Original Research Article

Alcohol, Substance Use and Psychosocial Competence of Adolescents in Selected Secondary Schools in Uganda: A Cross Sectional Survey

Aims: 1) To determine the nature and extend of alcohol and substance use and 2) To describe the relationship between alcohol use and psychosocial competence in secondary school youths in Northern and Central Uganda.

Study Design: This was a cross-sectional study.

Place and Duration of study: Departments of Psychiatry, Gulu (Northern Uganda) and Makerere (Central Uganda) Universities between September 2011 and April 2012.

Methodology: Four (4) and eight (8) secondary schools located in the rural and urban areas of Gulu and Kampala districts respectively were randomly selected to participate in the survey. A total of 3200 students aged 12 to 24 years were recruited by proportionate multistage sampling. Data was collected using socio-demographic questionnaire that included questions about nature and frequency of alcohol and substance use. A pretested self-administered survey questionnaire containing scales to measure components of psychosocial competence was administered. Data was entered in Epidata software, and analyzed using SPSS version 16.0. Psychosocial competence was classified as high or low depending on the responses in the sub-scales of decision making, self efficacy, empathy, emotional awareness, coping with stress and emotions, and Accurate self assessment and self confidence.

Results: 2902 (From Kampala: 2502, (86.2%) and Gulu: 400 (13.8%)) questionnaires were analyzed. Male to female ratio was 1:1 with age range of 12 to 24 years and a mean of 16.5. About 70.1% had ever used alcohol and substances. Only 39.1% used substances regularly. The commonest substance was alcohol (23.3%), followed by Kuber (10.8%), Khat (10.5%), Aviation fuel (10.1%), Cannabis

(9.2%) and cigarettes (5.9%). Respondents from the North were twice more likely to use all substances. The level of psychosocial competence among non-users from Central Uganda was low. Users and regular users from the North had lower psychosocial competence. Factors significantly associated with non-use of alcohol are high levels of self-confidence, non use of cannabis and kuber, age and having symptoms of depressive illness. In the alcohol user groups, a high level of coping was associated with discontinued and experimental use.

Conclusion: More than two-thirds (70.1%) of young people in this study had ever used substances only once and slightly over a third use it regularly. School mental health programmes that target both non-users and users are recommended from the perspectives of service provision, the perspective of mental health promotion and prevention of illicit substance use.

Keywords: ***Substance use; Young people; psychosocial competence; Uganda***

1.0 INTRODUCTION

The use of alcohol and other substances during adolescence and early adulthood has become a serious public health problem in Uganda. The global burden of disease projected that tobacco, alcohol and illicit drugs were respectively the 2nd, 9th and 20th leading cause of mortality globally[1]. This report further projected that tobacco smoking alone will lead to 1 billion deaths globally during the 21st century[1] . The World Health Organization's global status report on Alcohol, 2004 stated that Uganda has one of the highest alcohol and substance abuse rates in the World[2]. With over half of her population below 24 years, school going adolescents and young people have been part of this statistics [3]. A study done on drug and substance abuse in schools of Kampala and Wakiso found between 60 to 71% of the students were using drugs with alcohol and cannabis taking the biggest percentages[4].

Given the serious consequences of drug and alcohol abuse, considerable effort has been directed toward adults who have developed health problems despite the low success rates[5]. In research and clinical studies, adolescent alcohol and substance use has been relatively neglected[6]. In Uganda, there is also a paucity of services and treatment programmes, with the few programmes biased towards treating adults and adoption of adult treatment models without appropriate attention to different developmental and child protection needs. At the policy level, there is no policy to guide any implementation of services to control the alcohol and illicit substance use in Uganda.

