benson & Roehlkepartain, 2008; King & Boyatzis, 2004; Shek, 2012). The authors therefore assert that religion is a component in all the systems in the ecological theory as seen in the figure below;

Ecological System	Religious indicator
Self/Individual <i>Age, gender</i>	Religious Affiliation, service in church, spending time in worship
MicroSystems- Religious institutions Religious family	Availability of churches, chapel services in school, Family religious practices
MesoSystem- Interaction of Microsystem	Ability of parent, school and peers to model religiosity
ExoSystems	Parent affiliation, engagement in church activities
MacroSystems <i>(Culture, attitudes, beliefs)</i>	Religious culture and general attitude towards religion Belief system , value system instilled through religious background
Chronosystems <i>(time</i>	Ability to transition from parental control into undergraduate and managing to maintain one’s values system with time.

Figure 1: Religious Indicators as Seen through the Ecological Systems

Methodology

A total of 905 participants responded to a self-administered questionnaire. First, students were grouped as per their respective campuses and further stratification was done based on the year of study and the academic program. Systematic random sampling technique was applied to select students in each year of study from a list of students’ names in their respective batches. The survey used questionnaires and interviews to collect quantitative and qualitative data. The questionnaires were derived from a modified Global Assessment Program on Drug Abuse toolkit.

For purposes of this paper, only respondents who indicated that they had never been married were considered (n= 717). Descriptive statistics and bivariate analysis were done. Composite variables for individual and parental religiosity were developed based on specific religiosity indicators. Personal religiosity was estimated as a composite variable of religious affiliation, service in church and whether the respondents spent free time in worship. On the other hand, parental religiosity was viewed as a composite variable of religious affiliation by the parents and their services in church. Respondents received a score of 1 for each of the variables. Highly religious respondents were those who scored 2 points and above, moderate religiosity had a score of 1 and low religiosity had a score of 0. The composite variables were then analyzed against drug use per type of drug.

Results

Distribution by Age, Gender and Religion

The study recorded an 88.8% response rate. Of the 717 never married students (*Table 1*) who were considered in this analysis, 32.9% were male while 67.1% were female as seen in *Table 2*. Generally, 84% of the respondents were aged between 17 and 30 years.

Table 1: Characteristics of Respondents by Academic Program and Marital Status

Campus	Marital status						(blank)	Total
	Divorced	Married	Never married	Remarried	Separated	Widowed		
Athi River	45	5	402	2	5	3	23	485
Diploma	24	1	153			2	7	187
Pre-university	2		21			1	2	26
Undergraduate	18	4	226	2	4		14	268
Missing data	1		2		1			4
Nairobi	3	83	315	3	3	1	12	420
Diploma		17	90		1	1	4	113
Master's		41	35	1	1		1	79
Pre-university		4	14	2				20
Undergraduate	3	21	175		1		6	206
Missing data			1				1	2
Total	48	88	717	5	8	4	35	905

Table 2: Number and Percentage of Respondents by Campus, Gender and Place of Permanent Residence

Campus	Rural	semi urban	Urban	Missing data	Total
	N (%)	N (%)	N (%)	N (%)	N (%)
Athi River	24 (3.3)	82 (11.4)	283 (39.5)	13 (1.8)	401 (56.1)
Female	13 (1.8)	57 (7.9)	176 (24.5)	7 (1)	253 (35.3)
Male	11 (1.5)	25 (3.5)	106 (14.8)	6 (0.8)	148 (20.6)
Nairobi	15 (2.1)	47 (6.6)	247 (34.4)	6 (0.8)	315 (43.9)
Female	12 (1.7)	36 (5)	175 (24.4)	5 (0.7)	228 (31.8)
Male	3 (0.4)	11 (1.5)	72 (10.0)	1 (0.1)	87 (12.1)
Total	39 (5.4)	129 (18.0)	530 (73.9)	19 (2.6)	716 (100.0)

As seen in *Table 3*, the average age (\bar{x}) of respondents who were using any drug was 21.2 (20.9 -21.5); SD =3.7.

