EFFICACY OF HARM-REDUCTION THERAPY IN REDUCING ALCOHOL-RELATED PROBLEMS AMONG UNDERGRADUATES IN OWERRI, NIGERIA

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Abstract

This study examined Harm-Reduction Therapy (HRT) as a technique in controlling Alcohol-Related Problems (ARPs). It was hypothesized that there will be a significant reduction in the occurrence of ARPs at each interval test following baseline occurrence. The second hypothesis compared the outcome for the participants in HRT and the control group. 28 male undergraduate students of Imo State University, who abuse alcohol, were selected using purposive and convenience sampling methods. Their age range was between 22-24years with a mean age of 22.96 (STD= .88). The Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST) was used to screen participants for alcohol abuse, while the Alcohol drinking Consequences Questionnaire (ADCQ) was used to assess their alcohol-related problems. The study employed an experimental design and data was generated by assessing participants' alcohol-related problems at baseline, 30th day and 60th day of therapeutic interventions. The repeated measures analysis of variance statistics with SPSS version 17 was used for data analysis. As was hypothesized, there was an increased reduction in alcohol-related problems among participants across test intervals. The result also showed a significant difference in the reduction of alcohol-related problems between participants in the control group and the harm-reduction therapy group only. It was concluded that harm-reduction therapy alone is effective in controlling alcohol-related problems (ARPs) among undergraduates. In addition, a recommendation for the benefit of the inclusion of the harm-reduction therapy in the Nigerian public health policy was made.

Keywords: Harm-Reduction Therapy, Alcohol-Related Problems, Undergraduates, Owerri, Nigeria

Introduction

Alcohol is a psychoactive substance that is readily available in our society due to its classification as a licit drug. Licit drugs are drugs whose usage is permitted by the law of the land. As such, alcohol is a licit drug in our country, though it also has addictive and harmful qualities like cannabis, cocaine, and heroin which are classified as illicit because their use is prohibited by law.

Alcohol has enjoyed a pride of place as a major source of public concern in youth drinking. Since the 18th century, rigorous efforts have been made to educate young persons about the harmful effects and the need for them to stop the behaviour (Hawker, 1978). However, alcohol drinking by youths especially university students has not just persisted, but has continued to increase in recent times (Abikoye & Olley, 2012; Abiodun, 1991; Umoh, Obot & Obot, 2012). However, the mode, pattern, and frequency of drinking exhibited by youths also point to the problematic and unwavering place of alcohol in youth activities (Alwan, 2010; Bolt, 2013; Olisah, Adekeye, Sheikh & Yusuf, 2009).

Studies have shown a rapid increase in alcohol availability, consumption, and abuse by young adults in universities and secondary schools being the primary victims (Abiodun, 1991; Ijeoma, 1997).

Findings across the globe have shown that cultures exist among undergraduates which are handed down from one generation to another. One of such cultures is the drinking culture existent among undergraduates. Undergraduate (College) drinking has been described as "a pervasive culture with its own customs and beliefs handed down from generation to generation. Beginning from students' first days on campus, these customs and beliefs are constantly transmitted" (Siebert, Wilke, Jorge, Smith, & Howell, 2003, p.123).

Consequently, alcohol drinking is a behaviour commonly found among undergraduates. The frequency of use, quantity of intake, and expected effects of alcohol use are all influenced by who is present in the drinking setting. When drinking is aimed at gaining ground, winning competitions, better performance, conquering a mate, or strength and superiority exhibition, abusive use becomes the most likely tendency. This likelihood is very potent as researchers have shown that there is a thin line between the use and misuse of drugs; and as such, individuals who lack maturity, self-esteem, confidence, and accurate information are vulnerable to

abusive drinking (Okasha, 1995; Imam, 2004). Thus, most undergraduate students fall within this category.

Abusive drinking is problematic drinking patterns often referred to as binge-drinking and/or chronic drinking. The common perception of binge-drinking is an occasion in which large amounts of alcohol are drunk in a relatively short space of time. Binge-drinkers often drink with the specific objective of getting drunk, and binge-drinking is often associated with drinking by large groups of people. Some people may do this occasionally, while others drink excessively much more regularly. In all, binge or chronic drinking is seen as drinking large amounts of alcohol regularly (Cabinet Office, 2004).

