MAGNITUDE TO WHICH SELECTED PREDICTORS CONTRIBUTE TO ALCOHOL AND CIGARETTE USE AMONG MALE STUDENTS OF PUBLIC DAY SECONDARY SCHOOLS IN DAURA MUNICIPAL, KASTINA STATE

[1]Aliyu, Mohammed, PhD & [2]Ahmed, Sani Getso

1. Department of Physical and Health Education, Federal College of Education Kontagora, Nigeria
2. Department of Human Kinetics, Ahmadu Bello University Zaria, Nigeria

ABSRACT: *The increase in alcohol and cigarettes use among young people than any population strata is of great concern. The use of alcohol that began in African traditional society as an activity for political, religious, cultural and social relations has evolved over time into a problem of dependence and addiction. Despite concerted prevention efforts, studies have been conducted to unravel etiological complexities of this drugs use problem. This study sought to examine the extent to which the family predictors, peer-group influence, exposure to pro-alcohol and cigarette mass media content and level of self-esteem contribute to the use of alcohol and cigarettes among male students in public day secondary schools in Dauru municipality, Kastina. To achieve this purpose, ex post factor research design was used and independent variables were studied retrospectively. Multistage cluster, probability proportionate to size and purposive sampling methods were used to select the participating schools and respondents. A sample size of 327 students was selected from total population of 2279 from nine sampled schools. A self-administrated questionnaire was used to collect data on students 'demographic and background characteristics, level of self-reported alcohol and cigarettes use and social influence [parents, siblings' and peers and exposure to pro-alcohol and cigarettes mass media content] that promote use of these drugs. Rosenberg self-esteem scale was used to measure respondents 'self-esteem. Data was analyzed by used of frequencies, percentages, cross-tabulation, chi-square and logical regression. SPSS version 15.0 computer program was used to aid in data analysis. The study established that peer-group influence had the greatest contribution to high alcohol and cigarettes use, followed by family predictors accounted for 44% of high alcohol and cigarettes use collectively. These findings may be useful in prioritizing targets for prevention and intervention programs*.

KEYWORDS: Alcohol, cigarette use, Family predictors, Mass media, Self-esteem, Parental influence.

INTRODUCTION

The use of alcohol and cigarettes cuts across the whole population strata but at high risk are the youths and often it begins at or even before adolescence [National Drug Law Enforcement Agency.

(NDLEA, 2010a); National population commission (NPC, 2012).The vast majority of students in many places in the world experiment at least with alcohol and tobacco but a few will become drug abusers (Papalia, Olds and Feldman, 2010). For example, in USA in 2006,72.7 and 47.1% of American students of 12 th grade reported to have used alcohol and cigarettes in their lifetime respectively (Johnston *et al*; 2006] There is evidence of alcohol and cigarettes use not only with college students but also with secondary school students in Nigeria and Senegal   (Fatoye and Morakinyo, 2010; Abasiubong *et al*; 2008). A study conducted among government secondary student in Gibia town, and Kaduna State revealed that the prevalence rates for use of cigarettes and alcohol were 27 and 31% respectively (Flisher *et al*; 2003). In Kastina 2005, 27.7 and 8.3% of students interviewed from primary school to university reported 'lifetime use 'of alcohol and cigarettes respectively (NDLEA, 2010b). In the same year in Gibia Town which is one of the eight town of Kastina in which Daura municipality is located, the NDLEA Survey indicated that 21.6 and 6.1% of students, reported lifetime use of alcohol and cigarettes respectively.

The above mentioned prevalence of alcohol and cigarettes use has coursed the concern that the students may not reach their full potential and may be at high risk to abuse drugs later in life. The toxic effects of alcohol and cigarettes may cause short term and long term health damage on students (NDLEA, 2012; Escander and Galvez, 2005). The students, who use drugs, are likely to perform poorly in school, have strained relationship with their parents and teachers and engage in delinquent behavior (USAID, 2006). The earlier the age, at which the students begin using drugs, the more they are likely to use or abuse the drugs as adults. John *et al*, (2000), found that 37 of the boys, who reported using the drug by age 13, later met the criteria for drug dependence compared to 3 % of those who did not try drugs by age 13. Risk sexual behavior after alcohol intoxication has been central to the spread of HIV/AIDS (National AIDS/STD Control program (NASCOP), 2005). Neither abstainers nor the community are spared by the consequences of alcohol and cigarettes use. Passive smoking is the third preventable cause of death after active cigarettes smoking and alcoholism (Tobacco Free Initiative, 2004). The use of drugs has been associated with institutional unrest and destruction of property (Gathiari, 2002; NDLEA 2010). With these negative consequences associated with alcohol and cigarettes, it is imperative to put in place strategy that will prevent or reduce the likelihood that student will use these drugs.

