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Prevalence and Gender Disparity in Substance Use and Abuse among Adolescents in Public Secondary Schools in Kisumu East Sub-county, Kisumu, Kenya

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Abstract:
Substance use and abuse is a serious problem in Kenya. Kisumu County leads in substance use and abuse among 12–25-year-olds. There is, however, a dearth of studies on the prevalence and gender disparity in adolescents' use and abuse of substances in secondary schools in Kisumu East Sub- County. This study investigated the prevalence and gender disparity in adolescents' substance use and abuse in public secondary schools in Kisumu East Sub- County, Kisumu. The study found the prevalence of substance use and abuse among secondary school's adolescents in the study area to be 38.2%. The paper established the most abused substances to be sleeping pills, bottled beer and local brews. It further found out no significant gender difference in the adolescents' use and abuse of substances. The study concluded that there is a high prevalence of substance use and abuse in the study area, and that this prevalence defies gender considerations.

Keywords: *Adolescents, prevalence, gender, substance use/abuse*

1. Introduction

Since time immemorial, humans have used drugs for various reasons such as entertainment and self-elation (Weiten, 2003). In contemporary times, people use and abuse substances as a way of reducing stress, anxiety and depression (Changwony, 2005). Substance abuse is a worldwide problem affecting both the rich and the poor countries. Many nations spent massive national resources fighting this problem. Substance abuse cuts across race, gender and age. In the olden days, the use of alcohol and tobacco was a natural pastime practiced by the elderly during certain communal activities. These substances were taken in minimal amounts that would not lead to dependency or affect the individual's social behavior. Today, substance use has become a normal pursuit for adolescents both in school and at home. Abuse of illicit substances has negative effects on the individual. Apart from making users victims of substance dependency, it affects the educational performance of learners and impacts negatively on social behavior. This means that the abuser of substances can get involved in behaviors that do not conform to societal norms. (Candia, Mateos, Pardo, Montagud, Rodriguez, Jose &Aquillar 2015)

1.1. Background to the Study

Although majority of adolescents have sufficient knowledge on what substances are, research show that substance abuse is high among the youth. Studies have shown that about 400 000 adolescents in secondary schools in Kenya abuse various substances. Many students' unrests in public secondary schools are attributed to substance use and abuse. This abuse of substances alters the adolescents' brain functions and interferes with their modes of socially acceptable behavior. In Kenya, substance abuse among adolescents is raising a lot of concern to the society. Consequently, the National Agency for the Campaign against Drug Abuse, NACADA (2009) petitioned the government to declare substance abuse a national disaster, especially in the coast province where the youth and even young children had become addicted to drugs. According to NACADA (2003), consumption of hard drugs like cocaine, mandrax and heroin has increased in the country. A survey commissioned by NACADA in 2004 showed that the prevalence and the forms of substances abused vary from one region to another. For example, alcohol consumption prevalence is highest in Western (43.3%), followed by Nairobi (40.9%), Nyanza (26.8%), Central (26.3%), Rift Valley (21.9%), Coast (21.3%), Eastern (17.2%) and North Eastern (1.6%). Adolescents abuse mainly alcohol, tobacco, bhang, khat (miraa) and inhalants such as glue and petrol (NACADA 2004).
Kisumu County, situated in the Nyanza region, is listed by studies as leading in substance use and abuse among people aged 12-25 years. NACADA reported in October 2012 that Nyanza is among regions in the country with high prevalence in the abuse of illegal drinks and narcotics. The Nyanza region also leads in the manufacturing and consumption of traditional brews such as chang'aa and busaa, with a 10% prevalence which is above the national prevalence of 7.2%. It has also a

10.2% consumption prevalence of other local brews, putting it at par with the national average. Substance abuse among secondary school students in Kisumu County stands at 26.8%. The researchers found very scanty information on prevalence of substance use/abuse in public secondary schools in the area of study. The Sub-County has continuously performed dismally in national exams and has had its fair share of students' unrests attributed to substance use and abuse (County Education Office, 2016).

