

An exploratory study of alcohol use/abuse among first year students at Great Zimbabwe University, Masvingo, Zimbabwe

Elliott Nkoma¹ and Dadirai Bhumure²

¹Department of Psychology and Counseling, Faculty of Social Sciences

²Great Zimbabwe University, P.O.Box 1235, Masvingo, Zimbabwe

elliottnkoma@gmail.com

Abstract

The purpose of the study is to determine the prevalence of drug use among first year Faculty of Social Sciences students at Great Zimbabwe University. An explanatory sequential design was used in the study. The total sample size of 157 students (82 males, 75 females) volunteered. 72 students were from the department of Human Resources Management, 66 from Sociology and 19 from Psychology. Results show that students drank alcohol as their drug of choice and prevalence of beer drinking started at the age band of 19-22 when students are at college and that peer pressure makes them continue drinking. Males have a higher prevalence of using alcohol in the previous month and a higher rate of binge drinking and daily usage than their female counterparts. Co-use of alcohol and marijuana was most prevalent among males who binged or got drunk the previous month. There was a significant association between gender (in age band 19-22) and age of first drinking alcohol but with an insignificant association between gender (in age band 23-26) and age of first drinking alcohol. An insignificant association was found between students' majors and when they last took alcohol. Absence of parental control, reducing stress and closer bonds with peers was the reasons for using drugs.

Keywords: Study of Alcohol, Abuse, Zimbabwe, Drinking Alcohol

Background

The purpose of this study is to determine the prevalence of drug use among first year students at Great Zimbabwe University, Faculty of Social Sciences. College students often undergo role transitions—such as going away from the family home for the first time, residing with other students, and experiencing reduced adult supervision—that may increase the risk of substance abuse (Windle, 2003 p 81). Schulenberg and Maggs (2002) found that the transition to college involves major individual and contextual change in every domain of life; at the same time, heavy drinking and associated problems increase during this transition. Parental attachment and detachment is a major factor in a student's transition experience from high school to college (Lopez and Gormley, 2002). Although many successfully make this transition to college others experience long-term emotional maladjustment and depression (Gall, Evans and Bellerose, 2000; Wintre and Yaffe, 2000). Findings by Wechsler., Lee., Nelson, and Lee (2002) show that half of all college students engage in binge drinking, a behavior associated with reduced academic performance, and engaging in unplanned or unwanted sexual activity (Wechsler Davenport., Dowdall., Moeykens, and Castillo 1994) and such students are aged between 18 and 21years (Grant, 1997; O'Malley and Johnston, 2002). First year

students' expectations might be unrealistic and these may cause them to have difficulties in adjusting to the university environment (Krallman and Holcomb, 1997). Students are most at risk in the first year in terms of social and academic failure (McInnis, 2001); hence, some would engage in drug use as a result of peer influence and reduced adult supervision. However, studies indicate that, for many students, excessive consumption in college represents a continuation of drinking patterns established earlier (eg., Gonzalez, 1989; Lo and Globetti, 1993; Schulenberg and Maggs, 2002)

Alcohol use among adolescents and college students is also associated with a broad array of risk behaviors, including tobacco use, drinking and driving and having unprotected sex (Windle, 2003). Studies on college campuses have shown that students who do not drink nevertheless experience adverse secondhand effects of drinking, including victimization (e.g., verbal or physical threats and actions) and personal intrusion (e.g., disruption of sleep or study habits) by those who have been drinking (Wechsler Dowdall., Maenner., Gledhill-Hoyt and Lee 1998).

Previous studies among youth in Zimbabwe have reported lifetime marijuana use prevalence of between 3.4% and 12.1% (Rudatsikira., Mukandavire., Muula and Siziya 2009). They found that marijuana or glue use by adolescents in Harare is associated with male gender, sexual activity, alcohol use, current cigarette smoking and parental supervision. Also Zindi (2002) found that 93% of 2000 teenagers had some experience with substance use. Eida and Acuda (1996) found drug use being highest among private school students while the use of alcohol and tobacco increases with increasing socio-economic status. However, other studies have reported that marijuana has been a stepping stone towards other illicit behaviors (Greene, 1980; Tsuang ., Lyons., Meyer., Doyle., Eisen and Goldberget, 1998).