The following objectives guided this study. To establish the extent to which the following factors contribute to alcohol and cigarettes use among public day secondary school male students in Daura Municipality, kastina:

   (i) Family factors
   (ii) Peer-group influence
   (iii)Exposure to pro-alcohol and cigarettes mass media content
   (iv)Level of self-esteem.

LITERATURE/THEORETICAL UNDERPINNING

Predictors contributing to alcohol and cigarettes use

Numerous studies have been conducted to unravel etiological complexities of alcohol and cigarettes use in an attempt to search for effective prevention programs. It is evident from the studies done that a variety of factors account for initial experimentation of these drugs and progression to more frequent drug use patterns. However, family predictors, peer-group influence, exposure to pro-alcohol and cigarettes mass media content and level of self-esteem are among the major risk factors contributing to alcohol and cigarettes use (Hawkins *et al*; 1992) s studies have documented that correlations do exist between social influences that arise from parents, siblings, peers and mass media with alcohol and cigarettes use (Hwang and Akers, 2006; Gibbs, 2005; Bahr *et al*; 2005; Sergeant *et al*; 2001). Others investigations have found that the students with low self-esteem than those with high self-esteem were more likely to use alcohol and cigarettes (Don-Nelly, 2004).

Whereas research has identified alcohol and cigarettes use risk factors, few studies have examined which of these factors most strongly contributes to the use of these drugs. Kendal, Kessler and Margulies (1978) as cited in Bovine [2006] noted that the extent of personal, parental and peer influences on drug taking differed in the four stages [drinking of alcohol, smoking of cigarette, smoking of marijuana and using of hard drugs like cocaine and heroine] of adolescent drug use progression. According to Kendal, Kessler and Margulies (1978). Starting to use alcohol and cigarettes was determined primarily by parental and peers 'influence not very much by personal characteristics of the adolescent. Peer modeling more than parental modeling influenced the initiation into marijuana use. Personal factors like low self-esteem and psychological distress were likely to play a role in initiation into marijuana use. Personal factors like low self-esteem and psychological distress were likely to play a role in initiation of had drugs. Hwang and Akers (2006) asserted that parental variables contributed less than peer variables because adolescents spent more time with their peers than the parents.

Similarly, Brooks *et al*. (2006) on their study on 1468 adolescents aged 12 – 17 from south America indicated that personal attributes and peer drug use explained largest proportion of variance in adolescent frequency of illegal drugs.

 The study focused on the family, peer-group, exposure to pro-alcohol and cigarettes mass media and level of self-esteem. Studies have shown that family is a primary context in which the adolescents (student) learn behaviors from parents and siblings (Fuhrman\, 1986). Adolescent is stage that is characterized by extensive network of peer groups than any age bracket (Fossey, 1994; Escander and Galvez, 2005). The students are exposed to intense sociability, conformity to group rules and pressure from peers get stronger than before during the same stage, mass media exposure reaches its peak and the level of self-esteem drops considerably (Santrock, 2005; Fuhrman, 1986).

3

In light of these findings, the family, peers, mass media and level of self-esteem were selected for this study. The study focused on alcohol and cigarettes because they are regarded as ' 'gateway drugs ' ' as their use often leads to the use of more addictive drugs such as marijuana, cocaine and heroin (NDLEA, 2010a; Johnston *et al*; 2006; Papilla *et al*; 1999.] Therefore, the intervention that focuses on these drugs may prevent or reduce the likelihood of the students advancing to use more addictive drugs like heroin and cocaine. Moreover, the legal and social status of these drugs makes them easily available and accessible to the students (Escander and Galvez, 2005). Three fundamental questions motivated the need for this study; first, which of the factors (family, peer-group influence, pro-alcohol and cigarette mass media, and self esteem) has the strongest contribution to alcohol and cigarette use. Secondly, could the strong contrition of one factor sufficiently foster use of alcohol and cigarettes use even when other factors are minimal? Thirdly, what is the contribution of the four selected factors to alcohol and cigarettes use when examined all together?