In Kenya, some studies show gender disparity in adolescents' substance use and abuse. Others, however, indicate that there is no significant gender-based difference. For instance, NACADA (2012) established there is gender difference in substance use and abuse with the prevalence for females standing at 0.1% and for males at 7.5%. NACADA'S findings are similar to Muma's (2008) which established that male student abused substances (62%) more than female students (38%). In a survey commissioned by the National Agency for the Campaign against Drug Abuse (NACADA, 2004) among adolescents aged 10-24 years old in Western Province in Kenya, 43% drunk alcohol. The study showed that males were more likely to use and abuse alcohol than females. The same situation was also revealed by a survey done by the African Population and Health Research and Shelter Afrique Centre (2003) in Nairobi slums. This study established that adolescent male were five times more likely to consume alcohol than females. Otieno and Ofulla (2009), in a study in Nairobi of 5311 secondary school students, realized that 2246 (70.1%) of them were smokers, and out of those 38.6% were males while 17.9% were females. Most of these studies were done in the last two decades and many changes may have taken place as a result of cultural shifts in the communities. There is, however, insufficient research carried out on the prevalence and gender disparity in adolescents' use and abuse of substances in Kisumu East sub-county. Therefore, there is need to establish the prevalence and gender disparity in the use and abuse of substances in public secondary schools in this area.

The study was carried out in public secondary schools in Kisumu East Sub- County, Kisumu County, and it was restricted to secondary school students in their adolescent stage. For the purpose of this study, adolescence stage is between ages 14-19. Students in this adolescence stage are normally in secondary school.

2. Literature Review

Substance use and abuse is a problem world over. The United Nations estimates that 40 million people regularly use and abuse substances. The most highly abused substances are alcohol and tobacco (United Nations 2001). Research indicates that substance use and abuse is high among the youth (NACADA, 2004, 2007, 2012). In USA, a survey carried out in 2010 by the National Survey on Drug Use and Health (NSDUH) among students in grades 8, 10 and 12 established that 12.0% of the surveyed population reported driving under the influence of alcohol at least once in the year preceding the survey. The survey also showed an increase in the daily use of marijuana among the 8th, 10th and 12th graders. Griswold et al, (2008) contend that about 1.1 million American adolescents of ages 12-17 met the criteria of substance abuse treatment. In Canada, the rate of substance use and abuse by the youth aged 15-24 remained higher than that of adults 25 years or older (Canadian Alcohol and Drug Use Monitoring Survey, 2010). The annual European Monitoring Centre for Drugs and Drug Addicts (EMCDDA, 2009) reported that in Spain, 14.9% of those between 15 and 34 years have used and abused cocaine. Among adolescents aged 13-19 in Croatia, tobacco and alcohol consumption has increased (Hotujac, Sagud&Hotujac, 2001).

In 2000, Population Communication and Pathfinder International studied young people of ages 16-26 years in selected African countries. The findings showed that 23% consumed commercial beer and spirits, 20% smoked cigarettes, and 9% used cannabis sativa. Majority of the people studied were secondary school and college students. Despite stringent school regulations and rules, substances are smuggled to school compounds by workers and students (Changwony, 2005). Substance use and abuse is also on the rise in South African schools (Zulu et al, 2004). One report reveals that South African children are using drugs (Morojele, Parry, Robertson, &Ziervogel, 2001). Obot (2004) raises concern about substance use and abuse among students in Nigeria. Ekpenyong (2012) observes that the use and abuse of various types of substances among secondary school students in Nigeria stands at over 40%. Audu (2010) concludes that substance abuse is a serious problem that the government of Nigeria must deal with decisively.

The production, use and abuse of drugs and chemical substances are rampant in the Eastern African region. Erambo (2010) says that there are over 200 000 heroin addicts in the coastal region and about 300 000 users in the Eastern African countries. In Somalia, the warring groups have incapacitated the prevention of substance use and abuse among the youth (FOCEU, 2009). Ugandan schools report cases of substance use each school term (FOCEU, 2009). Kenya and Tanzania act as transit routes to the East African hinterland. As a result, the youth gain easy access to these substances (FOCEU, 2009). According to Changwony, (2005), the substances commonly abused in Kenya are alcohol and miraa. But there is an upsurge in the use and abuse of other substances such as bhang, heroine and tobacco. NACADA contends that although bhang is illegal in Kenya, it is grown clandestinely in most parts of the country.

Obot (2006) affirms gender difference in alcohol consumption with more males than females taking alcohol. But a study conducted in Argentina by WHO (2004) reported that among adolescents aged 12-15, life time prevalence of alcohol use was 40% among females and 38% among males. A study of high school students in Mexico City found that in the month preceding the study, more males (34%) than females (29%) consumed alcohol (WHO, 2004). Ibanga, Adetula, Dagona, Karick&Ojiji (2008), observed that in Nigeria, there were significant gender differences in the number of current drinkers, with males taking a higher proportion than females. A study by Green (2011) established that there are apparent disparities between women and men in their alcohol consumption behavior. Similarly, school surveys conducted in 35 European countries in 2012 by the European School Survey Project on Alcohol found that among 15- and 16-year-old students, 23% male and 17% female students had tried drugs.

