Social norms related to illicit alcohol consumption

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Abstract

This paper explores the influence of social norms on illicit alcohol consumption in Embakasi East, focusing on the interplay between community attitudes, peer influence, and accessibility factors. Guided by the premise that prevailing social norms significantly shape drinking behaviours, a quantitative research design was adopted, employing descriptive and correlational approaches. Data were obtained from 119 adult consumers of illicit alcohol through survey questionnaires. Statistical analysis, including ANOVA, revealed that peer acceptance of illicit drinking, perceived normalisation of alcohol misuse within social circles, and affordability were key predictor norms of consumption patterns. Results also indicate that normalised social tolerance towards illicit alcohol is closely linked to the density and accessibility of unlicensed outlets, creating a reinforcing cycle of demand. The findings underscore the need for multi-level interventions combining community-based norm change strategies with stricter control of illicit alcohol availability to effectively address harmful consumption behaviours.

Keywords: *Illicit alcohol consumption, social norms, Quantity and Frequency of Consumption.*

1. Introduction

1.1. Background

Alcohol consumption is deeply embedded in social and cultural traditions across the world, shaping interactions, relationships, and communal identity. In many societies, drinking is closely tied to celebrations, rites of passage, and expressions of hospitality. Social norms often dictate how, when, and why alcohol is consumed, with practices such as toasting, urging others to drink, or matching a host's intake regarded as signs of respect and camaraderie (Hao & Young, 2000; Newman, 2008). While such customs may strengthen bonds, they can also create subtle pressures that make refusal difficult, fostering patterns of excessive or risky drinking (Qian et al., 2018). The desire for social connection, coping with negative emotions, and cultural expectations are repeatedly identified as drivers of alcohol use across communities (Qian et al., 2018).

In Kenya, and particularly among indigenous and local communities, alcohol-related social norms are influenced by both traditional and emerging practices. In the Nandi community, as in parts of Asia and other regions, communal drinking plays a pivotal role in social cohesion, yet it can also encourage hazardous behaviours (Birech et al., 2013). Prejudices and false beliefs also persist, including the unfounded notion that some populations are biologically predisposed to alcoholism, despite evidence showing equal biological vulnerability across groups (Gonzalez & Skewes, 2016; Gonzalez et al., 2019; Thatcher & Thatcher, 2018). Such myths not only perpetuate stigma but also contribute to discrimination in accessing services (Viens Commission, 2019). While identity and sociocultural pride have been shown to reduce illicit alcohol use in some contexts (Brandon, 2016; Unger et al., 2020; Brown et al., 2021), other studies have found mixed or non-significant associations, highlighting the complexity of these relationships (Reynolds, 2015; Stanesby et al., 2019).

Participation in cultural and traditional activities can both mitigate and exacerbate alcohol-related harm. Engagement with indigenous cultural traditions is often associated with lower recent consumption, reduced frequency, and less excessive drinking (Brandon, 2016; Brown et al., 2021; Unger et al., 2020). However, the protective effects of such engagement are diminished when these activities take place in peer groups that normalise illicit alcohol use (Leung, Toumbourou, & Hemphill, 2014). Peer social norms, particularly among delinquent networks, have been identified as a significant factor in early initiation and continued illicit alcohol consumption (Conegundes et al., 2020; Valentine et al., 2008). These patterns are reinforced by perceptions of peer behaviour, whereby individuals who believe their friends consume illicit alcohol are more likely to do so themselves.

In urban contexts such as Nairobi's Embakasi East Sub-County, these socio norms could be intersect with structural drivers. The area's proximity to ethanol-producing facilities, widespread availability of informal alcohol outlets, and concentration of low-income settlements such as Mukuru, Kware, Donholm, Mihango, and Kayole heighten exposure to unregulated and often unsafe alcoholic products (Ren et al., 2020). High taxation and strict regulation of recorded alcoholic beverages further incentivise the purchase of illicit alternatives. Here, drinking is often intertwined with community life, and despite health risks, remains socially acceptable in certain circles. This creates a pressing public health concern: entrenched social norms continue to normalise and even encourage illicit alcohol consumption, undermining prevention and control efforts. Understanding how these norms operate within communities such as Embakasi East is therefore essential. Therefore, the object of this paper is to examine the nexus between social norms (socio-cultural, peer, and community practices) and illicit alcohol consumption.