Continued use of these substances has a spectrum of adverse outcomes including psychological, physical, social and legal problems. Among adolescents with substance use problems, co-occurring

mental disorders are common and serious [7]. In general, research has shown that individuals with co-occurring disorders (also called dual diagnosis) have more severe psychiatric symptoms, are more difficult to treat, incur greater costs, and have worse overall outcomes than persons with only one disorder [7]

Physical adverse health effects have been shown in adolescent smokers, including effects on the lungs [8]. While many of these conditions, particularly the physical ones develop only after a chronic use spanning many decades, and are therefore rare in children and adolescents, an understanding of substance use and substance use problems during adolescence is critical to any approach aimed at lessening these consequences, as it is during childhood and adolescence that the use of these substances typically first occurs [6]. Some studies suggest that if substance use has not been initiated by age 21, it is unlikely to ever be initiated [6, 9]. Further, age at initiation to substance use has consistently been shown to be associated with higher lifetime consumption, more risky patterns of use and with onset, duration and severity dependence[10]. Studies suggest that the younger an individual is at the onset of substance use, the greater the likelihood that a substance use disorder will develop and continue into adulthood [10]. Furthermore, it is stated that more than 90% of adults with current substance use disorders started using before age 18; half of those began before age 15 years [11] .Thus, it is clear that early onset use is a robust indicator of risk for future substance related problems.

There is also a growing recognition of the high cost of treatment and of the inability of existing treatment programs to keep up with increasing demand. Half of the admissions in the Ugandan National Mental Referral Hospital are young people with alcohol and substance use disorders[12]. These observations stimulate interest in primary prevention of alcohol and other drug abuse in adolescents. Psychosocial competence is one of the factors that has been stated to be protective against progressing to problematic use of alcohol and other substances[13, 14], and it is a critical starting point for policy reform aimed to promote mental health and to prevent and control illicit substance use by young people in Uganda.

This article focuses on the use of alcohol and other substances among young people in secondary schools. In this article, we advance the understanding that alcohol and substance use occurs along a spectrum ranging from beneficial to problematic use. We also support the proposition that harmful alcohol and substance use is facilitated by poor problem-solving capacity and low psychosocial competence. This conceptualization emphasizes the public health-based understanding of substance use instead of binary categorical approach of "use" vs. "abuse" [15].Viewed in this way, alcohol and substance related problems can be understood as occurring on different levels of use associated with different types of problems and levels of psychosocial competence, with young people moving between the different levels[16]. Many young people will experiment with alcohol and substances and stop while others may go on to recreational use and yet a few may get addicted and develop varying types and levels of complications [16].

In this paper, we define alcohol and substance use as lying along a continuum. This may be a onetime use, regular use or problematic use. Problematic use can further be classified as i) substance abuse which involves the use of substances despite persistent social, interpersonal or other problems caused by the use of the substance[17] and ii) substance dependence which is a more severe disorder entailing signs of physical or psychological tolerance or dependence[17].

Studies have shown that there are factors that cause some adolescents to be particularly vulnerable to problematic use of alcohol and substances [18] [6]. Factors associated with resilience are termed assets; i.e.: positive factors that reside within the individual, such as psychosocial competence and resources, and positive factors that help youth overcome risk, but that they are external to the individual, such as a supportive family environment or caring relationship with at least one adult[19].The importance of identification of these factors, and their impact upon the progression or not of substance use in particular individuals, underscores importance of prevention and early intervention programmes for young people. Botvin and others have studied the effectiveness of a drug abuse prevention programme, and life skills (psychosocial competence) training [20, 21]. At 6 year follow up, Botvin and colleagues' study showed that self reported substance abuse was 44% less in the intervention group and poly drug abuse was 66% less [21].

This study aimed to determine the nature and extend of alcohol and substance use and secondly, to describe the relationship between alcohol use and psychosocial competence in young people in secondary schools in Northern and Central Uganda. [(Arial, normal, 10 font, justified) (Detailed instruction about this section is given below. After reading these instructions, please delete this paragraph and begin typing your text here. If you are using copy-paste option then select 'match destination formatting' in paste option OR use 'paste special' option and select 'unformatted Unicode text' option).

Provide a factual background, clearly defined problem, proposed solution, a brief literature survey and the scope and justification of the work done.]

2. MATERIAL AND METHODS

This study sought to answer the following research questions; namely: a) what the nature and extent of alcohol and substance use among young people in secondary schools in Northern and Central Uganda was, and b) what the relations between alcohol and psychosocial competence of young people in secondary schools in the study areas was.

