Relationship between Awareness of Behavioural Risk and Psychosocial Wellness of Students in Public Secondary Schools in Nairobi County, Kenya

Cecilia Mburu[1]
Maina Anne (PhD)[2]
Newton Mukolwe (PhD)[3]

[1]Maasai Mara University (mburucecilia07@gmail.com)
[1]https://orcid.org/0000-0001-5035-2870
[2]Maasai Mara University (annemaina25@yahoo.com)
[3]Maasai Mara University (wasakhulu@gmail.com)

………..

ABSTRACT

Abuse of prescription drugs remains a major challenge among students in spite of numerous interventions aimed at curbing it. This study set out to examine the relationship between awareness of behavioural risk and psychosocial wellness of students in public secondary schools in Nairobi. The study was based on the situated rationality theories and social action theories and adopted the correlational research design. Quantitative data was analyzed descriptively by use of frequencies, percentages and means. It was also analyzed inferentially by use of Pearson correlation. Data from interviews and secondary data sources were analyzed using thematic and content analysis procedures. The study sampled 255 respondents. These included 100 students, 96 teachers, 42 principals and, 17 MOE officials. Out of these, 100 students (100%), 77 teachers (80.2%), 34 principals (81%) and 11 MOE officials (64.7%) responded. The findings show that prescription drug misuse is rampant among students despite the fact that most of them were aware of the associated risks. Pearson correlation showed that all the awareness factors under investigation had statistically significant relationships with psychosocial wellness among students (r=0.473, p<0.05). The study concludes that drug usage is widespread among secondary school students in Nairobi County, in terms of the types, quantity, and frequency of use. In line with the study findings, the study established that awareness of behavioural risk should also be enhanced at school and community levels through guidance and counselling interventions backed by school and government disciplinary policies.

Keywords: *Awareness of Morbidity Risk; Psychosocial Wellness; Students in Public Secondary Schools; Nairobi County, Kenya*
………..

I. INTRODUCTION

There have been immense increases in prescription drug abuse globally for the last several decades. This could affect the psychosocial wellness of users which according to Dodge et al. (2012) is the ability to strike a state of balance which is affected by challenges in addition to rewarding life events. Psychological wellness is also pegged to "the ability to sustain positive relationships with others, personal mastery, autonomy, a feeling of purpose and meaning in life in addition to personal growth and development" (Ryff, 2014, p. 10-28).

Abuse of prescription drugs entails the use of medication for other purposes than those prescribed by the doctor. Regrettably, it is not easy to check such abuse. This emanates from the fact that although governments deploy immense resources to reign in on the trafficking and abuse of illegal drugs such as marijuana, heroin, and cocaine, prescription drugs are legal and easy to buy over the counter (Boyd, McCabe, Cranford, & Young, 2007).

Due to high accessibility, there are staggering levels of abuse of prescription drugs. Indeed, the most abused substances are prescription drugs, especially opioid painkillers and stimulants (Compton & Volkow, 2006). In the United States (US), abuse of prescribed drugs by US adolescents is a big health problem among adolescents according to the Nonmedical use of prescription drugs (NMUPD) (Conn & Marks, 2015). Currie and Cameron (2012), point out that Canada was the top per capita consumer of high-potency prescription pain killers in the world. In developed countries, prescription drugs trail only alcohol and cannabis as the most common substance of abuse among the youth.

Evidence shows that there is a high-level use of nonmedical prescription drug use in the US (NPDU). In most cases, the rate of abuse was higher for those with weak social bonds. However, negative influences from newer social bonds could overtake the protective edges emanating from early-life bonds (Yang &Yang, 2017). The study, though not focused on Africa could highlight the levels of prescription drug use from a societal perspective and the associated effects on psychosocial wellness.

There are various predictors of prescription drug use (PDU) among adolescents. Desk review of extant literature shows that there are numerous risk and protective factors associated with adolescent NMUPD (Nargiso,

Ballard & Skeer, 2015). These include access to these drugs at the community level which led to increased abuse, parental and peer use and approval of drug use at the interpersonal level. As such risk awareness of NMUPD could enhance their use among adolescents; greatly affecting their psychosocial wellness.

This study hypothesizes that the awareness of the behavioural risk of prescription drugs by members of the society could have direct or indirect influences on their abuse at grassroots levels and by extension their psychosocial wellness. This emanates from the fact that interventions at grassroots levels have been proven to be positively correlated with reduced substance use (Conn & Marks, 2015).

Divergent awareness of the risk of prescription drug abuse has contributed to significant differences in abuse among rural and urban populations in the United States of America. In this regard, misuse of prescription opioid misuse (POM) among 12 to 17 years shows rural and small-urban adolescents have greater chances of POM in comparison to their urban adolescents (Monnat & Rigg, 2016). In Rhode Island, knowledge and students' perceptions of substance misuse harm were linked to nonmedical use of prescription opioids (NMUPO) among children in 9th grade. This often led to the transition to heroin and opioid overdose and death in some instances (Jeffrey, Ashley, Andrea, Balestrieri, & Matsona, 2019). It is thus evident that PDU is closely linked to awareness of the associated risks.

In Morocco, the most common risks associated with substance use among adolescents include perceived benefits of substance use, awareness and beliefs, family and peer influence, social norms, and easy accessibility of drugs (El Kazdouh, El-Ammari, and Bouftini, 2018). It is thus evident that there is a possible link between social awareness of addiction risks and the tendency to abuse prescription drugs. This current study sets out to test the veracity of these findings in Kenya.

In response to high levels of PDU use, the government had enacted numerous policies aimed at reducing such abuse. The National Authority for the Campaign Against Alcohol and Drug Abuse (NACADA, 2012) carried out a rapid situation assessment of the status of drug and substance abuse in Kenya, 2012. The findings show that there has been an immense increase in the abuse of recreational drugs. The main prescription drugs abused are morphine, codeine, pethidine, sedatives, or sleeping pills.

Adolescents in Kenya had also not been spared from the menace of PDU. NACADA (2019) posits that despite extensive interventions by the government to stem in on unchecked dispensing of prescription drugs, there was a disturbing emerging abuse among students in secondary schools. Through a national survey NACADA established that after alcohol at 9.3%, the second most abused substances among students in Kenya were prescription drugs at 6.8%. Interestingly, these drugs were more abused than tobacco (cigarettes and other tobacco products) at 5.2%. Most students were initiated into drug use at 13 to 15 years. However, the survey does not link awareness of risk on abuse of such drugs and the associated effects on psychosocial wellness.

In Nairobi County, which is the focus of this current study, PDU among adolescents and young adults is a serious challenge. The county has the highest level of PDY in comparison to the next biggest city county, Mombasa (Kahuthia-Gathu, Okwarah, Gakunju, & Thungu, 2013). The main drugs abused are pain relievers, tranquilizers, sedatives, and stimulants. Some of the prescription medicines abused in Nairobi are Valium, Panadol, Artane, Rohypnol, Cozapam, and Piriton. In response, the government put constantly puts in place mechanisms for tracking and controlling the use of emerging drugs such as prescription medicine. However, the efficacy of interventions aimed at enhancing the awareness of the risks associated with PDU has not been holistically studied as attested by the existing body of knowledge. This underlines the importance of studies aimed at taking stock of the gains of these interventions.