The study contributes to existing body of knowledge on drug use and prevention in several ways ; whereas previous studies have shown that peers contribute more than parents do, it is still unclear how much of the peer-group influence is due to socialization or selection. Other studies such as Kendal *et al*. [1978], in their analysis of the extent to which parental, peer and personal characteristics contribute to drug use progression. The study by Brooks *et al*. (2006) focused on illegal drugs.

From the available literature, there is no known study on extent that has combined these four factors (family, peer-group, exposure to pro-drug mass media and low self esteem) and examined their collective contribution to alcohol and cigarettes use. Furthermore, few studies on the extent to which factors contribute to drug use were conducted in other countries and hence they may not be applicable to the Kastina situation.

METHODOLOGY

The study used ex post factor research design that is defined as systematic empirical inquiry in which the researcher does not have direct control of independent variables because the manifestations have already occurred or inherently not manipulated, (Ker linger, 2006). The independent variables (family factors, peer-group, exposure to pro-alcohol and cigarette mass media content and self-esteem) were studied retrospectively to establish possible significant association with alcohol and cigarette use (dependent variables).

Location and population

Daura municipality is one of the eight town that kastina District is made of. it is situated within Daura town, the local government headquarters of Gibia town, kastina State. Daura municipality had 18 public day secondary schools with total enrolment of 3296 male students in forms two to four as at February, 2008. The study focused on nine of these schools with a total enrolment of 2279 male students. The study confined itself on male students because they have reported higher use of alcohol and cigarettes than girls in most past studies (NDLEA, 2010a; NDLEA, 2012). The age of respondents ranged 15-20 with a mean age of 16.4 (SD =2.1). As by grade (form) distribution 26.3% of the respondents were in form two, 35.4% in form three and 38.3% in form four.

Sampling procedures and sample size

Multistage cluster, purposive and probability proportionate to size (PPS) sampling methods were used to select participating schools and respondents. In multistage. Cluster sampling, there were two stages. First, the research drew a sample of schools from the population of schools as described below. Then a sample of male students was selected from those enrolled in the sampled schools. In this study, a sample size of nine public day and government secondary schools was obtained. This size was determined by the following formula recommended by Nassiuma (2000).

$$n = \frac{NC^2}{C^2 + (N\text{-}1)\, e^2} = \frac{18 \times (0.2)^2}{(0.2)^2 + (18\text{-}1)\, (0.05)^2} = 9$$

Where 'n' was the required sample size of schools, 'N' was the total number of public day and government secondary schools in the municipality, 'C' was the coefficient of variation and 'e' was the margin error (Nassiuma, 2000). For this study N = 18 schools, C = 20% and e = 0.05.Then, the schools were purposively selected based on the two criteria; first, the school should be located in central Business District (CBD) civic ward and civic wards neighboring CBD of Daura Municipality. Secondly, the schools should have had alcohol and cigarettes use manifestations among some of their students prior to the study according to the information gained from their school counselors. The sample size of 327 male students in forms two to four was obtained using a table for determining sample size as recommended by k athuri and pals (1993). After administration of the research instruments 53 respondents (16.2%) were eliminated becouse0f inconsistent responses, failure to meet the inclusion criterion (respondent should have used alcohol or cigarettes at least once in lifetime or scored at least 9 in Alcohol and Cigarettes use index) and missing data (respondents did not complete in filing in all the items of the research instruments) The final sample that was included in data analysis was 274. The method of probability proportionate to size (PPS) was used to get the exact number of male students per school to be included in the sample size. With PPS, the researcher chose the number of male students to be included in the sample for each school in proportion to the total male students'

5

enrolment of the schools selected. The method assisted the researchers to minimize under sampling or over sampling.

