International J. Soc. Sci. & Education
2014 Vol.4 Issue 2, ISSN: 2223-4934 E and 2227-393X Print

Substance Abuse among Senior High School Students in Ghana

By

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Abstract

This study examined the abuse of substances among senior high school students in Cape Coast and Kumasi in Ghana. A sample of 244 students (40.5% males, 59.5% females; mean age =18.4 years) completed the Adolescent Alcohol and Drug Involvement Scale. A series of one-way analysis of variance tests (ANOVA) was used to determine the existence of any significant differences among variables. The results indicate that the mean AADIS scores (N=244; M=13.86; SD=16.436) was low. There were significant differences in gender F (1, 240) = 68.105, p < .001; age F(1, 240) = 28.273, p < .001; boarding and day students F(1, 240) = 13.287, p < .001; relationships F(1, 240) = 14.647, p < .001; locations F(2, 239) = 9.024, p < .001, and religion F(1, 240) = 9.371, p = .002. The results of this study clearly indicate a lower prevalence of substance use among senior high school students than those reported in other African countries and western countries.

Keywords: *Alcohol, Ghana, abuse, substance, students*

1. Introduction

Many researchers have consistently shown that substance abuse is a problem among youth (Byrd, Wietman & Doniger, 1996; Harlow, Newcomb & Benter, 1986; Odejide, 2006; Obot, 2004). Indeed, abuse of substance by adolescents has long been matters of great public health concern and pose important and difficult problems for society (Substance Abuse and Mental Health Services Administration, SAMHSA, 2003). Substance (Drug) is any substance, natural or chemical other than food that is taken to change mood, behavior, feelings, and or the psychological state of the target youth (Ministry of Health/World Health Organization, MOH/WHO, 2003). Substance abuse occurs when a person uses drugs or consumes alcohol excessively and typically causes significant problems in person's life (Simmons, 2008). For the purpose of this study; they include alcohol, cigarette, cannabis, cocaine, heroin, valium, and other drugs common in Ghana.

Reports from school surveys in countries across Africa show that the use and abuse of alcohol and drugs by adolescents start with alcohol and cigarettes (Obot, 2004; Odejide, 2006). A study by Peltzer (2009) on substance use among school-going adolescents in six African countries (Kenya, Namibia, Swaziland, Uganda, Zambia, Zimbabwe) indicates 6.6% of students surveyed engaged in risky alcohol use (two or more per day for at least 20 days or more in the past month) and 10.5% engaged in illicit drug use (three or more times ever). Peltzer (2009) further reported that school truancy, loneliness, sleeping problems, sadness, suicidal ideation, suicide plans, mental distress, lack of parental, peer pressure and poverty were associated with substance use (tobacco, alcohol, illicit drugs), while school attendance, parental supervision, and connectedness were protective factors for substance use.

According to Fatoye (2003), in a study among secondary schools students in south western Nigeria, 13% of students reported current alcohol use while 26% had ever consumed alcohol. To date, much of the available information on alcohol and drug usage in Ghana has come from a small number of cross-sectional research studies often conducted in a single location especially urban areas (Adu-Mireku, 2003; Amonoo-Lartson & Papoe, 1992; Lamptey, 2005) and from information on police arrests and seizures. Furthermore, accurate national statistics on the use of illicit drugs and the inappropriate use of over-the-

counter or prescription medicines (lifetime use in the last 12 months and use in last 30 days) are currently unavailable.

The most extensive research in Ghana on substance use among the youth was done by the Ministry of Health/World Health Organization (MOH/WHO, 2003) indicate that the average age at first use of substances ranged between 14-19 years, with extremes of 6 and 23 years. The findings indicate that substances most commonly used by the youth included alcohol, cigarette, cannabis, cocaine, tranquilizer and heroine and more common either at the school or at home.

