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Patterns of Alcohol Usage on a South African University Campus

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Abstract

While there is research-based evidence that alcohol continues to be abused on university campuses in many countries around the world (Karam, Kypri, & Salamoun, 2007), there is insufficient hard evidence that South African campuses are the same. This paper attempts to address this gap by reporting on a survey of alcohol usage patterns at Rhodes University (in Grahamstown), the smallest tertiary institution in South Africa, with an annual intake of just under 6000 students. In the paper we provide a brief overview of strategies which the University has adopted in recent years in an attempt to control alcohol usage and alcohol abuse, as well as describing the local context, which is also relevant to student drinking behaviour. We then present the results of a survey using the Alcohol Use Disorders Identification Test (Saunders, Aasland, Babor, De La Fuente, & Grant) on alcohol usage patterns which was conducted recently among students at Rhodes, and outline planned strategies as a response to these results.

Introduction

It is probably uncontroversial to state that all university campuses struggle with containing and controlling alcohol consumption by their students, since the age at which students first enter such institutions is an age of freedom and experimentation, where young people have the opportunity to test the limits previously set by parents and schools. At Rhodes University, there has been a long history of efforts to control intake, discipline offenders and to reduce opportunities for excessive consumption. These include the banning of the long-standing annual “rag” (carnival) in the late 1980s as a direct response to problems of excessively drunken, rowdy and dangerous student behaviour which brought the University into disrepute.

Rhodes is primarily a residential University, and it occupies a very prominent position in the small town of Grahamstown. Firstly, it is the primary employer and is very visible, situated as it is near the centre of town, and occupying a relatively large area; secondly, the annual influx of students has a very significant impact on the town in terms of sheer numbers, and the fact that approximately 3000 of them rent accommodation or “digs” from local inhabitants; thirdly, the students bring with them significant spending power for the nine months per year that they live in Grahamstown, and local shops and bars are very keen to make the best of this opportunity.

While the level of drinking at Rhodes University is possibly no higher than that at any other University in South Africa, it does have a rather undesirable reputation as the “drinking university”, and the reason for this is twofold: firstly, the drinking behaviour is highly visible, because of the size of the town, and because of the location of many off-campus pubs and bars near to the university. This means that Rhodes students pursue their after-hours relaxation in a very concentrated, small area, whereas in a large city, university students are doing the same thing, but anonymously. So UCT students who

are drunk and disorderly in Cape Town are labelled as “the Cape Town youth”, but students who do so in Grahamstown are labelled as “Rhodes students’. Secondly, because of the small size of the University as a whole, students at Rhodes have very strong social networks, and a large proportion of them thoroughly enjoy this aspect of their University experience – probably more so than students who commute, or live at home.

That said, Rhodes University nonetheless regards the problem of drinking as a serious one, which deserves urgent attention. It has long been the topic of debate, and the survey which is the topic of this paper was one strategy aimed at changing this ‘drinking culture’.

The situation as it currently stands is that the University has a “no tolerance” stance with regard to the misuse of alcohol. The initiation of new students when they arrive is long banned, and at the start of orientation week (when students are introduced to university life), policies and penalties regarding the misuse of alcohol are a specific and very explicit focus of the programme. The Students’ Representative Council assists with this campaign, and the Registrar’s Division is very strict about upholding the rules preventing large parties on campus where excessive amounts of alcohol might be available. Students are provided with as much information as possible about the dangers of excessive use, so that they can make informed choices, and during 2007 a new “Alcohol misuse policy” has been accepted by the University and widely promulgated (see Appendix 1). Any student who becomes intoxicated and commits a disciplinary offence is dealt with promptly, and because the consumption of alcohol is regarded as an aggravating factor and not a mitigating factor, sentences in these cases are much stricter.

The policy encourages an enlightened and adult approach to alcohol consumption, based on the undeniable fact that social drinking is normal for large numbers of people, and to prevent such behaviour from going ‘underground’, which may lead to binge drinking and antisocial behaviour, often with very negative consequences both for the individual and others.

Hard alcohol is available on campus only through licensed outlets which are carefully controlled. In residences, alcohol (wine and punch) is only served at special functions, usually only once a term to students, and only when Wardens are present. Students are permitted to have only wine or beer in their rooms, since banning such drinking with their friends would be impossible to control, and would involve regular room searches – a gross invasion of privacy. Unfortunately though, the University cannot control what happens in town, and it is there that a great deal of the reckless consumption takes place.