The male students in forms two to four who were still using or had used alcohol and cigarettes prior to the study at least once in life time met the inclusion criterion. This was based on prior information gathered from school counselors, and if a respondent scored at least 9 in Alcohol and Cigarette use Index.

Instrumentation

The researchers used a self-administered questionnaire and Rosenberg self-esteem scale to collect data. The questionnaire was used to collect data on demographic and background characteristics of the respondents, self-reported alcohol and cigarettes use as well as social influences (parents siblings, peer-groups and pro-alcohol and cigarettes mass media content) that promote alcohol and cigarettes among respondents. The researcher used Rosenberg self-esteem scale (Rosenberg, 1989) to measure global self-esteem of the respondents. The questionnaire and Rosenberg self-esteem scale were pre-tested and their reliability coefficients were 0.8 and 0.88 respectively. The reliability coefficients were calculated using the spearman-Brown prophecy formula. The instruments were found appropriate because they were reliable, easy and fast to administer to a group of students.

Data analysis Technique

The data collected was edited, coded and scored. Scoring involved the following procedures: single index for each selected factor (independent variable) was calculated by adding the scores of responses in individual items that measure the particular variable. Then, the scores for independent variables were ranked into high, moderate and low categories. Alcohol and cigarettes use was measured by the number of occasions the drugs had been used in life-time, past year, past month and daily on five-level scale. Then, the scores in Alcohol and cigarettes use were ranked into high and low categories. Frequencies, percentages, cross tabulations: chi-square and logistic regression were used to analyze data. SPSS version 15.0 aided in data analysis.

RESULTS/FINDINGS

The findings of the study have demonstrated that there existed significant association between parental influence and alcohol and cigarettes use among the respondents (x^2 = 34.65, df = 2, p< 0.05). The analysis of results indicated that 82.0% of respondents who were low alcohol and cigarettes users had reported low parental influence as compared to 4.0% who had high parental influence. On the other hand, 47.9% of high alcohol and cigarettes users reported high parental influence compared to 10.4% who reported low parental influence. Moreover, the results indicated that 60% of the respondents who were high alcohol and cigarettes users perceived their fathers as

currently using alcohol and cigarettes. This is compared to 6.3% of high alcohol and cigarettes users who perceived their mothers as currently using these drugs. This implies that fathers' current use alcohol and cigarettes contributes more among respondents than mothers' current alcohol and cigarettes use. On the other hand, of the respondents who perceived that their mothers had never used alcohol and cigarettes, 89.5% had used these drugs highly as compared to 38.0% who perceived their fathers not using these drugs. This implies that the mothers who were not using alcohol and cigarettes did not protect the respondents from risks of using these drugs.

The study also established that there was significant relationship between sibling influence and alcohol and cigarettes use among the respondents ($x^2 = 46.70$, df = 2, p < 0.05). The results indicated that 79% of low alcohol and cigarettes users had low sibling influence and this is compared to 1.2% who had high sibling influence. The high alcohol and cigarettes users and who had high sibling influence were 50.0% while those who had high alcohol and cigarettes use but low sibling influence were 6.3%.The results have shown that respondents who perceived that their older sibling used drugs were more than those who perceived younger sibling used drugs. There were 74.6% and 71.6% of the respondents who perceived that their older sibling used alcohol and cigarettes respectively.

In addition, the study findings found that peer-group influence was significantly associated to alcohol and cigarettes use ($x^2 = 66.77$, df = 2, p < 0.05). From the results 69.8% of respondents who had low alcohol and cigarettes use had low peer-group influence as compared to 1.7% who had high peer influence. The respondents who had low peer group influence.

The results of this study found that socialization and selection had almost equal contribution to peer-group influence on alcohol and cigarettes use. The respondents who indicated that they chose to associate with peers who used these drugs were 69.3% and of these, 36% were their best friends. The respondents who indicated that they were socialized by peers to use drugs were 72.9% and of these, 27.5% were socialized by their best friends.