As shown by the body of literature, various studies have attempted to study the abuse of prescription drugs the world over. However, most studies do not link the knowledge of the risks associated with this abuse and psychosocial wellness among secondary school students in Kenya. Studies on awareness levels of the risks associated with PDU in the ecology of the students are scanty or lacking altogether. It is thus not possible to expressly understand the nexus between risk awareness levels and the psychosocial wellness of secondary school students in Nairobi County from the existing body of literature. This study thus sets out to examine the relationship between misuse of prescription drugs behavioural risk awareness and the psychosocial wellness of students in public secondary schools in Nairobi County.

1.4 Objectives of the Study
To determine the relationship between awareness of behavioural risk and psychosocial wellness of students in public secondary schools in Nairobi County, Kenya

1.5 Research Hypotheses

HO: There is no statistically significant relationship between awareness of behavioural risk and psychosocial wellness of students in public secondary schools in Nairobi County, Kenya

II. LITERATURE REVIEW

McCauley *et al.* studied "The role of traumatic event history in non-medical use of prescription drugs among a nationally representative sample of US adolescents." This study sought to examine how various factors such as depression, post-traumatic stress disorder (PTSD), other substance use, traumatic events, and delinquent behaviour correlate with nonmedical use of prescription drugs to build on previous research that examined the demographic variables and other forms of substance abuse in relation to non-medical use of prescription drugs (NMUPD) (McCauley et al., 2010). A sample size of 3,614 adolescents between 12 and 17 years was selected from households with telephone access and demographic characteristics, traumatic event history, mental health, and substance abuse variables assessments conducted. Multivariable logistic regressions were conducted for each theoretically derived predictor set and these sets were then entered into a final multivariable logistic regression to determine significant predictors of the past year. The findings of this study show the factors which led to increased NMUPD. These include a history of delinquent behavior, other forms of substance abuse, a history of witnessed violence, and a history of PTSD. Though this study was not focused on Nairobi County, its findings can guide the research objective in this study.

Yang and Yang (2017) in "Nonmedical Prescription Drug Use among Adults in Their Late Twenties: The Importance of Social Bonding Trajectories" sought to find out if there is an association between weak social bonds and addiction in cross-sectional studies. This study obtained panel surveys from 1994 to 2004 from the National Longitudinal Study of Adolescent to Adult Health in the United States of America. The data were used to carry out a group-based latent trajectory modeling to obtain trajectories of social bonds such as religious, civic, familial, educational, and marital. The findings showed or revealed that individuals with strong social bonds have a low risk of abusing prescription drugs and that weak social bonds are a significant cause of drug abuse in adults, although recent social bonds mostly overtake early-life bonds contributions. It was also established from the study that abuse of substances contributed to poor socializing behaviours. This study is focused on adults but its findings can be used to shed light on the effects of drug use on the behaviours of abusers. Although this study is not focused on Kenya, its findings can be used to highlight the effect of substance use on the behaviours of use within their society.

Johnson et al. (2013) looked at prescription drug abuse and risky behaviors among young injection drug users. The study included forty teenage injectable drug users between the ages of 16 and 25 who reported injecting a prescription medicine in Los Angeles and New York City in 2008-09. To highlight dangerous injection and sexual behaviors described in this population, descriptive quantitative and qualitative data were investigated. Over half of the subjects reported risky injection activity, three-quarters reported risky sexual behavior, nearly half reported both risky behaviors, and five did not disclose either risk behavior while misusing a prescription medicine, according to the study. Only opioids were abused in the context of injectable risk behaviors, while prescription opioids, tranquilizers, and stimulants were misused in the context of risky sexual activities. Key themes that contextualized risk behaviors included access to clean syringes, attitudes, and beliefs about hepatitis C and risk reduction through partner selection. Although these findings can assist highlight areas where educational programs should be focused, such as the prevention of sexually transmitted infections, risk behaviors related to prescription drug misuse deserve more investigation. The study was also focused on other parts of the USA which has different contextual characteristics hence the need for studies such as this current one which is focused on Kenya.

According to research by Compton and Volkow (2006), prescription drug addiction has increased dramatically over the world and is now at worrying proportions for specific agents, particularly opioid analgesics and stimulants. Prescription misuse medicines belong to the same pharmacological categories as their non-prescription counterparts. Thus, the predicted variables: dose, method of administration, co-administration with other medicines, the context of use, and expectations are all potential factors related to abuse or addiction versus safe therapeutic use of these substances. With the high rates of prescription drug abuse among teenagers, a particularly urgent priority is the investigation of best practices for effective prevention and treatment for adolescents, as well as the development of strategies to reduce the diversion and abuse of medications intended for medical use. Since the study by Comptom and Volkow does not focus on solely African country, its findings should be used sparingly in Kenya or Nairobi County for that matter. Also, the former study was based on desk review of extant literature and does not focus on all the factors under investigation in this current study. This means that the findings may not be expressly relate to the Kenyan situation. This underlines the need for studies such as this current study.

2.1 Theoretical Framework of the Study

Various theories can explain the interrelation between the dependent variable (psychosocial wellness of students) and awareness of behavioural risks. This study is based on the Situated Rationality and Social Action Theories.

2.1.1 Situated Rationality Theory

Situated rationality theory of risk behaviour postulates that situations influence individual rationalities about risk. These theories are drawn from cognitive and behavioural theories. In this regard, differences in the way people perceive risk and rational behaviour can exist (Parsons and Atkinson 1992; Bloor 1995). The theory posits that people do not just make decisions about risk without a context. In this regard, socially situated risk perceptions determine the risk behaviour of individuals. In this regard, abuse of prescription drugs would be an outcome of the environment where the abuser comes from. In the case of this study, perceptions of students about the immediate risks associated with prescription drug abuse could militate against their propensity to abuse these drugs.

Conversely, if there is scanty knowledge about the risks associated with drug use, students can continue abusing prescription drugs unabated. Douglas (1992) is of the view that knowledge about risks in the environment where one is linked to the level of abuse of drugs and vice versa. This current study sets out to find out the level to which knowledge about the behavioural risks associated with prescription drug use in society explains the drug use behaviours of adolescents abusing such drugs.

2.1.2 Social Action Theory

Although social action theory emphasizes contextual influences, it leans towards blaming individual decision-making for risk-taking behaviours (Douglas 1986). In this regard, the theory make an important assumption; that the definition of risk varies based on 'the social dynamics of particular relationships or situations.' There is an aspect of influence from others, which weathers down one's resistance to risk-taking behaviours. This explains the influence of peers and other persons in society on adolescents' decisions to abuse or not abuse drugs.

The perceptions of individuals and social interactions are dependent on social context and network norms. Mary Douglas argues that "If a group of individuals ignores some manifest risks, it must be because their social network encourages them to do so. In this regard, their social interaction presumably does a large part of the perceptual coding on risks (Douglas 1986, p.66).

According to Rhodes and Quirk (1996), 'individual 'choice' is seen as a result of the interrelations between social factors exogenous to individuals themselves by social action theories.' This explains why campaigns targeted at individuals to "make healthy Choices" regarding abuse of drugs often fail. By assuming that individual rationality has preeminence in averting risk-taking appetites, behavioural theorists fail to take cognizance of the fact that individuals do not necessarily act based on the systematic calculation of risks. In reality, persons can be influenced by others since social relationships are power relationships (Bloor 1995).

In the context of this current study, it is worth noting that awareness about the risks of drug abuse can influence the way persons in society view drugs. This can go on to influence the social relations of teenagers. As a result, tolerance of abuse of prescription drugs due to lack of sufficient knowledge of the associated risks can lead to more and more adolescents abusing them and vice versa. The two theories, one on rationalizing and the other on social environment relate to influencing one's behaviour. This underlines their importance in trying to explain the abuse of prescription drugs.