Table 3: Minimum, Average and Standard Deviation of the Age of First Use of Different Types of Drugs

Drug	Age of first use			Number of users (%)
	Minimum	Mean (CI)	SD	
Tobacco	6	17 (16.8 - 17.2)	3.2	20.78
Alcohol	6	17.1 (16.9 - 17.3)	2.8	55
Cannabis	12	17.9 (17.7 - 18.1)	2.5	22.51
Cocaine	14	16.9 (16.8 - 17)	2.0	1.73

In *Table 3*, the average age of the respondents when they first used drugs ranged between 16 and 17 years. The majority of respondents were using alcohol at 55% followed by cannabis at 22.51% and tobacco at 20.78%.

Table 3: Percentage of Respondents by Religious Affiliation

Campus	Respondents	%
Athi River	402	56.1
Catholic	80	11.2
Muslim	7	1.0
Protestant	294	41.0
None	21	2.9
Nairobi	315	43.9
Catholic	58	8.1
Muslim	3	0.4
Protestant	219	30.5
None	35	4.9
Total	717	100.0

As seen in *Table 4*, a majority of the students were Protestants (72%) followed by Catholics at 19% and Muslims at 1%. In total 91% of the respondents were Christians.

Factors influencing drug use

This study sought to find out the various factors that led the respondents to use drugs. *Table 5* shows the various factors that led to students' use of drugs. The findings revealed that the majority of the respondents (58%) used drugs for relaxation followed by those who used them due to stress (17%). Others used drugs due to peer pressure (13%).

