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THE INFLUENCE OF PHARMACOTHERAPY INTERVENTION ON PERCEIVED SOBRIETY IN REHABILITATION CENTER AND HOSPITAL IN WAKISO AND KAMPALA DISTRICTS, UGANDA.

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Abstract

Background

Pharmacological therapies diminish the level of perceived sobriety, improve the quality of life, reduce intake and affect, demand for alcohol. Physicians prescribe medications for patients to manage withdrawals, foster sobriety, and decrease alcohol and other substance use. The study objective was to examine the influence of pharmacotherapy intervention on perceived sobriety in Butabika National Referral Hospital Kampala and Serenity Rehabilitation Center Wakiso Districts, Uganda to address the challenges of perceived sobriety.

Methodology

The study was guided by the post-positivist paradigm. The research adopted a cross-sectional research design with a mixed-method approach known as simultaneous triangulation. Using purposive sampling and simple random sampling, questionnaires and interview guides were used for data collection. 338 respondents participated in the study. SPSS was used for analyzing Quantitative data, and Pearson's product-moment correlation coefficient was employed in testing the hypothesis. Primary data was collected using self – self-administered questionnaires, focused group discussions, observational checklists, and documentary reviews to obtain in-depth results.

Results

The results showed pharmacotherapy intervention and perceived sobriety r=0.723, which was positive with probability value p=0.000 < a=0.01 suggesting a significant correlation. Therefore, the stated Null Hypothesis was rejected which implies that pharmacotherapy intervention significantly positively correlates with perceived sobriety. "Most patients respond to Pharmacotherapy intervention, it controls withdrawal effects, alcohol addicts are given treatment (detoxification) at the initial phase, later are encouraged to attend group and individual counseling sessions to manage psychological challenges and social issues that may have led them into the use of alcohol".

Conclusion

Pharmacotherapy intervention has a significant positive correlation with perceived sobriety. Therefore, a change in pharmacotherapy positively affects perceived sobriety.

Recommendation

The study recommended that District Health Officers should encourage psychiatric doctors and nurses to understand that, one single intervention (pharmacotherapy) cannot facilitate long-term recovery but rather integrate with other recovery interventions.

Keywords: *Pharmacotherapy Intervention, Perceived Sobriety.*
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Introduction

Treatment in rehabilitation facilities was designed to help recovering addicts reduce alcohol dependence and attain a higher level of physical, psychological, and social functioning to live a productive and meaningful life. K4health, (2007) noted that, in Uganda, the supply of treatment options does not come close to the demand, Butabika hospital is experiencing an overwhelming number of patients waiting for treatment. Basangwa, (2013) noted that the available treatment facilities have low recognition

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and treatment involvement levels, and patients are not followed up for aftercare and are not well guided hence little is known about the success rates of the therapeutic programs after patients are discharged although some patients try to come for review while others do not come. Kalema, (2015) affirmed that developing countries in general do not have much documentation about recovery interventions and recovery of alcohol service users in Uganda this leaves a gap in the field of mental health. It was against this that, the research came up with the study to examine the influence of pharmacotherapy intervention on perceived sobriety in the treatment facilities.

Objective

To examine the influence of pharmacotherapy intervention on perceived sobriety in Butabika National Referral Hospital Kampala and Serenity Rehabilitation Center Wakiso districts, Uganda to address the challenges of perceived sobriety.

Methodology

Study design

The researcher used a cross-sectional design with a mixed method approach known as simultaneous triangulation to conduct the research among respondents in Butabika National Referral Hospital and Serenity Rehabilitation Centre in Wakiso and Kampala districts, Uganda. This design allowed the researcher to collect self-reported data to understand and make conclusions within a specific population at a place in a given period. It also allowed the researcher to study the same case at the same time since data could be collected once using a questionnaire about perceived sobriety.(Lindrio et al., 2024)

Setting

The study examined the influence of pharmacotherapy intervention on perceived sobriety in the selected rehabilitation facilities in Butabika National Referral Hospital and Serenity Rehabilitation Centre. The unit of analysis focuses on the recovering alcohol addicts in the treatment facilities. The researcher identified the two most prominent treatment facilities in Uganda. Butabika National Referral Hospital (BNRH) and Serenity Rehabilitation Centre (SRC) were selected as research sites due to their prominence in providing alcohol addiction treatment services in Uganda. Butabika Hospital is a public leading mental health facility in the country, offering specialized services for addiction treatment, while Serenity Rehabilitation Centre (SRC) is known for its comprehensive approaches to addiction recovery. By conducting research in these settings, the researcher aimed to gain insights into diverse interventions and experiences within both clinical and rehabilitation contexts.

Participants

The respondents comprised young adults aged 20-45 years receiving therapies at Butabika National Referral Hospital Kampala and Serenity Rehabilitation Center in Wakiso districts, Uganda.

Bias

The study used a sample of 338 respondents drawn from the population of 2,800 in Butabika National Referral Hospital and Serenity rehabilitation center, results from which could not be generalized to the entire population of addicts in Kampala and Wakiso districts, Uganda which is about 5,000 addicts including service providers in central Uganda (UYDL, 2019). The researcher tried to mitigate this by using statistical means based on the population of the study area.

The study was also prone to questionable external validity since only content validity was used for qualitative data. Statistical representativeness was needed to understand a phenomenon. In this study, the generalizations made were statistical rather than analytical.

Looking at the weakness of the qualitative approach, the researcher used interviews and focused group discussion; the researcher obtained excess oral information during the survey interview. Interpretation was a challenge while the quantitative approach was limited to highly structured data, which required a scientific method of analysis. To avoid the weakness, of each method, the researcher adopted the triangulation approach of combining the qualitative and quantitative approaches.

Study size

The study got 50 addicts and 15 service providers total of 65 respondents from Serenity Rehabilitation Centre while Butabika National Referral Hospital had a population of 2,407 addicts plus 328 service providers making a total of 2,735 and a general total of 2,800 target population.

Using Diliman's 2007 formula, the study obtained a sample size of three hundred thirty-eight (338) respondents; out of which Two Hundred and Ninety-seven (297) were addicts and Forty-One (41) were service providers.