III. METHODOLOGY

3.1 Research Design

This study adopted the correlational research design. This research design measures the relationship between two variables (Kahn, 1993). This study aimed at examining the correlation between awareness of the morbidity risk of prescription drug abuse and psychosocial wellness (the response variable). In establishing the aforesaid relationship, it was deemed a suitable design.

3.2 Location of Study

The study is focused on Nairobi County, Kenya. This is one of the 47 Counties and houses the capital of Kenya. There are 17 Sub-Counties in the County namely Westlands, Dagoretti North, Dagoretti South, Langata, Kibra, Roysambu, Kasarani, Ruaraka, Embakasi South, Embakasi North, Embakasi Central, Embakasi East, Embakasi West, Makadara, Kamukunji, Starehe and Mathare. The county has a population of 4,397,073 persons. It is the most

populous county in Kenya according to the Kenya National Bureau of Statistics (KNBS, 2019). There are 71 public secondary schools in Nairobi County. The county was chosen due to the special challenges related to PDU among adolescents (NACADA, 2019).

3.3 Target Population

A population is the portion of the study from which the researcher can practically reach to select a representative sample (Mugenda & Mugenda, 2008). This study focuses on the 71 public secondary schools in Nairobi County. The county has 44,561 students and 2,451 teachers in public secondary schools (MOE, Nairobi County, 2020). The 71 principals in the schools selected were also included in the study. Also, 20 MOE (national and county governments) were targeted. The county was targeted due to high levels of prescription drug abuse (Kahuthia-Gathu et al., 2013). The target population was presented in Table 1.

Table 1
Target Population

Category	Population
Students	44,561
Teachers	2,451
Principals	71
MOE officials	20

3.4 Sample Size and Sampling Procedure
This section presents the sample size and the procedure that was employed in this study.

3.4.1 Sample Size
The study sampled 255 participants. These included 100 students, 96 teachers, 42 principals and, 17 MOE officials.
Table 2
Sample Size

Category	Population	Sample	Calculation
Students	44,561	100	N1=N/1+N*(e)^2
Teachers	2,451	96	n2=N/1+N*(e)^2
Principals	71	42	N3=N/1+N*(e)^2
MOE officials	20	17	N4=N/1+N*(e)^2

3.4.2 Sampling Procedure

Sampling entails the selection of a representative number of individuals or objects from a study population (Orodho & Kombo, 2002). This study used the proportionate stratified and simple random sampling technique to obtain data. Proportionate sampling technique was used to obtained proportion samples from the four categories (stratum): students, teachers, principals, and MOE officials. Thereafter, simple random sampling was used to obtain the specific study participants from each stratum.

The simplified formula put forward by Yamane (1967) was used in calculating sample size.

The formula is as follows:
$n=N/1+N*(e)^2$
Where:
n=the sample size
N= the population size
e= sampling error (assumed at 0.1)

The formula was applied for each category but not the totals.

3.5 Research Instrument

Questionnaires, interview guides, and document analysis was used in data collection. The research instruments contained questions based on the research objectives. To begin with, the questionnaire contained 9 sections. While section one sought information on demographic characteristics of the study participants, sections two to nine sought information on each of the study variables namely: level of abuse of prescription drugs; awareness of addictive risk; awareness of physical dependence risk; awareness of toxicity risk, awareness of morbidity risk, awareness of behavioural risk; other factors that could influence abuse of prescription drugs (intervening variables) and; psychosocial wellness. It further included close-ended, psychometric tests as well as open-ended questions. On their part, the interview guides contained questions corresponding to each of the study hypotheses.

3.6 Data Collection Procedures

This study utilized both primary and secondary data. Whereas teachers and students filled out the questionnaire, interviews were focused on principals and MOE officials. Secondary data was collected from relevant online and print materials. Four research assistants were recruited, trained, and engaged in data collection. Before administering the research instruments, a research permit and letters of authorization were obtained from the relevant authorities. The researcher then visited the schools and the offices of the sampled MOE officials and sought permission to administer the questionnaires as well as to conduct the interviews. Data collection lasted 6 weeks. Whereas special appointments were made for the interviews, the questionnaires were dropped and picked after specially agreed upon times with the school principals and their representatives.

3.7 Pilot Study

Piloting was conducted to assist in determining the accuracy, clarity, and suitability of the research instrument. This entailed a pilot study targeting 10 teachers, 10 students, and 2 MOE officials in Nairobi County which neighbours Nairobi County. The participants of the pilot study were not included in the main study. This choice of pilot study sample was motivated by the fact that 10% of the study sample is considered sufficient for piloting study instruments (Kothari, 2004). The data collected was used to validate the validity and reliability of the research instruments.

3.7.1 Reliability of the Research Instruments

Reliability tests are carried out to measure the consistency of results from a test. This study used Cronbach's alpha, a reliability coefficient that varies from 0 to 1 to test the reliability of the questionnaires. Research items with Cronbach's alpha values of more than 0.7 are considered to have sufficient internal consistency (Malhotra, 2004). As shown in Table 3, the Chronbach alpha values of 0.89 and 0.82 for awareness of behavioural risk and psychosocial wellness respectively. The tools were thus considered reliable for use in data collection.

Table 3
Reliability Testing

Variable	No. of Item	Teachers' Responses Cronbach Alpha (α)	Students' Responses Cronbach Alpha (α)
Awareness of Behavioural Risk	7	0.89	0.85
Psychosocial Wellness	11	0.82	0.77

The interview guides were piloted among the 2 educational officials. The findings obtained from both interviews were compared for consistency. The consistency of the findings from both questionnaires and interview guides were assessed through triangulation by checking the level to which it relates to data from secondary sources.

3.7.2 Validity of the Research Instruments

Study instruments are said to have high degrees of validity if they "actually measure the intended parameters" (Mugenda & Mugenda, 2008). In this study, content validity was ensured through the inclusion of sufficient questions for each study variable. Face validity was assessed by finding out the ease with which the respondents answer the

71

research questions. In this case, any ambiguous questions were adjusted to make them easy to understand and answer. The input of university supervisors on the constructs of the research tools was also used and their guidance used to improve the tools. Construct validity was ensured through the operationalization by setting the questions in the research tools based on the reviewed literature and the operationalized definition of the study variables.

3.8 Data Analysis and Presentation

Quantitative data was analyzed descriptively by use of frequencies, percentages and means. It was also analyzed inferentially by Pearson correlation. Data from interviews and secondary data sources were analyzed using thematic and content analysis procedures.

IV. FINDINGS AND DISCUSSIONS

4.1 Demographics of the Participants

The study sampled 255 respondents. These included 100 students, 96 teachers, 42 principals and, 17 MOE officials. Out of these, 100 students (100%), 77 teachers (80.2%), 34 principals (81%) and 11 MOE officials (64.7%) responded as indicated in Table 4. These findings show that the various categories of study participants adequately responded to the study which was deemed sufficient for analysis.