2.1 Study instruments

2.1.1. Socio-demographic questionnaire

All students completed a demographic data sheet, which had questions on gender, age, class in school, religious affiliation, parenthood status, orphanhood status (for orphans), experience of domestic violence, nature of housing, number of rooms in a house where they live and history of mental illness in the respondent and family.

2.1.2. The Emotional Competence Inventory (ECI)

The ECI was used to measure psychosocial competence. The ECI is a 360-degree tool designed to assess the emotional and social competencies of individuals. The test is based on emotional competencies identified by Dr. Daniel Goleman in working with Emotional Intelligence [22]. Only the desired attributes were extracted and measured on a likert scale. Decision making/problem solving was assessed on 5 point likert scale of; (1) almost always, (2) usually, (3) about half the time, (4) rarely and (5) never. Self efficacy, accurate self assessment and self confidence were assessed on 5 point likert scale of; (1) strongly disagree, (2) disagree, (3) undecided, (4) agree and (5) strongly agree. Empathy, emotional awareness and coping with emotions were assessed on 6 point likert scale of; (1) always, (2) very frequently, (3) occasionally, (4) rarely, (5) very rarely and (6) never. Coping with stress was assessed on 5-point likert scale of; (1) very much, (2) often, (3) sometimes, (4) rarely and (5) not at all.

2.3.1. Measures of substance use

Alcohol and substance use was measured by asking a question: 'have you ever used the following (alcohol, Marijuana, Khat, Kuber, petrol/ aviation fuel, cigarettes, others?' This question was asked to identify lifetime users. The questions that followed asked the frequency of taking alcohol and other substances e.g How often do you drink alcohol? Students could answer by ticking off the number of times they had used any of the substances:1= never,2=Tried but don't use them now, 3=Once a year, 4=Once a Month, 5= 2 to 3 times a Month, 6=Once a week,7=A few times a week. This question also served as validating question [23, 24]. According to the Health Behaviour in School Aged Children (HBSC) standard [25], the results on both answers were combined and recoded into five substance use subgroups: 1) Those who had never used (non use);2) Those who tried but do not use them now (discontinued use);3)Those who used once a year (experimental use),4) Those who reported using any of the substances between once a month and 2-3 times a month (regular non- heavy use);5) Those who reported using it once a week and a few times a week (regular heavy use).

For the purposes of this article, 'use' is defined as any one time use of alcohol or any substances, 'non-use' as not ever taken alcohol or other substances; 'regular heavy use' defined as using any of the substances at least once a week and 'regular non heavy use' as using any of the substances once a month or more and excludes those who have never used any substances and experimental users.

2.2 Data management, analysis and handling of confounding factors

Data was entered in EpiData Version 3 and exported to the Statistical Package for Social Scientists (SPSS) version 16.0 for cleaning, editing and analysis. We compared young people from central and northern Uganda on selected socio-demographics, using frequency distributions and the two-way contingency table analyses. In order to incorporate multistage sampling design in our survey analyses, we chose SPSS complex Samples model using robust standard errors to obtain 95% confidence intervals and p values in a weighted and multistage sample[27]. Alcohol use was included in the model as a dependent variable, dichotomised into 'use' (reference category) and 'non use'. Psychosocial competence levels on each of the eight components were included as factors and confounding variables as covariates. These variables were included in a Logistic regression model.

To investigate the association between frequency of alcohol use and psychosocial competence, a five-category alcohol use variable was created (see Measures section): non use (reference group), discontinued use, experimental use, regular non heavy use and regular heavy use. This five-category variable was included in the model as an dependent variable while correcting for age, gender, nature of housing, experience of violence orphanhood, family history of mental illness depressive symptoms as independent variables. All analyses were carried out with SPSS version 13 for Windows. Level of significance was set at $p < 0.05$.

3. RESULTS

3.1. Socio-demographic characteristics

Out of the targeted sample of 3,200, data from 2,902 young people was collected using questionnaires and analyzed. To be consistent with the population of targeted students in the Kampala and Gulu, proportionate sampling was used. Consequently, out of the 2,902, 2,502 (86.2%) participants came from the Central region (Kampala) while 400 (13.8%) were from the Northern region (Gulu). Male to female ratio was 1:1 with age range of 12 to 24 years and a mean age of 16.5.