Statistical methods

The sample size was determined using (Dillman's 2007), Formula for determining sample size:

$$S = \frac{NP\,(P)\,(1-P)}{NP-1(B/C) + (P)\,(1-P)}$$

S= Sample
NP= Number of Population
P= Population Proposition Magnitude Yielding the maximum Possible Sample Size = 50% =0.5
B= Sampling error = 5% = 0.05
C=Level of Confidence = 1.960

$$S = \frac{2800\,(0.5)\,(1-0.5)}{}$$

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2800 -1(0.005)2+ (0.5) (0.5) 700
1.960

2800x0.25 S= 2799x0.0006507705+0.25
S=2799x0.0006507705+0.25 700
S= 2.0715066295 S=337.9 S=338

Table: 1: Population size, sample size, and method of data collection

Category of respondents	Population size	Sample size	Sampling strategy	Strategy Methods of data collection and instruments
Addiction counselors	20	20 x 338 = 2 2800	Purposive	Interviews, (use of Interview guide) documentary review (use of documentary checklist), and electronic data recording (use of the phone for recording the interviews)
Psychological Counselors	125	125 x 338= 15 2800	Purposive	Interviews, (Interview guide) documentary review (documentary checklist), and electronic data recording (use of telephone)
Occupational Therapists	30	30 x 338= 4 2800	Purposive	Interviews, (Interview guide) documentary review (documentary checklist), and electronic data recording (use of telephone)
Psychiatric Nurses	168	168 x 338= 20 2800	Purposive	Interviews, (Interview guide) documentary review (documentary checklist), and electronic data recording (use of telephone)
Alcohol addicts	2,457	2,457x 338=297 2800	Simple random sampling	Questionnaires (questionnaire guide), focused group discussion (FGD guide), Observations (Observational checklist), and Documentary review (documentary checklist)
Total	**2,800**	**338**		

Source: Primary Data (2022)

The study used simple random sampling and purposive sampling to get the respondents. 297 questionnaires were distributed among addicts who were randomly selected from Serenity Rehabilitation Centre and Butabika National Referral Hospital (BNRH). Out of the 297 questionnaires, the researcher gave 50 questionnaires to respondents at Serenity Centre and 247 questionnaires were administered to the respondents at Butabika National Referral Hospital (BNRH). The researcher received 47 questionnaires filled out of 50 and 03 questionnaires were not filled from Serenity Rehabilitation Centre (SRC) while 238 questionnaires were filled 06 questionnaires were not filled and 03 questionnaires were not returned by the respondents, from Butabika National Referral Hospital. The 09 questionnaires that were not filled were considered invalid while the 03 questionnaires that were not returned were considered lost since the respondents escaped from the treatment facility.

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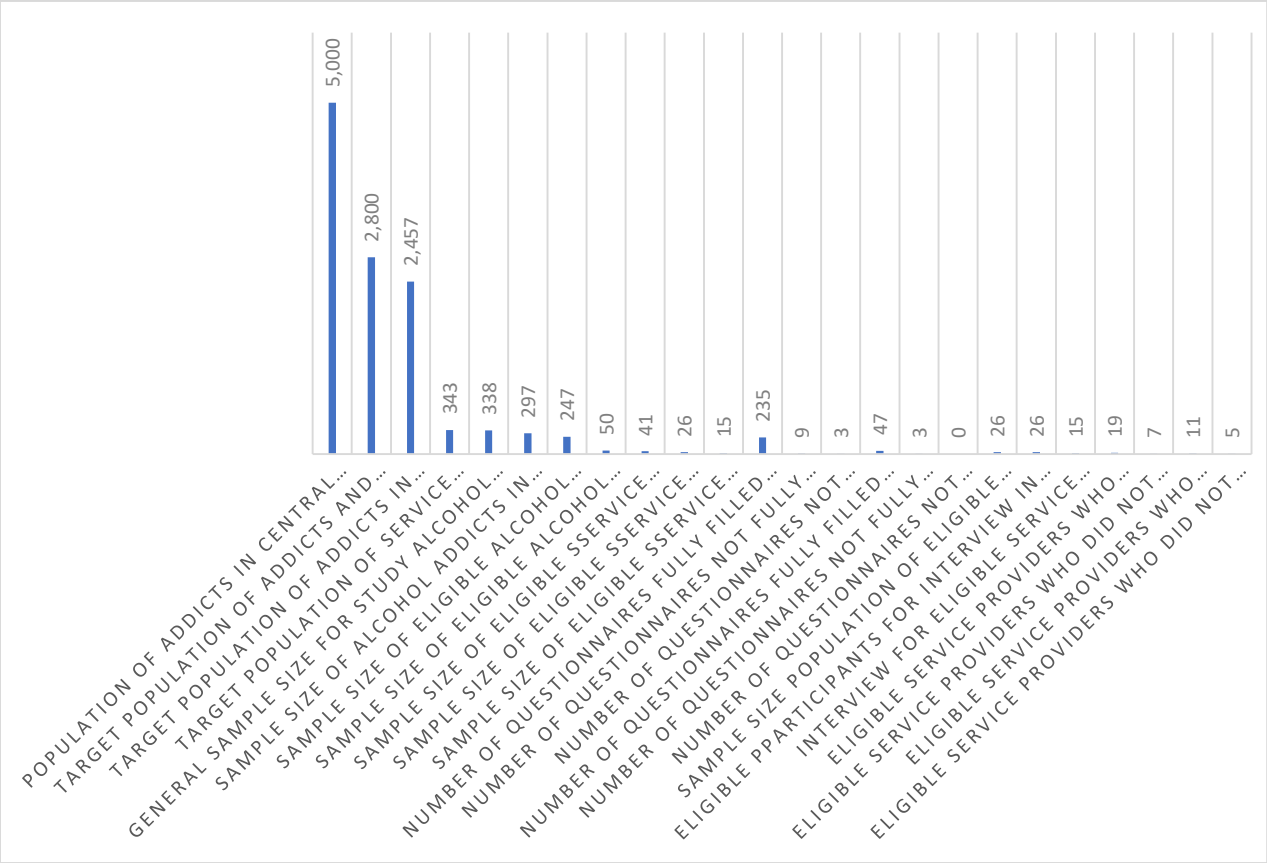
Figure: Breakdown of participants eligibility for the study and those eligible but did not participate in the study in Butabika National Referral Hospital and Serenity Rehabilitation Centre Response rate to the study



In response to the participants' eligibility, those examined were eligible and completed the study and analyzed for the final report, here are the details. The target population of addicts and service providers in Butabika National Referral Hospitals and Serenity Rehabilitation Center was 2,800, while the target population of addicts in Butabika National Referral Hospital and Serenity Rehabilitation Center was 2,457 the target population of Service providers in both Butabika national referral hospital and Serenity rehabilitation center was 343 and so using Dillman (2007) sample size determination, the sample size for eligible participants was 338 both Butabika national referral hospital and Serenity rehabilitation center alcohol addicts and service providers.

The sample size of alcohol addicts in Butabika National Referral Hospital and Serenity Rehabilitation Center was 297 and the sample size of alcohol addicts eligible for the study in Butabika alone was 247 out of which, 235 participated fully in the study while 09 did not participate fully, questionnaires were not filled and 03 respondents did not return the questionnaires or did not participate in the study although, they were eligible. This was because some of them escaped from the treatment facility as craving is one of the signs of addiction.