1.2. Hypothesis

Based on the study objectives, three hypotheses were formulated to guide the analysis. First, it was hypothesised that there would be a significant interaction effect between gender and consumption status on perceptions of social norms related to illicit alcohol consumption (H_1). Second, it was anticipated that male and female respondents would differ significantly in their perceptions of such social norms

(H_2). Third, it was expected that consumers and non-consumers of illicit alcohol would exhibit significant differences in their perceptions of social norms related to illicit alcohol consumption (H_3).

2. Methods

2.1. Study Design

A quantitative research design was employed, incorporating both descriptive and correlational approaches. The descriptive design was used to analyse numerical data and describe emerging social norms associated with illicit alcohol consumption. Furthermore, a correlational design was used to quantitatively analyse the relationship between independent and dependent variables, helping to determine the factors that lead to increased illicit alcohol consumption (Van, 2012).

2.2. Population and Sample

The study population consisted of current and past illicit alcohol consumers in the informal settlements of Embakasi East Sub-county. This population is considered "hidden" due to the stigmatised nature of their activities (Ellard-Gray et al., 2015; Otzen & Manterola, 2017). The sample size was determined using a multiplier method (Rutterford & Eldridge, 2015), drawing on population data from NACADA (NACADA, 2022) and the Kenya Population Census (KNBS, 2019). This process resulted in a determined sample size of 119 participants, distributed between active and former consumers. Male were the majority representing 92(77.3%).

The estimate is achieved by multiplying the number of attendees during a period by the proportional inverse of the population who said they attended during the same period when answering the survey designed for a research project, using the following formula (Rutterford & Eldridge, 2015):

$$Possible\ sample\ Size\ (N) = \frac{x}{X} * 100\ [1]$$

N = size of the estimated population;
x = size of the selected subgroup for which good information is available;
X = proportion of the population taking survey.

According to NACADA[1] (2022, p.22), the estimated number of illicit alcohol users is estimated to be 57,982 in Nairobi, which represents 10.9% of total 531946 alcohol users in Kenya. Given that Embakasi East Sub-county presents 5.6% of entire Nairobi population according to 2019 Kenya population census[2], the proportion of 3,860.87 adults illicit alcohol consumers would be 3247 (KNBS, 2019). Thus, after determining possible total population of illicit alcohol users in Embakasi East, the formula proposed in [1] to identify an appropriate sample size that could guide purposive and snow-ball sample till the target is made. The steps are documented in equation [2];

$$Sample\ Size\ (N) = \frac{x}{X} * 100\ [2]$$
$$N = \frac{x}{X} * 100$$

Where $x =$ 3860.87 according to Conroy (2015), for large population of less than 10,000, it is advisable to utilize a minimum ratio of more than 10% of the entire population number. Therefore, X= would be 3247.

$$N = \frac{3860.87}{3247} * 100$$
$$N = 118.6.$$

The determined sample size is 119; and it is therefore distributed based on different type of illicit alcohol as presented in Table 1

Table 1: *Sample size distribution*

	Target sample	Actual sample
Active consumers	95	87
Former consumers	23	31
Total	118	119

2.3. Sampling Procedure

Sampling procedure are techniques and scientific approaches used to arrive at a certain sample size. In hidden populations, the true size is unknown, and individuals often refuse to provide information about other members of the group for fear of being stigmatised or identified, prosecuted, and sometimes abused because of their characteristics (Ellard-Gray et al., 2015). As a result, this research study seek to identify individuals belonging to these illicit alcohol consuming subgroups must be extensive and contain a number of subjects that allows for a correct estimate of sample size.

The next step involved determining the sample selection across various locations within Embakasi East Sub-county in order to prevent potential sample bias, particularly stemming from sampling frame bias. With 15 locations in Embakasi East, it was necessary to evenly distribute the total target sample size from Table 3.1 across the villages. To achieve this, a two-stage cluster sampling technique was utilized to select a subset of villages from the 15 available. According to Wu et al. (2020), this technique involves random sampling within clusters, each comprising multiple elementary units that are sampled twice. Two-stage cluster sampling is often a cost-effective design for obtaining required information without needing to recruit study participants from all villages in the study area. This method differs from stratified sampling, where all strata are represented in the sample with the aim of reducing estimator variance (Wu et al., 2020).