Respondents from the North were more likely to be males, of age group17-20 years protestants or Catholics, be double orphan ,have family history of mental illness and more likely to experience domestic violence but less likely to have semi permanent or permanent house and 2 or more rooms(Table 1).

Table 1: Socio-demographic characteristics of the study participants in Central and Northern region

Variables	Region			
	Central	**Northern**	***P* Value**	**OD (95%CI)**

	N (%)	**N (%)**		
Age				
12-16	1396 (55.8)	181 (45.3)	Ref	Ref
17-20	1052 (42.0)	215(53.8)	<0.000	1.57(1.27-1.96)
21-24	55 (2.2)	4 (1.0)	.57	0.40 (0.17-1.67)
Gender				
Male	1228 (49.1)	231 (57.8)	.001	0.71(0.57-0.87)
Female	1274 (43.9)	169 (42.3)		
Class				
S2	785 (31.4)	122 (30.5)	Ref	Ref
S3	705 (28.2)	105(26.3)	.78	0.99(0.72-1.28)
S4	584 (23.3)	112 (28.0)	.15	1.23 (0.93-1.65)
S6	428(16.7)	61(15.1)	.41	0.62(0.19-2.31)
Religion				
SDA	157 (6.3)	3 (0.8)	Ref	Ref
Protestant	583(23,3)	131(32.8)	<0.000	11.76 (3.57-46.84)
Catholic	744 (29.7)	219 (54.8)	<0.000	15.41 (4.71-60.98)
Muslim	580 (23.2)	17 (4.3)	.78	1.53 (0.42-6.67)
Pentecostal	404(16.1)	30 (7.5)	.02	3.89 (1.11-16.21)
Others (JW&Trad)	34 (1.4)	0.0	1.00	0.00 (0.00-10.86)
Both Parents alive				
Yes	1774 (70.9)	224 (56.0)	<0.000	1.90 (1.53-2.35)
No	728 (29.1)	176 (44.0)		
Orphanhood				
Maternal/Paternal Orphan	560 (29.1))	50(13.1)	<0.000	8.40 (5.71-12.38)
Double Orphan	168 (7.2)	126(30.9)		
Domestic Violence				
Don't want to say	111(4.4)	19 (4.7)	Ref)	Ref
Yes	585 (23.0)	139(34.8)	<0.000	0.005 (0.004-0.007
No	1806(72.6)	248 (60.5)	<0.000	0.003(0.002-0.004))
Nature of Housing				
Hut	114 (4.6)	205 (51.3)	Ref	Ref
Semi permanent	683 (27.3)	99 (24.8)	,0.000	0.08(0.06-0.11)
Permanent House	1705 (68.1)	96 (24.0)	<0.000	0.03(0.02-0.04)
Number of rooms				
1 room	351(13.7)	142(35.1)	Ref	ref
2 rooms	692(23.2)	89(22.0)	<0.000	0.29(0.21-0.39)
3 rooms	625(24.5)	93(23.0)	<0.000	0.33(0.24-0.45)
More than 3 rooms	987(38.6)	80(19.8)	<0.000	0.21(0.16-0.28)
Family history of mental illness				

Yes	628 (25.0)	137(34.3)		
No	1874 (74.9)	263(65.8)	<0.000	0.64(0.51-0.81)

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3.2 Nature and extent of alcohol and substance use

When the following direct question was asked: 'have you ever taken the following 1) *Alcohol* 2) *Marijuana* 3) *Khat* 4) *Kuber* 5) *Petrol/ aviation fuel* 6) *Ciggarrettes* 7) *Any Other substances?*, 36.3% respondents reported that they had ever used the above substances; of these 66% were from Northern region. The commonest substance was alcohol (19.3%) followed by kuber (4.4%), Cigarettes (3.9%), Marijuana (2.9%), Aviation fuel (1.9%), and khat (1.7%). Other substances were mentioned including cocaine and heroin (2.2%). When a validating question was asked: 'How often (if ever) do you drink alcohol beverages, smoke marijuana etc, 70.1% had ever used alcohol and substances. The commonest substance was alcohol (23.3%) followed by Kuber (10.8%), Khat (10.5%), Aviation fuel (10.1%), Cannabis (9.2%) and cigarettes (5.9%). Respondents from the North were twice more likely to use all substances than those from Central Uganda (Table 2).