The sample size of alcohol addicts eligible in Serenity rehabilitation center was 50 and out of those 47 respondents fully participated in the study while 03 participants did not participate in the study that is 03 questionnaires were not filled; this could be as a result of low attention span as one of the characteristics of addicts.

Concerning the participation in the interviews, the study had a sample size of 41 respondents eligible for the interview 26 from Butabika National Referral Hospital, and 15 from Serenity Rehabilitation Centre, however, not all participated in the study when the responses reached the circulation point so 19 participants were interviewed from Butabika national referral hospital leaving out 07 participants consisting of the different categories identified to participate in the study that is addiction counselors, psychological counselors, occupational Therapists, and psychiatric nurses while

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Serenity rehabilitation center had 11 out of 15 responses from the similar category as potentially identified respondents leaving 05 after reaching point circulation.

Data Analysis

Data was analyzed using descriptive and inferential statistics like mean, standard deviation, correlation coefficient, and qualitative data analysis (QDA) involving content analysis.

Quantitative Data Analysis

Quantitative data analysis (QDA) involves the use of descriptive and inferential statistics like mean, and standard deviation that help the researcher to organize data in a meaningful form and describe the data such that quantitative statements could be made. The study used Pearson's product-moment correlation coefficient to find out whether a relationship existed between variables and determined its magnitude and direction.

Path analysis (PA) was used to describe the directed dependencies among a set of variables path analysis tests out the many different ways one variable could affect another. The structural Equation Model (SEM) was used to analyze the structural influence of the relationship between the variables and latent constructs in the study. Thereafter, data interpretation and discussion were done using tables, and figures, and then presented in report form.

Hypothesis Testing (HT)

The researcher used the Pearson Product Moment Correlation Coefficient ( )

The Pearson Product Moment Correlation Coefficient (PPMCC) is the most commonly used measure of correlation. It is often used when both variables are continuous (parametric) i.e., if both have scores. The following formula is used:

Example:

The following scores were obtained in the Pharmacotherapy intervention and perceived sobriety test.

Alcohol Addicts	Pharmacotherapy Intervention (X)	Perceived Sobriety (Y)
A	5	8
B	4	4
C	3	6
D	6	7
E	4	6
F	2	4

The researcher would wish to test the Null hypothesis (NH) that: There is no significant relationship between pharmacotherapy intervention and perceived sobriety.

Qualitative Data Analysis

Qualitative data analysis involved content analysis. The researcher coded the data and grouped them according to similar ideas in the data grouping, as well as similar information together in categories relating different ideas to the content. The researcher further organized the data findings and organized ideas and concepts using content analysis. The interview was used to transcribe verbatim data to support the questionnaire results. To strengthen the reliability and validity of the study findings, the questionnaire results were analyzed using HP Pavilion x 360 computer software**.** In the process of analyzing the data, the researcher drew meaning from the information collected.

Research Ethical Considerations (REC)

A letter of introduction was received from the School of Postgraduate Studies and Research of Nkumba University (SPGSRNU), introducing the researcher to Clarke International University Research Ethics Committee for approval of the research proposal and got a letter of approval with UG-REC-015, CIUREC/0216 and UNCST-SSI026ES. The researcher proceeded to submit the protocols to the National Council for Science and Technology for further approval to get the final letter of approval for going to the field to carry out the study.

Introduction to the authorities of Butabika National Referral Hospital and Serenity Rehabilitation Centre was done to get a letter of acceptance to allow the researcher to collect data from their institution. Following the generally established principles regarding informed consent, confidentiality, and anonymity, reading people's case files was a very sensitive issue. To protect the respondents' names, they were not required to write names on the questionnaire. The researcher also respected the respondents' views and gave them ample time to express their experiences during the focused discussion.

Data Collection

Data was collected using a variety of instruments that included questionnaires, interviews, and focus group discussions. Though the study adopted a post-positivist paradigm, both qualitative and quantitative data were collected. Qualitative data analysis involves making sense of the enormous amount of narrative data, that is looking for categories, patterns, and common themes that facilitate a coherent synthesis of the data Meadow, 2003). Coding involves critically analyzing the data and identifying contents representing categories into which numerous pieces of data can be classified (Gay, 1996) to allow triangulation of results.

Data regarding pharmacotherapy interventions on perceived sobriety was analyzed both qualitatively and quantitatively. This was because all answered questionnaire items and interviews were organized and coded by categorization and processed. Finally, data on testing the hypothesis was analyzed quantitatively using Pearson's Product Moment

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Correlation Coefficient (PPMCC) ( ) to measure the correlations because the two variables are continuous (parametric). The following formula was used:

The following scores were obtained in pharmacotherapy intervention (PI) and perceived sobriety test.

Respondents (Alcohol Addicts)	Pharmacotherapy Intervention (X)	Perceived Sobriety (Y)
A	5	8
B	4	4
C	3	6
D	6	7
E	4	6
F	2	4

The study would wish to test the Null hypothesis (NH) that: There is no significant relationship between pharmacotherapy intervention (PI) and perceived sobriety (PS).

The data was put into categories (frequencies, Percentages, and proportions) to reflect the effect of the independent variable.

Table: 2: Focused Group Discussion with Alcohol Addicts at Butabika National Referral Hospital and Serenity Rehabilitation Centre

Rehabilitation Centre	**Group One**	**Group Two**	**Total**
Serenity Centre	6	6	12
Butabika Hospital	6	6	12
Total	**12**	**12**	**24**

Source: Primary Date (2022)

Table: 2. shows the results of the Focused Group Discussions that were conducted at Butabika National Referral Hospital and Serenity Rehabilitation Centre. Participants who were involved were 24 in number. They were categorized into two groups each having two groups (of 6 participants).

Table: 3: Response rate

Instrument	Disseminated	Returned	Response Rate
Questionnaire	297	285	95.9%
Interviews	41	30	73.1%
Overall	**338**	**315**	**93.2%**

Source: Primary Source Data (2022)

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RESULTS OF THE FINDINGS.

Table 4: Demographic Characteristics of Young Adults receiving therapies at Butabika National Referral Hospital and Serenity rehabilitation center in central Uganda

		Frequency (N = 285)	Percentage (%)
Age in Years			
	20—25	55	19.3
	26—30	71	24.9
	31—35	95	33.3
	36—40	64	22.5
Gender			
	Male	213	74.7
	Female	72	25.3
Education Level			
	None	33	11.6
	Primary 1—7	44	15.4
	Senior 1—4	57	20.0
	Senior 5—6	63	22.1
	University or any institution	88	30.9
Marital Status			
	Married	89	31.2
	Single mother/father	44	15.4
	Separated/divorced	53	18.6
	Single	99	34.7
Occupation			
	Civil Servant	48	16.8
	Farmer	86	30.2
	Self –employed	97	34.0
	None	54	18.9

Source: Primary Source Data (2022)

From Table 4, the study findings show that most of the respondents, 95 (33.3%) were in the age range of 31-35 years; were in the age range of 26-30 years; 71 (24.9%) were in the age range of 36-40 years 64 (22.5%) and aged 20-25 years were 55 (19.3%). This shows that the majority of the respondents were mature enough to answer the questions correctly and hence had the basic idea of alcohol use and how one can get into addiction when subjected to excessive use.