The reviewed literature indicates that there is a high prevalence of substance use and abuse among adolescent students worldwide. Some of the literature shows that there are no significant gender differences in substance use and abuse. Other studies, however, demonstrate that male students use and abuse substances more than females. Thus, it is uncertain whether substance use and abuse is mainly a male problem. The current study, therefore, aims at determining substance use and abuse prevalence and whether there is gender disparity in substance use and abuse among adolescent students in the area of study.

3. Theoretical Framework

The study adopts Albert Bandura's Social Learning Theory (1977) as a theoretical framework. This theory postulates that humans are social beings who interact with each other in their environment. The theory emphasizes the importance of observation and modelling in learning. According to Bandura, the individual will observe and model behaviors, attitudes and emotional reactions of others. From observing and modelling others, the individual forms an idea of how new behaviors are performed and later, the coded information will serve as a guide for action. For this study, the theoretical framework is relevant as the adolescent may observe and model the behavior of adults, peers, teachers, media personalities or movie stars who use or abuse substances. The adolescent will also model gender specific behaviors from others which may include substance abuse. Gender influence may lead to specific behaviors in the individual. As a product of gender identity, if peers of the same sex abuse substances, the adolescent may consequently be influenced to do the same.

4. Methodology

Descriptive survey research design was used in the study. The target population comprised 7528 adolescent students in public secondary schools in Kisumu East Sub- County Using stratified sampling technique, 12 out of the 41 secondary schools in the sub-county were sampled. Teachers in charge of guidance and counselling from the 12 schools qualified automatically for the study. A sample of 366 adolescents was obtained using Fisher's sampling formula. Data for the study was collected using questionnaires and interview schedule. Reliability for the instruments was 0.870 for the students' questionnaire and 0.801 for interview schedule. This was obtained through the test-retest method. Content validity of the research tools was ascertained by experts in the Department of Educational Psychology, Maseno University. Quantitative data was analyzed using descriptive statistics such as frequency counts, percentages and means. Inferential statistics (T-test) was used to determine the gender disparity in substance use and abuse. Qualitative data was transcribed and organized into themes and reported. Levene's test for equality was used to determine the differences between males and females in the use and abuse of substances. The analyzed data was presented in the form of tables where applicable.

5. Results and Discussions

5.1. Prevalence of Substance Use and Abuse

In order to determine the prevalence of use and abuse of substances among adolescents in public secondary schools in Kisumu East Sub- County, the study sought responses from the respondents on various constructs of drug use and abuse. The aspects tested included respondents' knowledge of substance use and abuse, whether the respondents have used or abused substances and their knowledge about other adolescents who have used or abused drugs. The findings on knowledge of substance use and abuse among adolescents in secondary school are shown in Table 1 below.

Use and Abuse of Drug Substance	Agree	Not sure	Disagree
Respondents' knowledge of Substance Use and Abuse	354 (97.3)	4 (1.1)	6 (1.6)
Respondents who have used or abused drugs	236 (64.8)	10 (2.7)	118(22.4)
Respondents' knowledge of adolescents involved in substance use and abuse	331b(91.0)	14 (3.8)	19 (5.2)

Table 1: Knowledge of Substance Use and Abuse
Source: Field Data, 2020

The findings established that 354 (97.3%) of the respondents concurred that they knew what substance use and abuse is. 4 (1.1%) were not sure and 6 (1.6%) had no knowledge about substance use and abuse. The findings revealed that 236 (64.8%) of the respondents had used or abused substances. 10 (2.7%) were not sure and 118 (22.4%) denied ever having used or abused substances. The study also sought to get information from the respondents about the number of adolescents involved in the use or abuse of substances. The findings disclosed that 331 (91.0%) of the respondents knew of adolescents who were involved. 14 (3.8%) were not sure and 19 (5.2) had no idea.

The study also sought to establish from the respondents the most commonly used and abused substances within the past 30 days. The investigated used and abused substances included busaa or changáa, bottled beer, miraa, bhang or heroin, kuber, glue or any inhalants and sleeping pills. The findings are presented in Table 2 using frequency counts, mean and standard deviation.