Global data from the 1990s have shown that marijuana is the most widely used illicit drug in the world (Kingery., Alford., and Goggeshall 1999). High prevalence of marijuana use has been reported in countries such as Kenya, Zimbabwe, Nigeria (Eide and Acuda, 1995; Kingery et al., 1999) and many other settings outside of Africa (Miller and Plant, 1996; Pedersen, 1992). Some of the most studied risk factors for substance use among adolescents and young adults include low grade point average, lack of religiosity, early alcohol use, low self-esteem, psychopathology, poor relationship with parents, lack of social conformity, sensation seeking, perceived peer drug use, and perceived adult drug use (Newcomb and Bentler, 1986). In this study, the main objective is to determine the prevalence and factors associated with substance use among first year students at Great Zimbabwe University.

Statement of the Problem

The entry of freshmen into the university is filled with challenges of which many college students are found to not overcome hence universities in such countries as the United States, Australia, New Zealand and others to craft and implement specific transition programs (Adonis, 2000; Barefoot, 2000; Gardner, Barefoot, & Swing, 2001; Kantanis, 2001; Mason-Rogers, 2002). The Sunday Mail dated 2 November 2014 reported that Midlands State University (MSU) in Zimbabwe has been hit by hard and prescription drugs including 'Nyaope' also called whoonga which is a mixture of marijuana, rat poison, HIV anti-retroviral medication and sometimes heroine. Other drugs mentioned by the paper include blue pill, Nintendo, marijuana, ecstasy and Broncleer (a drug used for relaxation) and students choose drugs they can afford. Midlands State University is about 120 kilometers from Great Zimbabwe University and what is not known are the drugs used and how often they are used by students at Great Zimbabwe University.

Also the Herald (2014) reported that Delta Corporation reported a whooping 800 percent increase in beer sales last year while companies are closing down, downsizing or operating below capacity, while Zindi (1992) states the reasons for alcohol use or abuse as ranging from poverty, unemployment, peer influence and boredom. The Standard (2014) reported that 80 percent of admissions in mental institutions are youths aged between 16 and 40 years and the frequently used drugs by this age band are heroin, marijuana, histalix and broncleer. The newspapers reports indicate a need to study first year students as the passage from high school to college is commonly marked by reduced parent supervision and increased opportunity for peer interaction thus resulting in increased opportunity for drug use or abuse (Kantanis, 2001). Individuals may have learned to take drugs through their parents and siblings while they were young or through peers in the college as they are likely to receive positive social reinforcement from their friends for using drugs (Petratis, Flay, and Miller, 1995).

Purpose of the study

The study seeks to

1. Determine the drugs used by first year students and the prevalence of alcohol use
2. Find students' perceptions on the effects of using drugs.
3. Determine if there is any association between gender and age of onset of alcohol use.
4. Determine if there is any relationship between students' majors and when they last took alcohol.

Research questions

1. What are the drugs of choice used by students?
2. What is the prevalence of alcohol use?
3. Are there any other drugs used in combination with alcohol?
4. What are students' perceptions on the effects of using drugs?

Hypotheses

1. There is no significant association between sex and age of onset of alcohol use
2. There is no relationship between students' majors and when they last took alcohol.

Methodology

Site

Great Zimbabwe University is located in Masvingo Province, Zimbabwe and has a multi-campus system. The faculty of Social Sciences which consists of the departments of Sociology, Psychology, Human Resources Management, and Urban Planning are located in the industrial site and city centre. First year students do their lectures at the industrial site. First year students in their second semester were targeted. The research was carried out at Matewe industrial site, approximately two kilometers from the city centre.

Research design

An explanatory sequential design was opted in this study as this study follows two distinctive phases. The fact behind this approach is that the quantitative data and their subsequent analysis provide a general understanding of the research problem. The qualitative data and their analysis refine the explanation of those statistical results by exploring participants' views in more detail (Teddlie and Tashakkon, 2009).

