Influence of Demographic Variables on Relapse Risk Among Substance Use Addicts in Langata Sub County, Nairobi Kenya

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ABSTRACT

Globally studies have linked the demographic variables and relapse risk among substance use addicts. The study aimed to establish the influence of demographic characteristics of age, gender, marital status, admission criteria on relapse risk among substance use addicts in Langata sub-county, Nairobi, Kenya. The study employed cross-sectional research design. Using census method, the study utilized a sample size of 144 participants. The data was collected with demographic details of the participants and the Stimulant Relapse Risk Scale (SRRS). The data was analyzed using descriptive statistics (percentages, frequencies) and inferential statistics and particularly t-test and One Way ANOVA. The results showed significant difference between demographic characteristics and relapse risk. There was a significant difference in the scores for relapse risk between Male (M = 98.11, SD = 28.24) and Female participants (M = 113.00, SD = 32.47) at conditions, t (123) =. -2.21, p = .03. The results showed that there was significance difference between age and relapse risky (r = .434). Also, the results showed there was a significance difference between marital status and relapse risk (r = .013). The descriptive statistics emerging from the results suggested that there was a significant difference in the scores for relapse risk between Voluntary (M = 98.22, SD = 26.49) and Involuntary participants (M = 103.36, SD = 32.44) at conditions t (123) =.052, p = .033.

Keywords: Age, gender, marital status, admission criteria, relapse risk, substance use addicts, Nairobi

INTRODUCTION

Globally, studies have linked demographic variables and relapse risk among substance use addicts. For instance, a study conducted in Kathmandu, Nepal, by Poudel and Gautam (2017), sought to examine the age of onset of substance use and psychosocial problems is substance use. The study employed descriptive cross-sectional research design. A Probability Proportional to Size (PPS) sampling technique was used to select seven drug rehabilitation centers, yielding 221 diagnosed participants. A total of 141 early-onset users (≤17 years) and 80 late-onset users (≥18 years) completed the questionnaires, achieving a response rate of 98.6%. The groups differed significantly in most characteristics, with early-onset users being younger (mean age: 25.77 ± 8.83 years), predominantly male, and economically inactive, compared to late-onset users (mean age: 34.16 ± 8.72 years). Findings revealed that the age of onset of substance use was significantly correlated with psychosocial problems. Early-onset users exhibited significantly higher psychosocial problem scores across various DUSI-R domains, even after adjusting for potential confounding variables.

A study by Okonkwo et al. (2020) in Nigeria examined the socio-demographic characteristics, including marital status, age, education levels and family history of substance use, and its relation to relapse risk among individuals with SUDs in Lagos. This quantitative study utilized a cross-sectional survey design, involving 228 individuals (213 males and 15 females) who were receiving inpatient and outpatient treatment at the Federal Neuropsychiatric Hospital in Yaba, Lagos. Data collection involved the use of a socio-demographic questionnaire and the review of medical records, with analysis conducted through descriptive statistics, t-tests, and chi-square tests. The participants mean age was 29.6 years (SD = 9.19), with the majority (72%) being inpatients and predominantly male (93.4%). The study reported a relapse prevalence rate of 51.3%. Participants with a history of relapse exhibited a lower mean age (M = 27.06, SD = 7.35, n = 111) compared to those without

a history of relapse, who displayed a higher mean age (M = 31.98, SD = 10.11, n = 117). These findings highlighted a significant relationship between age, substance use disorders (SUDs), and relapse risk, indicating that younger participants were more likely to experience relapse.

A study conducted in Mombasa by Kairuthu (2020) provided empirical evidence indicating that demographic characteristics, particularly age, may influence the management of SUDs and treatment outcomes. The mixed-method study (used quantitative and qualitative approach), grounded in the REBT Theory and employed mixed design. The population included 220 individuals, comprising individuals undergoing SUD treatment, caregivers, and counselors at three NACADA-accredited sites in Mombasa. The study included152 participants who were identified using stratified and simple random sampling. Findings revealed that individuals aged 30-35 years had a relatively high mean score in life skills (mean=3.9074; SD=1.04666), as did those aged 35-40 years (mean=4.0278; SD=0.68748), while recovering addicts aged 25-30 years' mean score was lower (mean=3.7719; SD=0.58850). The uptake of life skills was highly popular among most of the recovering addicts. Additionally, those aged 35-40 years scored high in adherence to treatment (mean=3.3611; SD=0.77345), whereas those aged 25-30 years scored lower in treatment adherence (mean=3.0476; SD=0.74516). The age factor suggests that older participants have a stronger inclination to sustain recovery mechanisms compared to younger participants, which may predispose younger individuals to a higher risk of relapse. The current study focused on establishing whether the age of the addicts' influences relapse risk.