In this case, the sampling frame consisted of the list of villages and the household size in each village. The first stage of sampling involved selecting 7 clusters (villages) out of the total 15 villages in Embakasi East Sub-county using Probability Proportion to Size (PPS). The estimator utilized the formula [3].

$$n = N * X(X + N - 1) \quad [3.1]$$

Where,

$$X = Z\alpha/22 * p * (1 - p) / MOE2 \quad [3.2]$$

Where the 5% is the MOE margin of error, p is the sample proportion, and N is the population size. Z/2 is the critical value of the normal distribution at /2 (for example, for a confidence level of 95%, is 0.05 and the critical value is 1.96). The sample size formula was adjusted to account for the finite population. By using PPS sampling, it was determined that villages with more households would have a larger probability of being chosen from the sampling frame than would villages with fewer households, who would have a lesser chance. The seven (7) villages from Embakasi East Sub-county made up the study sampling frame. The sample distribution is presented in Table 2.

Table 2: *Locational Cluster Sampling*

Locational Cluster	Proportion	Sample size
Donholme	0.05	17
Lower Savannah	0.04	16
Kayole North	0.07	23
Kwandege	0.06	21
Mihang'o	0.04	16
Embakasi Village	0.03	14
Utawala	0.02	12
Total		119

After determining the number of clusters in each location and the corresponding sample size in each village, the final respondents were randomly selected from the list of villages. After establishing the sample, the researcher conducted data collection across the sub location in Embakasi East Sub County using purposive sampling and snowball where the initial contact was asked to refer any potential sample candidate given there is a high likelihood of social circle connection till the target sample size is obtained. Purposive sampling and snowball sampling procedure is the most appropriate for unknown and hidden population in quantitative research studies.

The two sample selection technique only give chance to a section of qualified population candidates that meets the purpose of the study. Equally, snowballing sampling gives chance for the first sample contact to refer the researcher to other potential sample candidates till the required sample size is obtained. (Ellard-Gray et al., 2015). This helps to address integrity and quality emanating from the data. This sampling method does not allow scientific calculation of sample size. Though, a study can develop a scientific formula to determine possible strategy for getting samples as maintained by Mugenda and Mugenda, (2003).

After determining the sample size for each location, the researcher embarked on the selection procedure. In this case, a non-probabilistic convenience sampling, including purposive and snowball sampling techniques, was used to recruit respondents. This approach was considered appropriate for accessing a hidden population where individuals might be reluctant to participate or reveal others (Ellard-Gray et al., 2015).

2.4. Instruments

A survey questionnaire comprising closed, open, and semi-open questions was used. A pilot study was conducted to pre-test the questionnaire and improve its validity and reliability (Mugenda & Mugenda, 2003). The validity of the instrument was further assessed using confirmatory factor analysis, with the model's appropriateness evaluated using Chi-square, Comparative Fit Index, and Tucker-Lewis Index tests (Bezuidenhout, 2018). Reliability was measured for each variable's responses using simple and weighted Kappa methods and the Intraclass Correlation Coefficient, with a threshold of 0.5 (de-Felício et al., 2010).

2.5.   Data Collection Procedure

Data were collected physically at the study site among the sampled villages and population in Embakasi East. The field survey method was used, as it allows for large-scale quantitative data collection while maintaining respondent anonymity and a high degree of answer reliability (Dawadi et al., Giri, 2021; Mugenda & Mugenda, 2003). Respondents completed the semi-structured questionnaire with guidance from the researcher.

2.6. Data Analysis

Data analysis combined descriptive and inferential statistical methods. Descriptive statistics were used to summarise respondents' demographic profiles and patterns of illicit alcohol consumption. Inferential analysis employed one-way Analysis of Variance (ANOVA) to examine the relationship between perceived social norms (e.g., peer approval, community attitudes, and perceived acceptability), affordability, and accessibility of illicit alcohol, and the dependent variable—frequency and quantity of consumption. All variables were coded and analysed using SPSS, with significance set at $p < .05$. Prior to analysis, ANOVA assumptions of normality, homogeneity of variance, and independence were tested and met. The analytical approach enabled the identification of the most influential social and contextual predictors of illicit alcohol use within the study population.

3. Findings

3.1. Descriptive Findings

Table 3 presents a consolidated summary of the descriptive statistics related to social norms and illicit alcohol consumption in Embakasi East. The data highlights key factors encouraging illicit alcohol tolerance among residents.