Common Drugs Used	SA	NS	D	Mean	SD	Prevalence
	f (%)	f (%)	f (%)			Percentage
Busaa or Changáa	188(51.7)	8 (2.2)	168 (46.2)	2.05	.989	41.0
Bottled Beer	204(55.5)	11 (3.0)	151 (41.5)	2.15	.975	43.0
Miraa	175(48.1)	11 (3.0)	178 (48.9)	1.99	.986	39.8
Bhang or Heroin	147(40.4)	5 (1.4)	212 (58.2)	1.82	.978	36.4
Kuber	103(28.3)	7 (1.9)	254 (69.8)	1.59	.901	31.8
Glue or any Inhalants	95 (26.1)	16 (1.4)	253 (69.6)	1.57	.877	31.4
Sleeping pills	217(59.6)	8 (2.2)	139 (58.1)	2.21	.967	44.2
Overall Mean and SD				1.91	.34	38.2

Table 2: Prevalence of Substances Used and Abused by Adolescents
Source: Field Data 2020

Of all these drugs and substances, sleeping pills were the most highly used substance, with the majority of the respondents - 217 (59.6%) - having used it. The pills have a high prevalence as revealed by a mean of M=2.21 and a standard deviation of 0.967. 139 (38.1%) of the respondents denied ever using or abusing sleeping pills. Bottled beer has a mean of 2.15, a standard deviation of 0.975 and a prevalence of 43%. Other commonly used drugs are busaa and chang'aa (mean=2.05, sd=.989, prevalence =41%) and miraa (mean=1.99, sd=0.986, prevalence =39.8%). Findings further reveal that Bhang or Heroin were used by 147 (40.4%) of the respondents. 212 (58.2%) denied having ever used or abused the substances with a mean of 1.82 and a standard deviation of 0.978. This shows average use.

Glue and inhalants, with a mean of 1.57 and a standard deviation of 0.877 are the drugs with the least prevalence of 31.4% as shown in Table 2. The findings indicated that Kuber (M=1.59, SD=.901) and glue and other inhalants (M=1.57, SD=.877) had low usage among the students, with 254 (69.8%) of the respondents saying they had never used glue, and 253(69.6%) denying ever trying any other inhalants. The overall usage of these drugs and substances was relatively high (M=1.91, SD=.34), as revealed by the mean and standard deviation with an index of 0.34. The prevalence of substance use and abuse was at 38.2% among the adolescents in the area of the study.

The qualitative data sourced from the guidance and counselling teachers concur with the data collected from the students. Respondent R 01, in response to whether substance use and abuse is a serious problem in secondary schools said:

> *It is a real problem. We grapple with it quite often. In this school, for instance, we have had several students suspended and two is replicated in neighbouring schools. My colleagues in charge of guidance and counselling in other schools also have issues with students' abuse of substances. The most abused substances are alcohol, bhang, painkillers, khat and kuber.*

Another teacher, R 07 expressed similar sentiments:

> *The use and abuse of substances is rampant among secondary school students. We hardly complete a term without having to deal with issues of drug abuse in school. We are concerned about this problem. It seems like the more we fight drug abuse, the more the students continue abusing them. I think there is a drugs problem in the society at large, and the menace should not be left to teachers, we should all get involved.*

These findings reveal that majority of the students have sufficient knowledge about substance abuse, and they concur with the findings of Otieno &Ofulla (2009). However, there is a gap between the students' understanding of drug abuse and its consequences and the actual use and abuse of drugs and substances. Further, the findings significantly reveal that substance use and abuse, with a prevalence of 38.2%, is a major problem among adolescents in secondary schools. The outcome of the study reflects NACADA'S (2008) report which placed substance abuse among adolescents in learning institutions at 40%. Atwoli et al (2011) reported a prevalence of 69.8% in a study done in Eldoret among college students. The higher prevalence in their study can be attributed to a different geographical area, an older demographical group and a different time span. The disparity can also be ascribed to socio-economic changes and cultural set up of the respondents.

As indicated by the findings, the overall use and abuse of the listed substances is 38.2%. Kisumu East Sub-County is a peri-urban area, a pointer to the ease with which respondents accessed these substances and hence the high rate of substance use and abuse in schools in the area. Sleeping pills can be bought over the counter without a prescription, making them readily accessible. The relatively minimal usage of glue/inhalants can be attributed to the general attitude of associating these substances with street urchins. The high prevalence rates in substance use and abuse can also be brought about by Kisumu County's appalling poverty level which stands at 39.9% (Kenya Bureau of Statistics, 2017). With meagre or unstable sources of income, many families depend on small businesses which may include brewing of alcohol or selling of illicit substances. The easy availability of these substances makes the youth quite vulnerable.

5.2. Gender Disparity in the Use and Abuse of Substances

The study also examined gender disparity in adolescents' substance use and abuse in secondary schools in Kisumu East Sub- County. Analysis was done using frequency counts, means and standard deviations, and finally an independent sample t-test. The findings on adolescents' views were as shown in Table 3.