Some of the reasons given for alcohol and drug use among the youth centered on the perceived benefits, such as enabling them to study, to do hard work, to get rid of shyness, and to forget about their problems; for curiosity, for fun, and due to peer pressure (MOH/WHO, 2003). Other reasons include the lack of parental control and rebelling against parents. In previous studies conducted in some other African countries and in Ghana researchers seem to indicate that lifetime prevalence rates of alcohol, cigarette, and cannabis are significantly greater for boys compared to girls (Adu-Mireku, 2003; Adelekan, 1989; Anumonye, 1980). Lamptey (2005) indicates that the importance of family cohesion plays a role in youth substance abuse in Ghana and the chances of substance abuse are less when the adolescent stays with both parents rather than others. Parents of abusers often are divorced, separated, or never married.

The present study was conducted to determine the prevalence of substance use among senior high school students in Ghana and look for between group differences among such variables as students' gender, age, residence, relationship, location, intact family, living with parents, and religious affiliation

Research questions

This study was designed to address the following questions:

1. To what degree is Substance use prevalent among senior high school students in Ghana?
2. Are there significant differences in rates of substance use among Ghanaian senior high students across gender, age, boarding, relationship, location (city, town, rural), divorce, living with parents and religious affiliation?

2. Methods

The Study Setting

This study is intended to address the populations of adolescents in Senior High Schools in Ghana. The setting for the study consisted of all individuals within the two schools in two metropolitan cities--Cape Coast and Kumasi. Choosing these two settings provided a sample of students within a confined geographic area, thereby facilitating the collection of data while at the same time meeting the requirements of socio-economic and gender differences.

Research Design

The study employed a non-experimental design. The data collected was analyzed using various statistical procedures that allowed the researcher to determine whether data supports, refutes, or elaborates on existing theory. The study involved the gathering of information about substance use/abuse among high school students in two different school settings.

Participants

Two senior high boarding schools designated "A" and "B in Cape Coast and Kumasi respectively were selected by purposive sampling because they were accessible to be studied, and they differ in terms of total student population and gender. "A" is a female school with a population of 903 students, while "B" is a male school of 1800 students. A total of 300 students were randomly selected from the total of 2703 students based on the number of classes in each grade out of which 244 usable surveys remained, for a usable response rate of 81.3%. Of those usable 244 surveys, 40.5% were males (N= 98) and 59.5% were

females (N=144). The sample comprised 146 females and 96 males and two participants that did not include gender. The mean age was 18.4 years.

Instruments

The Adolescent Alcohol and Drug Involvement Scale.

The Adolescent Alcohol and Drug Involvement Scale (AADIS) developed by Moberg (2005) were used to measure the degree of substance abuse. Higher scale scores represent higher levels of alcohol and /or drug involvement. The AADIS instrument was chosen for the study because it was written in simple English language and could be read by a 6^{th} grade child, was adaptable to different cultures, and because it is both reliable and valid. The AADIS consists of two sessions. The scored part B, survey self-completed version, (which is the focus of this review) comprises 14 items that pertain to both legal (e.g., cigarettes, alcohol) and illegal (e.g., cocaine, marijuana, and heroin) substances. The items are rated on 5-to-8 point scales with responses unique for each question. The AADIS was scored by adding the weights on items B.1-14 to the highest positive answer to each item in the section and given only one weight in the scoring (Moberg, 2005) logistic regression analysis identified an optimal cut score of 37 on the AADIS.

Other measures: gender, age, residence, relationship, location, intact family, living with parents, and religious affiliation.

Procedure

The researcher sought permission from the heads of the schools. A letter of invitation and consent was sent to students requesting their consent to participate in the study. All students were assured that their participation in the study was voluntary, a non-invasive one, and was not likely to cause any physical harm, and they were assured of the anonymity and confidentiality. After obtaining the required permission and consent, survey instruments were posted on Survey monkey website for six weeks March-April 2010. The first part requested students to complete personal information and the other parts consisted of the AADIS. Students took about fifteen minutes to complete the survey.