Population and sample size

The Faculty of Social Sciences was purposively selected and first year students in their second semester from the departments of psychology, human resources management and sociology who volunteered participated in the study. The total number of students in the three departments is 356 of which 157 students (82 males, 75 females) volunteered. The table below indicates the number of students by gender and department.

Table 1: Distribution of students by gender and department

Gender	Department			Total
	Human Resources Management	Sociology	Psychology	
Male	39	31	12	82
Female	33	35	7	75
Total	72	66	19	157

Research instruments

The study was carried out in two phases. The first phase wanted to determine drugs of choice by students and the prevalence of the drugs. During the first phase students were given a questionnaire designed from the literature. This instrument was divided into three sections. The first section related to demographic information and the second

section sort to determine the drug of choice and prevalence of substance using eight closed and open questions. Prevalence was define as when students report having ever taken the drug in 30 days before the survey (30 day prevalence) and those having been drunk within the previous 30 days. Daily use of the drug was viewed as having taken the drug on 20 or more occasions in the past 30 days and Binge drinking was defined as taking five or drinks in a row in the past two weeks. The section also elicited information on age of onset and multi-use of drugs and reasons for doing so. The last section allowed students to state the effects of drugs they experienced. The questionnaire was content analyzed by four lecturers in the department of education and was found to be representative of the domain under study. In the final phase of the study, focus group discussions by department and gender were done to further probe information obtained from the analysis of the questionnaire.

Research procedure

Permission to carry out the study was granted by the Dean of Faculty of Social Sciences. During the first phase of the research all first year students who had just finished attending the faculty wide course were told about the purpose of the research and confidentiality. Those who volunteered to participate were given an appointment on an agreed date. Questionnaires were given to the students in a large lecture room and were allowed to individually fill it. After the analysis of the results, three days later, (second phase) students were put in same sex groups by department and allowed to answer questions that have been analyzed quantitatively from the questionnaire.

Data analysis

Data was analyzed using bar graphs and a chi-square to determine the degree of association between variables. Qualitative data from focus groups discussions were analyzed thematically.

Results

The first research question seeks to determine drugs of choice used by students.

Table 2: Drugs used by students

Gender	Drugs						Total
	Alcohol		Cigarettes		Marijuana		
	N	%	N	%	N	%	
Male	66	42 %	5	2.2 %	11	7 %	82 52.2 %
Female	69	43.9 %	-	-	6	3.8 %	75 47.8 %
Total	135	86 %	5	3.2 %	17	10.8 %	157 100 %

Students stated alcohol, marijuana and cigarettes as the drugs used by students. Alcohol is the most frequently used drug by students (M=42 %, n=66; F = 43.9%, n= 69) followed by marijuana (m = 7 %, n= 11; F= 3.8 %, n= 6) and the least being cigarettes (M =3.2 %, n= 5) with none of the females taking this drug.

The second research question seeks to determine the prevalence of alcohol use.

Table 3: prevalence of alcohol use by gender

Gender	Prevalence of alcohol use				
	Ever used alcohol in the previous month	Ever got drunk in the previous month	5+ drinks in a row in the past last two weeks	Daily drinking	Total
Male	47 33.1 %	11 7.7 %	17 12 %	4 2.8 %	79 55.6 %
Female	38 26.8 %	16 11.3 %	9 6.3 %	-	63 44.4%

Total	85 59.9 %	27 19 %	26 18.3 %	4 2.8 %	142 100 %
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59.9 % (n = 85) of students have used alcohol in previous month with a higher percentage of males 33.1 % (n = 47) than females 26.8 % (n = 38) while 19 % (n = 27) have been drunk. A higher percentage of females (11.3 %, n = 16) than males (7.7 %, n = 11) have been drunk a month prior to the study. There is a higher prevalence of binge drinking (five drinks in a row in the past two weeks) among males (12 %, n = 17) than females (6.3 %, n = 9). Only males are daily drinkers (2.8 %, n = 4).

The third research question seeks to find co-use of alcohol and other drugs and reasons for co-usage.