Abusive drinking is a behaviour that is readily observable among young people as they struggle to adjust to developmental, social, cultural, as well as academic demands and dictates. For some, these events become a passing fancy and are resolved with maturity. However, there exist an increasing number of others who end up as abusers, addicts or dependents. So, many reasons have been cited by several authors/researchers to explain individuals' involvement in abusive drinking. Such reasons include availability of the substance, social pressure, peer pressure, curiosity or experimentation, rebel against constituted authority, frustration, expression of maturity, vulnerable personality, insomnia, need to increase work output or better performance, search for identity, religious obligations, rejection of society, ignorance of the implications of abuse, poverty, unemployment, anxiety, depression, stress, exhibition of strength, potency, and endurance (Gaide, 2013; Imam, 2004; Kacir, 2009). Furthermore, abusive drinking has been a source of worry to humanity and a great challenge to World powers globally because of their consequent damaging effects (e. g. acute and chronic health conditions, social problems like domestic violence, marital instability, absenteeism to low productivity, accidents, criminal behaviours, etc.).

Umoh, Obot, and Obot (2012) pointed out that alcohol abuse has become a pervasive and enduring public health problem. As a result, the hazardous pattern of consumption in Nigeria is increasingly associated with social and health problems, especially unintentional injuries among young men, mental health problems, domestic and other types of violence.

According to Olisah, Adekeye, Sheikh, and Yusuf (2009), most alcohol-related problems appear in non-alcoholic dependent individuals who fall into the categories of hazardous or harmful drinkers. Alcohol-related problems are sometimes referred to as the social consequences of alcohol use (Gmel & Rehm, 2003).

The following are the associated or related-harm of abusive (binge/chronic) alcohol intake as depicted by previous research findings:

i.   Abusive use (binge or chronic drinking)
ii.   Physical injury to self or others
iii.   Having unprotected sex or sex without consent
iv.   Forgetting what happened while under influence
v.   Forgetting where one was or what he/she did
vi.   Doing something that will be later regretted
vii.   Fighting
viii. Higher risk of Suicide/Murder
ix.   Domestic violence
x.   Violent offences e.g. rape
xi.   Mental illness
xii.   Accidents
xiii. Road accidents (drink driving)
xiv.   Drug use
xv.   Homelessness
xvi.   Lost productivity
xvii. Alcohol poisoning
xviii. Haemorrhagic stroke
xix.   Chronic liver disease
xx.   Cancer
xxi.   Premature deaths (culled from; Cabinet Office, 2004; Ritter & Cameron, 2006; and Siebert *et al*., 2003).

Due to these harms caused by abusive drinking and their associated cost to individuals, families, societies and nations, a concerted effort is being made by practitioners, researchers, policy makers, governments and non-governmental organizations to reduce these avoidable harms. The inability of law enforcement to curb drug demand, drug use, and drug-related harm left an obvious vacuum that called for an urgent filling. Thus, a pragmatic view of the world's drug situation necessitated a re-evaluation and re-thinking of the international, as well as national strategies to drug control and alcohol being a gateway drug. Consequently, its use also needs to be controlled. As such, new scientific and evidence-based approaches to successful drug use, control, or treatment are coming up, and one of them is the harm-reduction approaches. Alcohol harm- reduction programmes is an important alternative to abstinence only. This is so because though some people are ready to try to stop drinking for 30 days or want to learn how to abstain from alcohol, there are others who are not even interested in quitting (Harm Reduction, 2012).

According to Enders (2009), "harm-reduction therapy is a set of practical strategies that reduce negative consequences of drug use and unsafe behaviours by incorporating a spectrum of strategies ranging from safer use to managed use to abstinence" (p.2). It is a prevention and practice model that has emerged from the chemical dependency field in response to rising

dissatisfaction with abstinence and prohibition efforts along with a growing epidemic of HIV/AIDS and hepatitis infections related to needle sharing among injection drug users (Bigler, 2005).   MacCoun (1998) further described harm-reduction as "a set of programs that share certain public health goals and assumptions. Central among them is the belief that it is possible to modify the behaviour of drug users, and the conditions in which they are used, in order to reduce many of the most serious risks that drugs pose to public health and safety". As a therapeutic method, harm reductionists seek to minimize the risks and negative consequences associated with alcohol and illicit drug use or other high-risk activities through various public health measures, intervention programs, or individual counseling (Marlatt & Witkiewitz, 2010). Therefore, this model looks at substance use which is related to various harms (problems) grouped as:

a) Health consequences – infection, mental health, and effects on overall health or nutrition.

b) Social consequences – interpersonal relationships, family, and stigmatization.

c) Personal development – education, happiness, and legal issues.

d) Economic and physical wellbeing consequences – employment, housing, and imprisonment (Logan, Carusone, Barnes, Rohaila, & Strike, 2014).