Trends in alcohol misuse

Alcohol misuse is associated with a range of chronic and acute physical and mental health problems, including suicidal ideation and behaviour; accident and injury; unsafe sexual practices resulting in the spread of sexually transmitted infections and unwanted

pregnancy; family and domestic problems; reduced productivity; absenteeism and academic failure; foetal harm during pregnancy; and criminal justice problems where the likelihoods of being the victim and perpetrator of crime are both increased (Hingson, Heeren, Zakocs, Kopstein, & Wechsler, 2002; Stoelb, 1998; Wechsler et al., 2002; WHO, 2004, 2005).

As a country undergoing rapid socioeconomic change, South Africa has seen an increase in substance-related problems, including alcohol abuse (Pluddermann et al., 2004). Indeed, of all the substances abused in South Africa, alcohol dominates (Parry et al., 2002). Given that drinking is a national problem, the situation amongst South African students is also likely to be a public health concern.

Research from around the world, particularly in the US and UK, suggests that university students are at particular risk of alcohol-related harm (Wechsler, Davenport, Moeykens, & Castillo, 1994). In the US, binge drinking is reported to be the leading cause of death and injury among college students (Hingson et al., 2002). The deleterious effects of student drinking are not confined to those who drink: students living amongst high proportions of binge drinkers experience more incidences of assault, unwanted sexual advances and frequently have their studies disturbed (Wechsler, Moeykens, Davenport, Castillo, & Hansen, 1995).

Other studies have suggested that university and college students report a higher prevalence of alcohol disorders and harm than those young people not at college or university (Dawson, Grant, Stinson, & Chou, 2004; Kyrpi, Cronin, & Wright, 2005). It is clear that some aspect of the university or college experience predisposes students to overuse alcohol and makes them vulnerable to alcohol use disorders (though perhaps not necessarily for alcohol dependence (Slutske, 2005)).

Although researchers report evidence of alcohol abuse in many countries around the world (Karam et al., 2007), and media reports suggest that the situation in South Africa is not different (see, for example, Govender, 2007, September 2), the actual prevalence of alcohol misuse on South African campuses is not accurately known. This in a country where the rampant crime statistics, the high prevalence of HIV infection, poor educational resources and high drop-out rates from tertiary institutions possibly exacerbate the harmful effects of alcohol misuse. It is clear that more accurate data is required before the prevalence of this abuse can be properly assessed, so that appropriate and effective public health interventions can follow.

Categories of Alcohol misuse

The growing trend internationally is to broaden alcohol harm reduction strategies to include not only those people who are dependant on alcohol but also those people who are drinking at a level that increases the risk of harm but who have not yet developed alcohol-related problems, as well as those whose drinking is causing harm, but who are not moderately or severely dependent on alcohol (Raistrick, Heather, & Godfrey, 2006). These three categories of alcohol use disorders are defined by the World Health Organisation along the continuum of alcohol consumption from safe to dangerous

drinking as 'hazardous', 'harmful' and 'dependent' (Babor, Campbell, Room, & Saunders, 1994). Each of these will be discussed more fully below:

1. *Hazardous Drinking*

Hazardous drinking is a pattern of alcohol use that increases the risk of harmful consequences for the drinker without having yet caused any alcohol-related harm. This category applies to men and women who exceed the Royal Colleges' (1995) recommended limits of 14 and 21 units of alcohol each week respectively (1 unit = 10mg of pure alcohol; a standard glass of wine = 2 units and a beer = 2 units).

Binge drinking, or heavy episodic drinking, is included in the hazardous category, even if the weekly limits are not exceeded, because it generally involves rapid and excessive drinking over a relatively short period of time, which intensifies the effects. Although a range of definitions are employed by different researchers (Gill, 2002; McAlaney & McMahon, 2007), a thorough review of alcohol treatments defines bingeing as drinking eight or more units in one session for men and six or more units for women (Raistrick et al., 2006).

2. *Harmful Drinking*

Harmful drinking is defined by the ICD-10 Classification of Mental and Behavioural Disorders (WHO, 1992) as a pattern of drinking that is already causing physical or mental health damage to the drinker. In terms of this definition, negative social consequences, such as relationship or occupational problems, are not regarded as causing physical or mental health damage. People who are drinking harmfully are likely to have a mild degree of dependence on alcohol, but do not meet the full criteria of the ICD-10 definition of alcohol dependence.