Table 5: Percentage of Respondents by the Cause of Drug Use

Cause of drug use	% of respondents
Relax	58
Stress	17
Peer pressure	13
Others	12

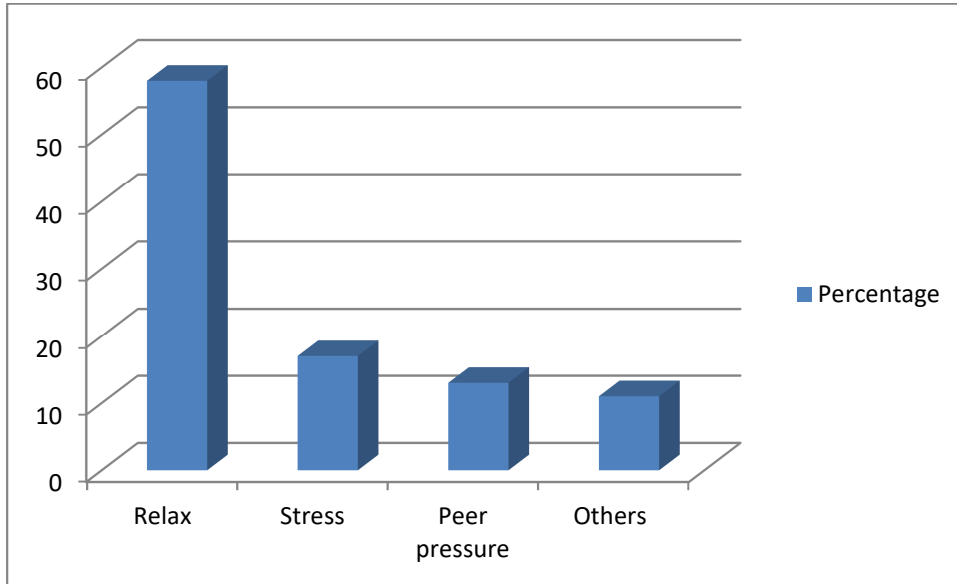


Figure 2: Factors Influencing Use of Drugs

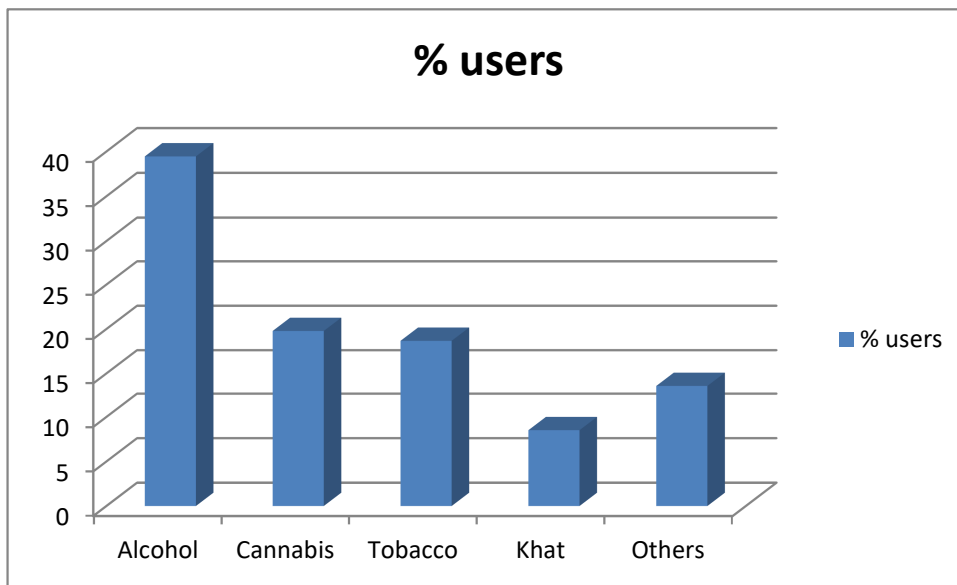


Figure 3: Percentage of users of various drugs

In Figure 3 the majority of respondents used alcohol (39.45%) followed by cannabis at 19.78%; tobacco at 18.67% and khat at 8.51. 13.59% used other drugs.

Table 6: Students and Parents Substance Use Cross Tabulation

	Yes	No	Total
Yes	66	103	169
	39.05	60.95	100
No	37	589	626
	5.91	94.09	100
Total	103	692	795
	12.96	87.04	100

In *Table 6*, of the proportion of students consuming drugs, 39.05% reported that their parents also consumed drugs while 60.95 said their parents were not consuming any drugs. For the non-consumers, only 5.91% had parents who were consuming drugs while 94.09% of these non-consumer reported that their parents did not take drugs. Based on these findings, abstinence from drug use was more likely if a parent was not using drugs.

Personal Religiosity and Drug use

Based on level of personal religiosity, 38.6 % of the respondents were considered highly religious, while 56.5% and 4.9% were found to be of moderate and of low religiosity respectively (*Figure 4*). The religiosity level was measured based on three distinct indicators, namely, religious affiliation, active participation in church activities (beyond attendance) and whether the student spent free time worshipping. Results show that, 91% of the participants were affiliated to a religion (see *Table 7*), 39% were participating in church activities through serving in their churches, while only 8% of the respondents were spending their free time worshipping.

Participants who were highly religious were less likely to consume drugs as seen in *Figure 4*. Alcohol use was highest among those with low religiosity at 68.6% as compared to 44.4% in respondents considered highly religious. The same trend was noted in tobacco and marijuana use at 15.9% and 15.5% respectively for highly religious respondents. However, for the least religious respondents, tobacco and marijuana use was higher at 37.1% and 42.9%.

Table 7: Personal Religiosity and Drug Use

Personal religiosity	Alcohol	Tobacco	Marijuana	Khat	Amphetamine	Others	total respondents
High	44.4	15.9	15.5	5.1	2.2	8.7	38.6
Medium	57.8	21.5	24.2	12.1	4.2	11.1	56.5
Low	68.6	37.1	42.9	0	8.6	11.4	4.9
Drug use (%)	53.1	20.1	21.8	8.8	3.6	10.2	100