Regarding gender, the majority of the respondents, 213(74.7%) were male whereas 72(25.3%) were female indicating that the number of males who participated in the study was greater than that of the females. Concerning the education level, the majority of the respondents, 88 (30.9%) were at university or an institution level, whereas were senior 5-6 education level63 (22.1); while 57 (20.0%), were senior 1-4 level; whereas, 44 (15.4%) were of primary 1-7 level and those with non -educational level were 33 (11.6%), indicating that most of the respondents were with high educational level, meaning that those who participated in the study were university or institution professionals in education. Regarding marital status, most of the respondents, 89 (31.2%) were married, while 99 (34.7%) were single, whereas 53 (18.6%) were Separated/divorced and the lowest respondents 44 (15.4%) were single mothers/fathers. This means that most of the respondents who participated in the study were married people followed by single people. Regarding occupation, most of the respondents, 97 (34.0%) were self-employed, whereas, 86 (30.2%) of the respondents were farmers 54(18.9%) of the respondents had no occupation and 48 (16.8%) were civil servants who participated in the study. This means that the majority of the participants in the study were self-employed followed by farmers.

Demographic Characteristics on Age

The demographic age group of the study was largely determined by the matrix of social relationships, where influences of different peers were involved at different

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stages, circumstances, and intra and interpersonal factors in the use of alcohol. Denise Kande, (1986), noted that individuals of the same age group seriously are engaged in excessive use of alcohol leading to cognitive distortion. This eventually requires psychological intervention to address the challenge where the healthy thought patterns and beliefs of the addicts are cut down by the use of alcohol. Zuckerman, (1975) explored the relationship between an individual's need for sensory stimulation and behaviors among alcohol addicts. The study findings revealed that individuals who sought several therapies were able to establish new experiences to reduce boredom, facilitate disinhibition, and offer adventure. The most important demographic correlates with perceived sobriety were age and sex at the age of 30 and males generally scored higher than females on perceived sobriety. However, to believe that recovery intervention is effective to provide abstaining, several preventive measures were taken such as socio-cultural, pharmacotherapy, and psychosocial interventions coupled with the mediating recovery factors as presented in the earlier fourth objective.

Age is significantly connected to this study and it is a big factor in influencing high prevalence due to peer influence. The study finding shows that the majority of the respondents who were admitted for rehabilitation due to alcohol abuse were between the age group of 31-35 with 33.3%, (95) followed by the age group 26-30 with 24.9% (71) whereas those within the age range of 36-40 with 22.5% (64) as the minority lies within 20-25 with 19.3% (55) age bracket were admitted for rehabilitation due to drinking alcohol. This could be because Uganda does not have a strict regulatory body to control young people from misusing alcohol. However, excessive use of alcohol remains a global challenge. National Survey on Drug Use and Health (NSDUH, 2015) revealed that 33.1% of individuals aged 15 years old at least had 1 drink in their lives and about 7.7 million people aged 12 – 20 abuse alcohol and 76.5% had health-related complications 25-34 ages had liver cirrhosis while 35-44 years that is 70.0% cases of deaths. Among 1,825 individuals ages 18-24 die of alcohol-related unintentional injuries including motor-vehicle crashes. This means that across the globe, alcohol is being abused regardless of the age of the abusers, which poses a very serious challenge to the present generation. WHO, (2010) confirmed that alcohol abuse was the 5th risk factor globally, for premature death and disabilities among the age group 15-49 years of age and in the age group of 20-39 (25%) death due to alcohol-related issues. The study is looking forward to supporting the interventions used in the recovery centers to improve the quality of services offered in the treatment facilities.

Demographic characteristic of Gender

The study found significant gender differences concerning heavy drinking problems in the treatment facilities where males were 74.7% (213) and females 25.3% (72). NSDUH, (2015) confirmed that 49,695 men suffer from liver-related disease while 49.5% die due to alcohol-related problems while 28,834 women suffer from liver disease, and 43.5% die due to alcohol-related problems. WHO, (2012), the report revealed that, about 3.3 million (5.9%) deaths globally whereby 7.6% of men and 4.0% of women suffer due to alcohol-related problems. Whitford et al., (2013) affirmed that, in Uganda, men are estimated to have the highest prevalence of alcohol use in sub-Saharan Africa with 25.6 liters of pure alcohol. The study findings demonstrated that the males were more problematic in drinking alcohol than the women, this could be related to the cultural perspective to avoid stigma since cultural norms do not allow women to drink openly, nor does culture allow women to drink to addiction levels which is a health problem. Globally, perceived sobriety is a problem for the male figure, and culturally, men were allowed to drink alcohol unlike women, which resulted in variation in terms of drinking patterns, and drinking problems.

Table: 4: Descriptive Statistics Results of Pharmacotherapy Intervention

Pharmacotherapy Intervention	Mean	Std. Deviation	Interpretation
The therapy providers have always expressed empathy for me in the center	3.08	1.22	Average
I have had conversions to assist me in reaching a change that is desirous	3.54	1.05	High
I am always helped to follow the course of treatment	3.83	1.07	High
The therapists here have been instrumental in helping me to reinforce my achievements.	3.64	1.03	High
The providers always help me to identify differences between my alcohol-drinking behavior and my goals in life	3.77	1.10	High
I am always encouraged by the therapy providers that I can do without alcohol	3.68	1.12	High
Sub-Mean & Standard Deviation	**3.59**	**1.10**	

Legend: 4.20-5.00 Very High, 3.40-4.19 High, 2.60-3.39 Average, 1.80-2.59 Low, 1.00-1.79 Very Low

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Source: Primary Data (2022).

The descriptive statistics in Table 4 show an aggregate (Mean = 3.59, SD = 1.10) which implies that there was a high level of psychotherapy intervention, while the specific results show a high score level of always being helped to follow the course of treatment with (Mean =3.83, SD=1.07). This means that, if all the patients in the rehabilitation adhere to the treatment as well as therapeutic relation with the therapists effectively, there will be a minimum rate of perceived sobriety in the rehabilitation facilities although from the table above, therapy providers expressed empathy scored 3.08, (1.22) average however, the overall result Was high.