Among the users, again respondents from the North were more likely to be regular heavy users (defined as taking any substance at least once a week) of alcohol, Marijuana, Aviation Fuel and cigarettes. The differences between regular heavy users and regular non heavy users in regard to region were not however significant

Table 2: Use and non-use of substance by region (Central and Northern)

Substance of use	Region				
	Central *(n%)*	**Northern** *(n%)*	***P*-value**	**Crude (95%CI)**	**Odds**
Alcohol					
Use	516(20.6)	159(39.8)**			
Non use	1986(79.4)	241(60.3)	**<0.000**	0.39(0.32-0.49)	
Marijuana					
Use	201(8.0)	67(16.8)**			
Non use	2301(92.0)	333(83.3)	**<0.000**	0.51(0.38-0.68)	
Khat					
Use	243(9.7)	70(17.5)**			
Non use	2259(90.3)	330(82.5)	**<0.000**	0.51(0.38-0.68)	
Kuber					
Use	247(9.9)	59(14.8)**			
Non use	2255(90.1)	341(85.3)	**0.003**	0.63(0.47-0.86)	
Fuel					
Use	239(9.6)	55(13.8)**			
Non use	2263(90.4)	345(86.3)	**0.01**	0.66(0.48-0.91)	
Cigarettes					
Use	127(5.1)	45(11.3)**			
Non use	2375(94.9	355(88.8)	**<0.000**	0.42(0.29-0.60)	

Significant at p≤0.05 , Use defined as any one-time use of alcohol or any substances, non-use as not ever taken alcohol or other substances*

3.3. Alcohol and psychosocial competence

Non-users of alcohol in the central had higher percentages of low score on six (6) of the eight components of PSC. They were more likely to have low levels of PSC on the subscale of empathy *(P*=.01), emotional awareness (*P*=.04) and coping with emotions (*P*=.001). Non-users from the North had higher percentages of low score of PSC on 4 of the components with significant difference on decision-making and self-confidence.

They were less likely to have low levels of decision-making (*P*=.03) and self-confidence (*P*= .01). In the central region regular non-heavy use of alcohol was significantly associated with coping with stress; they were less likely to have low levels of PSC on coping with stress. There was a tendency of northern region to have higher percentages of low scores on PSC on five (5) of the eight components (table 3), none of which reaching significant levels. Non-users of alcohol in Central Uganda had low psychosocial competence but users and regular heavy users in Northern Uganda had lower psycho-social competence

Table 3: Alcohol use and non use by components of PSC and region

Components of PSC	Region Central				Northern			
	Non use(N=1986) *n(%)*	Use(N=516) *n(%)*	*P*-value	Crude ORs (95%CI)	Non use(N=241) *n(%)*	*Use(N=159) n(%)*	*P*-value	Crude ORs (95%CI)
Decision making								
High	1513(76.2)	408(79.1)			192(79.7)	112(70.4)		
Low	473**(23.8)**	108(20.9)	.17	1.18(0.93-1.50)	49**(20.3)**	47(29.6)	**.03*** **	0.61(0.38-0.97)
Self efficacy								
High	1461(73.6)	389(75.4)			156(64.7)	99(62.3)		
Low	525(26.4)	127(24.6)	.40	1.10(0.88-1.37)	85(35.3)	60(37.7)	.62	0.89(0.59-1.36)
Empathy								
High	1034(52.1)	302(58.5)			146(60.6)	99(62.3)		
Low	952**(47.9)**	214(41.5)	**.01**	1.23(1.07-1.58)	95(39.5)	60(37.7)	.74	1.07(0.71-1.62)
Emotional awareness								
High	1244(62.6)	349(67.6)			167(69.3)	111(69.8)		
Low	742**(37.4)**	167(32.4)	**.04**	1.25(1.02-1.53)	74(30.7)	48(30.2)	.91	1.03(0.66-1.58)
Coping with emotions								
High	1061(53.4)	317(61.4)			414(58.5)	96(60.4)		