Gender variables have been found to be a key factor in influencing various psychological and behavioral outcomes. Gender differences have been known to impact personality functioning and relapse risk in different ways. For example, men and women may exhibit distinct coping mechanisms, treatment responses and relapse patterns which is all due to biological, psychological and socio-cultural factors. The study examines the gender role in relapse risk among substance use addicts. Understanding gender variances in personality functioning may provide deeper insights into recovery and tailored rehabilitation strategies aligned to gender variance.

Research in Finland by Hoijer et al. (2021) investigated gender differences in personality and emotional problems among individuals with single use and poly substance use. The quantitative cross-sectional study used a population of 164 individuals, with 97 men and 67 women who took neuropsychological evaluation on verbal capacity, speed in processing, inhibitory capacity, memory, perceptual reasoning, learning and executive functioning. Personality measures used the Minnesota Multiphase Personality Inventory (MMPI) and the associations in neuropsychological measures, personality and gender differences used multiday analysis of covariance. The study was mediated by years of substance use, substance use onset, poly use and level of education. Findings showed that men had more severe personality and emotional issues than women, even after the mediation of level of education, onset of regular use and poly substance use. Similarly, men also had high value indicators of somatic issues and emotions of anxiety and depression much higher than women. These findings may indicate that men with SUD may experience more intense personality -related challenges during rehabilitation than women showing a variance from previous findings, that women may not be more vulnerable in substance use. The study examined gender differences in emotionality capacities, the current investigated gender differences and relapse risk in substance use rehabilitation.

From a regional perspective, Baloyi and Khosa (2025) conducted a study in South Africa's, Limpopo Province, to investigate the barriers encountered by women in accessing treatment services for substance use disorders (SUDs). The research utilized a qualitative methodology with an exploratory research design, employing semi-structured interviews. The study sample consisted of 20 social workers from the Social Development, all aged between 30 and 45 years. These participants served as coordinators for SUD treatment services across 13 municipalities within Limpopo Province, focusing on the provision of early interventions, prevention and reintegration after SUD treatment. Findings from this study revealed that women encountered specific personal barriers including lack of motivation to change, denial on substance use problem alongside external obstacles such as shortage of facilities that include women in treatment programs and limited government support in female SUD treatment.

Local research has examined gender characteristics in relation to recovery from substance use disorders (SUDs) and associated outcomes. Anundo (2019) conducted a study in Nairobi County to investigate the prevalence of

depression among female injecting drug users (FIDUs). The study employed a cross-sectional research design and purposive sampling to select 149 participants, all of whom were over the age of 18. The majority of respondents were aged between 26 and 40 years, single, and unemployed. The findings revealed a high prevalence of inject able drug use among women, which significantly increased their vulnerability to a persistent risk of relapse. While specific studies examining the relationship between marital status and risk of relapse in substance use disorder (SUD) rehabilitation within North or West Africa are limited, research from other regions provides valuable insights into how marital status influences relapse rates. For instance, studies show that marital status can significantly influence relapse tendency among individuals undergoing SUD treatment. Married individuals often exhibit lower relapse rates compared to their unmarried counterparts, potentially due to increased social support and stability associated with marriage. Conversely, individuals experiencing marital discord or those who are divorced may face higher relapse risks, possibly due to stress and reduced social support.

A study conducted by Blair and Menasco, in Buffalo, USA in (2016) examined the relationship between marital status, substance use, and relapse risk among adults. It included data from the 2012 National Survey on Drug Use and Health (NSDUH) to analyze substance use patterns and relapse risk within a nationally representative sample comprising 14,715 adults. Among remarried individuals, men demonstrated significantly higher alcohol and marijuana consumption than women, reported substance use rates were 6.32 compared to 4.22 for alcohol and 0.91 compared to 0.51 for marijuana, respectively. Furthermore, never-married individuals, particularly those in early adulthood - a stage often correlated with elevated substance use-demonstrated significant levels of marijuana consumption. Approximately 11.2% of never-married men and 5.3% of never-married women reported using marijuana 20 or more times within the past month, reflecting a habitual usage pattern and increased relapse risk.

