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## **Religiosity and Substance Use Disorder in Kenya: What are the Implications on the Future of Rehabilitation Interventions?**

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### **Abstract**

Substance use is increasingly becoming a global problem and a constant health crisis that affects each region of the world. Substance use tends to induce certain disorders and this makes users prone to psychological disorders such as depression, anxiety and psychosis among others. Successful treatment for substance use disorders (SUD) must take into account other underlying factors that either protect or predispose the patients to SUD. Religiosity has been suggested as one of the most important protective factors against drug use, preventing individuals from using drugs even if they live in precarious environments. However, previous studies in Kenya have not investigated the links between religiosity and substance use disorder in the country prompting the need for the study. The study adopted a quasi-experimental design targeting 6 government accredited rehabilitation centers in Kenya. A sample size of 120 participants were selected through convenience sampling. The Socio-Demographic Questionnaire and substance use assessment tools consisting of the Alcohol Use Disorders Identification Test (AUDIT) and the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) were used for data collection. Quantitative data generated was analyzed using descriptive and inferential statistics involving frequency distributions, percentages and chi-square respectively. The study found that religion was a significant risk factor rather than a protective factor among persons with SUD in Kenya including some who had already undergone treatment.

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The study recommends that the religious message in the rehabilitation programs should seek to reinforce behaviour through engendering factual understanding of one's behaviours and their spiritual realities.

**Keywords:** Health crisis; Substance use disorders; Religiosity; Protective factors.

## **1. Introduction**

Substance use disorder (SUD) refers to a disease that affects an individual's brain and behaviour, and leads to an incapability to control the use of a legal or an illegal drug or medication. Substance use is increasingly becoming a globally widespread problem. It has remained a constant health crisis that affects each region of the world. According to the latest World Drug Report released by the United Nations Office on Drugs and Crime (UNODC) [1], an estimated 269 million individuals globally used drugs in 2018, which is 30% more than in 2009, while over 35 million people suffer from drug use disorders. This suggests that the occurrence of drug use and drug use disorders has amplified significantly in the ten-year period and with it a rise in addiction cases. Substance use tends to induce certain disorders and this makes users prone to psychological disorders such as depression, anxiety and psychosis among others. This is usually brought about by recurrent usage of the substance leading to significant levels of distress or even disability to the user and their families [2]. Apart from adversely impacting on the abuser's health and welfare the rise in addiction cases tend to impact heavily on families because when an individual abuses drugs, it not only distresses the individual but the family as well. The family usually has to contend with deviant behaviours of the individual in addition to emotionally and financially supporting the individual during use as well as during treatment.

Treating SUD can be difficult given that, the causal factors and the consequences of dependence tend to have an effect on multiple sections of a person's life such as; work performance, family and social interactions, as well as physical health and psychological well-being [3]. It has also been reported that high rates of substance use and dependence are associated with psychosis, anxiety or even depression especially with alcohol leading at 30% and 10% for the other drugs. Substance use disorders have also been included in the growing global diseases burden - which refers to the rate of disease within the population- and corresponding morbidity and mortality [3-4]. For example, World Health Organization estimates that 450, 000 people died as a result of drug use in 2015, 160,000 of these were from opioid use disorders [5]. Overdose contributed to roughly about a third and a half of all drug related deaths, most of these cases are attributable to opioids.

Evidently, the world must brace itself for a growing substance use trend and the associated morbidity and mortality which if not mitigated effectively could soon reach crisis proportions. From drug enforcement policies and agencies to local community based interventional therapies, there is need for urgent action to stem the already escalating trend. However, rehabilitation for substance use disorders in developing countries such as Kenya still presents a significant challenge owing largely to resourcing which includes interventions. Subsequently, there has been high relapse rates even among individuals presumed to be successfully reformed in the increasing number of rehabilitation centers in the Country. Successful treatment for SUD must take into account other underlying factors that either protect or predispose the patients to SUD.