Table 4
Response Rate

Response	Students		Teachers		Principals		MOE Officials	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Responded	100	100	77	80.2	34	81.0	11	64.7
Non-Respondent	0	0	19	19.8	8	19.0	6	35.3
Total	**100**	**100**	**96**	**100**	**42**	**100.0**	**17**	**100.0**

General information about the students and teachers was assessed in the study. This included gender, age, person students lived with, class of students, duration teachers had taught in their current schools as well as teachers' level of education. First and foremost, the findings show that most of the students lived with parents, males (31%) and females (20%). Overall, more students lived with both parents (51%); which was more than half. These were followed by 21 % who lived with their mothers and 13% who lived with their fathers. Further, 6.6 % lived with guardians or alone while a paltry 3.3% living with siblings. This shows that most students lived with parents which could a bulwark against prescription drug use as posited by Nargiso et al., (2015). These findings were presented in Figure 1.
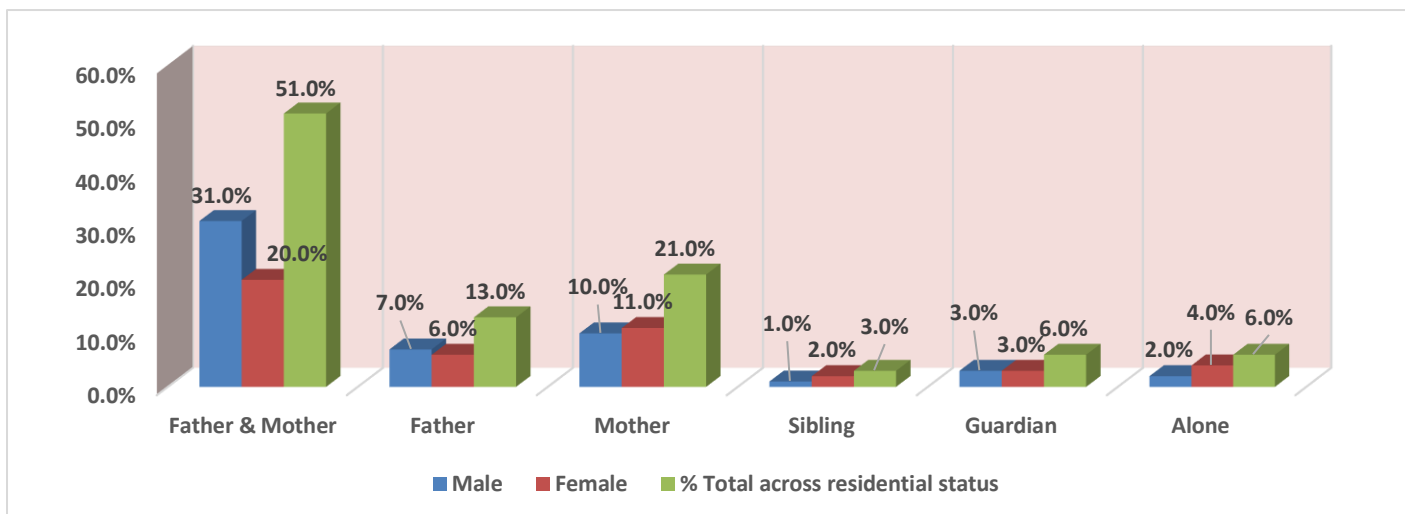
Figure 1

Students Gender and Residential Status

The fact that most students lived with their parents meant that they could get guidance on prescription drug use. The findings were further supported by respondents who opined that parent or guardian, have a big impact on a student's life and the decisions they make. They reasoned that there were numerous approaches for parents to reduce the likelihood of their children abusing prescription medicines. They underlined the need of parents being involved in their children's lives, setting norms and expectations, and informing them about the hazards of prescription drug misuse. This agrees with the study by El Kazdouh et al. (2018) who posits that parental support can affect substance use tendencies among students. To this end one of the respondents said:

> *I live with my parents because they provide me with care, emotional support, security, and safety, in addition to physical and financial assistance* (Principal 1, Nairobi, May 2022)

The students were asked to indicate their class. The findings show that most of the students were male (54%) while females were 46%. Most of the males were either in Form 4 or Form 3 at 34.8% and 33.9% respectively. These were followed by females most of whom were in Form 3 (25.4%) and Form 4 (21.7%). The rest were in the other classes. Most of those aged 16 years were either in Form 2 with 44.4% of them being females. Most of the male students were either in Form 4 (34.8%) or in Form 3 (33.9%). These findings show that most of the older students were male. Both genders were however well represented in the study with no major differences in the demographic characteristics of either gender being registered. The findings could thus clearly depict the opinions of the students based on gender, age and class. The findings were presented in Figure 2.

	Male	Female	Male	Female	Male	Female	Male	Female
	Form 2		Form 3		Form 4		Gender	
■ 14 years			1.7%			4.3%		
■ 15 years	11.1%		1.7%	5.1%				
■ 16 years	33.3%	44.4%	3.4%	6.8%	4.3%			
■ 17 years	5.6%	5.6%	33.9%	25.4%	4.3%	13.0%		
■ 18 years			13.6%	6.8%	34.8%	21.7%		
■ 19 years			1.7%		4.3%	4.3%		
■ 20 years						4.3%		
■ 23 years					4.3%			
■ % Total across gender							54.0%	46.0%

Figure 2

Students Gender, Age and Class

Most of the male and female teachers had taught for 6 to 10 years at 24.7% and 20.8% respectively as shown in Figure 3. These were followed by females who had taught for 2 to 5 years (15.6%) and males who had taught for either 2 to 5 years or more than 10 years at 13% respectively. Only 3.9% of male teachers had taught for less than 1 year with no female teachers teaching for such duration. These findings show that most of the teachers had taught in the schools long enough to understand the issues facing their schools. This is important since work experience enhances mastery of a subject (Kamamia, Ngugi, &Thinguri, 2014).
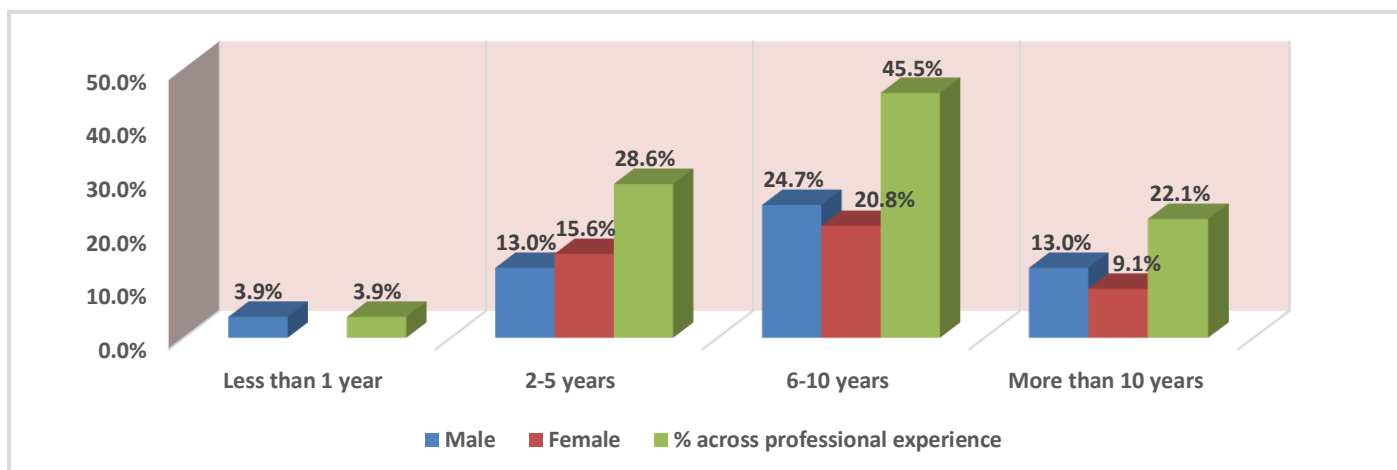

Figure 3
Teachers Gender and Professional Experience

Most of the teachers were males who were aged between 41 and 50 years and had post-graduate diplomas. These were followed by male and female teachers who had diplomas and were aged less than 30 years each at 33% and male teachers who had diplomas and aged 31 to 40 years at 33.3%. The next important group was male teachers who had degrees aged between 41 and 50 years and female teachers aged 31 to 40 years who had degrees at 25% respectively. These findings show that the teachers had sufficient academic qualifications and could make informed contributions to the study in agreement. This further agrees with the study by Kamamia et al. (2014) that highlights the role played by qualifications on the quality of contributions made on a subject. These findings were presented in Figure 4.