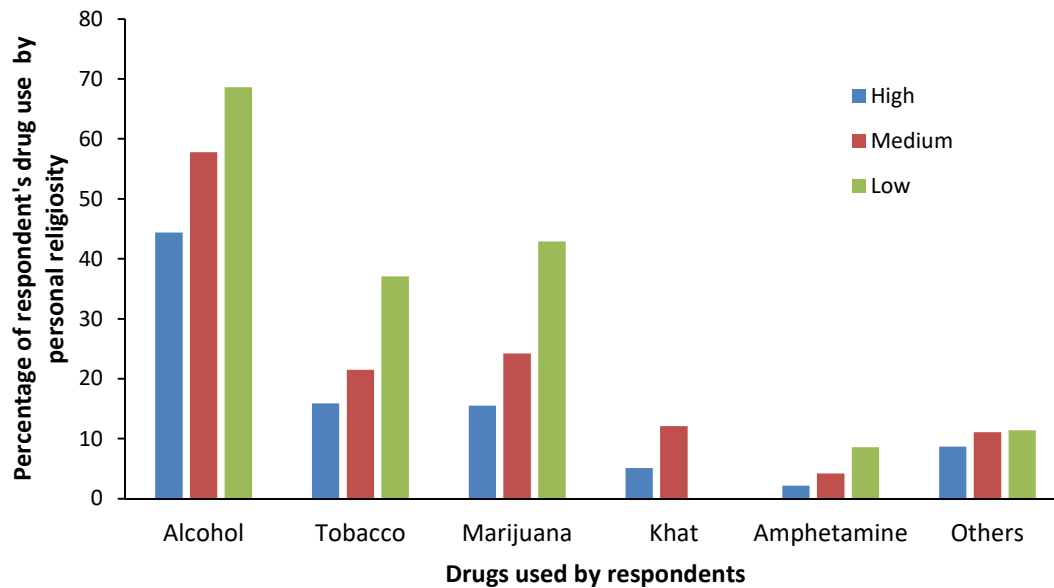


Figure 4: Personal Religiosity and Drug Use

Parental Religiosity and Drug use

On parental religiosity, respondents whose parents were highly religious were 38.6 %; medium religiosity 56.5% and low religiosity 4.9%. Respondents whose parents were seen to be highly religious were also found to be using alcohol, tobacco, and Marijuana at 70%, 25.5% and 29.2%. as compared to those whose parents were less religious at 45.7%. 22.9 and 25.7% respectively. There was no clear pattern that would suggest a significant influence of parental religiosity on respondents' drug use.

Table 8: Parental Religiosity and Drug Use

Parental religiosity	Alcohol	Tobacco	Marijuana	Khat	Amphetamine	Others	total respondents
High	70	25.3	29.2	11.6	4.7	13	38.6
Medium	42.2	16.3	16.3	7.2	3.2	8.6	56.5
Low	45.7	22.9	25.7	5.7	0	5.7	4.9
Drug use (%)	53.1	20.1	21.8	8.8	3.6	10.2	100

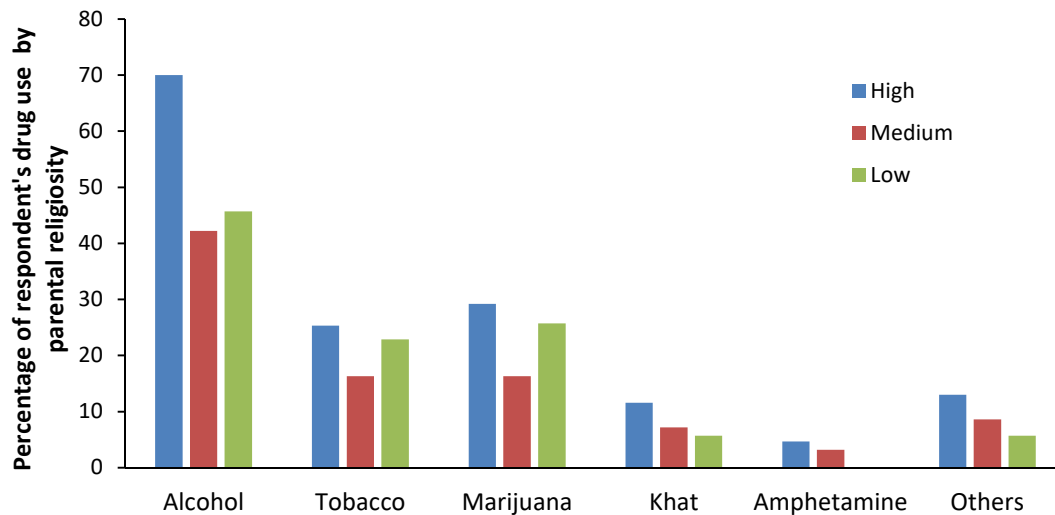


Figure 5: Parental Religiosity and Drug Use by Respondents

Perception of students on institution's religious stand and lowered drug use

Perception of students on the role of religious stand of the institution on the use of drugs was also measured. The respondents were asked whether the strong religious emphasis in their university discouraged students from using drugs and alcohol. In response, the students were to select one of the five choices including; strongly agree, agree, neutral, disagree, and strongly disagree. The responses were cross-tabulated with those on drug use. Students who believed that the institution's religious stand reduced drug use in the university were less likely to engage in drugs and vice versa. Those who agreed that religious stand of the institution discouraged them from using drugs but were still consuming alcohol were 53.8% while those who strongly