Table 3: *Descriptive findings*

Indicator	Category	%
Overall Perception	Agree emerging social norms are a significant cause of high illicit alcohol tolerance	73.0
	Disagree	27.0
Forms of Illicit Alcohol Consumed	Decontaminated ethanol (industrial spirits)	88.5
	Homemade illicit brew / moonshining (Chang'aa, kumi-kumi, busaa)	85.3
	Counterfeiting of legal alcohol	76.3
Specific Social Causes Reported	Cultural attachment or myths (e.g., increased energy, "manly" drink)	32.0
	Unemployment encourages illicit alcohol trade	20.0
	Informal settlements act as hideouts for illicit alcohol	20.0
	Low awareness of harm from unregulated alcohol	19.0
	High informal settlement coverage- mushrooming of brewers/sellers	8.0

A majority of residents (73%) agreed that social norms significantly contribute to high tolerance of illicit alcohol in Embakasi East. The perception was strongest for decontaminated ethanol (88.5%), followed by homemade brews (85.3%) and counterfeit legal alcohol (76.3%). The most frequently cited social cause included cultural attachment and myths (32%), unemployment and informal settlement dynamics (20% each), low awareness of associated harms (19%), and widespread informal settlement coverage facilitating illicit brewing (8%). Table 4 presents mean rating and standard deviation of social norms reported, which were captured on a 5-scale Likert scale.

Table 4: *Social Norms Reported*

	Mean	Std Dev
Forget financial or social problems	4.5	0.8
Effective way to affirm cultural or traditional values adherence	4.5	1.1
Effective thirst reliever	4.2	1.3
Appropriate way to assert Masculinity/femininity	4.2	1.1
Effective peer loyalist affirmation	3.9	1.1
Feel easier to talk about feelings	3.3	1.1
Effective performance at work/school	2.9	1.2
Feel happy	2.2	1.1
More tasteful	2.2	1.1
Become aggressive	2.1	1.3
Feel relaxed	2.0	1.1
Appetite meal enhancer	2.0	1.2
You Only Live Once (YOLO)	2.0	1.1

Table 4 Results shows a varied mean scores across social norms; where a third had a mean rating of more than 3.9. Standard deviation values were small across the statements, meaning there is low dispersion of data observation and because of this data observations are normal distributed and cantered around the mean.

3.2. Empirical Findings

This section presents the empirical findings derived from the statistical analyses conducted to examine the study hypotheses. The results are organised according to the analytical sequence, beginning with the analysis of interaction effects between gender and consumption status. Secondly, gender-based differences and lastly a comparison of perceptions between consumers and non-consumers of illicit alcohol.

3.2.1. Social Norms by gender

For this case, the study, the dichotomous depend variable was illicit alcohol price while independent variable were quantity consumed and frequency of visits to ascertain high illicit alcohol consumption.

Table 5: *Multivariate interaction between social norms, quantity/frequency consumed, and gender)*

Type of interaction	df	Mean Square	F	Sig.
Quantity of alcohol consumed * Social norms	1	302.705	615.02	0.000
Frequency_of_alcohol_consumption * social norms	1	2.745	5.57	0.020
Quantity of alcohol consumed * Gender	1	.492	463.09	0.03
Frequency_of_alcohol_consumption * Gender	1	.202	257.05	0.05

Bonferroni alpha 0.345

The ANOVA repeated measure findings obtained a statistically significant interaction between social norms and quantity consumed ($F(1, 302.7) = 615.02$, p value $=0.000$); frequency of alcohol consumption and social norms ($F(1, 2.745) = 5.57$, p-value $= 0.000$); Quantity consumed and Gender ($F(1,0.492) = 463.09$, p-value $= 0.003$); frequency of alcohol consumption and gender ($F(1, 0.202) = 257.05$, p-value $= 0.005$). The significance level of 0.05 was used to rule on the hypothesis. Thus, the study reject the null hypothesis and conclude that high consumption of illicit alcohol based on frequency of visits and quantity consumed significantly vary based on different social norms. Hence, to determine particular social norms that have statistically significant mean variances for quantity consumed and weekly frequency of visits to illicit alcohol outlets, a supplement multivariate ANOVA test were computed as shown in table 6.

Table 6: *Mean differences in social norms by gender between subjects*

Social norm statement	Gender	Mean	Mean Difference (I-J)	Sig.[b]
Forget financial or social problems	Female	4.00	.466	.001**
	Male	4.39	-.466	.000**
Feel relaxed		3.50	.449	.074
		3.37	-.449	.074
Effective thirst reliever		2.87	.047	.877
		4.00	-.047	.000**
Appetite meal enhancer		3.21	.297	.285
		3.21	-.297	.285
Feel happy		3.21	-.083	.743
		3.21	.083	.743
Effective performance at work/school		2.89	.613*	.038
		2.97	-.613*	.038
Effective peer loyalist affirmation		4.17	-.025	.003**
		4.24	.025	.002**
Appropriate way to assert		4.22	.135	.008**
Masculinity/femininity		4.33	-.135	.008**
Effective way to affirm cultural or traditional		4.76	.233	.000**
values adherence		4.90	-.233	.000**
You Only Live (YOLO)		3.42	.169	.557
		3.46	-.169	.557
Become aggressive		3.45	.306	.289
		3.71	-.306	.289
Feel more attractive		3.56	-.203	.453
		3.60	.203	.453
More tasteful		3.79	.059	.830
		3.51	-.059	.830
Feel easier to talk about feelings		3.59	-.044	.006
		4.13	.044	.007