Also, exposure to pro-alcohol and cigarettes mass media content was significantly related to levels of alcohol and cigarettes use ($x^2 = 13.63$, df = 2, p < 0.05). The findings indicated that 52.9% low drug users reported low mass media exposure as compared to 9.3% who reported high mass media exposure

For high alcohol and cigarettes users, 56.2% had high mass media exposure. This is compared to 4.2% high alcohol and cigarettes users who had low mass media exposure. The results indicated that 15.7% of the respondents had seen or heard pro-alcohol and cigarettes advertisement in the television. This is compared to 12.3% of the respondents who accessed pro-alcohol and cigarettes advertisement on the internet. The respondents, who accessed to alcohol and cigarettes advertisement on the internet. The respondents who saw, read or heard pro-alcohol and cigarettes

7

contention movies (14.8%), radio (14.4%), magazine (14.4%) street billboards (14.0%) and newspapers (14.4%) were almost the same.

Similar to the results of other studies, findings of this study found that self esteem was significantly associated to alcohol and cigarettes use among the respondent (2 = 35.98, df = 2, p < 0.05). The results indicated that 39.5% of low alcohol and cigarettes users had high self esteem compared to 23.3% of low alcohol and cigarettes users who had low self esteem. Those who were high alcohol and cigarettes users and had low esteem were 56.3%. This is compared to 14.5% who reported high alcohol and cigarettes use and high self esteem. The results indicated that the majority of respondents had low (33.2%) and medium (33.9%) level of self-esteem.

From the results of binary logistic regression, the overall model was statistically significant (x^2= 93.394, df = 6, p < 0.05). This meant that at least one of the selected predictors significantly predicted high alcohol and cigarettes use. The R-squared was 0.44 meaning approximately 44% of high alcohol and cigarettes use was accounted for by selected factors in the model. The weald statistic indicated that each selected predictors had significant associations with alcohol and cigarettes use. The strength of contribution of each selected factors was ranked using the product of unstandardized simultaneous logistic regression coefficients (B) and standard Error (SE). From these results, peer group influence had the greatest contribution (0.529) to high alcohol and cigarettes use, followed by family (0.409), level of self esteem (0.206) and mass media (0.135).

The sibling influence (.281) had more contribution to high alcohol and cigarettes use than parental influence (.239). From the exponential results, peer-group influence had the greatest positive contribution (5.319) to high alcohol and cigarettes use, followed by family predictors (3.430), and pro- alcohol and cigarettes mass media (1.020) in that oder. This meant that the likelihood for high alcohol and cigarettes use was 5.319 times higher than likelihood for low alcohol and cigarettes use for one-unit change in peer-group influence when other predictors were held constant. The level of self-esteem had negative contribution to high alcohol and cigarettes use. For one unit increase in the level of self-esteem, the likelihood for high alcohol and cigarettes use was 0.467 times lower than the likelihood for low alcohol and cigarettes use when other predictors held constant. This meant that level of self esteem was negatively associated to the level of alcohol and cigarettes use.

Discussion of Findings

The current study found a relationship between parental influence and respondents' alcohol and cigarettes use. The results were similar with the findings of past studies that found an association between adolescents' perception of having parents who use or who have favorable attitudes towards drug use and their use of alcohol and cigarettes (ADAMS, 2006; Hwang Akers, 2006; Kimmel and Weiner, 1995; McDonald *et al*. 1993). The study findings indicated that respondents who perceived that their fathers used alcohol and cigarettes in the past and currently using them

8

were more than those who perceived that their mothers used these drugs in past or currently. These findings were consistence with previous studies that postulated that paternal alcohol and cigarettes use was a significant predictor of use of these drugs among male adolescents (O' Conner, 1978). These results concur with social learning theory that guided the study which asserts that individuals model behaviors of significant others (Bandura, 1997).

Moreover, the findings indicated that having siblings who used alcohol and cigarettes and had favorable attitudes towards these drugs increased the likelihood of respondents' high alcohol and cigarettes use. The findings concurred with previous research findings (Hops *et al*. 2000). In support of previous studies, findings suggest that sibling influence was due to socialization (social learning) than genetic similarity as older siblings contributed more to drug use than the younger siblings (Gibbs, 2005). The findings supported the social learning theory that emphasizes the importance of observing and modeling attitudes and behaviors of significant others (Bandura, 1997). The results indicated that number of respondents who associated with peers using alcohol and or cigarettes were almost the same to those who socialized (introduce and encouraged) by peers to use these drugs. This finding concurred with previous study that asserted that socialization and selection effects had equal contribution in peer-group influence (Ennett and Bauman, 1994).