3. *Dependent Drinking*

Dependent drinking is a pattern of drinking characterised by moderate or severe dependence on alcohol. It is likely to include alcohol-related harm. The ICD-10 (WHO, 1992) defines alcohol dependence as a cluster of symptoms including a strong desire to use alcohol, impaired control over alcohol use, physiological withdrawal when alcohol consumption is reduced, greater tolerance of alcohol, neglect of alternative pleasures and interests, and persistence with drinking, despite clear evidence of harmful consequences. Such individuals would evince all the symptoms related to hazardous and harmful drinking, alongside the serious social consequences that inevitably accompany such a disorder.

Method

The Alcohol Use Disorders Identification Test (AUDIT) was developed by the World Health Organisation (WHO), and a number of studies conducted around the world in various settings have established the reliability and validity of the measure (Allen, Litten, Fertig, & Babor, 1997; Saunders et al., 1993). The test is widely used in research and

practical settings, has been translated into numerous languages, appears to be cross-culturally valid, is quick to complete and easily scored (Allen et al., 1997; Babor, Higgins-Biddle, Saunders, & Monteiro, 2001).

A further advantage is that AUDIT has been used in several studies involving university settings (see, for example, Andersson, Johnsson, Berglund, & Ojehagen, 2007; Fleming, Barry, & MacDonald, 1991; Granville-Chapman, Yu, & White, 2001; Kypri, Langley, McGee, Saunders, & Williams, 2002; McShane & Cunningham, 2003; O'Hare & Sherrer, 1999; Shields, Guttmanova, & Caruso, 2004). For this reason it was selected as a suitable measure to ascertain levels of usage in this survey.

The measure consists of ten items: three on alcohol consumption, four on alcohol related problems and adverse reactions, and three on dependence symptoms (see Appendix 2). Each item has a score ranging from 0 to 4 and the maximum score is 40; the higher the total score, the more dangerous the drinking. A number of useful cut-off points have been identified in terms of interpreting the scores, and those relevant to this study pertain to the three categories described above: hazardous, harmful and dependent:

- A score of 8 to 15 is regarded as *hazardous drinking*;
- A score of 16 to 19 is regarded as *harmful drinking*;
- A score of 20 or more is regarded as *alcohol dependence*.

The purpose of this study was to determine the prevalence and distribution of safe, hazardous, harmful and dependent drinking amongst students of Rhodes University. An ad hoc sample survey was used to obtain this data. The AUDIT Test was incorporated into the Rhodes University StudentZone website in such a way that all registered students would have the opportunity to complete the test only once. The University and students are increasingly using the internet to post announcements and other information, and this was deemed to be the most effective way of reaching the entire student population.

In addition to the ten questionnaire items, each respondent was asked to indicate his or her sex, date of birth, whether they are living in residence, digs or their family home, faculty, year of study, and whether an undergraduate or postgraduate student. The data was collected over two weeks in October 2007, and 2049 students completed the survey, representing a little more than one third of all registered students. The test took only a few minutes to complete, and all students who submitted responses were assured of anonymity.

Nonparametric statistical tests are employed to test for differences between the various independent groups. Since the data are subjected to a number of statistical analyses, alpha is set at 0.01 rather than the usual 0.05 to reduce the family-wise error rate, which is the probability that a family of comparisons contains at least one Type 1 error.