Data analysis

The data were analyzed via the Statistical Package for the Social Sciences for Windows, Standard Version 17.0 software (SPSS Inc, 2010) and the One-Way Analysis of Variance (ANOVA) for final analysis. Significance throughout was determined using alpha= 0.05.

3. Results and Discussion

Table1 displays the means and standard deviations of the AADIS for the participants in the study (N=244).

	N	Minimum	Maximum	Mean	Std. Deviation
AADIS	244	0	52	13.86	16.436
Valid N (listwise)	244				

1. To what degree is Substance use prevalent among senior high school students in Ghana?

The results of the descriptive data analysis show (table 1) that the mean AADIS scores among the senior high school students were low (N=244; M=13.86; SD=16.436). In the study, 180 students (76.1%) report that they have never used alcohol or taken any drug while 42.3% (44) and 44.9% students indicated that they drink wine and alcohol respectively. With regard to why they use alcohol, 47% (47) reported because of curiosity, 27.7% (28) reported they got alcohol from friends. It was also surprising that 27% (27) drink with friends, while 27% reported they drink alone. Students who reported

they have had only one drink was 52% (51) while 30.3% (40) indicated they had their first drink at ages 14 or 15. With regard to alcohol effects, 52.8% indicated Alcohol has no effect on their life. Thirty percent (30%) of the participants reports, alcohol is not a problem while 36% indicated they can control alcohol. This finding indicates the participants in the study use of alcohol and other drugs is lower than the rate reported by students in some of other African countries (Adelekan, 1989: Peltzer, 2009) and the United States of America with a previous study among senior high schools that 80% of the students had used alcohol at some point in their lives (Johnston, O'Malley, and Bachman, 2003).

A review of the descriptive statistics (table 2) computed for the AADIS administration reveals that the scores reported are quite varied. The large standard deviation indicates that participants' scores included outlying scores at both extremes. Given the nature of how the AADIS is scored, with 0 representing "no alcohol or drug use" and above 37 "meeting criteria for a substance use disorder", the gap between potential scores allows for extreme variance to occur should the sample include a mix of participants who have either never used or have a clinically significant problem with drugs or alcohol. The table two shows the descriptive statistics of the variables that includes number of participants' mean, Standard deviation, Standard error etc.

Table 2

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Gender	Male	98	25.28	16.282	1.645	22.01	28.54	1	56
	Female	144	8.78	14.525	1.210	6.39	11.18	0	58
	Total	242	15.46	17.254	1.109	13.28	17.65	0	58
Age	18	193	13.10	15.515	1.117	10.90	15.30	1	58
	19	42	27.98	20.185	3.115	21.69	34.27	1	53
	Total	235	15.76	17.364	1.133	13.53	17.99	1	58
Board Day	Board	225	14.21	16.684	1.112	12.02	16.40	0	58
	Day	17	29.59	17.986	4.362	20.34	38.84	1	48
	Total	242	15.29	17.196	1.105	13.11	17.47	0	58
Relp	YES	86	20.74	18.750	2.022	16.72	24.76	1	58
	NO	153	12.11	15.498	1.253	9.64	14.59	1	56
Location	Total	239	15.22	17.210	1.113	13.02	17.41	1	58
	Rural	8	30.63	19.071	6.743	14.68	46.57	2	51
	Town	64	20.78	19.535	2.442	15.90	25.66	1	58
	City	169	12.60	15.378	1.183	10.27	14.94	0	56
	Total	241	15.37	17.242	1.111	13.19	17.56	0	58
Divorce	YES	183	14.84	16.905	1.250	12.37	17.30	0	58
	NO	56	17.11	18.725	2.502	12.09	22.12	1	53
	Total	239	15.37	17.335	1.121	13.16	17.58	0	58
Live with Parents	YES	204	14.83	16.723	1.171	12.52	17.14	0	58
	NO	38	17.74	19.608	3.181	11.29	24.18	1	53
	Total	242	15.29	17.196	1.105	13.11	17.47	0	58
Religion	Christian	211	14.08	16.214	1.116	11.88	16.28	1	58
	Non Xtn	31	24.06	21.491	3.860	16.18	31.95	1	53
	Total	242	15.36	17.256	1.109	13.17	17.54	1	58