The result indicated that there was an association between exposure to pro-alcohol and cigarettes mass media and alcohol and cigarettes use among the respondents. The findings were consistent with previous studies that postulate that video characters using alcohol and cigarettes and advertisements in electronic and print media have the potential to influence the attitude concerning acceptability of the use of these drugs and may motivate the students to model the behaviors (Latonia and Sicilia, 2006, Madera, 2004, Escander and Galvez, 2005, Sergeant *et al*, 2001). From the results, majority of respondents who watched pro-alcohol and cigarettes television advertisements and videos (with characters using alcohol and cigarettes) and this was consistent with the past study (Oweke, 2005).

The research findings indicated that most of those who had low level self-esteem scored highly in Alcohol and Cigarettes Use Index and vice verse. These findings concurred with past studies that postulated that level of self-esteem and drug use were negatively correlated (John *et al*, 2006; Parker and Benson, 2004; Dubois and Silver thorn, 2004). The results indicated that majority of respondents had low and medium self esteem and this was consistent with similar research that postulated that self-esteem drops drastically during early adolescence and improve as individual grow to late adolescence (Santrock, 2005).

From these results, 56% (1-R then multiplied by 100) of the likelihood to high alcohol and cigarettes use was not accounted for in the model. The findings were consistent with the bio-ecological theory that guided the study that recognizes that behavior (alcohol and cigarettes use)

9

is as a results of dynamic interact of multiple predictors within the individual and the environment (Bronfenbrenner, 2000).

CONCLUSION

The perception of parental and sibling use of alcohol and cigarettes and favorable attitude towards these drugs use had association with the respondents observed parents or and siblings using drugs, they took it as an acceptable behavior for them to imitate.

Peer-group influence on alcohol and cigarettes use among the respondents could be explained by both socialization and selection effects. This meant that the respondents were not encouraged by their peers to use alcohol and cigarettes but also they chose to associate with peers who used them.

The majority of respondents (more than half) had medium and high exposure to pro-drug mass media content. The pro-alcohol and cigarettes mass media exposure was associated with respondents' use of these drugs.

More than half of total respondents had low and medium levels of self-esteem. The level of self-esteem were negatively correlated with the level of alcohol and cigarettes use.

Peer-group influence had the strongest contribution to high alcohol and cigarettes use. It was followed by family predictors, level of self-esteem and mass media exposure.

The selected predictors accounted for less than half (44%) to high drug use. Therefore, high alcohol and cigarettes use was associated with many risk predictors.

RECOMMENDATIONS

(i) Alcohol and cigarettes use prevention programs should be broad-based with priorities, to target on peers, siblings and parents for effective results.
(ii) Self-esteem enhancement program should be included in alcohol and cigarettes use prevention. Self-esteem has been envisaged as 'social vaccine that empowers individuals and inoculates them against socially undesirable behaviors' (California Task Force to Promote Self Esteem, 1990).
(iii) Multi-media campaign against drug use should be included in prevention program. Mass media should be used to communicate anti-drug messages as it has an advantage of reaching large audience that make it cost effective.

SUGGESTIONS FOR FUTURE RESEARCH

The study was limited in regards to causal inferences; there is need for longitudinal study to examine casual relationship between independent variables and dependent variables. A cohort of

10

respondents may be followed over a period of time to determine how the selected predictors interact and change while the extraneous variables are statically controlled. It is also noted from the results that peer-group influence made the greatest contribution total drug use variation. A further study is recommended to explain why peers have greatest contrition on drug use among the respondent.

REFRENCES

Adams G (2006). Reconsidering adult influence on adolescent drug use. Paper presented at annual meeting of American sociological association, montereal convention center, Monteal. Retrieved January 2008, from http;//www.allacademic.com/meta/index.html.