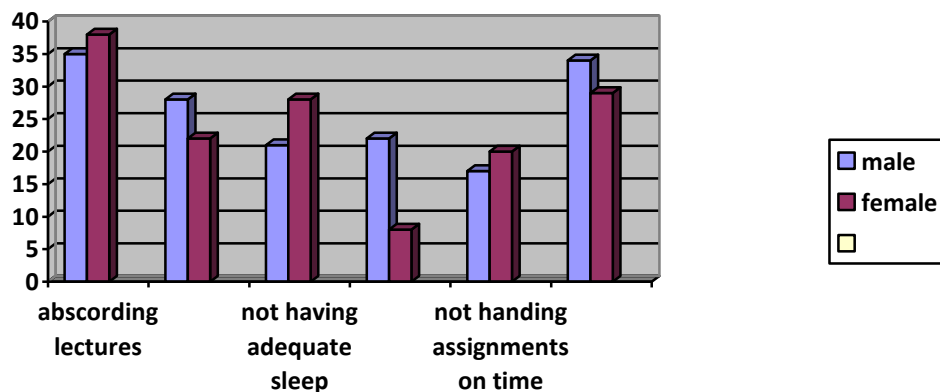
Table 4: co-use of alcohol and other drugs by gender

Gender	Prevalence of alcohol use and co-use											
	Ever used alcohol in the previous month while smoking....			Ever got drunk in the previous month while smoking....			5+ drinks in a row in the past last two weeks while smoking....			Daily drinking while smoking....		
	cigar	marij	both	cigar	marij	both	cigar	marij	both	cigar	marij	both
Male	-	4	-	2	7	3	5	8	4	-	3	-
Female	-	2	-	1	6	1	1	5	2	-	-	-
Total		6 7.1%		3 11.1 %	13 48.2%	4 14.8 %	6 23.1%	13 50%	6 23.1%		3 75%	
Grand total	85			27			26			4		

Out of a total of 85 students who have ever used alcohol in the previous month 7.1 % (n = 6) co-used it with marijuana with a higher prevalence in males. Out of 27 students who got drunk the previous month there was co-use with cigarettes, marijuana or both but with a high percentage of marijuana use. Of the students who had five or more drinks in a row in the past two weeks there was a percentage of also using cigarettes, marijuana or both. Most of the students who have ever used alcohol in the previous month said that they were experimenting on the combined effects while those who took five or more drinks during the past two weeks said that alcohol was no longer satisfying and needed a catalyst.

The fourth research question seeks to answer the effects of alcohol use by students.

Figure 1: Effects of using alcohol by students



Most students indicated that they abscond lectures ($m = 35$; $f = 38$), followed by sexual indiscretion. Behavior problems were most reported by males (22) than females (8).

The first hypothesis states that there is no significant association between sex and age of onset of alcohol use.

Table 5: Relationship between gender (in age band 19-22) and age of first drinking alcohol (expected frequencies in parenthesis)

Age band of respondents (19-22)	Age band when started use			Total
	9-12	13-16	17-20	
Male	14 (9.49)	14 (12.66)	20 (25.85)	48 52.7%
Female	4 (8.51)	10 (11.34)	29 (23.15)	43 47.3%
Total	18 19.8%	24 26.4%	49 53.8%	91 100%

Chi-square (χ^2) = 7.78, $p < 0.05$ $df = 2$ (significant)

The results indicate a significant association between gender (age band 19-22) and age of first drinking alcohol. A high percentage of students (53.8%) started drinking in the age band 17-20 with little difference between males and females. The least percentage of students (19.8%) was initiated at age band 9-12.

Table 6: Relationship between gender (in age band 23-26) and age of first drinking alcohol

Age band of respondents	Age band when started use 23-26			Total
	9-12	13-16	17-20	
Male	11 (9.27)	8 (6.18)	15 (18.55)	34 51.5%
Female	7 (8.73)	4 (5.82)	21 (17.45)	32 48.5%
Total	18 (27.3%)	12 (18.2%)	36 (54.5%)	66 (100%)

Chi-square (χ^2) = 3.17, $p > 0.05$ $df = 2$ (insignificant)

There is an insignificant association between gender (age band 23-26) and age of onset drinking alcohol. More students started drinking in the age band 17-20 (54.5%, $n = 36$) with a higher frequency of females than males.