Consequently, in harm-reduction therapy/ treatment, the focus of attention is not on the drug or behaviour itself, but on the harm associated with it (Enders, 2009).   Several harm-reduction interventions have been developed following research in this area. Some include: needle and syringe exchange, low threshold methadone maintenance, "safe-use" educational campaigns, and the use of treatment as an alternative to incarceration for convicted drug offenders (MacCoun, 1998).   Furthermore, we are more interested in those interventions which can be considered beneficial to individuals experiencing alcohol-related problems. Thus, the interventions include:

a.   Determine in advance not to exceed a set number of drinks
b.   Choose not to drink alcohol
c.   Use a designated driver
d.   Eat before and/ or during drinking
e.   Have a friend to let you know when you have had enough
f.   Keep track of how many drinks you have had
g.   Pace drinks to 1 or fewer per hour
h.   Avoid drinking games or competition
i.   Drink an alcohol look-alike (non- alcoholic beer, wine, etc.)
j.   Avoid occasions where alcohol drinking is certain (all-night parties, clubs, etc.)

(Culled from Siebert et al., 2003).

Meanwhile, the use of alcohol has become widespread in the Western part of the globe (e.g. Holland, Sweden, Canada, Czech, etc.) and is expected to reach the shores of Africa sooner than later as indicated by the West African Commission on Drugs (WACD) (2014) report. Therefore, in order not to let harm-reduction come to Nigeria as 'a stranger', 'an immigrant' or worst still, as 'an expatriate', this research serves as one of a kind to study, understand, and clarify the effectiveness of harm reduction therapy as a treatment approach in psychology and in ascertaining its suitability in reducing harm among young Nigerian alcohol abusers. Besides, the presence of alcohol in our society is not considered as a misnomer, even when it is in the possession of underage children and young adults. As such, the rate of alcohol-related problems among young people keeps escalating. It is this seeming increase in alcohol-related problems (e.g. abusive /harmful drinking, increased tribal clashes, terrorism, mental illness, poor academic performance, increased school dropout rate, increased number of unemployable youths, accidents, sex offenses, unsafe sex, violence, unintentional injuries, premature deaths, drink-driving, etc) that calls for urgent efforts to be directed towards the control of these harms. Furthermore, it is based on this premise that the current research has taken the leap as one of the first study to examine the effectiveness of harm reduction therapy in the control of alcohol-related problems among University undergraduates in Nigeria.

Taylor, Johnson, Voas, and Turrisi (2005) studied *demographic and academic trends in drinking patterns and alcohol-related problems on dry campuses.* They found that for each measure of 29 alcohol-related problem behaviours assessed, males significantly reported higher average occurrence than females (p< .01). Also, students aged 20years and younger, had significantly higher mean alcohol-related problems in total and on each of the scale dimensions except risk/reckless behaviour (p< .01), for which students aged 21 and older, reported more problems significantly (p< .05). The researchers concluded that campus alcohol policies can only have limited effect on the drinking patterns of college students; as such, the prevention programs are needed on most dry campuses as well. In another study, Siebert et al. (2003) *explored the differences in African American and White college students' drinking behaviour; their attitudes to consequences, harm-reduction strategies, and health information sources*. They found that African-American students scored lower on drinking measures, reported fewer negative consequences, and employed drinking-reduction strategies more regularly than White students, except for choosing a designated driver. However, this findings points to the worrisome fact that students drive after drinking, thereby making themselves prone to auto-accident related harm.