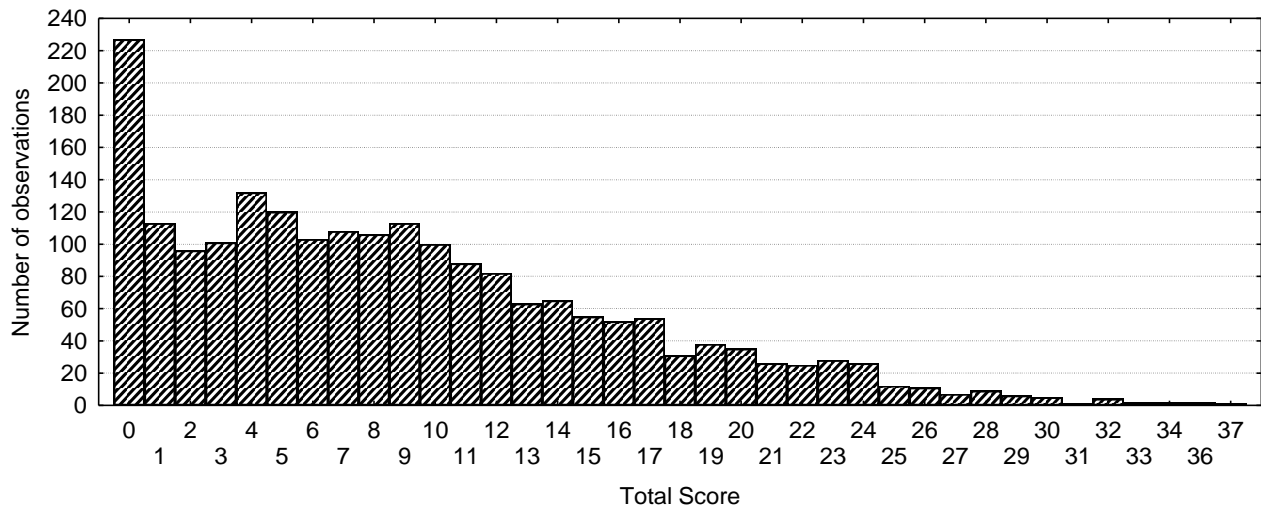
Results

In total, 2049 students completed the questionnaire and the extra biographical questions. The average age of the respondents was 21 years and 3 months. The descriptive statistics are reported in Table 1, and Figure 1 represents the distribution of the score totals obtained from all respondents in the survey.

Table 1: Overall Descriptive Statistics for the AUDIT Survey

	Total	Per cent	Average AUDIT Score	Median AUDIT Score	Std. Dev.	Statistical Significance
Total	2049	100%	8.94	8	7.19	
Male	851	42.5%	10.90	10	7.67	p<0.01
Female	1198	58.5%	7.56	6	6.48	
Undergraduate	1751	85.5%	8.97	8	7.32	p=0.670
Postgraduate	298	14.5%	8.79	8	6.38	
Pharmacy	111	5.4%	4.52	3	5.12	p<0.01
Science	356	17.4%	7.45	6	6.41	
Law	72	3.5%	9.69	7.5	8.13	
Humanities	928	45.3%	9.30	8	7.15	
Education	21	1.0%	9.00	7	7.25	
Commerce	561	27.4%	10.09	9	7.49	
Residence	1250	61.0%	8.59	8	7.13	
Digs	750	36.6%	9.55	8	7.23	
Parental Home	49	2.4%	8.57	7	7.57	

Figure 1: Distribution of Score Totals



The data reveals that only 227 students (slightly more than 11% of the respondents), do not drink at all. The remainder drink at least occasionally and many drink excessively. Table 2 presents this data according to the different categories of drinking. It shows that nearly half of the students who completed the survey are drinking safely and another third are drinking hazardously, but still at a level that could be corrected by psycho-

educational advice. The remaining 18.4%, however, are drinking at levels that are regarded as harmful and, more alarmingly, half of these students are possibly dependent on alcohol.

Table 2: Results in terms of Categories of Drinking.

Score Categories	0 – 7 Safe	8 - 15 Hazardous	16 - 19 Harmful	20+ Dependent
Number	1000 48.8%	672 32.8%	175 8.5%	202 9.9%
Cumulative Totals	1000 48.8%	1672 81.6%	1847 90.1%	2049 100%

Gender

The AUDIT scores for men are higher than they are for women, a result that is statistically significant ($U=376490.5$, $N_1=1198$, $N_2=851$, $p<0.01$, two-tailed). Table 3 displays the distribution of both genders across the four drinking categories, suggesting that male respondents are more likely to fall in the hazardous, harmful or dependant categories compared to female respondents (63.5% versus 42.5%).

Table 3: Gender-based Differences in Consumption

Score Categories	0 – 7 Safe	8 - 15 Hazardous	16 - 19 Harmful	20+ Dependent
Female Students	689 57.5%	352 29.4%	75 6.3%	82 6.8%
Male Students	311 36.5%	320 37.6%	100 11.8%	120 14.1%

Undergraduate and Postgraduate Students

The differences between the median scores for undergraduate and postgraduate students is not statistically significant ($U=256881$, $N_1=1751$, $N_2=298$, $p=0.670$, two-tailed). Table 4 shows that usage levels in the different drinking categories is very similar. Also, there were no statistically significant differences in the scores reported by undergraduate students according to the different years of study ($X^2=2.307720$, $df=4$, $p=0.6794$). So while postgraduate respondents drink no less dangerously than undergraduates, the same is also true of senior and junior undergraduate students.