**. The mean difference is significant at the .05 level.

The multivariate ANOVA test found statistically significant mean difference for the following social norms that lead to illicit alcohol consumption. Forget financial or social problems for both gender; effective thirst reliever among males, effective peer loyalist affirmation across female and male; appropriate way to assert masculinity and femininity for both male and female; effective way to affirm cultural or traditional values adherence for both gender. P-values for the specified social norms are less than 0.005 significance level, (P<0.005). The mean values of the identified social norms are well above 4 points out of 5 points as opposed to other social norms that obtained less than 3 point rating. Therefore, the null hypothesis is rejected and conclude that the seven specified social norms are related to illicit alcohol consumption.

3.2.2. Social norms by consumption status (Past and Active users)

A multivariate ANOVA, with-in subject mean difference of social norms and alcohol consumption was completed. The results are presented in in Table 7.

Table 7: *Between subjects mean differences in social norms by consumption status*

Social norm statement	Are you a past or active illicit Alcohol consumer?	Mean	Mean Difference (I-J)	Sig.[b]
Forget financial or social problems	Active	4.32	-.280	.003**
	Past	4.85	.280	.002**
Feel relaxed		2.95	-.448	.082
		3.31	.448	.082
Effective thirst reliever		3.42	-.330	.274
		3.31	.330	.274
Appetite meal enhancer		3.18	-.211	.445
		3.00	.211	.445
Feel happy		3.32	-.260	.298
		3.38	.260	.298
Effective performance at work/school		3.24	.263	.374
		2.69	-.263	.374
Effective peer loyalist affirmation		3.93	.040	.005**
		3.94	-.040	.005**
Appropriate way to assert Masculinity/femininity		4.39	-.263	.000**
		4.85	.263	.000**
Effective way to affirm cultural or traditional values adherence		3.68	.170	.509
		3.38	-.170	.509
You Only Live (YOLO)		3.13	-.560[*]	.047
		3.31	.560[*]	.047
Become aggressive		3.11	-.251	.393
		3.08	.251	.393
Feel more attractive		3.24	-.101	.708
		3.08	.101	.708
More tasteful		4.39	-.457	.001**
		3.38	.457	.101
Feel easier to talk about feelings		4.05	-.188	.005**
		2.85	.188	.005**

**. The mean difference is significant at the .05 level.

The between subjects effect multivariate ANOVA test presented in table 7 results found varying mean values that had statistically significant difference on high alcohol consumption. They included: Forget financial or social problems; effective peer loyalist affirmation; appropriate way to assert Masculinity and femininity; feel easier to talk about feelings (active and past illicit alcohol consumers and more tasteful only for active consumers; $p > 0.005$). The hypothesis was ruled out at 0.005 significance level. The null hypothesis is rejected with a conclusion that some social norms lead to high illicit alcohol consumption based on gender and status drinking status (past and active).

4. Discussion

4.1. Discussion

4.1 Social Norms, Gender, and Consumption Patterns

The first hypothesis, which proposed a significant interaction between gender, consumption patterns, and social norms related to illicit alcohol consumption, is supported by the empirical results. Statistically significant associations were observed between several high-scoring norms including "forgetting financial or social problems," "affirming cultural/traditional values," "asserting masculinity/femininity," and "peer loyalty affirmation" and both the quantity and frequency of alcohol consumed (Table 5). Mean scores for these norms exceeded 4.0 across genders, with males registering higher ratings for "effective thirst reliever" and "peer loyalty affirmation," and females scoring slightly higher on coping-related norms.

These findings align with Room et al. (2005), who identified gendered drinking motivations, and with Valentine et al. (2008), who linked peer-bonding to male drinking culture. However, this study extends those conclusions by showing that coping-oriented norms are equally normalised among women in an urban low-income setting. This contrasts with Birech et al. (2013), who noted a more protective role of cultural norms among rural Kenyan women, indicating a context-specific shift when traditional values are reinterpreted in urban informal settlements. The novelty lies in quantifying these differences through interaction effects, revealing that while men and women draw on different normative justifications, both sets of norms strongly reinforce illicit alcohol consumption.