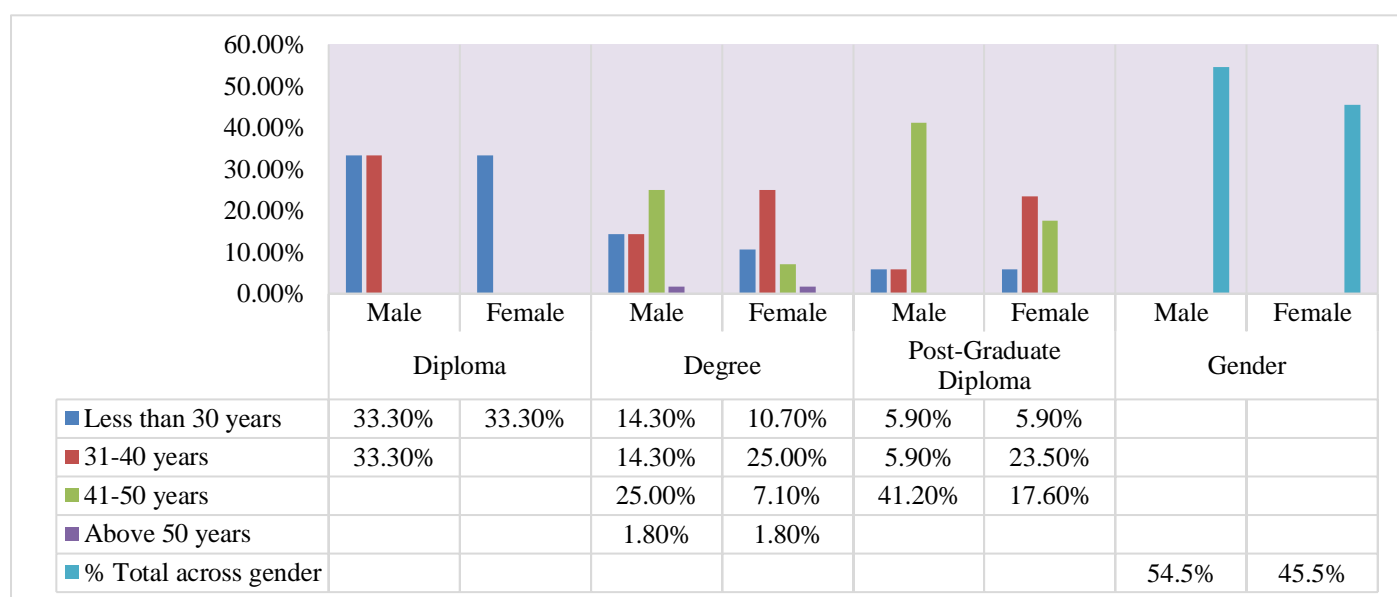|	Diploma		Degree		Post-Graduate Diploma		Gender	
	Male	Female	Male	Female	Male	Female	Male	Female
■ Less than 30 years	33.30%	33.30%	14.30%	10.70%	5.90%	5.90%		
■ 31-40 years	33.30%		14.30%	25.00%	5.90%	23.50%		
■ 41-50 years			25.00%	7.10%	41.20%	17.60%		
■ Above 50 years			1.80%	1.80%				
■ % Total across gender							54.5%	45.5%

Figure 4
Teachers Gender, Age and Academic Qualifications

4.2 Awareness of Behavioural Risk of Abuse of Prescription Drugs and Psychosocial Wellness

The fifth objective of the study was to determine the relationship between awareness of behavioural risk and psychosocial wellness. Data was collected using psychometric scale statements, open-ended questions as well as interviews. This section presents the findings obtained. Firstly, the students and teachers agreed to a great extent (M=4) that students who abuse prescription drugs could suffer from increased aggression or irritability as shown in Table 5.

Table 5

Awareness of Behavioural Risk of Abuse of Prescription Drugs and Psychosocial Wellness

Descriptive Statistics				
	Mean		Std. Dev.	
Statement	Students	Teachers	Students	Teachers
Students who abuse prescription drugs could suffer from increased aggression or irritability	4	4	0.99	0.66

N=100 (students); N=77(teachers)

The students and teachers also agreed greatly (M=4) that prescription drugs could lead to quarrelsome behaviour that could lead to fights. These findings were presented in Table 6. These findings support the study by McCauley et al. (2010) who takes cognizance of the fact that substance use could lead to negative behavioural tendencies. Knowledge of this risk could affect substance use among students.

Table 6

Prescription Drugs Could Lead to Quarrelsome Behaviour and Fights

Descriptive Statistics				
	Mean		Std. Dev.	
Statement	Students	Teachers	Students	Teachers
Prescription drugs could lead to quarrelsome behaviour that could lead to fights	4	4	0.97	0.68

N=100 (students); N=77(teachers)

As shown in Table 7, the respondents also agreed to a great extent (M=4) continued consumption could lead to poor interpersonal relations with peers at school. A study by Nargiso et al. (2015) posits that substance use could affect interpersonal relationships. As such, risk awareness of NMUPD could enhance their use among adolescents; greatly affecting their psychosocial wellness as established by this study.

Table 7

Continued Consumption Could Lead To Poor Interpersonal Relations with Peers at School

Descriptive Statistics				
	Mean		Std. Dev.	
Statement	Students	Teachers	Students	Teachers
Continued consumption could lead to poor interpersonal relations with peers at school	4	4	1.04	0.57

N=100 (students); N=77(teachers)

The students and teachers further agreed to a great extent (M=4) that prescription drugs could lead to trouble with parents and guardians as shown in Table 8. This further supports the study by Nargiso et al. (2015) which emphasizes the effect of abuse of substances on behavioural outcomes. Awareness of these risks could affect the tendency to use substances among students.

Table 8

Prescription drugs could lead to trouble with parents and guardians

Descriptive Statistics				
	Mean		**Std. Dev.**	
Statement	**Students**	**Teachers**	**Students**	**Teachers**
Prescription drugs could lead to trouble with parents and guardians	4	4	0.96	0.64

N=100 (students); N=77(teachers)

The students and teachers further agreed to a great extent (M=4) that students who abuse prescription drugs could lead to indiscipline at school. Table 9 presents these findings. These findings are in agreement with the study by Yang and Yang (2017) which shows a positive relationship between substance use and indiscipline. There is high level of awareness of this risk among students which could affect their likelihood to abuse prescription drugs.

Table 9

Abuse of Prescription Drugs Could Lead To Indiscipline at School

Descriptive Statistics				
	Mean		**Std. Dev.**	
Statement	**Students**	**Teachers**	**Students**	**Teachers**
Abuse of prescription drugs could lead to indiscipline at school	4	4	0.92	0.55
N=100 (students); N=77(teachers)				

The students agreed to a great extent (M=4) that students who abuse prescription drugs could start stealing to get money to purchase those drugs while teachers agreed with the statement to a very high extent (M=5). These findings as presented in Table 10 agree with Johnson et al. (2013) who opined that substance use could lead to risky behaviours such as stealing as users look for money to purchase substances. Being aware of this risk could affect the level to which students abused substances.