disagreed and were taking alcohol were 93.8% (*Figure 6*). The same trend was seen in other drugs such as tobacco where those who strongly agreed that the institution’s stand on religion discouraged them from smoking but were smoking was at 21.7% and while those who disagreed *and* were smoking is 31.3%. Alcohol and tobacco use was higher among students who disagreed that religious stand of the institution had any impact on their drug use at 93.8% and 31.3% respectively.

Table 9: Perception that Religious Stand of the Institution Lowers Drug Use among Respondents

Perception on religious emphasis (%)	Alcohol	Tobacco	Marijuana	Khat	Amphetamine	Others	total respondents
strongly agree	53.8	21.7	21.7	8.5	1.9	3.8	44.4
Agree	59.8	26.5	29.9	10.3	6	6	16.3
Neutral	61.6	19.8	26.7	11.6	3.5	11.6	12
Disagree	61.4	19.3	24.6	8.8	5.3	54.4	7.9
strongly disagree	93.8	31.3	43.8	18.8	12.5	6.3	2.2
(blank)	30.1	8.9	6.5	4.9	4.1	9.8	17.2
Drug use (%)	53.1	20.1	21.8	8.8	3.6	10.2	100

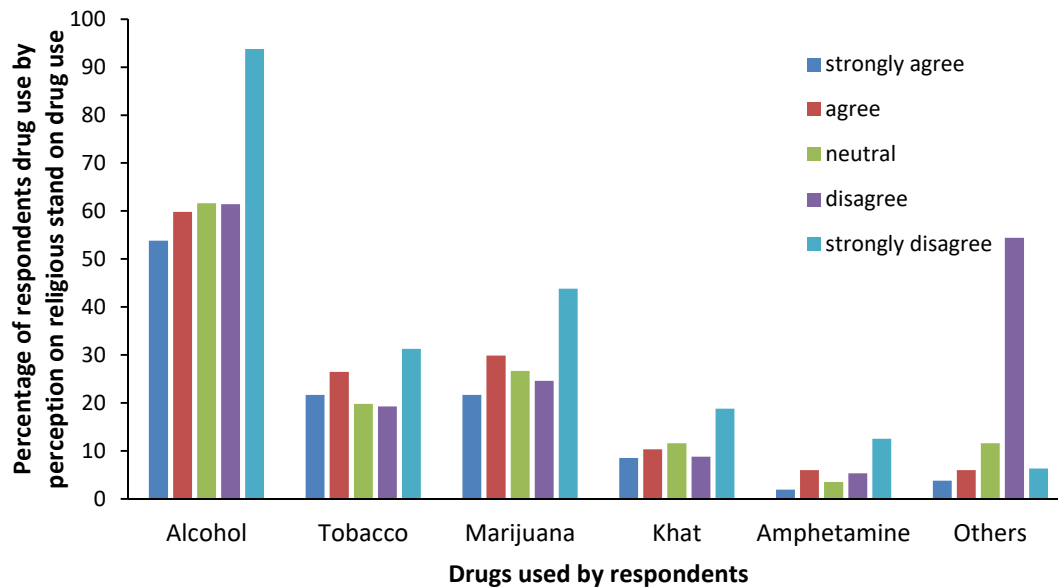


Figure 6: Perception on Institution’s Religious Stand and Drug Use by Respondents

Discussion

As confirmed by other studies, the commonly used substances among university students included alcohol, cannabis, tobacco and khat. The study also revealed that the majority of the

respondents used drugs for relaxation and to cope with stress. Institutions of higher learning should therefore provide forums for students to engage in co-curriculum activities such as religious activities and sports among others.