Abasiubong F, Atting I, Basey E, Ektt J (2008). A Comparative study of use of psychoactive substances amongst secondary school students in two lacal government areas of Akwa Ibom state, Nigeria. Nig. J. Clin. Pract. 11 (1); 45-51.

Bandura A (1997). Self-efficacy; The exercise of practice. New York; W.H. Freman

Bahr S, Hoffmann jp, yuang X (2005). Parental and peer influence on the risk adolescent drug use. Retrieved January 2008, from http;//www.springe-link.com/content J. Prim. Preventions 26 (6);529-551.

Bauman KE, Susan TE (1996). The impotance of peer influence for adolescent drug use; commonly neglected considerations. Retrived January 2008, fromhttp;//www.black-well-synergy.com/doi/abs. Addictions 91 (2); 185-198.

Berndt TJ, Perry TB (1990). Distinctive features and effects of early adolescent relationship. In R. Montemayor GR, Adams, TP Gullota (Ends) from childhood to adolescence; A transitional period? New-Bury park, CA; Sage Publication

Botvin GJ (2006). Preventing drug abuse through the schools: inter-vention programs that work. Retrieved January 2008, from http://www.nida.nih.gov/MeetSum/CODA/Schools.html

Bronfenbrenner U (2000). Ecological theory.In A. Kazdin (ed.) Encyclopedia of psychology. Wshington, DC:America psychological Association.

Brooks SD, Morojele NK, Pahl PK, Brooks MD (2006). Predictors of drug use among South American adolescents. J. Adolesc. Health 38(1): 26-34.

California Task Force to promote self Esteem and personal and social Responsibility (1990). Towards a state of self esteem. Sacremento: Califonia State Department of education

Donnelly J (2004). Self-esteem and its relationship to alcohol and substance abuse prevention in adolescents. Retrieved june 2007, from http://www.self-esteem-nase.org/journal02.shtml

Dubois DL, Silverthorn N (2004). Do deviant peer association mediate the Contribution of self-esteem to problem behaviors during early adolescence? A two-year longitudinal study. Retrieved june 2007, from http://www.eric.ed.gov+adolescents+self-esteem+drug+abuseJ.Clin. Child Adolesc. Psychol. 3(2):382-338

Ennett ST, Bauman KE (1994). The contribution of influence and selection to peers group homogeneity: A case of adolescents cigarette smoking.J. Personality social psycho. 67, 653-666.

Escander, R, Galvez c (2005). Free from drugs and addictions: In the face of AIDS and enemies of society. Madid: Talleres Graficos penelara.

Fatoye FO, Morakinyo O (2002). Substance use among secondary school students in rural and urban communities in South Western Nigeria. East Afr. Med.J. 79(6):299-305.Flisher AJ. Parry CD, Evans J, Muller M, Lombaed C (2003). Substance use by adolescents in cape town: prevalence and correlates.J. Adolesc. Health 32(1):58-65.

Forney MA, Forney PD, Ripley WK (1991). Alcoholic use among black adolescents: Parental and peer influence. Retrieved june 2007, from http://www.uc.edu/healthpro-motion/jade.ttml.J. Alcohol Drug Educ.36,43.

Fuhrmann SB (1986). Adolescence,adolescents. Boston: Little Brown and company.

Gathiari JF (2002). The role of guidance and counseling in reducing students' indicipline in secondary schools: A case of Nakuru municipality. Egerton university,Njoro, Kenya: Unpublished thesis.

Gibbs GD (2005). Sibiling influence on adolesecent alcohol, cigarette and marijuana use.Brigham Young University, Unpoblished thesis. Retrieved February 2008, from http://patriot.lib.byu.edu/ETD/li-mage/etd927.pdf

Hawkins JD, Catalano RF, Miller J (1992).Risk and protective factors for alcohol and other drug problems in adolescence and early adult-hood: Implications for substance abuse. Retrived on February 2008, from http://elb.emcdda.euro-pa.eu/index.cfm?nNodelD=3308 Psychological bulletin 112,1,64-105.

Hwang S, Akers R (2006). Parental and peer influence on adolesecent drug use in South korea. Retrieved on January 2008 from http://www.springelink.com/content/Asian J. criminal. 1, 51-69.