The second hypothesis states that there is no relationship between students' majors and when they last took alcohol.

Table 7: Relationship between students' majors and when they last took alcohol.

Student majors	When last did you take alcohol			Total
	Past 2 weeks	During the past month	In the last year	
Human resources	11 (13.76)	30 (26.14)	31 (32.10)	72 45.9%
Psychology	2 (3.63)	5 (6.9)	12 (8.47)	19 12.1%

Sociology	17 (12.61)	22 (23.96)	27 (29.43)	66 42%
Total	30 19.1%	57 36.3%	70 44.6%	157 100%

Chi-square (χ^2) = 5.72, $p > 0.01$ df = 4 (insignificant)

There is an insignificant relationship between students' majors and when they last took alcohol.

A follow-up on quantitative analysis of data indicated that most students preferred alcohol especially Chibuku, a traditional brew. The beer is usually taken in public places like bottle stores and they call it a 'starter' after which they then drink clear beers as a 'wash down' as they call it. The ladies preferred wines which they drink in their hostels or hotels with a few very close friends. The males stated that Chibuku is cheap and allows them to socialize as they drink from the same container. Most students started drinking in the age bands 17-20 because of minimal parental or loco-parentis control at University as compared to their high schools. As one female student puts it "Tava nema-key, ende hakuchina siren," literally translated "We have keys to our doors and there are no sirens to notify them of lesson changes as in high schools" implying that they can do what they want without supervision and can go and come whenever they want. They also said that parents rarely asked them about school work and do not visit them while on campus. One male student said "Ini cocaine kuishaya chete" meaning that he likes to have cocaine but cannot find the means of getting it. Despite stating the effects of alcohol like absconding lectures, having problems with the police, facing disciplinary measures by the University and not studying well students said that peer pressure, inadequate parental supervision, the need to reduce stress and the relief they get from alcohol as highly satisfying makes them continue taking it. Some male students said that their frequency of drinking is determined by their pockets and hence if they have the money they can even drink during the week.

Discussion

The results show that first year students take alcohol as their drug of choice with a higher prevalence in males who used alcohol the previous month and binge drank than females. Students comments indicate that peer pressure make them continue drinking. Literature generally states that males drink more than females. For example, Globetti, (1999) found alcohol to be the most commonly used substance by college students with males having higher rates of drinking than females. Men are more likely than women to binge drink, and to do so more frequently (Marlatt and Baer, 1997; Schulenberg., Wadsworth., O'Malley., Bachman and Johnston, 1997; Wechsler, et al., 2002; Weitzman, Nelson, and Wechsler, 2003). Similarly, Flory, K., Lynam., Milich., Leukefeld and Clayton, R (2004) and Shishana., Rehle., Simbayi., Parker., Zuma (2005) found that males drink in a more hazardous way than females. Bachman and Schulenberg (2002) and Johnston., O'Malley., Bachman., Schulenberg., Patrick and Miech (2004) found that people start drinking during their adolescence and increase the amounts they drink in their early twenties when they become a college student. With peer alcohol use, perceived peer approval and less resistance to peer pressure results in heavier alcohol use (Tucker., Orlando and Ellickson 2003).

The findings also indicate that those students who binge drank or got drunk the previous month also used marijuana. Similarly, Bennett, Miller, and Woodall (1999) found that students who used alcohol and participated in binge drinking reported using both marijuana and alcohol during the same period. The results also show that despite knowing or stating the effects of alcohol use or abuse they continued drinking. Students commented that they absconded lessons and have less time studying. Students who drink excessively tends to spend less time studying and skip lessons (Wolaver, 2002; Williams, Powell and Wechsler, 2003).

A significant association between gender (in age band 19-22) and age of first drinking alcohol was found in the study. Literature indicates that most people start drinking during their adolescence and increase the amounts they drink in their early twenties when they become a college student and decrease when they marry (Bachman et al., 1991; Johnston et al., 2004) with males drinking more than females at this transitional period (Shishana et al., 2005). An insignificant association between gender (in age band 23-26) and age of first drinking alcohol was found in the study. This implies that males and females take similar quantities of alcohol in the age bands specified.