From the interview report on pharmacotherapy intervention, the majority of the respondents 28/30 said that:

"Most patients respond to Pharmacotherapy intervention/medications to control the withdrawal effects, we give them pharmacological treatment (detoxification) first at the initial phase than later we encourage the individual patients to attend group and individual counseling sessions to help them manage psychological challenges, distress and other psychosocial factors that may lead them into the use of alcohol, We put them on drugs such as orilvitablzi 1/1/tabs, dielqcphinx1/52, B; Complex TTbilx2/52, or Neuroto, M1vite ℿ bd x1/52 or Toractin 4Mg; tebj1/52, Tabs 1inj Diazepam 1 tab long tds x3/7, long bd x 3/7 nocte2/7, Tabs 1inj Thiamaine 1 tab 200mg bd x1/52 then 100mg edx2/52, Tabs Amitriptyline 25mg and nocte x5/7" **(K.I.I, 2022).**

Most patients, who get discharged after receiving detox, relapse more often than those who receive both medication and psychological interventions; some patients are still on medications but keep escaping for booze, so their recovery takes a long a slow process. Violent patients are isolated from others while on medication until they stabilize. Medication helps patients from getting liver cancer, cirrhosis, kidney diseases, and heart problems, medication helps the addicts get to know the dangers associated with alcohol use due to medical complications, most of them present with the challenges of overwhelming factors out there such as family challenges and negative peer influence which ought to be handled by the counselor; not all patients receive counseling services before discharge due limited number of counseling therapists in the facilities.

Some of the clients noted that:

*"Many people relapse because there is no follow-up after discharge, hence challenges at home make a person relapse, and counseling services are not provided for all alcohol addicts in all the wards. I think the counselors are only taking care of those in ADU hence some of us in other wards are left out and discharged without receiving counseling services. We only depend on the medication given to us to stop the withdrawal symptoms and when the time comes; we are discharged without any information on how to cope with the challenges back at home. Patients at Kireka are taken all as mentally sick people so we are left to survive on drugs only, there is no psychosocial support given to them like counseling or group sessions, we usually hear about them but we don't know what it was until today we are experiencing it. We appreciate your support in preparing us to face the world out there after our discharge"***(K.I.I, 2022).**

During the focused group discussion, the first thing done was carrying out assessment and blood testing followed by medication, to reduce the amount of alcohol in the body. Nevertheless, the recovery of an individual depends on the perception of the individual's attitude toward recovery, if one wants to recover; they will commit himself or herself and will recover. The medication they get helps them stop the withdrawal symptoms most of them come when they are affected by too much use of alcohol for some use both alcohol and drugs. It was noted that counseling is good but little time for one-to-one individuals, most of the time people are discharged without going through counseling, and some of the clients have been there for weeks but do not have a counselor. The counselors who help the clients are students who have no experience with addiction (have not drunk alcohol nor used drugs) but only give clients book knowledge. Clients need competent professionals to help them. There is effective group therapy and that is what some people go with, the program provided helps to provide information on positive attitudes to keep sober.

On the contrary, the few available therapists are overwhelmed with patients making it difficult for them to follow up on the progress of the patients after discharge. There is no organized structure set to follow-up apart from admission and giving patients medication/detox, there are limited human resources especially counselors and clinical psychologists compared to the high number of patients admitted and poor the support system from families and communities after the patient's discharge.

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Table: 5: Observational Checklist and Responses

#	Observations	Checklist (Diagnostic tools)	Checklist comments
1	**Physical Aspects**	Slowed reaction to time, Blackouts (again, usually in binge drinking episodes), Trouble with motor coordination or an inability to walk properly, Impaired judgment and risk-taking without full consideration of the consequences (such as drunk driving), Red lips, pale skin, brown hair, extended abdomen, Tremors, Nausea/vomiting Drowsiness, very slow or very fast breathing	Most of these symptoms were present in the alcohol addict respondents
2	**Cognitive / Psychological Aspects**	Difficulty understanding, instructions, Apathy, lack of coordination, Carelessness, Lack of coordination Impaired judgment, Difficulty concentrating, distracted, confused speech and thought, unusual difficulty focusing on tasks, disoriented in time and space, including location, date, and time, Poor coordination, Slurred speech, Impaired thinking, Memory impairment or memory lapses, Slurred speech, wanting to stop drinking but not managing to do so	Most of the respondents were recovering and others had recovered from the withdrawal symptoms and during assessment the element cognitive factors were present in the majority of alcohol addicts on the day of arrival.
3	**Behaviors**	Distressed at the prospect of not having access to alcohol, Secretiveness about the extent of alcohol abuse to protect it, Denial about the extent of alcohol abuse problem, Diverting energy from work, family, and social life to drink, Increasing legal troubles, such as assault, domestic abuse, Engaging in risky behavior, such as drunk driving, drinking and then stopping in a repeated pattern over time, Overreacting to any perceived criticism against their drinking, Increased financial problems, Taking loans, liquidating any assets, and depleting cash accounts, Stealing and likely lying about it, Engaging in risky activities, such as unprotected sex, Low movements, Fast or jerky movements, speaking in an exaggerated way (loud voice, gesticulating, etc.), Slow speech, sluggish, Frequent noisy laughter, Unsteady posture, Carrying alcohol in the pocket, Unable to remain standing/must lie down, Injures themselves or others, Frequent accidents.	Most of the respondents appeared with withdrawal symptoms and some of the effects were still pronounced in some of them since they are in the process of recovering.

Source: Primary Data (2022)

Table 6: Documentary checklist and perceived sobriety responses from Butabika National Referral Hospital and Serenity Rehabilitation Centre.

#	Documents	Checklist (Diagnostic tools)
1	Screening	Physical chronic non-communicable related due to alcohol use such as heart diseases, kidney, Alzema, amnesia, tremors, loss of memory, and injuries.
2	Patient progress record on medication	Physical chronic infectious diseases related to alcohol use such as HIV/AIDS infection, Syphilis, Gonorrhea
3	Interventions used	Medications, Pharmacological treatment (detoxification), and Psychotherapy
4	Patient progress record on therapy.	Mental health related to alcohol use such as addiction, major/minor psychiatric disorders
5.	Rate of Admission	Statistics of admission ranging from 2017 – 2021

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Documentary review results were done using patient's files and the screening/assessment tools used in Butabika National Referral Hospital and Serenity Rehabilitation Centre (BNRHASRC) such as history-taking protocol, investigations, tests, screening tools, and assessment tools. During the screening, a drug screening test uses a drug screening cup (Multipurpose) cup such as blood tests and biological testing such as urinalysis, saliva, hair tests, fingernail clippings, blood tests; and an admission form that caters to the client's data, telephone number, religion, marital status, next of kin and contact. Under the different histories, the reason for referral, presenting complaint, history of the presenting complaints, drug history, past psychiatric history, past medical and surgical history, occupational history, marital or sexual history, forensic history, family history, premorbid personal history, and history of drug use in the family as well as family psychiatric history is taken into consideration.