Hops H, A drew TA, Duncan S, Duncan TE, Tildesley E (2000). Adolescent drug use development: A social interactional and contextual perspective. In A. J Sameroff, M. Lewis & M. S Miller (Eds),Hand-book of developmental psychopathology (2nd edn), New York: Springer science business media. Retrieved on March 2008, from http://www.google.co.ke/search pp. 589-603.

John T, Donald L, Emeriyus GW (2006).Pre teen low self-esteem linked to drug use. Retrived july 2007, from http://www.medicine-net.com/script/main/art.asp?articlekey=61068

Johnston LD, O' Malley PM, Bachman JG (2006) Monitoring the future national survey results on drug use, 1975-2006: Secondary school students. Bethesda, MD: National institute on Drug Abuse. Retrieved October 2007 from, http://www.monitoringthefuture.org/data06data.cigs volume 1

Kathuri JN, Pals DA (1993).An introduction to educational research.Njoro, Kenya. Egerton University press.

Kerlinger FN (2000) Fondations of behavioral research (5th edn.).New Delhi:Holt, Rinehaut and Winston.

Kimmel DC,Weiner IB (1995). Adolescence: A developmental transition New York: John Wiley & sons, incl.

Lutomia G, Sikolia L (2006). Handing problems facing youth in learning institutions: A guidance and counselling approach. Nairobi: Uzima Publishing House.

Madara D (2004) Guidance and counselling for schools and colleges Nairobi: Phedi graphics.

McDonald MR, Towberman DB (1993).Pychosocial correlates of adolescent drug involvement.Adolescence. Retrieved January 2008, from http://books.google.com/book?

NACDA (2004a) Youth in peril: Alcohol and drug abuse in Kenya. Nairobi: MOH

NACADA (2004b) A handbook on prevention of drug use and substance abuse in Kenya. Nairobi: MOH

NACADAA (2006)Drug and substance abuse in tertiary institutions in Kenya: A situational analysis. Nairobi: MOH

NACADAA (2009) Causes and impacts of alcohol and drug abuse. Paper presented during the Teachers Counselors Training held on 10th-13th February 2009 at Water Buck, Nakuru, Kenya.

NASCOP (2005).AIDS in Kenya: Trends, interventions and impact.Nairobi: MOH

Nassiuma DK (2000) Survey sampling: Theory and methods Nairobi University of Nairobi press

NCAPD (2005).Adolescence reproductive health and development policy. Nairobi: MOH

NSAUH (2005).National Survey on Alcohol Use and Health. Retrieved on October 2007 from http://ncadistore.samhsa.gov/catalog/pro-ductDatails.aspx?productlD=17728

O'Conner J (1978).The young drinkers.London: Tavistock.

Oweke J (2005). Influence of drug adverstisements on drug abuse among secondary school students in Nakuru municipality, Kenya Egerton University, Njoro, Kenya: Unpublished project report.

Papalia DE, Olds WS, Feldman DR (1999) A child's world: infancy through adolesecence. Boston: McGraw Hill.

Parker JS, Benson MJ (2004). Parent-adolescent relations and adolescent functioning: Self esteem, substance abuse and delinquency, san Diego: Libra publishers.

Rosenberg M (1989). Society and adolescent self-image (Revised edn.). Middletown, CT: Wesleyan University press.

Santrock J (2005). Educational psychology (2nd edn). New Delhi: Tata McGgraw-Hill.

Sargent JD,Beach ML, Dalton MA, Tickle JJ, Ahrens MB, heartherton TF (2001). The effect of seeing tobacco use in films on trying smoking among the adolescent British Medical Journal, 323, 1394. Retrieved January 2008, from http://www.bmj.com/cgi/content/ab-stract/323/7326/1394.

Tobacco Free initiative (2007). Tobacco free initiative report. Retreived from http://www..wpro-who.int/NR/rdonlyres/

Tobacco free initative (2004). Tobbaco free iniciative report. Retrieved june 2007,from http://www..wpro-who.int/NR/rdonlyres/

USAID (2006). Tuko pamja;Adolescent reproductive health and life skills curriculum. Nairobi: USAID