Low	925**(46.5)**	199(38.6)	**.001**	1.39(1.14-1.69)	100(41.5)	63(39.6**)**	.71	1.08(0.72-1.63)
Coping with stress								
High	626(31.5)	182(35.3)			89(36.9)	59(37.1)		
Low	1360(68.5)	334(64.7)	.11	1.18(0.96-1.45)	152(63.1)	100(62.9)	.97	1.01(0.66-1.52)
Accurate self assessment								
High	1570(79.1)	394(76.4)			155(64.9)	93(58.5)		
Low	416(20.9)	122(23.6)	.18	0.86(0.68-1.08)	84(35.1)	66(41.5)	.24	0.78(0.52-1.18)
self confidence								
High	1563(78.3)	395(76.6)			178(73.9)	99(62.3)		
Low	423(21.3)	121(23.4)	.29	0.88(0.70-1.11)	63**(26.1)**	60(37.7)	**.01*** **	0.58(0.38-0.89)

3.4. Results of Multiple Logistic regressions

To control for the multiple explanatory variables on alcohol non-use, multiple logistic regression was done. In this model, self-confidence, non use of cannabis and kuber, age and having symptoms of depressive illness emerged as significantly associated factors of non-use of alcohol. Young people with high levels of self-confidence were more likely to be non-users of alcohol *(P*=.0001, adjusted OR =1.204, 95% CI =1.147-1.260). Non-users of cannabis and Kuber were also likely to be non-users of alcohol (*P*= .001; Adjusted OR =1.050; 95% CI=7.477-1.260) and *P*=.02; OR=2.688; 95%CI=2.007-3.601) respectively. The age group of 17-20 was less likely to be non-users (*P*=.003; Adjusted OR =0.713; 95% CI= 0.630-0.807).

3.5 Association between alcohol use and psychosocial competence in different user groups

High levels of components of psychosocial competence of self-confidence, coping with stress and emotions were associated with discontinued and experimental use respectively. Those with high levels of self-confidence were less likely to discontinue use while high levels of PSC on the component of coping with stress were more likely to have discontinued use.

Those with PSC high levels on the component of coping with emotions were about 2 times more likely to be experimental users. The age group 17-20 emerged a strong predictor of the whole spectrum ranging from discontinued to regular heavy use (table 5)

Table 5: Association between alcohol use and psychosocial competence in different user groups

Alcohol user groups	*P*	*Adjusted OR*	*95% CI*
Discontinued use			
Age (17-20)	.02	1.31	1.04-1.64
Self confidence (high)	.03	0.72	0.53-0.96
Coping with stress (high)	.05	1.29	1.01-1.66
Experimental use			
Age (17-20)	<0.0001	2.34	1.49-3.67
Coping with emotions (high)	.01	2.22	1.25-3.95
Regular non heavy use			
Age (17-20)	<.0001	1.88	1.45-2.45
Regular heavy use			
Age (17-20)	<.0001	2.13	1.43-3.15

4.0 DISCUSSION:

4.1 Key findings

For students aged 12 to 24 in selected secondary schools in Northern and Central Uganda, 70.1% of respondents had ever used alcohol and substances. We found a discrepant level of nearly twice when a validation question was asked. This discrepancy in the rates of alcohol and substance use demonstrated by the two questions supports the view that response validity of substances use is highly dependent on the construction of the question, procedures for administration, investigators' perceived intentions and respondents' cognitive fitness [23, 24]. This finding is further supported by a study done in adults in IDP camps in Northern Uganda by Roberts and others in 2008 which revealed very low rates of alcohol and outright denial of alcohol use by interviewees who were drunk even at the time of interview[28]

Only 39.1% of our respondents used substances regularly. The commonest substance was alcohol 23.3%, Kuber 10.8%, Khat 10.5%, Aviation fuel 10.1%, Cannabis 9.2% and cigarettes 5.9%. The finding that alcohol is the substance most commonly used by secondary school youth is consistent with previous studies conducted among secondary school youth[3, 4, 29-31]. The somewhat new finding here that Kuber being the second most common illicit drug used. Not much is known about this drug that is thought to originate from India and is being sold in Ugandan supermarkets in sachets similar to tea bags

disguised as mouth freshener since 2009[32]. It is thought to be a CNS stimulant, libido enhancing, highly addictive with some of its users experiencing psychotic and depressive like symptoms[33].