Under mental state examination: attitude, general appearance and behavior, speech, mood, thought processes, suicidal ideas/intentions, delusions, perceptual disturbances, cognition, judgment, and insight. The use of appropriate tools to monitor patterns of substance use, estimation of problems associated with substance use, assessment of dependence, and degree of dependence are taken into account. Finally, physical examination entails medical emergencies, infections, neurological deficits, cardio-respiratory, withdrawal and intoxication, random blood sugar using a glucometer, blood pressure machine; taking blood samples for testing using different needles according to the test needed. This helps the nurses to test their blood sample and check for liver function test; then do the renal function test, full blood count; checkup hepatitis B, TPHA syphilis test, HIV/AIDS, serology, amnesia, and memory check from the MSE, and injuries checked from physical appearance.

For the patients' progress records on medication, the treatment chart used has a date, the name of the medication and the dosage, the duration of the time for taking the medication, remarks, signature of the patient, and the signature of the in-charge. Most of the patients have full insight and they are told of the drug they are given and the reason for the medication. The remark of the psychiatric nurse helps to indicate whether the patient is complying with the medication or not. Each patient has an IP number, a number to help identify the patient.

Among the common diseases, patients present on admission for treatment include: tremors and memory loss which are more common in alcoholics**,** amnesia comes with aging instead of presenting with memory loss, they also present with injuries due to falling which is a result of the alcohol seizures (Romfits)**,** the kidney and heart issues are too much**,** syphilis and gonorrhea is very common in both men and women 50/50**,** memory loss and injuries are common in alcoholics**,** tremors are due to a lot of taking alcohol and they can no longer control it (sometimes they experience it even when they have not taken. Some of them use early morning drinks to control too much shaking (tremors) (eye-opener CAGE assessment for managing hangover hangover). Furthermore, those who come without knowing, they are HIV positive, are tested and then referred to Mild-may for counseling and medication, and then we brief the family about the patient's situation but those who come knowing, they are HIV positive, come with drugs and chart for drugs, they are taken to Mild-may, 30% have HIV. The drug is higher use of needles injections and those who use weed and alcohol blackout, they experience UTIs because of carelessness.

Among the interventions used include: Cognitive behavior therapy (CBT)**,** motivational enhancement therapy (MET), and physical exercise that is involvement of alcohol addicts in activities such as volleyball, netball, basketball ballet, and football to occupy their minds**,** family therapy programs and encouraging visitation by family members**,**psycho-social spiritual therapy, attending sessions for guidance and counseling, intergeneration counseling services individuals are encouraged to attend group and individual counseling sessions to manage psychological and other factors**,** group therapy program**,** psychological rehabilitations pharmacological treatment (detoxification) is done first then individuals are encouraged to attend group and individual counseling session to manage psychological and other factors, nutritional interventions, psychotherapy intervention, measuring pressure, isolation of the alcohol intervention and group psycho-education sessions. Medications used to control the addict's withdrawal symptoms include: Orilvitablzi 1/1/tabs, Dielqcphinx1/52, B. Complex TTbilx2/52, or Neuroto, M1vite □ bd x1/52 or Toractin 4Mg. tebj1/52, Tabs 1inj Diazapam 1 tabs long tds x3/7, long bd x 3/7 nocte2/7, Tabs 1inj Thiamaine 1 tads 200mg bd x1/52 then 100mg edx2/52 and Tabs Amitryptipine 25mg, nocte x5/7.

Patients' progress record on therapy is taken into account, and counselors do assessment of the patients**,** and filling forms to drag the problem into depth, to provide answers, the answers they get help them come up with a clear treatment plan**,** and the therapists agree with clients on the issues they are ready to talk about and some clients may not be ready to talk but rather express anger, therapist together with the client design goals for issues the client comes with and after designing goals, they come up with general objectives with the client; they consider the issue of trust and confidentiality, and family involvement key. It also entails assuring the client of confidentiality at the initial stage, encouraging the client to trust and be committed to the therapy provided; the client filling out the consent form is where they are assured of confidentiality, the client together with the therapist filling intake form at the initial stage.

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The intake form contains various issues: presenting the problem, history of the problem, family history, mental status examination (MSE) of the client, general appearance and behavior of the client at the time of admission, interview, considering how the client looks like, the dressing code and checking if the client is alert/orientation, attentiveness and level of concentration. In case the therapist finds any form of disturbance, they refer to the medical doctor or for psychiatric attention such as schizophrenia, psychosis, depression and other chronic illnesses such as hypertension, heart conditions, surgeries, injuries, syphilis, gonorrhea, and dental issues are very common and they are referred to Kisubi hospital.

Under MSE: Examination of the thought/thinking, this checking was to affirm if it is formal (connected or informal) not connected, hallucinations, schizophrenia, psychosis, and delusion. Then they are referred for checking unusual perceptions such as hallucinations, and false beliefs, looking at the emotional state of the patient, the therapist observes the mood of the patient as they pay attention to emotions like anxiety, depression, fear, and anger and looking at the conceptual awareness of the clients-the therapist considers how much insight the clients have in awareness. The therapists also consider psychological functioning, looking at the sleeping pattern, eating habits: appetite or not, energy to do other physical activities, sexual desires or not. This gauges the therapists' level of making a diagnosis. The occupational therapists also look at the social life of the client and the level of performance in daily activities, such as the level of interest in their hobbies; they ask if there are gains resulting from the problem. They are facing like drinking alcohol. The therapist also rates the level of severity of the client's conditions such as psychological craving, tolerance, and withdrawal issues.

After the intake/use of alcohol, an addict severity index (ASI) form, is done at the initial stage, after that, the therapist takes the client into one-on-one sessions, that is: Counseling progress report, formal case presentation, individual counseling record form and modified mini screen (MMS). It was further noted that some clients do not participate in the such as sports day but few respond, every day has a class and some don't attend until they are dragged activities in some classes because certain topics are very crucial for their recovery like occupational class-cookery, psycho-education-stress, and relapse management, introduction to addiction and group therapy where they all join together to share experiences**,** documentary and biblio-therapy where the patients are made to watch videos on addiction recovery, listening to testimonies of recovery, programs on doctors teaching on addiction, management recorded literature and after listening, the therapist takes them into plenary and share what touches them from the video.

They also have medical classes handled by psychiatric nurses, the nurses design several topics in line with recovery programs like chronic illnesses related to addiction and other illnesses that have no connection with addiction but which they can acquire as a result of the addictive behavior and they are advised to avoid them, such as HIV / AIDS and those who are already HIV positive are taken through the challenges of taking drugs as well as drinking alcohol and are asked to make their final decision for recovery and health conditions, patients of HIV/AIDS are admitted due to alcohol-related problems as a result of hopelessness and frustrations.