2. *Are there significant differences in rates of substance use among Ghanaian senior high students across gender, age, boarding, relationship, location (city, town, rural), divorce, living with parents and religious affiliation?*

A comparison of the mean AADIS score between males (M = 25.28, SD = 16.28) and females (M = 8.78, SD = 14.25) within the sample revealed significant differences in gender F (1, 240) = 68.105, p < .001. The analysis revealed AADIS mean score of the female students in the study was significantly lower than male students. The results of the present study show a significant difference in gender with greater use of alcohol and drugs in males than females. This finding is consistent with the results of studies that have been reported in other African countries (Adu-Mireku, 2003, Adelekan, 1989). The differences between gender are significantly ($p<0.001$). There has always been gender imbalance in substance abuse. This has led to various explanations, however the most appealing explanation is that propounded by Maccoby and Jaklin (1974) they postulated that it is possible that these inequalities in gender distribution may be due to, some degree, and the innate differences between both sexes in their readiness to learn certain behaviours. Thus, males are associated with aggression, violence, independency and adventurism, which are potent factors in the initiation of substance abuse. Women are, on the other hand, conceptualized as more emotional less aggressive, more dependent and less adventurous. These explanations are still controversial. Factors like ignorance, modeling and rebellious acting-out against authorities may also play an important role as well as peer pressure. As Ghana society becomes more modernized, the traditional gender differences in substance use rates may decline.

The mean AADIS score of the age 18 year students (N=193; M=13.10; SD=15.52 was compared to the 19 year students (N=42; M=27.98; SD= 20.19) within the sample found significant difference in age, F(1, 240) = 28.273, p < .001. Students of 19 years scored significantly higher on the AADIS than students of 18 years age. This may indicate that age could be a predictor to determine the use of alcohol and substances.

The mean AADIS scores of the students who resided on campus-"boarding" (N=225; M=14.21, SD=16.68) were compared with the mean AADIS score of those who resided off campus- day"(N=17; M=29.59, SD=17.99) revealed significant difference in which boarding students showed a significantly lower score than day students F(1, 240) = 13.287, p < .001. In terms of serious relationship between the "opposite sex" (N=86; M=20.74; SD=18.75) and NO serious relationship with the "opposite sex" (N=153; M=12.11; SD=15.50), students in serious relationship with the "opposite sex" scored significantly higher than those students in NO serious relationship with the "opposite sex" 2, F(1, 240) = 14.647, p < .001. A significant finding was discovered, F(2, 239) = 9.024, p < .001.

Comparisons between rural, town and city were made. Multiple comparison tests were used to determine where the differences were and it was discovered that those in the city scored significantly lower than those in towns and rural settings. There was no significant differences, however, between rural and town. It appears that those adolescents in the study live in conditions of socioeconomic disadvantage and that they are likely to be exposed to substances compared to those living in the cities. This could be explained with the findings of Kodjo and Klein (2002) that the more available drugs are in a given community; the more likely it is that adolescents will report using them. It may also appear that the norms, beliefs and behavioral in the rural or town communities of these students live are not enforced. Furthermore, many rural and town parents temporarily migrate to work in cities leaving their adolescent children with some people or relatives where there are no monitoring.

There was no significant difference between those children whose parents were divorced and those who were not on the AADIS, F (1, 240) = .735, p = .392. This is not consistent with the previous studies that experiencing parental divorce has been shown to increase the risk for alcohol use and likely to use tobacco than adolescents living with both parents among adolescents (Menning, 2006; Groesbeck, 2003). Indeed, Amato (1993, 2000) has indicated that the family emotional stressors that often accompany

marital discord may explain the increase in risk for substance use frequently observed among adolescents of divorced parents.