Table 10

Students Who Abuse Prescription Drugs Could Start Stealing to Get Money to Purchase Those Drugs

Descriptive Statistics				
	Mean		**Std. Dev.**	
Statement	**Students**	**Teachers**	**Students**	**Teachers**
Students who abuse prescription drugs could start stealing to get money to purchase those drugs	5	4	0.82	0.55

N=100 (students); N=77(teachers)

The teacher and students agreed to a great extent (M=4) that students who abuse prescription drugs could get into risky sexual behaviours such as prostitution to get money to purchase those drugs. Prostitution was one of the vices identified by Johnson et al. (2013) as users look for money to buy substances. High awareness of this risk among students could affect their tendency to use prescription drugs. These findings were presented in Table 11.

Table 11

Abuse Prescription Drugs and Risky Sexual Behaviours to Get Money

Descriptive Statistics				
	Mean		**Std. Dev.**	
Statement	**Students**	**Teachers**	**Students**	**Teachers**
Students who abuse prescription drugs could get into risky sexual behaviours such as prostitution to get money to purchase those drugs	4	4	0.90	0.55

N=100 (students); N=77(teachers)

These findings are a pointer to the fact that there were high levels of awareness of behavioural risks of abuse of prescription drugs among students in line with the studies by Yang and Yang (2017) as well as Johnson et al. (2013). Indeed the principals and MOE officials opined that awareness of behavioural risk of prescription drug abuse had resulted in reduced drug use, which leads to the conclusion that prevention programs touching on drug abuse have significant results of drug use reductions if they combine social resistance and general life skills and if they are properly implemented. They opined that the society should be actively involved in checking substance use behaviours among students. To this end, one of the principals said:

Everyone in the society should find opportunities to discuss about prescription drug addiction around key occasions and holidays. Because many students who abuse prescription medicines also abuse alcohol and other substances, awareness activities should be scheduled around occasions and dates that are traditionally linked with alcohol usage, such as term breaks and holidays (Respondent C, Nairobi County, May 2022).

Furthermore, the participants agreed that radio and television campaigns, as well as school visits, should be expedited to enhance awareness of behavioural risks among students who abused prescription drugs as well as other substances. To this one of the participants said:

The majority of kids who abuse pain relievers say they receive them from relatives and friends, as well as from their homes. As a result, it is critical to keep medicines safe at home. Also, teaching adolescents and their parents about the dangers of drug misuse and abuse can help to address the problem (Respondent A, Nairobi County, May 2022).

Prescription drug abuse has been linked to a variety of physical and mental health issues. The findings showed that individuals with strong social bonds have a low risk of abusing prescription drugs and that weak social bonds are a significant cause of drug abuse in adults, although recent social bonds mostly overtake early-life bonds contributions. Yang and Yang (2017) supports this observation and adds abuse of substances contributed to poor socializing behaviors. Furthermore, the study show that prescription medication use has been related to decreased judgment and coordination, which can lead to drowning and other injuries. McCauley et al., (2010) opine that such patterns of risk-taking behavior and dependency can wreak havoc not just on the abusers' lives, but also on the afflicted pupils' academic work, emotional well-being, and transition to school life.

In this study, prescription opioids, tranquilizers, and stimulants were overused in the setting of risky sexual activities. The respondents noted that students who abuse prescription drugs could indulge into prostitution to get money to purchase those drugs. This finding is similar to the finding by Johnson, et al. (2013) who opines that only opioids were abused in the context of injectable risk behaviors, while prescription opioids, tranquilizers, and stimulants were misused in the context of risky sexual activities.

The study also had positive findings. Indeed the study show that awareness of behavioural risk of prescription drug abuse had resulted in reduced drug use, which leads to the conclusion that prevention programs touching on drug abuse have significant results of drug use reductions if they combine social resistance and general life skills and if they are properly implemented. They opined that the society should be actively involved in checking substance use behaviours among students. This finding buttress Compton and Volkow (2006) view that a particularly urgent priority is the investigation of best practices for effective prevention, as well as the development of strategies to reduce the diversion and abuse of medications intended for medical use. Therefore, everybody in the society should find opportunities to discuss about prescription drug addiction around key occasions and holidays. Because many students who abuse prescription medicines also abuse alcohol and other substances, awareness activities should be scheduled around occasions and dates that are traditionally linked with alcohol usage, such as term breaks and holidays.

The hypothesis was also tested using Pearson correlation and the findings presented in Table 12.

HO_1: **There is no statistically significant relationship between awareness of behavioral risk and psychosocial wellness of students in public secondary schools in Nairobi County, Kenya**

Table 12

Correlation between Awareness of Behavioural Risk and Psychosocial Wellness of Students

		Psychological Wellness Scores
Behavioral Risks Scores	Pearson Correlation	.473[**]
	Sig. (2-tailed)	0.000
	R^2	0.22
	N	177

***. Correlation is significant at the 0.01 level (2-tailed).**

Pearson correlation shows that awareness of behavioural risk (r=0.473, P<0.05) had a statistically significant relationships with psychosocial wellness among students. The null hypothesis was consequently rejected since it was evident that behavioural risk had significant effects on abuse of prescription drugs. These findings agree with the study by Yang and Yang (2017) that drew links between the abuse of drugs and poor socializing behaviours. It is thus expected that knowledge of these risk should persuade students from using prescription drugs. Regrettably, this is often not the case.

4.3 Psychosocial Wellness

The dependent variable in the study was psychosocial wellbeing. First and foremost, the respondents were asked to show their level of agreement with selected statements regarding the psychological wellness of students who abuse prescription drugs. This section presents the findings from questionnaires and interviews. To begin with, findings from psychometric scale statement were presented. As presented in Table 13, the findings show that teachers and students agreed to a great extent (M=4) that abuse of prescription drugs could affect a student's purpose in life in line with the study by Ryff (2014, p. 10-28).

Table 13

Abuse of Prescription Drugs Could Affect a Student's Purpose in Life

Descriptive Statistics				
	Mean		**Std. Dev.**	
Statement	**Students**	**Teachers**	**Students**	**Teachers**
Abuse of prescription drugs could affect a student's purpose in life	4	4	1.15	0.66

N=100 (students); N=77(teachers)

The respondents also agreed to a great extent (M=4) that consumption of prescription drugs reduces a student's self-esteem as shown in Table 14. This also agrees with the study by Ryff (2014) that shows that substance use can affect user's self-esteem.

Table 14

Consumption of Prescription Drugs Reduces a Student's Self-Esteem

Descriptive Statistics				
	Mean		**Std. Dev.**	
Statement	**Students**	**Teachers**	**Students**	**Teachers**
Consumption of prescription drugs reduces a student's self-esteem	4	4	1.27	0.61

N=100 (students); N=77(teachers)

The respondents went on agree to a great extent (M=4) that they believed that consumption of prescription drugs affects the level of a student's self-acceptance. These findings as presented in Table 15 further agree with the study by Ryff (2014).

Table 15

Consumption of Prescription Drugs and the Level of a Student's Self-Acceptance

Descriptive Statistics				
	Mean		**Std. Dev.**	
Statement	**Students**	**Teachers**	**Students**	**Teachers**
I believe that consumption of prescription drugs affects the level of a student's self-acceptance	4	4	1.22	0.68

N=100 (students); N=77(teachers)

As shown in Table 16, the respondents further agreed that continued consumption of prescription drugs could reduce a student's general quality of life (M=4). These findings agree with the study by Olsson, Runnamo, and Engfeldt (2011) which shows association between substance use and quality of life.