Ongaro et al. (2022) carried out a study in Nairobi and Kajiado aimed at evaluating the prevalence of risky and hazardous substance use disorders (SUDs) across genders among individuals admitted for treatment and examining the relationship between these patterns and relapse risk. The research was carried out in six accredited treatment centers, involving a sample of 120 respondents aged between 18 and 40 years. Data was collected using socio-demographic questionnaires and assessment tools including AWARE, ASSIST AND AUDIT tools. Findings from the study indicated that relapse risk in alcohol was rampant across the gender divide, indicating that males had higher dependency (61%) more than females (39%). More singles had higher dependency (40%), than those in marital relationships along the marital status demographic. Use of tobacco was significantly associated with marital status ($p = 0.018$).

Sant'Anna et al. (2020) conducted a cross-sectional study in Brazil to explore the association between relapse rates and admission types (voluntary versus involuntary) among individuals with substance dependence. The study was carried out at a therapeutic community specializing in addiction treatment, located in São Paulo, Brazil. Data collection included various socio-demographic variables and employed instruments such as the University of Rhode Island Change Assessment Scale (URICA), Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES), Beck Anxiety Inventory (BAI), Beck Depression Inventory (BDI), and the Structured Clinical Interview for DSM-IV (SCID). The results indicated that relapse was significantly associated with lower family income ($P = .006$) and the contemplation stage of motivation ($P < 0.05$). However, no significant differences in relapse rates were observed between involuntarily admitted individuals (64%) and voluntarily admitted individuals (54%) ($P = 0.683$).

Regionally, Mkhize and Gutura (2021) conducted a study in the Uthungulu District, situated in the northeastern region of KwaZulu Natal Province, South Africa. The study aimed to explore substance dependency and treatment challenges, focusing on the perspectives and experiences of relapsed involuntary service users. A qualitative methodology was employed to explore and elucidate the experiences of involuntary service users. The study's target demographic included youth aged 18 to 35, alongside social workers serving as key informants. Findings showed emergent themes causing the underlying causes of relapse to be lack of motivation to change, lack of aftercare services and psychological factors.

METHODOLODY

The study employed cross-sectional research design to examine the relationship between demographic variables and relapse risk among substance addicts. This study was conducted in Langata Sub County, a constituency of the larger Nairobi Metropolitan. Langata Sub County is an electoral division within Nairobi City County, which encompasses the southern and southwestern regions of Nairobi. It was purposively sampled because it had a good presentation of middle-class population with substance use issues. The study population was comprised of substance use individuals admitted in rehabilitation centers within Langata Sub County. The target population was justified by the concentration of substance use among emerging young adults in urban locations in Nairobi. Using a census method the study utilized the whole population of 144 substance use addicts as a sample size.

The data for the variables of the study was collected using the demographic details and stimulant relapse risk scale. Stimulant relapse risk scale was developed by Ogai et al. (2007), in Japan, and is designed for evaluation of drug treatment program. The self-rate scale has a total of 35 items with 6 subscales as listed: a. Anxiety with Intention to use substances (AI) 8 items. b. Emotionality problems (EP) 8 items, c. Compulsivity to use drugs (CD) 4 items, d. Positive expectancy and lack of control (PL) 6 items, e. Negative expectancy for the drug (NE) 4 items and f. Lie scale: Insight of own problem, 5 items. The tool is scored on a 5 – point Likert scale ranging from 1 = strongly disagree, 2 = Disagree. 3 = Neither agree nor disagree, 4 = Agree and 5 = Strongly agree. The lowest totals a person can score is 35 meaning the respondent totally disagreed with each of the statements and the highest is 175 which means the respondent strongly agreed with all the statements in the questionnaire. The score is evaluated as follows: - 1 – 35 (low score), 36 – 105 (moderate score) and 106 – 175 (High score) indicating high risk of relapse. The collected data was analyzed using descriptive statistics (frequencies and percentages), t-test and One Way ANOVA.