Again, Ritter and Cameron (2006) reviewed over 650 studies on *the efficacy and effectiveness of harm-reduction strategies for alcohol, tobacco and illicit drugs*. They found that for tobacco, the result on the efficacy and effectiveness of harm-reduction interventions is controversial. Thus, promising new products that reduce the harm associated with smoking are being developed. However, they reported that for alcohol, harm-reduction interventions to reduce road trauma were well-founded in evidence. Nevertheless, there is limited research to support the efficacy and effectiveness of other alcohol harm-reduction interventions. In a study by McBride, Farringdon, Midford, Meuleners, and Philips (2003) on *harm minimization in school drug education: final results of the school health and alcohol harm-reduction project (SHAHRP)*, the researchers found that a harm-reduction programme which does not solely advocate non-use or delayed use can produce larger reductions in alcohol consumption than either a classroom-based or comprehensive programmes that promote abstinence and delayed use. Specifically, they found that during the 1st and 2nd phases of the programme intervention, students consumed 31.4% and 31.7% less alcohol compared to students in the comparison group. Subsequently, they also showed 25.7%, 33.8%, and 4.2% less likelihood to drink to risky levels on their follow-ups. They stated that the intervention reduced the harm that young people reported to be associated with their own use of alcohol. However, this was accompanied with intervention students experiencing 32.7%, 16.17%, and 22.9% less harm during follow-ups.

Smock, Trepper, Wetchler, McCollum, Ray, and Pierce (2008) studied the solution-focused group therapy for level 1 substance abusers. Their result showed no significant difference between the groups. Their findings suggested that the treatment and control groups faired similarly at the pre-test and post-test on the SASSI. In addition, the researchers concluded that SFGT may be a useful approach in the treatment of level 1 substance abusers. They reported that while clients who received either SFGT or a traditional treatment approach both improved overall, clients who received SFGT improved significantly on co-morbid factors unlike those in the traditional treatment.

Hypotheses
1.   At baseline 30th day and 60th day interval tests, there will be a significant reduction in the occurrence of alcohol-related problems among participants.
2.   Participants who received Harm-reduction therapy will only differ significantly from those in the Control group in the reduction of alcohol-related problems.

Method
Participants

The study involved 28 male undergraduate students of Imo State University, Owerri, who abuse alcohol. Purposive sampling method was used to select three students' inhabited hostels at the Front-gate axis of the University. They were Red house hostel, Laurel Suites, and Abuja hostel. Participants were selected from these hostels using both purposive and convenient sampling techniques. These sampling techniques were used for only individuals who are abusing alcohol. Also, an alcohol-related problem considered as common among participants in this study were selected. Secondly, individuals were not compelled to participate or continue with the therapy; as such, only those willing to join were selected. In addition, participants' age ranged from 22 to 24years. They were of all academic levels (i.e. year one to year 5) and from all Faculties of the University except the Faculty of Social Sciences. Thus, this selection was done to avoid bias due to familiarity with both the researchers and the study tools.

Instruments

Alcohol abuse was measured using the Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST), English version 3.0 (Humeniuk & Ali, 2006). The ASSIST was used to assess the rate of alcohol abuse among participants prior to therapy. Alcohol abuse is one alcohol-related problem that is common to all participants in this study. It was therefore considered as a key variable in selecting and ensuring the equivalence of participants on the dependent variable. The instrument is an 8 item questionnaire covering 10 substances. It uses a 5-point likert scoring pattern for items 2, 3, 4, & 5 and 3-point likert scoring pattern for items 6 & 7. In addition, item 1 is a nominal question with "yes" or "no" response. However, only items 1, 2, 4, 5, and 6 for ascertaining alcohol abuse were considered in this study. The screening test result based on a participant's score is interpreted as 0-10 Low (requires no intervention); 11-26 Moderate (requires brief intervention), and 27 and above High (requires intensive treatment).

Consequently, a validation study was conducted to adapt the scale for local use. Internal consistency for the ASSIST was Cronbach alpha 0.71. For validity, concurrent validity between the ASSIST for alcohol and AUDIT was r = 0. 54, p<.01; and discriminant validity between ASSIST for alcohol and RTQ- Smoking was r = 0. 59, p<.01

The second instrument in this study, which is the Alcohol Drinking Consequences Questionnaire (ADCQ) was used to measure Alcohol-related problems (harms). The instrument is a 14 item questionnaire developed and validated by the researchers. It was used to assess the students' resultant

drinking problems as experienced in the last three (3) months. The items were coded using a 3 point likert type scale of 3= yes, 0= no, and 1= I can't say.

Internal consistency of the instrument was Cronbach alpha 0.78. Concurrent validity was obtained by correlating the scores of the instrument with those of the GENACIS Drinking Problem Instrument. However, concurrent validity was r = 0.66, p<.01.