An insignificant association was found between students' majors and when they last took alcohol. This entails that students have similar drinking patterns or quantities despite their majors. In the study students commented that less

parental supervision; reducing stress and increased cohesive friends make them drink alcohol. Studies have found that first year students would engage in drug use as a result of peer influence and reduced adult supervision (Lopez and Gormley, 2002; McInnis, 2001).

Recommendations

Intervention efforts aimed to reduce the number of new heavy drinkers is an important component of strategies geared toward lowering heavy drinking among college students. by increasing parental involvement. College administrators need to adopt a more intensive on-campus alcohol and drug abuse education and evidence-based interventions programs. Also increasing parental involvement might reduce substance use or abuse.

Conclusion

Results indicate that students drink alcohol as their drug of choice and the prevalence of beer drinking started at the age band of 19-22 when students are at college and that peer pressure makes them continue drinking. Males have a higher prevalence of using alcohol in the previous month and a higher rate of binge drinking and daily usage than their female counterparts. Co-use of alcohol and marijuana was most prevalent among males who binged or got drunk the previous month. There was a significant association between gender (in age band 19-22) and age of first drinking alcohol but with an insignificant association between gender (in age band 23-26) and age of first drinking alcohol. An insignificant association was found between students' majors and when they last took alcohol. Absence of parental control, need to reduce stress and closer bonds with peers were the reasons for using drugs.

Further research

There is need to carry out a university wide research on substance use or abuse and make a comparative analysis with other universities so that intervention programs on substance use will be more evidence based.

References

- Adonis, C. (2000). An evaluation of students' perception of a multi-faceted support programme in a large, diverse first year class. Paper presented at the Fourth Pacific Rim First Year in Higher Education Conference: Creating futures for a new millennium, July 5–7, at Queensland University of Technology, Brisbane.
- Aida, A. H and Acuda, S.W. (1996). Adolescents' drug use in Zimbabwe. Comparing two recent studies. *Cent Afr J Med* 42(5) 128-135
- Bachman, J.G. and Schulenberg, J. (2002). How part-time work intensity relates to drug use, problem behavior, time use, and satisfaction among high school seniors: Are these consequences or merely correlates? *Devel. Psychol.* 29: 220-235, 1993.
- Bachman, J. G., Wallace, J.M.Jr., Kurth, C.L., Johnston, Lloyd D., O'Malley, Patrick M.(1991). Drug Use among Black, White, Hispanic, Native American, and Asian American High School Seniors (1976-1989): Prevalence, Trends, and Correlates (rev. ed.). *Monitoring the Future Occasional Paper No. 30.*. Ann Arbor, MI: Institute for Social Research
- Barefoot, B. (2000). The first-year experience: Are we making it any better? *About Campus* 5, 1, 12–18
- Bennett, M. E., Miller, J. H., and Woodall, W. G. (1999). Drinking, binge drinking, and other use among southwestern undergraduates: three-year trends. *American Journal on Drug and Alcohol Abuse*, 25, 2, 331-350.
- Chassin, L., Pitts, S.C. and Prost, J. (2002). Binge drinking trajectories from adolescence to emerging adulthood in a high-risk sample: Predictors and substance abuse outcomes. *Journal of Consulting and Clinical Psychology* 70:67–78.
- Eide, A.H., Acuda, W.S. (1995). Drug use among secondary school students in Zimbabwe. *Addiction*, 90:1517-27.
- Flory, K., Lynam, D., Milich, R., Leukefeld, C. and Clayton, R. (2004). Early adolescent through young adult alcohol and marijuana use trajectories: Early predictors, young adult outcomes, and predictive utility. *Development and Psychopathology* 16:193–213.