RESULTS AND DISCUSSION

The study was set to examine the influence of demographic variables on relapse risk among substance use addicts in Langata sub-county, Nairobi, Kenya. The section presents the demographic of the participants followed by the findings of the study.

Demographic Details of Participants

The study utilized descriptive statistics to analyze the demographic variables generated from the demographic profiles of the participants. The analysis was carried out on the five variables: age, level of education, religious affiliation, source of motivation and contribution to the seminary's personal growth. Thus, the social demographic characteristics were summarized and presented accordingly in Table 1.

Table 1: Social Demographics of Participants

Variables	Frequency	Percentage
Age		
18-40	108	86.4
41-64	14	11.2
Above 65	3	2.4
Gender		
Male	104	83.2
Female	21	16.8
Marital Status		

Single	82	65.6
Married	30	24
Divorced	13	10.4
Admission		
Voluntary	67	53.6
Involuntary	58	46.4

The results in Table 1, concerning the age distribution, data showed that the frequency of the respondents aged 18 - 40 years was higher at (n = 108) 86.4% as opposed to 41 - 64 years at (n = 14) 11.2% and above 65 years at (n = 3) 2.4%. Regarding classification of the Gender, the male participants were more, 104 (83.2%), followed by female, 21 (16.8%). Concerning marital status, the data showed that65.6% (*n* = 82) were single and 24 %, (*n* = 30) were married, and 10.4% (*n* = 13) were divorced. About admission, 53.6% (*n* = 67) voluntarily went to a rehabilitation centre as opposed to 46.4 (*n* = 58) who went there involuntarily.

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To examine whether there was a significance difference between demographic variables (age, gender, marital and admission), and relapse risk, the t-test and One-Way ANOVA was conducted and results were presented in Tables 2 and 3 respectively.

Table 2: Results of the T-Test on Gender and Relapse Risk

Group Statistics					
Gender		**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Relapse Risk	Male	104	98.1058	28.24062	2.76922
	Female	21	113.0000	32.46999	7.08553

Independent Samples Test										
		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**
Relapse risk	Equal variances assumed	1.566	0.213	-2.149	123	0.034	-14.89423	6.93079	-28.61331	-1.17515
	Equal variances not assumed.			-1.958	26.457	0.061	-14.89423	7.60745	-30.51845	0.72999

The descriptive statistics emerging from the results suggested that there was a significant difference in the scores for relapse risk between Male (M = 98.11, SD = 28.24) and Female participants (M = 113.00, SD = 32.47) at conditions, t (123) =. -2.21, p = .03).

Table 3: Results of t-test on Admission Criteria and Relapse Risk

Group Statistics					
Admission		**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Relapse Risk	Voluntary	67	98.2239	26.48603	3.23578
	Involuntary	58	103.3621	32.44088	4.25970

Independent Samples Test										
		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
Relapse Risk	Equal variances assumed	3.837	0.052	-0.975	123	0.332	-5.13819	5.27219	-15.57	5.10
	Equal variances not assumed.			-0.961	110.100	0.339	-5.13819	5.34933	-15.74	5.46

The descriptive statistics emerging from the results suggested that there was a significant difference in the scores for relapse risk between Voluntary (M = 98.22, SD = 26.49) and Involuntary participants (M = 103.36, SD = 32.44) at conditions t (123) =.052, p = .033).

The study further examined the influence of age on relapse risk by using One-Way ANOVA analysis. The results were summarized and presented in Table 4.

Table 4: One Way ANOVA Results on Age and Relapse Risk

ANOVA					
Relapse Risk					
	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	1454.780	2	727.390	0.840	0.434
Within Groups	105653.012	122	866.008		
Total	107107.792	124			

Table 4 showed that there was a significant difference in means between age and relapse risk of the substance use addicts of Langata, Nairobi, Kenya (p = .434).Therefore, the statistical difference between group means as determined by one-way ANOVA was [F (2,122) = .840, p = .434].

Lastly, the study also examined the influence of marital status on relapse risk by using One-Way ANOVA analysis. The results were summarized and presented in Table 5.

Table 5: Results of One Way ANOVA on Marital Status and Relapse Risk

ANOVA					
Relapse Risk					
	Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**
Between Groups	7311.393	2	3655.696	4.469	0.013
Within Groups	99796.399	122	818.003		
Total	107107.792	124			

Table 5 showed that there was a significant difference in means between marital status and relapse risk of the substance use addicts of Langata, Nairobi, Kenya (p=.013).Therefore, the statistical difference between group means as determined by one-way ANOVA was [F (2,122) = .4.469, p = .013].