Procedure

Pre-treatment Phase: Ethical approval to carry out this study was granted and received from the departmental Post-graduate Board through the study supervisors following which the study commenced. A one day closed lecture was organized on '*ALCOHOL CONSEQUENCES ON EDUCATION*' which involved oral explanation and a video show of people who abused alcohol and the different alcohol-related problems they experienced. In the course of the lecture, the participants were required to respond to ASSIST and ADCQ questionnaires at different points. Assurance of confidentiality of every process and information undertaken, released, or shared in the course of the research was given to the participants. The lecture and all other processes described here lasted for a maximum of 90 minutes. At the end of the lecture, all those present and who also gave informed consent were encouraged to come for further harm-reduction therapy; and they were given the venue, date, and time. The first session took place the day following the lecture. This close dating was to prevent a renewed ambivalence among participants.

Treatment Phase: The treatment adopted a group counseling approach and the intervention technique was the harm-reduction therapy. The therapy involved two clinical psychologists and two counseling psychologists. Harm-reduction therapy was a 10 behaviour based activities taught over 13 group sessions of 20-30minutes each and assessed at baseline, on the 30th day and on the 60th day of the therapy using the ADCQ questionnaire. Therapy lasted for 2months, twice a week (5pm on Fridays and Saturdays) on an outpatient basis. Individuals who were present at the lecture and gave informed consent, but did not participate in the counseling sessions at all, were considered as the control group and they were assessed at the same rate.

Post-Treatment Phase: A compilation of some alcohol treatment service centers *Out-Patient Counseling, Day Treatment, Residential and Detoxification Programs, and Mental Health Programs that deal with Alcohol-Related Problems* within southern Nigeria was made available to participants. Also, phone numbers, address, contact person, and a brief description of the services they offer were also provided. This was made

available at all sessions for participants who might need further assistance than the therapy sessions offered. The entire treatment process took place in a temporary clinic at the hall in the Red House hostel, Frontgate, Imo State University. The hostel was chosen because of its proximity to the other two hostels and all participants gathered there for each counseling session. After termination, the data gathered during the study was used for statistical analysis.

Design and Statistics

This is an experimental field study that utilized a mixed-experimental repeated measures design.

The repeated measures analysis of variance (Repeated Measures ANOVA) was used to test the hypotheses.

Results

Table 1 Mean and Standard Deviations of Alcohol-Related Problem arranged by Experimental Groups and at Different Points of Assessment

	Experimental Groups	N	Mean	Std. Deviation
Baseline	Control Group	14	19.14	4.45
	HRT Group	14	17.36	3.62
	Total	28	18.25	4.08
30th Day	Control Group	14	15.00	5.64
	HRT Group	14	9.86	4.88
	Total	28	12.42	5.80
60th Day	Control Group	14	8.79	4.96
	HRT Group	14	4.00	2.93
	Total	28	6.39	4.68

Note: HRT= Harm Reduction Therapy.

Result from table 1 above shows the mean scores of participants from different experimental conditions and at different stages of the intervention. Generally, there is a mean difference showing reduction in alcohol related problems which was reported at baseline of 18.25 (4.08), at first assessment after 30 days of intervention of 12.42 (5.80), and at final assessment after 60 days of intervention of 6.39 (4.68).

Table 2 Summary of Repeated Measures Analyses of Variance (ANOVA) Showing Within-Subjects Effect of HRT on Alcohol-Related Problems

APR 1 M (SD)	APR 2 M (SD)	APR 3 M (SD)	F	df	Sig.
18.25 (4.08)	12.42 (5.80)	6.39 (4.68)	232.81***	2,25	.001

***p = .001

Repeated measures ANOVA result of table 2 above showed that the within-subject main effect was significant (sphericity assumed) ($F_{(2, 25)} = 232.81$, p= .001; Wilks' $\varkappa = .05$). The linear trend analysis was also significant ($F_{(1, 26)} = 481.81$, p = .001), while the quadratic trend analysis was not significant ($F_{(1, 26)} = .06$, p<.05). *Post- hoc* test to further examine the within-subject effect using multiple comparison with Bonferroni adjustment (in order to prevent Type 1 error), showed a significant reduction in alcohol-related problems (5.48, p = .00) between baseline and 30th day assessment with less problem reported at the second assessment. Similarly, a significant difference in the reduction of alcohol-related problems was found (11.71, p= .00) between baseline and 60th day assessment with even lesser problems reported at the 60th day assessment. Again, a significant difference in the reduction of alcohol-related problems was found (6.24, p = .00) between the 30th day assessment and the 60th day assessment with less problems being reported at the 60th assessment. All the findings showed that alcohol-related problems reported by participants continued to decrease as intervention progressed. Thus, the first alternative hypothesis that there will be a reduction in the occurrence of alcohol-related problems from baseline to 30th day and 60th day interval tests was accepted.