Table 4: Undergraduate versus Postgraduate Students

Score Categories	0 – 7 Safe	8 - 15 Hazardous	16 - 19 Harmful	20+ Dependent
Undergraduates	859 49.1%	562 32.1%	148 8.5%	182 10.4%
Postgraduates	141 47.3%	110 36.9%	27 9.1%	20 6.7%

Faculty

The differences between the median total scores for each faculty is statistically significant ($\chi^2=52.40196$, $df=5$, $p<0.01$). Table 5 presents comparisons in consumption according to the four drinking categories based on faculty of study.

Table 5: Faculty-based Comparisons

Score Categories	0 – 7 Safe	8 - 15 Hazardous	16 - 19 Harmful	20+ Dependent
Pharmacy	83 74.8%	23 20.7%	3 2.7%	2 1.8%
Science	200 56.2%	114 32.0%	25 7.0%	17 4.8%
Law	36 50.0%	21 29.2%	6 8.3%	9 12.5%
Humanities	438 47.2%	315 33.9%	76 8.2%	99 10.7%
Education	11 52.4%	5 23.8%	3 14.3%	2 9.5%
Commerce	232 41.4%	194 34.6%	62 11.1%	73 13.0%

Accommodation

The difference in Audit scores for students according to their accommodation is statistically significant ($U=430074.5$, $N_1=750$, $N_2=1250$, $p<0.01$, two-tailed). Table 6 reports that distributions across the drinking categories, indicating that a greater proportion of digs students fall in the harmful or dependant categories compared to those who live with their parents or in residence.

Table 6: Comparisons based on living in Residence or in Town

Score Categories	0 – 7 Safe	8 - 15 Hazardous	16 – 19 Harmful	20+ Dependent
Residence	622 49.8%	418 33.4%	98 7.8%	112 9.0%
Digs	350 46.7%	242 32.3%	74 9.9%	84 11.2%
Parents	28 57.1%	12 24.5%	3 6.1%	6 12.2%

Discussion

It is of great concern that half of the respondents to this survey report drinking patterns that are either hazardous, harmful or alcohol dependent. Apart from the deleterious effect of such behaviour on health and safety, such heavy drinking is also associated with absenteeism and poor academic performance. Thus, it is in the interests of institutions of higher learning to take note of the levels of alcohol consumption amongst their students, and devise strategies to counteract such trends where necessary.

The matter is of particular concern because the already high prevalence of excessive drinking at a University is likely to influence the drinking behaviour of new students when they first arrive, since direct influence, modelling and perceived social norms are mechanisms whereby excessive drinking is encouraged (Borsari & Carey, 2001), and senior students are likely to exert strong peer pressure to make them to conform. First-time entering students who observe the excessive drinking of others in the social group are more likely to drink excessively themselves. In order to prevent Universities from being places where people develop alcohol disorders, university administrations are under considerably pressure, if not obligation, to do everything in their power to resist and counteract such patterns of excessive drinking where this is possible.

Male students appear to be at particular risk of alcohol abuse, although one needs to be cautious about interpreting this to mean that women are drinking safely as there is research evidence to suggest that after an equivalent dose of alcohol, women have higher blood ethanol levels than men do. This is not only because men are usually larger than women, but also because the body composition of women per kilogram of body weight contains less water than men and because decreased gastric alcohol dehydrogenase activity in women means that a greater proportion of the alcohol passes into the bloodstream (Frezza et al., 1990; Lieber, 1997).

It is noteworthy that the pass rates for male students are lower than for female students. Table 8 reveals that a greater proportion of female than male students pass all their subjects in each year of study (a phenomenon that is repeated yearly since 2004). However, although the connection between excessive consumption and poor academic performance is very plausible and supported by some research, if for no other reason than because heavy drinkers are more likely to miss lectures, one cannot assume that the discrepancy in academic performance between male and female students is caused by the differences in drinking behaviour. It may be that students who perform poorly are more likely to turn to alcohol or that both variables are determined by an unidentified third variable.