It may be argued that emotional deprivation is not a serious problem in Ghana because the traditional practice of extended family ties creates strong commitment to family members. Indeed, this practice is, gradually disappearing and giving way to nuclear family practice. Nevertheless, it also appears from the present study that the chances of substance abuse are less when the young or the adolescent stays with extended families even when there is divorce. Finally, the results show that divorce, living with parents had no significant association with students' use of drugs. It is thus not surprising in the study that students living with parents and those not living with their parents found no significant difference on the AADIS, $F(1, 240) = .913$, $p = .340$.

The mean AADIS score of those who are Christians compared to those with no religious belief found Christians scored significantly lower on the AADIS than their counterparts with no religious affiliation $F(1, 240) = 9.371$, $p = .002$. Religiosity also emerged to be a significant predictor of alcohol and drug use among adolescents. Specifically, participants who reported to have no religious affiliation were significantly more likely to report higher use on the AADIS than their peers who reported to have religious affiliation. This finding is also consistent with previous work in Lebanon and the United States of America (Edlund et al, 2010; Ghandour, Karam, & Maalouf, 2009) showing the protective nature of religiosity. This study indicates that one's religious life has something significant to say about one's mental health. AADIS Variables and significant relationships are summarized in Table 3.

Table 3

Variable	Value	N	Mean	SD	F	p
Gender	male	98	25.28	16.28	68.105	<.001
	female	144	8.78	14.25		
Age	18	193	13.10	15.52	28.273	<.001
	19	42	27.98	20.19		
Boarding	1	225	14.21	16.68	13.287	<.001
Day	2	17	29.59	17.99		
Relationship		86	20.74	18.75	14.647	<.001
No Relp		153	12.11	15.50		
Location	Rural	8	30.63	19.07	9.024	<.001
	Town	64	20.78	19.54		
	City	169	12.60	15.38		
Intact family	1	183	14.84	16.91	0.735	0.392
Divorced fam	2	56	17.11	18.73		
Live w Parents?	1	204	14.83	16.72	0.913	0.340
Not w parents	2	38	17.74	19.61		
Christianity	1	211	14.08	16.21	9.371	0.002
Other Religion	2	31	24.06	21.49		

Limitations

A few limitations to the current study should be noted. First, the current study was based on only two schools; the results of the current study could not be generalized to the general senior high school

population in Ghana. Second, the data are based on self report survey and as a result, participants might not be willing to disclose their use of alcohol or drugs in spite of the anonymity and confidentiality.

4. Conclusion and Recommendations

The purpose of the study was to find out the degree of substance use prevalent among senior high school students in Ghana. It was also to determine the significant use of substance by gender, age, boarding, relationship, location (city, town, rural), divorce, living with parents and religious affiliation. There were significant differences in gender, age, residential, relationships, locations and religions in relationship to substance use. However, there were no significant differences between those children whose parents were divorced, as well those students who lived with their parents and those who did not.

The study makes a significant contribution to the literature on adolescent alcohol and drug use in Ghana. The current findings indicate that the prevalent rates of alcohol and drug use are low as measured by the AADIS scale. Nevertheless, there is still the need to strengthen the efforts through prevention and educational programs in junior and senior high schools in Ghana. With the introduction graduate programs in counseling in tertiary institutions, many teachers have enrolled in Master Degree in Guidance and Counseling programs. As we live in a global world, adolescents are in search of looking for new information through the internet. Invariably, information on alcohol and drugs may not be an exception. Parents and community leaders should enforce the cultural values and norms that can protect the adolescents form involving themselves in behaviors that could affect their future career. Government agencies, non-Governmental agencies, and youth related institutions of training must have design programs directed at addressing the problem of drugs as part of its curricular or extracurricular activities. Such programs must address all facets of adolescents and drugs, as well as teaching them empowerment approaches that serve to keep them away from drugs. Future research is needed to replicate these findings so that cross sections of the senior high schools students in Ghana have an opportunity to participate in the study to ensure that no particular segment of the population is overrepresented or underrepresented.

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