When considering the continuum of alcohol use by gender, males in this study generally had higher prevalence rates of discontinued, experimental, regular non-heavy and regular heavy use than females. Respondents in the Northern Uganda were twice more likely to use all substances. The risk of having low levels psychosocial competence among respondents from the Central was high among non-users of alcohol and other substances. While both users and regular-heavy users from the North had lower levels of psychosocial competence. This finding may mean that use and non-use of alcohol and substances in the two regions are influenced by same factors differently. One explanation for this finding may be that resilience may be content and context specific, i.e. a young person may be able overcome one type of risk but unable to overcome other type of risks. Researchers have found that different assets may be associated with different risk and outcome pairings, as in our study, this makes it difficult to identify universal protective or risk factors [34].

Holding the region constant, in multiple logistic regression, factors found to be significantly associated with non use of alcohol are self esteem, use of cannabis and kuber, age and having symptoms of depressive illness emerged as significantly associated with use of alcohol. Young people with high levels of self-esteem were more likely to be non-users of alcohol. And among the users, those with high levels of self-esteem were less likely to have discontinued use. Self esteem is about how we rate or appraise ourselves and this attribute is closely related to self-confidence, a measure of one's beliefs about one's own judgment, skills and abilities. The two concepts sometimes are used interchangeably. This finding may seem contradictory but it is not far from what is in the literature. Previous studies have not provided conclusive evidence about the relationship between self esteem and alcohol use or non use[21, 35]. For instance, despite theory positing a negative relation between self-esteem and alcohol use, empirical findings have indicated that in certain situations, delinquent activities (e.g., alcohol use) can enhance self-esteem[36, 37]. Some of the explanations for this finding may be that rapid developmental change occurs during adolescence and thus a lack of stability in either alcohol use or self-esteem could influence the statistical reliability of their relations with one another[35]. Further, the operative mechanisms that link self-esteem and alcohol are likely to be complicated, and thus not necessarily straightforward, to delineate adequately[21, 35].

In this study, the finding that non users of cannabis and Kuber were also likely to be non users of alcohol was not surprising as previous studies have indicated that most 13 and 15 year olds in Scotland in 2002 were not regular users of any substance (66%)[38]. The age group of 17-20 was less likely to be non-users but more likely to be have discontinued, experimented, and was regular non-heavy and regular and heavy use of alcohol and illicit drug use.

4.2 Use of Alcohol and depression

Those who had Depressive symptoms as measured by Becks depression Inventory BDI-II were also likely to be users. According to National Institute of Alcohol Abuse and Alcoholism study, nearly one-third of people with major depression also have an alcohol problem, [39-41]. Previous research shows that children who are depressed are more prone to develop alcohol problems once they reach adolescence [42].Adolescents who've had an episode of major depression are twice as likely as those who aren't depressed to start drinking alcohol[42].In studies with adult population, it has been shown that alcohol abuse increases the risk for depression[39]. This connection may be because of the direct neurotoxic effects of heavy alcohol exposure to the brain[43]. Alcohol related problems and depression might share common trigger factors. Twin Studies have shown that the same factors that contribute to heavy drinking in families also contribute to the risk for major depression [44-47]. Genetic studies have found a variant of the gene CHRM2 [48] that is thought to be involved in several important brain functions like memory and attention [53]. Variations in this gene might put people at risk for alcohol related problems and depression [53].