Table 8: Proportions of students who passed all subjects by gender in 2007

	1 st Year		2 nd Year		3 rd Year		4 th Year	
	n	%	N	%	n	%	n	%
Male	233	45.4	203	46.4	286	67.9	12	54.55
Female	386	55.9	328	56.5	392	73.3	34	79.1

A finding that is somewhat surprising is that the difference in drinking patters between indergraduate and postgraduate students is not statistically significant. This suggests that despite their demanding academic loads and the fact that this is a group selected on the basis of good academic achievement, postgraduate students drink no less dangerously than undergraduate students. It also implies that interventions to reduce drinking must not overlook postgraduate students.

Also interesting is that the drinking patterns differ according to faculty. Students in the Faculty of Pharmacy report drinking behaviour that is less dangerous than any of the

other faculties. One possible reason for this difference is that these students are more aware than other students of the harmful effects of substance abuse and, therefore, drink more cautiously. This suggests that the provision of accurate, scientific facts about the harmful effects of drinking (by virtue of their course of study) is an effective intervention to reduce alcohol consumption. In terms of the mean scores and the distribution across the drinking categories, results show that Commerce students drink more dangerously than the rest.

Another finding is that students living in digs drink more excessively than those in residence. Although statistically significant, the difference, however, is small and is probably explained by the fact that Wardens in residences are tasked with preventing drinking in communal areas, while students in digs are independent and unsupervised and free to consume alcohol where and when they choose.

Given these findings, the University will continue to intervene to counter the drinking culture that exists. Among such interventions, aggressive information campaigns, ideally supported by the students themselves, as well as clear and regular messages from University Administration and the SRC are necessary.

These interventions to limit alcohol abuse should reach all students, irrespective of gender, level of study or place of residence, and should take place on an annual basis, in order to reach each new cohort of students. While repeated interventions of this kind are obviously important, they must vary from year to year, avoiding repetition of actual strategies, since such repetition dulls the effect of the message and leads to boredom and resistance.

In addition to awareness-raising campaigns and spreading of scientific information, the following strategies are planned by the University for the near future:

- promulgation of the recently-approved “Responsible Use of Alcohol Policy”
- training and workshops for all wardens
- compulsory training workshops for all sub-wardens and House Committee members at the start of the year
- compulsory workshops during Orientation Week for first-time entering students on substance abuse, coordinated by wardening staff and senior students
- parallel workshops for students living in town
- the publicising and discussion of the survey results which form part of this paper
- repeats of the same survey at the same time in 2008 and 2009, in order to monitor any changes in usage
- zero tolerance in the implementation of the University Disciplinary code where alcohol is involved in any offences
- publicisation of all punishments in this regard to all students
- regular pronouncements about the zero tolerance approach to alcohol from people in authority, such as the Vice Chancellor and Deputy Vice Chancellors
- concerted efforts to provide alternatives to alcohol at social gatherings

Final remarks

In addition to their internal strategies, Universities need the cooperation of society and parents in their effort to control alcohol consumption: firstly, beer and alcohol companies need to acknowledge their shared responsibility to assist universities to launch more effective awareness campaigns and make concrete efforts to build responsible drinking cultures on campuses. Secondly, local businesses in the community who take advantage of the ready market need to be pressurised to cooperate in not selling alcohol to people who are obviously over the limit, and to be persuaded that it is socially irresponsible to market cheap alcohol in vast quantities. And thirdly, parents have a role to play, in addition to the messages they convey during the student's developmental year: alcohol costs money, and if students have a good steady supply of money, they are likely to spend a fair amount of it on alcohol. Students from less privileged backgrounds do not form part of the so-called 'drinking cultures' – they simply cannot afford to.

In working towards changing the drinking culture at any University, administrators must accept that such efforts take time and have to be ongoing, involving each new cohort of students and the community. Regular information campaigns are necessary, reminding students of the facts of alcohol abuse and correcting students' misperceptions about 'normal' drinking; consistent and rigorous enforcement of the disciplinary code as it relates to misuse of alcohol is also essential. The hope is ultimately to achieve a culture in which students adopt responsible habits of the use of alcohol in their lives at all times.

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Appendices

Appendix 1: Responsible Alcohol Use Policy

Appendix 2: AUDIT test