- Gall, T. L., Evans, D. R., and Bellerose, S. (2000). Transition to first- Year University: Patterns of change in adjustment across life domains and time. *Journal of Social and Clinical Psychology*, 19, 544-567.
- Gardner, J., Barefoot, B., and Swing, R. (2001). Guidelines for evaluating the first -year experience at four-year colleges. Columbia: National Resource Centre for the First-Year Experience and Students in Transition (University of South Carolina).
- Globetti, G. (1999). Drug and alcohol use at a southern university. *College Student Affairs Journal*, 12(2), 41-51.
- Gonzalez, G. M. (1989). Early onset of drinking as a predictor of alcohol-related problems in college. *Journal of drug education* 19. 225-230.
- Greene, B.J. (1980). Sequential use of drugs and alcohol: A reexamination of the stepping-stone hypothesis. *J Drug Alcohol Abuse*. 7:83-99.
- Green, K. M., Doherty, E. E., Stuart, E. A., and Ensminger, M. E. (2010). Does heavy adolescent marijuana use lead to criminal involvement in adulthood? Evidence from a multiwave longitudinal study of urban African Americans. *Drug and Alcohol Dependence*, 112(1-2), 117-125.
- Grant, B.F. (1997). Prevalence and correlates of alcohol use and DSM-IV alcohol dependence in the United States. Results of the national longitudinal alcohol epidemiologic survey. *Journal of Studies on Alcohol*. 58:464–473.
- Johnston, L.D., O'Malley, P.M., and Bachman, J.G. (2002). Issues of validity and population coverage in student surveys of drug use. NIDA Research Monograph. Washington, D.C.: US Government Printing Office.
- Johnston, L.D., O'Malley, P.M., Bachman, J.G., Schulenberg, J. E., Patrick, M. E., and Miech, R. A. (2004). *National Survey Results on Drug Use From the Monitoring the Future Study, 1975–2003. Volume I: Secondary School Students. Volume II: College Students and Adults Ages 19–45*. NIH Pub. Nos. 04–5507 and 04–5508. Bethesda, MD: National Institute on Drug Abuse.
- Kantanis, T. (2001). Transition program management: Does it really matter who runs the show? <http://www.adm.monash.edu.au/transition/research/kantanis6.html> (accessed September 20, 2002)
- Kingery, P., Alford A.A., and Goggeshall M.B. (1999). Marijuana use among youth: Epidemiologic evidence from the US and other nations. *Sch Psychol Int*, 20:9-21.
- Krallman, D. and Holcomb, T. (1997). First-year student expectation: pre- and post- orientation', paper presented at the Annual Meeting of the Association of Institutional Research, Buena Vista, May.
- Lo, C. C. and Globetti, G. (1993). A partial analysis of the compus influence on drinking behavior: Students who enter college as nondrinkers. *The Journal of Drug Issues* 23:715-725
- Lopez, F. G. and Gormley, B. (2002). Stability and change in adult attachment style over the first-year college transition: Relations to self-confidence, coping, and distress patterns. *Journal of Counseling Psychology* , 49,355-364
- Marlatt, G. A. and Baer, J. S. (1997). Harm reduction and alcohol abuse: A brief intervention for college-students binge drinking. In P. G. Erickson (Ed.), Harm reduction: A new direction for drug policies and programs. Collection of papers drawn from 7 international conferences on harm reduction (pp. 245-262). Toronto, ON: University of Toronto Press.
- Mason-Rogers, C. (2002). Strategies for success in transition year. Ma te huruhuru te mana, ka rere mai. Paper presented at the Sixth Pacific Rim First Year Conference. Changing agendas, the University of Canterbury in conjunction with the Queensland University of technology. Christchurch, New Zealand
- McInnis, C. (2001). Researching the first-year experience: Where to from here? *Higher Education Research and Development*, 20(2), 105-114.
- Miller, P. and Plant, M. (1996). Drinking, smoking and illicit drug use among 15 and 16 year olds in the United Kingdom. *Br Med J*, 313- 397.
- Newcomb, M. D. and Bentler, P. M. (1986). Drug use, educational aspirations, and work force involvement: The transition from adolescence to young adulthood. *American Journal of Community Psychology*, 14(3), 303-321.
- O'Malley, P. M and Johnston, L. D. (2002). Epidemiology of alcohol and other drug use among American college students. *Journal of Studies on Alcohol*. 63, 23–39.
- Pedersen, J. M. (1992). Substance abuse among greenlandic school children. *Arctic Med Res* 51:67-71.
-