The center also uses psycho-spiritual elements which are also attended by the clients like a mass of the Catholics, although Muslims were not taken care of because getting an imam was still a challenge but Christians attend Holy mass every Thursday morning and Sunday. For the patient to participate in AA class, the sponsor has to be someone who has ever used drugs/alcohol to take them for the AA group therapy. Currently, the center does not have one. Those who have never been participating in the AA group were not allowed to join due to the COVID-19 lockdown. Biblio therapy – a client or therapist will choose any topic and prepare a presentation while others contribute to what is being shared.

A documentary review on the rate of admission of perceived sobriety in Butabika National Referral Hospital and Serenity rehabilitation was done below are the details.

Regarding the rate of admission of the patients, the majority 28/30 of the respondents during the interview reported that: *"In general, the number of admissions is extremely high, monthly alcohol and drug unit (ADU) in Butabika is full, as such patients are admitted to other units with patients of other psychotic challenges, hence they end up not benefiting from the services offered for alcohol and drug use. The number of admissions has always been overlapping the discharge and always exceeds 100 patients per month. The number of alcohol addicts keeps rising every other day for admission. The number increases following the high level of alcohol use. The number of addicts discharged is low compared to admission because addicts take a long to recover. For any of the alcohol addict's patients to be discharged is dependent on the recovery process which is slow since it takes about 60-90 days compared to other patients of mental disorders who can be discharged anytime once got better".* **(K.I.I, 2022).**

25/30 of the respondents acknowledged during an interview that:

"About three quarter 3/4 of the patients respond well to treatment, most of the patients have gained an appetite for food, eat well, good sleep, gaining weight, and plan for the future among others. Patients can acknowledge their addiction issues and are positive about the programs in the rehabilitation center. Furthermore, patients undergoing

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therapy effectively attend sessions and follow through with their homework activities, they fully accept to take their medication; they interact and express themselves freely with others as well as their counselors. Some patients can draw up plans with the help of their therapists follow their health routines and are ready to perform independently. However, some patients express concerns about the moral standards of their community and are skeptical about the environment of placement after discharge which has many triggers" **(K.I.I, 2022).**

Based on the findings, it is important to note that some of the patients catch up well because they adhere to both counseling and medication, while others do not which is why the rate of discharges varies. The recovery process can take an average of 2-4 months to be discharged. Among the discharged, 1/10 tend to follow what is supposed to be done, meanwhile, the ones in admission try to remain sober. In most cases, patients who were discharged have a positive view of themselves and situations whereas those admitted seem to be negative over everything and are in denial so discharge is dependent on the assessment of the therapist. Another reason for the low discharge is that recovery is very low depending on a particular individual's response to the intervention provided all alcohol addicts' admission more than discharge, simply because they have different days of responses to therapy, that is group, individual, drug therapy. 19/30 of the respondents said that:

"Drug adherence helps the patients to recover from withdrawal symptoms. Generally, the recovery process of perceived sobriety patients is slow, alcohol abuse is a very big problem in this country (Uganda), The recovery response is very slow many patients do not adhere to medication, and worse still, some of the patients escape and come back with drugs and Sackets of alcohol and sometimes friends and relatives who come to see them sneak in drugs or drinks for the patients. Some of the patients bring themselves to the rehabilitation center after experiencing relapse several times so they express willingness to take medicine and accept that they have a problem" **(K.I.I, 2022).**

Table 2. presents participants who were involved in focused group discussion and were 24 in number. They were categorized into two groups; each group had 6 participants. Responses from the focused group discussion about the rate of admission on perceived sobriety were obtained. Admission is a continuous process and many new patients come to the center because change is a gradual process, even after one month, one can continue to experience a desire to drink and that is why some people are at Serenity Rehabilitation Centre and Butabika National Referral Hospital for the second or third time and yet the hospital and the center keep receiving new cases. Few patients are discharged because the treatment period takes 2-6 or 9 months for some few and yet admission of new cases is daily; so, the admission rate is higher, hence the place is not enough.

Due to the high number of patients, some are discharged without having been attended to by the counselors since they adhere to the drugs given which helps them to recover from the withdrawal symptoms. They are discharged but again in a few weeks, they are brought back to the facility. The number of admissions is high compared to discharge in one month since most of the clients using alcohol always fight a battle of trying to abstain after leaving the Hospital because the life of friends and relatives out there is very challenging, that is why many people keep falling back into the drinking behavior. Some patients are in denial and they take longer to recover, while those who accept their status and bring themselves to the facility find it easy to recover compared to those brought forcefully to the facility. Admission is more in number because discharge is sometimes done weekly depending on the assessment of the doctor and the recommendation of the counselor for follow-up.

One of the respondents during the focused group discussion remarked:

"To be honest, the rate of admission has always been very high, every day new patients come in big numbers compared to those being discharged as a result, there is no space as a result, patients share beds, and some of our relatives have refused to come for us and not even showing a sign of concern but they just brought me and dumped me here. We are mixed up with patients with mental illnesses some of us are in Biina, and Kireka wards and we even do not attend any of the sessions taking place in ADU. Recovery depends on the choice and will of the individual; here in Butabika, discharge is dependent on the recovery of the patient. The number of admissions is extremely high monthly, ADU is full, and as a result, some patients are admitted in other words, and always the number of patients admitted is always more than the number of discharged patients. The number increases following the high level of alcohol use because alcohol is not a problem in our society and in the community, everyone almost drinks and I am wondering why I am here. There are many people out there abusing alcohol compared to us who are here right now, even those who have ever been here in Butabika, keep drinking for one month after discharge, and they are brought back. The moment an alcohol addict is on medication, in one month, they begin experiencing a feeling of recovery by having hope, so, admission is always higher even if the place is full whether people come willing or unwilling, they have to go through the procedure of the facility" **(K.I.I, 2022).**

This, therefore, implies that some people are forced to come to a treatment facility. In actuality, they do not like the treatment facility place to stay. Their relatives brought them dumped them at the facility and never came back to check on them. Their families don't even want to believe what they have become not even interested to see them. Hence such

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patients have become bitter and uncooperative. They don't even want to listen to their counselors claiming that the counselor's experience is from the books.