Table 16

Continued Consumption of Prescription Drugs Could Reduce a Student's General Quality of Life

Descriptive Statistics				
	Mean		**Std. Dev.**	
Statement	**Students**	**Teachers**	**Students**	**Teachers**
Continued consumption of prescription drugs could reduce a student's general quality of life.	4	4	1.14	0.65

N=100 (students); N=77(teachers)

Furthermore, they agreed to a great extent (M=4) that consumption of prescription drugs could affect a student's emotional balance leading to anxiety and irritations as shown in Table 17. These findings corroborate the study by Lubman et al. (2008) show that regular use of volatile substances such as toluene has the same effect as other drugs of abuse and has an effect on the neurotransmitter systems in cognitive, emotional, and brain development in children and adolescents.

Table 17

Consumption of Prescription Drugs Could Affect a Student's Emotional Balance

Descriptive Statistics				
	Mean		**Std. Dev.**	
Statement	**Students**	**Teachers**	**Students**	**Teachers**
Consumption of prescription drugs could affect a student's emotional balance leading to anxiety and irritations	4	4	1.20	0.69

N=100 (students); N=77(teachers)

The respondents also agreed to a great extent (M=4) and that consumption of prescription drugs could affect the way a student relates with other students in school (M=4). These findings as presented in Table 18 agree with the study by Ryff (2014, p. 10-28) that shows that use of substances can affect how one relates with others.

Table 18

Consumption of Prescription Drugs Could Affect the Way A Student Relates With Other Students in School

Descriptive Statistics				
	Mean		**Std. Dev.**	
Statement	**Students**	**Teachers**	**Students**	**Teachers**
Consumption of prescription drugs could affect the way a student relates with other students in school	4	4	1.16	0.73

N=100 (students); N=77(teachers)

The respondents as presented in Table 19 also agreed that consumption of prescription drugs could affect the way a student relates with teachers in school (M=4). This further agrees with the study by Ryff (2014) that shows that use of substances affects interpersonal relationships. The ways students interacted with teachers was affected by substance use.

Table 19
Consumption of Prescription Drugs Could Affect the Way a Student Relates With Teachers in School

Descriptive Statistics				
	Mean		**Std. Dev.**	
Statement	**Students**	**Teachers**	**Students**	**Teachers**
Consumption of prescription drugs could affect the way a student relates with teachers in school	4	4	1.15	0.73

N=100 (students); N=77(teachers)

The teachers and students also agreed to a great extent (M=4) that abuse of prescription drugs affects a student's relationship with parents and siblings. These findings as presented in Table 20 also support the study by Ryff (2014) as already cited.

Table 20
Abuse of Prescription Drugs Affects a Student's Relationship with Parents and Siblings

Descriptive Statistics				
	Mean		**Std. Dev.**	
Statement	**Students**	**Teachers**	**Students**	**Teachers**
Abuse of prescription drugs affects a student's relationship with parents and siblings	4	4	1.39	0.64

N=100 (students); N=77(teachers)

Additionally, the respondents agreed to a high extent (M=4) that abuse of prescription drugs affects the way a student relates with others in the community which agrees with the study by Nargiso et al. (2015) who underlines the effect of substance use on interpersonal relationships. These findings were presented in Table 21.

Table 21
Abuse of Prescription Drugs May Affect the Way a Student Relates With Others in the Community

Descriptive Statistics				
	Mean		**Std. Dev.**	
Statement	**Students**	**Teachers**	**Students**	**Teachers**
Abuse of prescription drugs may affect the way a student relates with others in the community	4	4	1.12	0.54

N=100 (students); N=77(teachers)

The respondents, as shown in Table 22, also agreed to agreed extent that students who abuse prescription drugs may not be active in community events (M=4). This corroborates the study by Ritchie and Roser, (2019) which shows that the performance of substance use is greatly impaired; affecting their interpersonal activities and personal drive.

Table 22
Psychosocial Wellness

Descriptive Statistics				
	Mean		Std. Dev.	
Statement	Students	Teachers	Students	Teachers
Students who abuse prescription drugs may not be active in community events	4	4	1.23	0.70

N=100 (students); N=77(teachers)

Lastly, the students and teachers agreed to a great extent students who abuse prescription drugs may not socialize well with others in religious organizations (M=4) as presented in Table 23. In accordance with the study by Monnat and Rigg, 2016), these findings show that stronger religious beliefs are linked with less substance use and vice versa. Students who abuse prescription substances may be less active in religious activities. Based on the foregoing findings, it is evident that abuse of prescription drugs had effect on the psychosocial wellness of students.

Table 23
Students Who Abuse Prescription Drugs May Not Socialize Well With Others in Religious Organizations

Descriptive Statistics				
	Mean		Std. Dev.	
Statement	Students	Teachers	Students	Teachers
Students who abuse prescription drugs may not socialize well with others in religious organizations	4	4	1.20	0.71

N=100 (students); N=77(teachers)

The principals and MOE officials showed that demographic, economic, and socio-cultural factors contributed to prescription drug abuse and that the effects of drug abuse affect both the individual and the society at large and include high school drop-out rate, risky sexual behaviours, indiscipline, crime, poor health, and personal hygiene as posited by Johnson et al. (2013). These findings were affirmed by one of the respondents who said:
Students who abused prescription drugs were affected in various ways. Some of them, for example, started abusing risky sexual behaviours. Some become undisciplined with some taking to crime among others (Respondent B, Nairobi County, May 2022).

Furthermore, the principals and MOE officials opined that students who had a history of abuse and stress and who were older had a higher chance of substance misuse. This went on to affect the psychosocial wellness of users in agreement with the study by Yang and Yang (2017). These findings suggest that there is a need for prevention measures among students to avert the abuse of such drugs. To this, one of the participants said:
Abuse of prescription drugs could affect the psychosocial wellness of abusers. This issue has to be addressed urgently (Respondent G, Nairobi County, May 2022).

The findings show that demographic, economic, and socio-cultural factors contributed to prescription drug abuse and that the effects of drug abuse affect both the individual and the society at large and include high school drop-out rate, risky sexual behaviours, indiscipline, crime, poor health, and personal hygiene. These findings were affirmed by Conn and Marks (2015) who opine that the interplay of interpersonal factors and socialization agents influence adolescent behaviors on prescription drugs. According to Kasundu et al. (2012) these factors contribute to drug abuse and that the effects of drug abuse affect both the individual and the society at large and include high school drop-out rate, homosexuality, prostitution, crime, poor health, and personal hygiene.

Furthermore, the study shows that students who had a history of abuse and stress and who were older had a higher chance of substance misuse. As a result, abuse of prescription drugs could affect the psychosocial wellness of abusers. According to Gray & Damian (2017) medications aimed at treating both common health problems and long-term physical and mental health needs in adolescence can have a significant effect on a young person's emotional well-being. These findings suggest that there is a need for prevention measures among students to avert the abuse of such drugs.