Religion has long been treated as a protective factor for SUD. Religiosity has been suggested as one of the most important protective factors against drug use, preventing individuals from using drugs even if they live in precarious environments [6-7]. This has, therefore, prompted more research interest in establishing the links between religion and treatment outcomes. Consequently, a growing number of evidence-based studies are demonstrating that faith is instrumental to the deterrence and recovery of persons from substance use disorder. Lyons and his colleagues [8] in their study, for example, established that up to 82% of persons under rehabilitation for SUD who experienced a spiritual awakening during addiction treatment and recovery were completely abstinent during a 1-year follow-up compared to 55% of non-spiritually awakened clients. Religiosity is proving to be instrumental in decreasing the levels of substance use including the lowered probability of ever using various drugs, in the course of a lifetime [9,10,11]. Further, according to Grim and Grim [12] the vast majority (> 84%) of existing scientific concur that faith is a positive factor in addiction prevention or recovery and a risk in less than 2%. The risk or predisposing factors are, however, largely attributed to negative experiences with religion such as sexual molestation and abuse which have been found to contribute to substance abuse among some survivors of sexual abuse.

Kenya is among the top 10 Countries with the most religious population in the world with over 98% of the population professing to subscribe to a religious belief, according to the Kenya National Bureau of Statistics [KNBS] [13]. Therefore, it is expected that religion plays a very important role in their lifestyle decisions such as substance use and can be also instrumental in their treatment. However, previous studies have not investigated the links between religiosity and substance use disorder in the Country. With a growing number of SUD cases notwithstanding, the increase in the number of residential rehabilitation centers, both private and public, the growing social and economic costs for SUD at the household and the national levels calls for urgent solutions to address SUD. Therefore, an examination into religion which has demonstrated efficacy in addressing the SUD problem in several studies (with the exception of local studies done in Kenya) needs to be carried out. Indeed, Grim and Grim [12], found that these faith-based volunteer SUD support groups contribute up to \$316.6 billion in savings to the US economy every year at no cost to tax payers underscoring the need to relook the role of religiosity in the management of SUD.

## **2. Material and Methods**

This study adopted a quasi-experimental design (with control and experimental groups) targeting 6 NACADA accredited rehabilitation centers in Nairobi and Kajiado Counties in Kenya. Majority of the SUD rehabilitation centers in the country are located in the two Counties and they cater for patients drawn from all over the Country and even in the East African Region. The study targeted only the full residential rehabs with a predominantly population of persons with SUD aged between 18 and 40 years. The study used purposive sampling to select six rehabilitation centers and used a sample size 120 participants (persons with SUD) who were selected through convenience sampling. Data for the study was collected at the inception stage before the intervention programs began using three questionnaires; the Socio-Demographic Questionnaire and substance use assessment tools consisting of the Alcohol Use Disorders Identification Test (AUDIT) and the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST). These were administered directly to the respondents. The religiosity construct was measured through the subscription to the main religions in Kenya,

that is; Christianity (Protestantism and Catholicism) (85.52%), Islam (11%), Hinduism (0.13%), Baha'i (1%), Traditional African Religions (0.75%) and no religion (1.6%). According to the 2019 Kenya Population and Housing Census, over 98% of Kenyans are religious [13]. This makes the country among the top 10 of the most religious countries globally. The religion constructs from the socio-demographics questionnaire formed the independent variable while the drug and alcohol use trends from the AUDIT and ASSIST tools formed the dependent variable. The dependent variable was also proxied from the socio-demographics questionnaire using the participants' history of treatment where only those who were receiving treatment other than the initial treatment were considered as having relapsed. The data was analyzed using descriptive and inferential statistical methods aided by the Statistical Package for Social Sciences (SPSS) version 24.0. Descriptive statistics using frequency distributions and percentages provided the basic trends of the data while the significance of association between the variables was determined using the Chi-square.

### 3. Results

This section presents data obtained from all the 120 participants who filled the questionnaires. The results are presented along specific constructs which provide a basis for comparison of religion and substance use trends.

#### 3.1 Baseline of substance use disorder along social demographics of participants

A baseline of socio-demographic patterns of the participants was carried out to establish which were the most significant predictors of substance use disorder. The results are given in Table 1.