The negative correlation between religiosity and drug use has been documented extensively. Studies indicate that individuals who showed higher commitment to religion had lesser experiments with drugs (Edlund et al., 2010). Although this relationship has since been established, there were still gaps in highlighting which indicators had a stronger influence on reducing drug use among university students. The results from this study were in agreement with previous studies but went further to measure the level of influence for each indicator.

As already determined by other researchers, religiosity protects one from drug use in a number of ways. Religiosity may inhibit adolescent risky behaviors through instilled religious values that influence positive behavior. Additionally, expectations on good behavior make religious adolescents less prone to indulging in drugs. A greater percentage of those with low religiosity (68.6%) were found to be engaging in alcohol as compared to those who were highly religious (44.4%) (see *Table 5*)

From the study some indicators were seen to be stronger than others. Indicators such as salvation status and chapel attendance were seen to have no significant influence in reduction of alcohol or tobacco use. The university policy on chapel attendance could explain the high number of chapel attendance. Out of those who attended chapel regularly (n=498) only 29% indicated that they consumed alcohol regularly.

There was a significant difference in indulgence rate by affiliation. Researchers have related such to the religious affiliation of the individual with some affiliations seen to lack explicit deterrence policies on drugs and alcohol. While some religious groups/affiliations may prohibit drug explicitly while others do so through prescribing to behavior norms that would discourage one from engaging in drugs use (Gomes et al., 2013). Hence, religion can function as a control factor that determines whether the individual will engage or abstain from drug use.

Religion also offers opportunities for positive social engagement which are seen to promote abstinence from drugs; such activities include fellowship, Bible study and drug free sporting activities (Gomes et al., 2013). This can be confirmed from the results, where students who were seen to be highly religious were engaging in service in church, attending fellowships and spending their free time in worship. These factors as compared to chapel attendance were

seen to be based on the individual's decision and had more influence in reducing substance use. In this study, those who were serving in Christian fellowship subcommittee were engaging less in alcohol compared to those who were only attending chapel. Similarly, students who chose to engage their free time in worship had even lesser prevalence of alcohol use. Such kind of engagement brings religious adolescents together and reduces the chances that they would interact with deviant adolescents who are already using drugs (Mason & Windle, 2001). Therefore, adolescents who are less involved in religious activities are at a higher risk of substance use (Bartkowski & Xu, 2007).

Authors have determined that resilience is associated with abstinence from drugs. According to Bartkowski and Xu (2007), religious people have a high level of resilience and higher ability to maneuver through everyday life stressors without resorting to substance use. This resilience is also associated with recovery from substance addiction (Pardini, Plante, Sherman, & Stump, 2000). This is particularly important in this study because 26% of respondents were engaging in alcohol as a stress coping mechanism an indication of their inability to resolve their stresses appropriately.

Finally, although parental religiosity did not necessarily reduce drug use among students, it increased the chances of individual religiosity; 54% of students who were religious also had religious parents. This confirms the theoretical framework that the immediate environment that a child interacts with influences the child's holistic well-being. When parents are able to choose religious activities and socialization for their children, there is a high likelihood that the child will turn out religious and choose to engage in religious activities at the university (Bartkowski & Xu, 2007; Gomes et al., 2013).

Conclusion

Studies have confirmed that measuring religious commitment based on church attendance and salvation status as inadequate and does not give a full measure of an individual's religiosity. To cover this, researchers have defined religiosity as the commitment to activities of a particular religion. This commitment was measured through indicators that showed attitude and behavior of students who were considered religious. Individual religiosity based on attitude towards religion showed that students believed that religious principles were deterrence to engaging in drugs and that an institutions religious stand also influenced their decision to stay away from alcohol and tobacco. It was therefore concluded that elements of religiosity were associated with lower

reported drug use. Consequently, institutions and parents need to provide extra forums beyond church attendance that students can engage in. Alternative religious activities or forums have more influence in deterring drug use among university students. Finally, although this study was based on only one university, there is need for a National comparative study focusing on both religious based university and secular public universities to determine the level of drug prevalence. Further research on the role of parental and institutional religiosity in curbing drug use is recommended.

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