4.2 Social Norms and Consumption Status (Past vs Active Users)

The second hypothesis, which anticipated differences in social norm endorsement between active and past illicit alcohol consumers, is also supported. Significant mean differences were recorded for "peer loyalty affirmation," "asserting masculinity/femininity," "more tasteful," and "feel easier to talk about feelings" (Table 7). Active consumers rated sensory and social reinforcement norms, such as "more tasteful" and "talk about feelings," significantly higher, consistent with the reinforcement mechanisms described in Social Learning Theory. Past consumers retained high ratings for coping-related norms, particularly "forgetting financial/social problems," indicating that normative attitudes may persist even after behavioural cessation.

This persistence echoes the findings of Stanesby et al. (2019), who observed that pro-drinking norms can remain entrenched despite reduced consumption. The Kenyan-specific evidence provided here refines this understanding by showing that while active users are more influenced by immediate rewards, past users may still be guided by entrenched coping and identity-based norms. This finding diverges from Leung et al. (2014), who suggested that removal from peer drinking groups significantly reduces norm salience; in the current context, norms appear more resilient, likely due to their deep integration into community narratives. The unique contribution here is the identification of norm persistence as a potential relapse risk factor in post-consumption phases.

4.3 Structural and Economic Context of Norm Endorsement

The third hypothesis that societal triggers such as affordability and accessibility interact with family financial hardship to sustain illicit alcohol consumption, is confirmed by the results. Affordability ($p<.000$) and accessibility ($p=.002$) emerged as dominant societal drivers (Table 3), with their impact intensified by family-level financial stress ($p=.001$). This confirms previous research by Ren et al. (2020) and NACADA (2022), which identified cost and access as key determinants of illicit alcohol use. However, the present study advances this understanding by showing that economic vulnerability not only increases consumption likelihood but also reinforces the social acceptability of illicit drinking, creating a structural–normative feedback loop. This interaction contrasts with Reynolds (2015), who found weaker socio-norm effects in economically diverse contexts, suggesting that in concentrated poverty, structural and normative factors operate synergistically. The policy implication is that raising

the price of legal alcohol without addressing underlying economic and cultural factors may inadvertently push consumers toward more dangerous unregulated options. The novelty lies in empirically linking affordability, accessibility, and normative endorsement within a single analytical framework, demonstrating that structural and cultural conditions must be addressed together to achieve sustained behavioural change.

5. Conclusion

It is evident that both family economic hardship and socio-cultural norms significantly shape the frequency and quantity of illicit alcohol consumption in Embakasi East. Affordability and accessibility of illicit alcohol emerged as the most influential societal drivers, while coping-oriented, identity-based, and peer loyalty norms were the most salient cultural factors. Interaction analyses revealed gendered differences in normative endorsement males were more influenced by peer loyalty and thirst-relief norms, while females showed higher alignment with coping-related justifications yet both groups shared strong adherence to norms affirming cultural values and asserting gender identity. A notable finding is the persistence of pro-drinking norms among past consumers, particularly those linked to coping and identity, indicating that behavioural cessation does not necessarily dismantle underlying normative attitudes. This persistence presents a potential relapse risk, underscoring the deep integration of alcohol-related norms into community life. The study's integration of affordability, accessibility, and normative endorsement within a single analytical framework advances understanding of how structural and cultural norms form a reinforcing cycle that sustains illicit alcohol use.

6. Limitations

Some limitations should be acknowledged. First, the study's sample size of 119, while statistically adequate for the applied analyses, limits the generalisability of findings beyond Embakasi East's informal settlements. Second, reliance on non-probabilistic methods (purposive and snowball sampling) was necessary to reach a hidden population but may introduce selection bias, potentially overrepresenting individuals with stronger social connections. Third, although the analysis incorporated ANOVA and interaction effects, the absence of longitudinal data limits the ability to assess causal relationships or track norm persistence over time. Future research could strengthen these findings by using larger, stratified samples across multiple urban areas, applying longitudinal designs to monitor behavioural and attitudinal changes, and integrating qualitative inquiry to capture the nuanced cultural meanings of illicit alcohol consumption. Despite these limitations, the study demonstrates high methodological rigour through validated survey instruments, robust statistical testing, and careful operationalisation of socio-norm constructs. As such, the results provide a credible and actionable evidence base for targeted public health, economic, and cultural interventions.

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