V. CONCLUSIONS AND RECOMMENDATIONS

5.2 Conclusion

The study sought to examine the relationship between misuse of prescription drugs behavioural risk awareness and the psychosocial wellness of students in public secondary schools in Nairobi County. It is evident that prescription drug misuse is rampant among students, posing a threat not only to students who abuse the medications, but also to the nation's well-being, as the youth represent the people's future. Drug usage is widespread among secondary school students in Nairobi County, in terms of the types, quantity, and frequency of use. Students were aware of the behavioural risks that were associated with prescription drug use such as propensity to get into risky sexual behaviours such as prostitution to get money to purchase drugs, proclivity to get into stealing, conflict with parents and teachers, indiscipline as well increased aggression and poor interpersonal relations with peers at school. The study also concludes that lack of family and school role models, peer pressure, poor school performance, conflict between the school system and family values, easy availability of drugs, poor parenting, pressure to perform, the media, low self-esteem, stress, legalization of some drugs, lack of clear school policies on drug use and abuse, and relaxed school rules are just a few of the risk factors associated with drug abuse. Tangible ways of reining in on the abuse of prescription drugs should thus entail enhancing awareness of the behavioural risks associated with their use as posited by the social action theory.

5.3 Recommendations

Awareness of behavioural risk should also be enhanced at school and community levels. This can be achieved through guidance and counselling interventions backed by school and government disciplinary policies.

REFERENCES

Bloor, M, (1995b). *The Sociology of HIV Transmission*. London: Sage.

Boyd, C. J., McCabe, S. E., Cranford, J. A., & Young, A. (2007). Adolescents' motivations to abuse prescription medications. *Pediatrics*, 118, 2472–2480.

Compton, W.M., & Volkow, N.D (2006). Abuse of prescription drugs and the risk of addiction. *Drug Alcohol Depend, 83*(1), S4-7.

Conn, B.M., & Marks, A.K. (2015). An Ecological Approach to Understanding Adolescent Prescription Drug Misuse. *Journal of Adolescent Research*, 32 (2), 183-204.

Currie, C.L., & Wild, T.C. (2012). Adolescent use of prescription drugs to get high in Canada. *Canadian Journal of Psychiatry*, 57(12), 745-51.

Dodge, R., Daly, A.P., Huyton, J., & Sanders, L.D. (2012). The Challenge of Defining Wellbeing. *International Journal of Wellbeing, 2*, 222-235.

Douglas, M. (1986). *Risk Acceptability According to the Social Sciences*. London: Routledge and Kegem Paul.

Douglas, M. (1992). *Risk and Blame: Essays in Cultural Theory*. London: Routledge

El Kazdouh, H., El-Ammari, A., & Bouftini, S. (2018). Adolescents, parents, and teachers' perceptions of risk and protective factors of substance use in Moroccan adolescents: a qualitative study. *Subst Abuse Treat Prev Policy, 13* (1), 31

Government of Kenya. (2008). *Kenya National Pharmaceutical Policy 2008*. Ministry of Medical Services. Accessed on January 20, 2021, from http://digicollection.org/hss/documents/s18078en/s18078en.pdf

Gray, N.J., & Damian M.W. (2017). The Role of Medication in Supporting Emotional Wellbeing in Young People with Long-Term Needs. *Healthcare* 5 (4), 84.

Jeffrey, E.P., Ashley, P.B., Andrea, B., Balestrieri, L.P., & Matsona, K.L. (2019). Rx for addiction and medication safety: An evaluation of teen education for opioid misuse prevention. *Research in Social and Administrative Pharmacy*, 15(8), 917-924.

Johnson, K. M., Fibbi, M., Langer, D., Silva, K., & Lankenau, S. E. (2013). Prescription drug misuse and risk behaviors among young injection drug users. *Journal of psychoactive drugs, 45*(2), 112–121.

Kahuthia-Gathu, Okwarah, P., Gakunju, R., & Thungu J. (2013). Trends and emerging drugs in Kenya: A case study in Mombasa and Nairobi County. *Journal of Applied Biosciences*, 67(1), 5308 – 5325.

Kamamia, L., Ngugi, N., & Thinguri, R. (2014). To establish the extent to which the subject mastery enhances quality teaching to student-teachers during teaching practice. *International Journal of Education and Research, 2*(7), 641

Kasundu, B., Mutiso, M.M., Chebet, P.S., & Mwirigi, P.W. (2012). Factors Contributing To Drug Abuse among the Youth in Kenya: A Case of Bamburi. Social Science, 46 (1), 8259-8267.

KNBS. (2019). *Kenya Population and housing census: population by county and sub-county*. Kenya National Bureau of Statistics. Accessed on January 18, 2021, from http://housingfinanceafrica.org/app/uploads/VOLUME-I-KPHC-2019.pdf

Kothari, C.R. (2004). *Research Methodology: Methods and Techniques* (2nd Ed.). New Delhi: New Age International (P) Limited Publishers.

Lubman, D.I., Yücel, M., & Lawrence, A.J. (2008). Inhalant abuse among adolescents: neurobiological considerations. British Journal of Pharmacology, 154 (1), 316–326;

Malhotra, N.K. (2004). *Marketing research: An applied orientation* (4th edition) Pearson Education, Inc: New Jersey.

McCabe, S.E., Boyd C.J., & Young, A. (2007). Medical and nonmedical use of prescription drugs among secondary school students. *J Adolesc Health., 40*(1), 76–83.

McCauley, J.L., Danielson, C.K., Amstadter, A.B., Ruggiero, K.J., Resnick, H.S., Hanson, R.F., Smith, D.W., Saunders, B.E., & Kilpatrick, D.G. (2010). The role of traumatic event history in non-medical use of prescription drugs among a nationally representative sample of US adolescents. *The Journal of Child Psychology and Psychiatry,* 51(1), 84-93.

Monnat, S.M., & Rigg, K.K. (2016). Examining rural/urban differences in prescription opioid misuse among US Adolescents. *The journal of rural health*, 32(2), 204-218.

Mugenda, O.M., & Mugenda, A. G. (2008). *Research Methods Quantitative and Qualitative Approaches* Nairobi: ACTS Press Publishers.

NACADA (2019). *New Shocking Details of Drug Abuse in Kenya schools*. NACADA.

NACADA. (2012). *Rapid situation assessment of the status of drug and substance abuse in Kenya.* National Authority for the Campaign Against Alcohol and Drug Abuse.

Nargiso, J.E., Ballard, E.L., & Skeer, M.R. (2015). A Systematic Review of Risk and Protective Factors Associated With Nonmedical Use of Prescription Drugs Among Youth in the United States: A Social-Ecological Perspective. *Journal of Studies on Alcohol and Drugs*, 76(1), 5-20.

Olsson, I., Runnamo, R., & Engfeldt, P. (2011). Medication quality and quality of life in the elderly, a cohort study. *Health Qual Life Outcomes, 3*(9), 95. DOI: 10.1186/1477-7525-9-95.

Orodho, A., & Kombo, D. (2002). *Research Methods*. Nairobi: Kenyatta University, Institute of Open Learning.

Parsons, E., & Atkinson, P. (1992) Lay constructions of genetic risk. *Sociology of Health and Illness*, 14, 437-55.

Rhodes, T. and Quirk, A. (1996) Heroin, risk, and sexual safety: some problems for interventions encouraging community change. In Rhodes, T., & Hartnoll, R. (Eds) AIDS, *Drugs and Prevention: Perspectives on Individual and Community Action*. London: Routledge.

Ritchie, H., & Roser, M. (2019). *Drug Use.* OurWorldInData.org. Retrieved from: https: //ourworldindata.org/drug-use (Accessed January 31, 2022)

Yang, X.Y., & Yang, T. (2017). Nonmedical prescription drug use among adults in their late twenties: the importance of social bonding trajectories. Journal of Drug Issues, 47 (4), 665-678.