- Petraitis, J., Flay, B. R. and Miller, T. Q. (1995). Reviewing theories of adolescent substance use: organizing pieces in the puzzle. *Psycho Bull* 117(1):67-8
- Rudatsikira, E., Mukandavire, Z., Muula, A. S. and Siziya, S. (2009). Prevalence and predictors of illicit drug use among school- going adolescents. Harare : Harare publishers.
- Schulenberg, J. E. and Maggs, J. L. (2002). A developmental perspective on alcohol use and heavy drinking during adolescence and the transition to adulthood. *J. Stud. Alcohol*, Supplement No. 14: 54-70
- Schulenberg, J., Wadsworth, K.N., O'Malley, P.M., Bachman, J.G. and Johnston, L.D. (1997). Adolescent risk factors for binge drinking during the Miller, P.M., Smith, G.T. and Goldman, M.S. Emergence of alcohol expectancies in childhood: A possible critical period. *J. Stud. Alcohol* 51: 343-349
- Shisana, O., Rehle, T., Simbayi, L.C., Parker, W., Zuma, K., Bhana, A., Connolly, C., Jooste, S. & Piillay, V. (2005). Cape Town: HSRC Press. Reanalysed by Peltzer, K., Ramlagan, S., & Davids, A. South African national HIV prevalence, HIV incidence, behavior and communication survey.
- Teddlie, C. and Tashakkori, P. (2009). Foundations of mixed methods research. Thousand Oaks, CA: Sage.
- The Herald (17 Dec, 2014). Zimbabweans must sober up.
- The Sunday Mail (2 Nov, 2014). Drug epidemic hits MSU.
- The Standard (2 Mar, 2014). Drug abuse leads to mental illness.
- Tsuang, M. T., Lyons. M. J., Meyer, J. M., Doyle T., Eisen SA., Goldberg J. (1998). Co-occurrence of abuse of different drugs in men: The drug-specific and shared vulnerabilities. *Arch Gen Psychiatry* 55:967-72.
- Tucker, J.S., Orlando, M. and Ellickson, P.L. (2003). Patterns and correlates of binge drinking trajectories from early adolescence to young adulthood. *Health Psychology* 22:79-87
- Wechsler, H., Davenport, A., Dowdall, G. W., Moeykens, B., and Castillo, S. (1994). Health and behavioral consequences of binge drinking in college: A national survey of adolescents at 140 campuses. *Journal of the American Medical Association*, 272 ,1672-1677
- Wechsler, H., Dowdall, G.W., Maenner, G., Gledhill-Hoyt, J. and Lee, H. (1998) Changes in binge drinking and related problems among American college students between 1993 and 1997: Results of the Harvard School of Public Health College Alcohol Study. *J. Amer. Coll. Hlth* 47: 57- 68.
- Wechsler, H. L., Lee, J. E., Nelson, T. F., and Lee, H. (2002). Drinking and driving among college students: The influence of alcohol-control policies. *American Journal of Preventive Medicine* , 25, 212-218.
- Weitzman, E. R., Nelson, N. F. and Wechsler, H. (2003). Taking up binge drinking in college: The influences of perso, social group, and environment. *J Adolesc Health* 32(1) 26-35.
- Wintre, M.G, and Yaffe, M. (2000). First- year students' adjustment to university life as a function of relationships with parents. *Journal of Adolescent Research*, 15, 9-37.
- Williams, J., Powel., L.M. and Wechsler, H. (2003). Does alcohol consumption reduce human capital accumulation? Evidence from the College Alcohol Study. *Appl Econ*,35(10):1227-1239.
- Windle, M. (2003). Alcohol use among adolescents and young adults. *Alcohol research and health*,27(1) 79-85.
- Wolaver, A. M. (2002). Effects of heavy drinking in college on study effort, grade point average, and major choice. *Contemp Econ Policy*,20 (4):415-428.
- Zindi, F. (1992). Experimental substance use among rural and urban teenagers in Zimbabwe. *Zimbabwe Journal of Educational Research* 4(1) 1-16.