Table 3 Summary of Repeated Measures Analyses of Variance (ANOVA) Showing Between- Subjects Effects on Alcohol Related Problems Based on the Experimental Groups

Control group	HRT only group			
M (SD)	M (SD)	F	df	Sig.
14.31 (1.13)	10.41 (1.13)	6.03	1,26	.02*

The test of between-subjects effects (experimental groups) was significant ($F_{(1, 26)} = 6.03$, p = .02), indicating that there is a significant difference in the reduction of alcohol-related problems between the two experimental groups. Thus, the second alternative hypothesis that there will be a greater reduction of alcohol-related problems in participants who received Harm-reduction therapy than those in the control group was accepted.

Discussion

The present findings are in line with previous empirical results. The efficacy of brief interventions in the control of alcohol abuse and alcohol-related problems (Smock *et al.*, 2008), and alcohol consumption rate, binge drinking or drinking patterns (Marlatt *et al.*, 1998; Taylor *et al.*, 2005) have been strongly established in previous studies. Furthermore, brief interventions like harm reduction therapy used in this study have recurrent scientific evidence for being effective intervention in controlling or initiating control for problematic behaviours like abusive drinking, eating, especially in reducing the harm due to these behaviours, but are not particular about

abstinence. In the researchers view, the significant reduction reflected between the 30th and 60th day tests suggests that the initial enthusiasm to change was maintained throughout the sessions. The cumulative effect of the counseling sessions helped participants in reducing problems that are both social and personal in nature.

Again, the finding that the difference in the reduction of alcohol-related problems between undergraduates in the harm reduction group and those in the control group was not negligible is supported by previous studies. Collins, Carey and Sliwinski (2000) control group showed a psycho-educational brochure about alcohol use. Also, Marlatt *et al.* (1998) used an assessment group only as their control group.

For this finding, the researchers explained that participants in only the harm-reduction therapy group received solution-focused kind of therapy, in which they were basically taught skills and strategies necessary to overcome their alcohol-related problems. This practical approach to treatment might have agreed with the disposition of the participants who by the virtue of their age bracket believe more in action than in words. And as such, they practiced the newly found skills. In addition, this also agrees with their proneness to behavioral experimentation. Again, the effectiveness of harm-reduction therapy in this study can be linked to the fact that HRT did not insist on abstinence as a condition of effectiveness. Thus, this means that participants can have their alcohol drinks and also reduce the problems due to alcohol drinking. Social desirability as a developmental need of this age group could have favored the use of harm-reduction therapy in this study. This is so because participants are likely to prefer those behaviors that would help to put them in 'good light' with others like their parents and peers. Therefore, they adopted those skills that helped reduce their alcohol-related problems, like pacing their drinks and not drinking in rowdy environments in order to avoid possible fights. The researchers opine that this finding indicates the efficacy of harm-reduction therapy in controlling alcohol-related problems. This shows that the application of only HRT as a brief intervention to individuals experiencing alcohol-related problems is effective. In other words, Nigerian undergraduates experiencing alcohol-related problems would benefit from harm-reduction therapy.

Conclusion/Recommendation

This study concludes by stating categorically that alcohol-related problems are prevalent among undergraduates in Owerri. Therefore, based on the findings of this study, harm-reduction therapy is effective in reducing these problems. Furthermore, it is recommended first and foremost that Nigerian Policy makers should begin to consider alcohol-related problems as a public health issue. Hence, it should be treated as crucial societal concern

with free access to good psychological treatments. Secondly, with the clear demonstration of the efficacy of harm-reduction therapy in this study, the researchers recommend that harm-reduction therapy be given during orientation programmes in universities, at hospital out-patient units, hospital emergency rooms, and even at police checkpoints. Finally, sponsorship for more empirical research studies and trainings in this area is recommended in order to help curtail the spread of alcohol and other drugs related problems and their consequent cost in our society.

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