**Table 1:** Baseline of substance use disorder along socio- demographics of participants

Demographic	Chi Square	
	Statistic	P-value
Gender	4.071	0.254
Marital Status	9.007	0.702
Education Levels	5.617	0.467
Occupation	2.871	0.412
Religion	38.971	0.000
Treatment history	5.854	0.119

Table 1 suggests that only religion ( $p \leq 0.05$ ) was significantly associated with substance use disorder among the social demographic characteristics of the participants. The other demographics, such as, gender, marital status, education levels, occupation and treatment history were not significantly ( $p > 0.05$ ) associated with alcohol use disorder. This was confounding since religion has been long held as a protective factor against substance use both as a deterrent and as a remedy for substance use disorder. We, therefore, decided to focus on the religion construct in an attempt to find out the underlying issues between religion and substance use.

### 3.2 Religion of the Participants

The study sought to determine the religious affiliations of the participants as shown in Table 2

**Table 2:** Religion of the Participants

Religion	Overall	
	Frequency	Percent
Protestant	47	39.2
Catholic	40	33.3
Muslim	27	22.5
Hindu	5	4.2
Sikh	1	0.8
Total	120	100

Table 2 shows that the participants identified with only four mainstream religions in the country, that is, Christianity (Protestantism and Catholicism), Islam, Hinduism and Sikhism. Overall, persons who subscribed to the Protestant Christian faith (39.2%) were the largest group compared to the other faiths in the SUD rehabilitation centers. This was followed by the Catholic group which had an overall representation of 33.3%. This shows that cumulatively, persons who identified as Christians formed the largest group of participants in the rehabs (72.5%). The other participants subscribed to other faiths common in the country such as Islam, Hinduism, and Sikhism. No respondent, however, identified as non-religious or belonging to Traditional African Religions, Baha'ism or Buddhism despite the presence of these religious groups in the country.

### 4.3 Gender vs religion of the participants

The study, consequently, sought to first perform gender comparison across the religions and the findings are given in Table 3.

**Table 3:** Gender vs religion of the participants

Religion		Gender		Total
		Male	Female	
Protestant	Frequency	27	20	47
	Percentage	22.5%	16.7%	39.2%
Muslim	Frequency	20	7	27
	Percentage	16.7%	5.8%	22.5%
Catholic	Frequency	23	17	40
	Percentage	19.2%	14.2%	33.3%
Hindu	Frequency	5	0	5
	Percentage	4.2%	0.0%	4.2%
Sikh	Frequency	1	0	1
	Percentage	0.8%	0.0%	0.8%
Total	Frequency	76	44	120
	Percentage	63.3%	36.7%	100.0%

Table 3 shows that, overall, there were more males (63.3%) than females (36.7%) in the SUD rehabilitation centers in the country. Across all religions, more males than females had enrolled in the rehabilitation programs. Gender is an important factor when examining religion and decision making or behaviour because in most cases religion which is asocial construct plays a very important role in delimiting gender roles and behaviour in the society.

#### 4.4 Types of substances used vs religion of the participants

The study also sought to find out the substance use trends among the religious groups. The findings are given in Table 4.

**Table 4:** Types of substances used by the participants

Substance used		Religion					Total
		Protestants	Catholics	Muslims	Hindus	Sikhs	
Alcohol	Frequency	39	38	10	5	1	93
	Percentage	32.5%	31.7%	8.3%	4.2%	0.8%	77.5%
Cannabis	Frequency	26	13	23	5	0	67
	Percentage	21.7%	10.8%	19.2%	4.2%	0.0%	55.8%
Miraa	Frequency	19	9	21	5	0	54
	Percentage	15.8%	7.5%	17.5%	4.2%	0.0%	54%
Sedatives	Frequency	11	3	11	2	0	27
	Percentage	9.2%	2.5%	9.2%	1.7%	0.0%	22.5%
Tobacco	Frequency	34	30	23	4	1	92
	Percentage	28%	25%	19%	3%	1%	76.7%
Inhalants	Frequency	0	1	0	0	0	1
	Percentage	0.0%	0.8%	0.0%	0.0%	0.0%	0.8%