4.3 Use of alcohol and Coping:

Those with high PSC levels of coping with stress and emotions were about twice more likely to have discontinued or be experimental users respectively. Studies in animals have indicated that stress increases alcohol consumption and that individual animals may differ in the amount of alcohol they consume in response to stress [49]. Prolonged stress in infancy may permanently alter the hormonal stress response and subsequent reactions to new stressors, including alcohol consumption [43, 50, 51]. Sigvardsson and others reported an association between certain types of alcoholism and adverse early childhood experiences [52]. Part of our sample was drawn from the northern region that has experienced war for time period that may correspond with time of birth of most of the respondents. The central region has not be free of violence either.

4.4 Limitations of the study

Although we made all effort to counter some of the potential limitations of this study, there are some aspects of the research that may limit the interpretation of our findings. One is the reliance on self-report questionnaire and data. Responses to sensitive questions about undesirable or illegal behavior may be biased and subjective. However, having prior knowledge that response validity of substances use is highly dependent on the construction of the question, procedures for administration, investigators' perceived intentions and respondents' cognitive fitness helped us in preparing beforehand. The administration of the questionnaires in school classes, assuring anonymity, making clear our intentions and asking a validating question as was done in this study, might have helped to generate reliable and

valid data[23, 24]. A limitation of conducting a school survey is that adolescents may be absent from school as a result of alcohol and substance use and the same adolescents may also possibly have low levels of psychosocial competence and poor coping mechanisms. This bias could have probably resulted in an underestimation of the strength of the association between alcohol use and psychosocial competence. However, the timing of the study- at the beginning of term, when academic stress may be less may have minimized this bias. The study age group of 12 to 24 is a period of rapid developmental change. We used regression models that may reflect static views of development. In our analysis, the ages were grouped into 12-16, 17-20 and 21-24 to correspond with early adolescence, mid adolescence and late adolescence respectively. Despite this age grouping, our results may not represent the best approach to capturing possible dynamic relations between psychosocial competence and alcohol use. In light of the possible dynamics underlying psychosocial competence and alcohol use in young people, it is important that models be developed that can account for change reliably as part of the developmental mechanisms linking psychosocial competence with alcohol use [35]. Finally, because of the cross-sectional design of this study we cannot therefore make inferences on causal relations.

5.0 Conclusions

In this study, about three quarters of young people had ever used substances only once and slightly over a third use it regularly. Of the substances evaluated, alcohol is the commonest, followed by Kuber while cigarettes are the least used. Factors found to be significantly associated with non-use of alcohol are high levels of self-confidence, non-use of cannabis and kuber, age group of 17-20 years and having symptoms of depressive illness. In the alcohol user groups, a high level of coping was associated with discontinued and experimental use.

Young people who have difficulties adjusting to emotional and life difficulties try to escape from their problems by using alcohol or illicit drugs [53] .With time, the amount of life difficulties they have to cope with exceeds their ability to respond resulting in the inability to achieve desired goals [54]. This overload is experienced at school, families and social lives. It is therefore necessary that efforts are directed at promotion of psychosocial competence e.g. problem solving skills; device strategies to strengthen self-confidence; strategies to cope with stress, anxiety and depression. Further, setting up school mental health program to promote mental health, identify and treat mental health problems early and lastly, support to families of vulnerable young persons including the identification of family members with mental health problems[55, 56]

8.0 Consent

Assent and consent was sought from all study participants at the time of recruitment. Participants below the age of 18 years took detailed consent forms in English and local language to their parents or

guardians. The signed forms were brought back to the research assistants on the day of administration of the questionnaire. All those who declined to participate in the study were treated with respect and without prejudice. What to expect as a participant was made clear to all respondents. Confidentiality of information supplied by research participants and the anonymity of respondents were given utmost respect. All authors hereby declare that all researches have been examined and approved by the appropriate ethics committee and have therefore been performed in accordance with the ethical standards laid down in the 1964 declaration of helsinki [26].

2. Ethical Approvals

Ethical clearances were obtained from the Research and Ethics Committees of Makerere University Medical School (Uganda) and Uganda National Council for Science and Technology Committee on study of Human Subjects. Administrative clearance was obtained from Ministry of Education and Sports as well as relevant District Education Officers. The head teachers of the sampled secondary schools allowed the study in their schools.

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ABBREVIATIONS

List of abbreviations used: PSC-Psychosocial competence; WHO-World Health Organization