Variable	Use and Abuse of Substances					
	Agree		Undecided		Disagree	
	F	%	F	%	F	%
1. Used by males	320	87.9	12	3.3	32	8.8
2. Used by females	178	48.9	45	12.4	141	38.7
3. Higher in males than in females	297	81.6	27	7.4	40	11.0
4. More males exposed to Drugs	308	84.6	25	6.9	31	8.5
5. Used by both male and female	320	87.9	12	3.3	32	8.8
6. No gender difference	299	82.1	25	6.9	40	11
7. Not used by most females	241	66.2	35	9.6	88	24.2
8. Used more by females than males	156	42.9	52	14.2	156	42.9
9. More rampant among males	294	80.8	32	8.8	38	10.4

Table 3: Gender Disparity in the Use and Abuse of Substances
Source: Field Data 2020

The research findings in Table 3 present the respondents' views on gender disparity in substance use and abuse. The study established that majority – 320 (87.9%) - agreed that drugs were used or abused by both male and female students, while 178 (48.9%) revealed that they were used and abused by female students. It is apparent from the findings that majority of the respondents - 297(81.6%) - reported that substance use and abuse is higher in males than in females. 308 (84.6%) stated that more male than female adolescents were exposed to substances, while 299 (82.1%) indicated that there was no gender difference. Startlingly 320 (87.9%) of the respondents revealed that both male and female adolescents used and abused drugs. Furthermore, the findings revealed that majority of the respondents - 241(66.2%) believed that drugs were not used or abused by most females. Only 156 (42.9%) indicated that drugs were used by more females than males. However, the majority of the respondents – 294 (80.8%) – thought that drug use and abuse was more rampant among boys.

The study also endeavoured to establish whether significant difference existed between female and male adolescents in the use/abuse of substances. An independent sample t-test was carried out to examine these differences. The means were computed using group statistics. The findings on the group statistics are presented in Table 4 below.

	Sex	N	Mean	S. D.	S. Error Mean
mean of drug use	Girls	160	1.9013	.35810	.02507
	Boys	204	1.9241	.33681	.02663

Table 4: Group Statistics on the Difference between Female and Male Adolescents on Drug Use/Abuse

The group statistics in table 4 indicates that there is a small difference in the use/abuse of substances between males and females. From the findings, males had a slightly higher degree of usage of drugs (mean =1.9241) than females (mean=1.9013). The mean difference in this case was 0.0228. It was therefore necessary to establish whether this difference was statistically significant using the Levene's test. The findings are presented in Table 5.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
mean of drug use	Equal variances assumed	.289	.591	.620	362	.536	.02285	.03685	-.04961	.09531
	Equal variances not assumed			.625	350.266	.533	.02285	.03657	-.04908	.09478

Table 5: Difference in the Use/Abuse of Substances between Males and Females
Source: Field Data 2020

The findings in Table 5 agree with the group statistics of table 4, but indicate no significant difference. The mean for boys (1.9241) and that for girls (1.9013) had very small difference. There is therefore lack of enough evidence that there exists a statistically significant difference in the use/abuse of substances between adolescent boys and girls in schools (t (364) =0.620, p>.05, i.e., p=0.536). The implication is that there was no significant gender disparity in the

use/abuse of substances. These findings correspond with Atwoli et al. (2011) and Amaro et al (2001) that revealed that there was no statistically significant variation of alcohol and drug use based on gender or any other socio-demographic variable. According to Amaro et al (2001), the traditional gender gap in substance abuse has declined. The explanation to this may lie in a hidden causal factor associated with female empowerment happening in the society.

5.3. Conclusion

The study examined the prevalence and gender disparity in substance use and abuse among adolescents. The findings revealed that more than 50% of the adolescents had information about substance use and abuse, had ever used or abused substances or had been involved in the use and abuse of substances in the past 30 days. The prevalence of substance use/abuse among adolescents in public Secondary schools in Kisumu East sub-county stood at 38.2%. The most abused substances were sleeping pills, bottled beer and local brews such as chang'aa, busaa, and miraa chewing. This could be attributed to both the availability and affordability of these substances. The lowest prevalence occurred on the use and abuse of glue and inhalants at 31.4%. Generally, the level of prevalence was above 30% for all substances, implying that drug use and abuse was relatively high. The study established that gender disparity in substance use and abuse among adolescents in Kisumu East Sub- County was statistically insignificant. Both male and female students used and abused substances. From the conclusions, there is need to engage adolescents of both genders in activities that minimize the chances of involvement in the use and abuse of substances. Guidance and counselling services should be reinforced and more sensitization should be done on the dangers of substance use/abuse.

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