Table 4 shows that the most commonly used substances were alcohol (77.5%) followed by tobacco (76.7%). The least used was inhalants at 0.83%. Across the religions, alcohol use among Protestants (32.5%) and Catholics (31.67%) was higher than all other religious groups while cannabis use was highest among participants who identified as Protestants (21.7%) and Muslims (19.2%). Muslims (17.5%) and Protestants (15.8%) reported the highest use of *Miraa* (khat) while use of sedatives was most common among Protestants (9.2%) and Muslims (9.2%). Tobacco use was highest among Protestants (28%) and Catholics (25%) while Catholics (0.8%) were the only group that reported they used inhalants. These findings while assuming the size effect as not equal populations were sampled, rather underscore the fact that religion was not a strong protective factor against substance use among their adherents.

The study also sought to establish whether the participants consumed combined substances. The results are

given in Table 5.

**Table 5:** Polysubstance use among the participants

Substance used	Religion					Overall
	Protestants	Catholics	Muslims	Hindus	Sikhs	
Alcohol	42.60%	55%	3.70%	0%	0%	35.8%
Drugs	19.10%	5%	63%	0%	0%	23.3%
Both	38.30%	40%	33.30%	100%	100%	40.8%

From the results in Table 5, it is evident that, overall, most participants combined the use of both alcohol and drugs (40.8%). Polysubstance use was, however, high among Hindus (100%) and Sikhs (100%) than the other religious groups. Consequently, the study performed a chi-square analysis to establish whether religion predicted substance use trends. The findings are given in Table 6.

**Table 6:** Chi-square of Religion vs Substance Use Prevalence – ASSIST

Substance	Religion	
	Value	P-value
Alcohol	94.09	0.212
Cannabis	78.232	0.033
Miraa (khat)	53.8	0.596
Sedatives	40.432	0.281
Tobacco	50.569	0.68

Table 6 shows that the only significant association observed was that between Religion and Cannabis use ( $p \leq 0.05$ ). This means that the use of cannabis among people professing religious beliefs was significant. The finding also shows that religion was not necessarily a protective factor against substance use.

#### **4.5 Relapse and Religion among the participants**

The study also sought to determine the SUD relapse trends along the participants' religiosity trends. The results are summarized in Table 6.

Table 4 indicates that relapse trends were highest among Sikhs (100%) followed by Muslims (66.7%). However, Catholics showed the least relapse trends (20%) among the religious groupings in the rehabs.

**Table 6:** Relapse and Religion among the participants

Religion		Relapsed	
		Yes	No
Protestants	Frequency	19	28
	Percent	40.4	59.6
Catholics	Frequency	8	32
	Percent	20	80
Muslims	Frequency	18	9
	Percent	66.7	33.3
Hindus	Frequency	3	2
	Percent	60	40
Sikhs	Frequency	1	0
	Percent	100	0

#### 4. Discussions

Substance use disorder prevalence characteristics are not necessarily the same with context and, as such, the epidemiology patterns cannot be generalized across contexts. This study examined the socio-demographic patterns in Kenya with a view of establishing the factors significantly associated with SUD. The results show that religion among the socio-demographic factors investigated in the study was the only one significantly associated with substance use disorder among the respondents, both who had no prior history of treatment and those who had been in rehabilitation before. This was rather confounding given the several evidence-based studies that have advanced the view that religion is an important protective factor to substance use both as a protective factor for engaging in the behaviour and also relapsing in to the behaviour after treatment. Indeed, an increasing number of studies have found that religiosity is associated with decreased substance use across the populations.