Results showed that there as a significance gender and relapse risk among substance use addicts. There was a significant difference in the scores for relapse risk between Male (M = 98.11, SD = 28.24) and Female participants (M = 113.00, SD = 32.47) at conditions, t (123) =. -2.21, p = .03. The findings were affirmed by findings of Hoijer et al. (2021), who conducted a cross-sectional study in Finland with a sample size of 164 individuals, with 97 men and 67 women to investigate gender differences in personality and emotional problems among individuals with single use and polysubstance use. Findings showed that men had more severe personality and emotional issues than women, even after the mediation of level of education, onset of regular use and poly-substance use. Similarly, men also had high value indicators of somatic issues and emotions of anxiety and depression much higher than women. These findings may indicate that men with SUD may experience more intense personality -related challenges during rehabilitation than women showing a variance from previous findings, that women may not be more vulnerable in substance use.

Furthermore, the results were supported by the findings of Anundo (2019) who conducted a study in Nairobi County with a sample size of 149 participants to investigate the prevalence of depression among female injecting drug users (FIDUs) and the findings revealed a high prevalence of injectable drug use among women, which significantly increased their vulnerability to a persistent risk of relapse. Moreover, the results were in agreement with the findings of Ongaro et al. (2022) carried out a study in Nairobi and Kajiado with an aim of evaluating the prevalence of risky and hazardous substance use disorders (SUDs) across genders with a sample size of 120 respondents aged between 18 and 40 years and findings from the study indicated that relapse risk in alcohol was rampant across the gender divide, indicating that males had higher dependency (61%) more than females (39%). More singles had higher dependency (40%), than those in marital relationships along the marital status demographic. Use of tobacco was significantly associated with marital status (p = 0.018).

The results showed that there was significance difference between age and relapse risky. The significance p-value of relapse risk was p = .434. Since p. ≥ .05, there was a significant difference in means between age and relapse risk of the substance use addicts of Langata, Nairobi, Kenya. Therefore, the statistical difference between group means as determined by one-way ANOVA was [F (2,122) = .840, p = .434]. The findings were supported by the findings of Kairuthu (2020) who conducted a study in Mombasa with a sample size of 220 individuals undergoing SUD treatment, caregivers, and counselors at three NACADA-accredited sites and findings revealed that individuals aged 30-35 years had a relatively high mean score in life skills (mean=3.9074; SD=1.04666), as did those aged 35-40 years (mean=4.0278; SD=0.68748), while recovering addicts aged 25-30 years' mean score was lower (mean=3.7719; SD=0.58850). The uptake of life skills was highly popular among most of the recovering addicts. Additionally, those aged 35-40 years scored high in adherence to treatment (mean=3.3611; SD=0.77345), whereas those aged 25-30 years scored lower in treatment adherence (mean=3.0476; SD=0.74516). The age factor suggests that older participants have a stronger inclination to sustain recovery mechanisms compared to younger participants, which may predispose younger individuals to a higher risk of relapse.

The descriptive statistics emerging from the results suggested that there was a significant difference in the scores for relapse risk between Voluntary (M = 98.22, SD = 26.49) and Involuntary participants (M = 103.36, SD = 32.44) at conditions t (123) =.052, p = .033. On the other hand, the results contradicted the findings of Sant Anna et al. (2020) conducted a cross-sectional study in Brazil to examine the association between relapse rates and admission types (voluntary versus involuntary) among individuals with substance dependence and found there was no significant differences in relapse rates were observed between involuntarily admitted individuals (64%) and voluntarily admitted individuals (54%) (P = 0.683).