For instance, one of the groundbreaking studies carried out by Borini and his colleagues [14] showed that religion played a protective role against the use of alcohol. Koenig [15] and Kim-Spoon and his colleagues [16] found that level of religious beliefs is associated with a decreased risk of substance abuse. Blay and his colleagues [17] showed that religiosity reduces the odds of using tobacco and that not having a religion increases the risk of alcohol misuse in a community-based sample of elderly adults 60 years and older. The findings, therefore, failed to agree with the general observation of Gomes and his colleagues [18] that religiosity was a strong protective factor against drug use among Brazilian university students. The findings also disagree with Koenig and his colleagues [19] who reviewed 278 studies on the relationship between alcohol abuse and faith and 185 studies on the impact of faith on drug abuse. In both cases, Koenig and his colleagues established that religion was a protective factor against substance use. Religion reduced alcohol use risk by 86% and similarly reduced drugs use risk by 84%. However, even in this case, religion was found to be substance use risk factor with an increased risk of 1.4% of alcohol use and 1% of drugs use. The findings, further, disagree with Van der Meer Sanchez and his colleagues [6] who found that religion may be a relevant protective factor in keeping youth away from drugs.



Further, the findings in the current study indicating that there were significant levels of SUD among participants with specific religious affiliations could be explained by the fact that while people can affirm that they belong to a certain religion or faith, this does not-necessarily mean that are fully committed to the faith and could actually be having low levels of religious beliefs. The dimensions of faith among religious people has been found to be rather indicative of their response to substance abuse. Moreira-Almeida and his colleagues [20], for instance, found that attendance at religious meetings was a very strong dimension associated with health outcomes. Other dimensions of religious commitment that were also significant in reducing substance use were personal prayers, reading scripture or other religious literature, religious coping, and subjective religiosity, that is, one's affirmation of the importance of religion to him/her. Sanchez and his colleagues [21] found evidence of non-committal to religion accounting for 13% of the substance use cases. Therefore, if low levels of religious beliefs or non-committed adherence to religious services are taken into account, the current findings would concur with [18] on the points that non-frequent attenders of religious services or functions were more likely to use marijuana or alcohol, tobacco, and at least one illicit drug. Abu-Ras and his colleagues [22] found out that low religious activities and parents' positive attitude toward alcohol use are major risk factors for drinking among Muslim students. Therefore, while in the current study the participants professed to certain religions, it is possible that they could be having low levels of commitment to their religions. Hence, while our findings tended to confound the trend in several studies, they rather corroborate the observations in other studies that weak religion adherence could be a predisposing rather than a protective factor against substance use. However, the messaging also mattered in the religious contexts. Camargo and his colleagues [23] examination of the impact of religious affiliation on college students' 12-step model preferences, for example, found that millennial and Generation Z-aged individuals may have a preference for language and treatment approaches that are less focused on faith and more focused on self-empowerment.

This study, however, did not examine the background of the participants to establish other factors associated with their religiosity such as attendance to religious services, family background on religion and spirituality of the participants. The generational characteristics could also explain the confounding findings given that all the participants sampled either belonged to the Millennial group or Generation-Z. Further, being that the study design was a quasi-experimental, its inherent limitations, such as, history, maturation, regression to the mean and spontaneous remission which could affect the pre-test and post-test sampling validity. However, the researcher mitigated this by exercising extra caution when inferring causality from pretest-posttest designs.

## **5. Conclusions**

Drawing from the foregoing findings and discussions, the study concludes that religion was a significant risk factor rather than protective factor among persons with SUD in Kenya including some who had already undergone treatment. This could be due to the likelihood that many were not committed to the religions they professed to belong to. This is a cause for serious concern given that religion has been regarded as a protective factor and decrease in religiosity within the population could lead to increase in substance use and SUD. Further, lack of profound interest in religion could also attenuate the rehabilitation interventions efficacy as most of them like MCBT and the 12-steps model are designed along religious themes. Failure to address this by the stakeholders could lead to a runaway SUD problem that will necessitate non-behavioural interventions such

as chemical interventions and also increasing social and economic costs. Further, the religious message in the rehabilitation programs should seek to reinforce behaviour through engendering factual understanding of one's behaviours and their spiritual realities without proselyting the participants or encouraging them to become dogmatic.

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