Also, the results showed there was a significance difference between marital status and relapse risk. The results showed that the significance p-value of relapse risk was p = .013. Since p. ≥ .05, there was a significant difference in means between marital status and relapse risk of the substance use addicts of Langata, Nairobi, Kenya. Therefore, the statistical difference between group means as determined by one-way ANOVA was [F (2,122) = .4.469, p = .013]. The findings were in agreement with the findings of Blair and Menasco, in Buffalo, USA in (2016), who conducted a study to examine the relationship between marital status, substance use, and relapse risk among adults. It included data from the 2012 National Survey on Drug Use and Health (NSDUH) to analyze substance use patterns and relapse risk within a nationally representative sample comprising 14,715 adults and the findings revealed remarried individual men demonstrated significantly higher alcohol and marijuana consumption than women, reported substance use rates were 6.32 compared to 4.22 for alcohol and 0.91 compared to 0.51 for marijuana, respectively. Furthermore, never-married individuals, particularly those in early adulthood - a stage often correlated with elevated substance use-demonstrated significant levels of marijuana consumption. Approximately 11.2% of never-married men and 5.3% of never-married women reported using marijuana 20 or more times within the past month, reflecting a habitual usage pattern and increased relapse risk.

CONCLUSION

The study concluded there was a significance difference between demographic variables and relapse risk among substance use addicts in Langa'ta Sub-County, Nairobi, Kenya. There was a significant difference in the scores for relapse risk between Male and Female participants. There was a significant difference in means between age and relapse risk of the substance use addicts. In addition, a significance difference between marital status and relapse risk was reported. The study recommends to addiction counselors to consider demographic variables influence to relapse risk when offering counseling intervention to substance use addicts. The study recommends to researchers in future to utilize mixed method research approach to have a deeper understanding of the demographic variables influence in relapse risk and especially using qualitative approach to explore the lived experiences of relapse risk in relation to demographic variables. In addition, the study recommends the future studies to consider including additional variables such as psychological health, social support systems, employment status, and duration of substance use treatment to provide a more comprehensive understanding of relapse risk.

REFERENCES

1. Anundo, J. A., Ayuya, C., & Ongaro, K. (2022). Relapse Risk Factors Across Socio-Demographic Patterns of Persons Admitted with Substance Use Disorder In Selected Rehabilitation Centres in Kenya. Researchjournali's Journal of Public Health, 8(3)
2. Baloyi, D. E., & Khosa, P. (2025). Voices of social workers on the barriers that women face in accessing substance use treatment services in Limpopo province, South Africa. Journal of Social Development in Africa, 40(1), 86-107.
3. Blair, S., & Menasco, M. A. (2016). Gender differences in substance use across marital statuses. International Journal of Criminology and Sociology, 5, 1.
4. Höijer, I., Ilonen, T., Löyttyniemi, E., & Salokangas, R. K. (2021). Gender differences in cognitive and personality functioning in patients with substance use disorder. Addictive Disorders & Their Treatment, 20(4), 538-547.
5. Kaithuru, P. N. (2020). Demographic differences in management of substance use disorders among recovering addicts in selected rehabilitation centres in Mombasa County, Kenya. International Journal of Indian Psychology, 8(3), 173-183.

6. Mkhize, N. N., & Gutura, P. (2021). Substance dependency and treatment issues in South Africa: Voices of relapsed involuntary service users. e-BANGI, 18(9), 228-242.
7. Ogai, Y., Haraguchi, A., Kondo, A., Ishibashi, Y., Umeno, M., Kikumoto, H., ... & Ikeda, K. (2007). Development and validation of the Stimulant Relapse Risk Scale for drug abusers in Japan. Drug and alcohol dependence, 88(2-3), 174-181.
8. Okonkwo, C. C., Onyedibe, M. C. C., Okeke, N. A., & Agoha, B. C. (2020). Prevalence and socio-demographic factors of relapse among patients with substance use disorder in Lagos, Southwest Nigeria. Nigerian Journal of Psychological Research, 16(1).
9. Ongaro, K. A. (2022). Comparative Study on Effectiveness of Mindfulness Cognitive Behaviour Therapy and 12-Steps Model on Relapse Prevention Among Persons with Substance Use Disorder in Selected Rehabilitation Centres in Nairobi and Kajiado Counties in Kenya.
10. Poudel, A., & Gautam, S. (2017). Age of onset of substance use and psychosocial problems among individuals with substance use disorders. BMC Psychiatry, 17, 1-7.
11. Sant'Annaa, W. T., Mitsuhiroa, S. S., Figliea, N. B., Diehla, A., Pillonb, S. C., & Laranjeiraa, R. (2020). Relapse in involuntary substance treatment: a transversal study. Nuestra portada, 255.