One of the respondents during an interview said that,

"This is my third time being here in the Serenity Rehabilitation Centre, after my first discharge, I stayed home only for one month and I was brought back. I did not see any help from the counselor despite all the sessions we had. Counseling sessions have lost meaning to me and I don't think I need it. My first experience in communication with the counselor was interrogation like police asking a criminal who is under police custody. It was terrible for me and I wouldn't like to experience it a second time, I would rather share my challenge with my colleagues, and actually, we have decided to counsel ourselves rather than be condemned by an unprofessional counselor who even talks about our issues with the staff. We have people whose relatives have abandoned them they even don't know why some of the patients choose to live a hopeless life" ***(K.I.I, 2022).***

Follow-up of patients generally, has been a challenge in Butabika due to the limited number of human resources especially in the psychology department, patients are many and few counselors hence as a result, many addicts who are admitted to other wards, like Kireka, Biina, and female convalescent wards majorly depend on medication instead of psychological support resulting to high relapse.

Table: 7: Pearson Product Moment Correlation Coefficient of pharmacotherapy intervention and perceived sobriety

		Pharmacotherapy Intervention	Perceived Sobriety
Pharmacotherapy Intervention	Pearson Correlation	1	.723**
	Sig.(2-Tailed)		.000
	N	285	285
Perceived Sobriety	Pearson Correlation	.723**	1
	Sig.(2-Tailed)	.000	
	N	285	285

*****. Correlation is significant at the 0.01 level (2-tailed).***
Source: Field Data (2022)

The results are presented in Table 7. Shows The Pearson Product Moment Correlation Coefficient (PPMCC) for pharmacotherapy intervention and perceived sobriety was r=0.723, which was positive with probability value p=0.000 which was less than a=0.01 suggesting a significant correlation. This implies that pharmacotherapy intervention significantly positively correlates with perceived sobriety. Thus, a change in pharmacotherapy intervention positively affects perceived sobriety. These findings are by Alternative Hypothesis 2. Therefore, the Null hypothesis (NH) was rejected. The details of these results are shown in the qualitative results that follow as well as the results from perceived sobriety and the qualitative results.

Results of Hypothesis Testing

The second null hypothesis of the study was tested. It stated that:

H0: There is no statistically significant influence of pharmacotherapy intervention on perceived sobriety in Butabika National Referral Hospital Kampala and Serenity Rehabilitation Centre Wakiso District Uganda against the directional hypothesis.

H1: There is a statistically significant influence of pharmacotherapy intervention on perceived sobriety in Butabika National Referral Hospital Kampala and Serenity Rehabilitation Centre Wakiso District Uganda.

Descriptive statistics of pharmacotherapy intervention an aggregate (Mean = 3.59, SD = 1.16)

Descriptive statistics of perceived sobriety an aggregate (Mean = 2.73, SD = 1.056)

OPERATIONALIZATION OF ISCAR MODEL

The Operationalization of the ISCAR Model was done based on the existing laws and policy on alcohol addiction recovery, and alcohol addiction recovery interventions to improve perceived sobriety through the model as illustrated.

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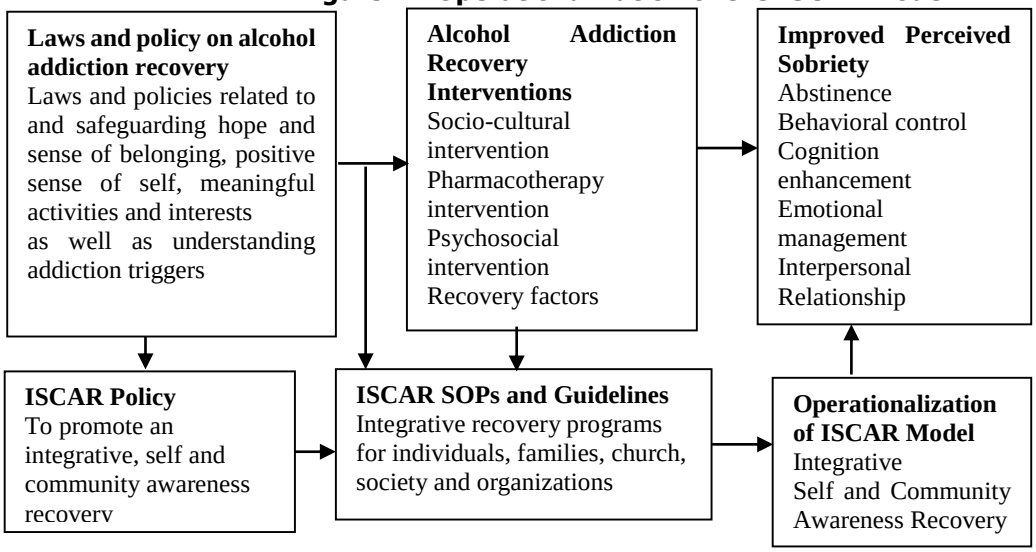
Figure: 2: Operationalization of the ISCAR Mode



Source: Developed by the researcher from the study findings (2022)

Explanation of the ISCAR Model

The interaction channel flows from laws and policies on alcohol addiction recovery together with alcohol addiction recovery interventions (socio-cultural intervention (SCI). Pharmacotherapy intervention (PI), and psychosocial intervention (PsI) can help to improve perceived sobriety that entails abstinence, behavioral control, cognition enhancement, emotional management, and interpersonal relationship) based on laws and policies related to and safeguarding hope and sense of belonging, positive sense of self, meaningful activities and interests as well as understanding addiction triggers. This is aligned with ISCAR policy of promoting an integrative, self and community awareness recovery together with ISCAR SOPs policy and Guidelines such as integrative recovery programs for individuals, families, churches, society, and organizations that lead to the operationalization of the Integrative Self and Community Awareness Recovery (ISCAR) Model to attain improved perceived sobriety.

The ISCAR Model works in a way that Alcohol Addiction Recovery Interventions use the parameter and the programs to create change meaning to support the recovering addicts to view life meaningfully compared to living a life of addiction. The parameters are: Socio-cultural intervention, Pharmacotherapy intervention, and psychosocial intervention have a direct influence on perceived sobriety (abstinence, behavioral control, cognition enhancement, emotional management, and interpersonal relationship).

At the same time, Alcohol Addiction Recovery Interventions (AARI) help recovery factors such as hope and sense of belonging, a positive sense of self, meaningful activities and interests, and understanding of addiction triggers help to minimize perceived sobriety.

It is also noted in the above model that, factors of recovery affect integrative recovery programs such as individual, family, church, society, and organizations, which are instrumental in reducing perceived sobriety.

Finally, Integrative Recovery Programs are vital in enhancing the recovery factors such as hope and sense of belonging, a positive sense of self, meaningful activities and interests, and understanding of addiction triggers which have a direct influence on perceived sobriety and empower the ISCAR Model comprising of Integrative Self and Community Awareness together with Recovery to minimize perceived sobriety.

DISCUSSION ON PHARMACOTHERAPY INTERVENTION ON PERCEIVED SOBRIETY

The results of pharmacotherapy intervention on perceived sobriety in inButabika National Referral Hospital Kampala and Serenity Rehabilitation Centre Wakiso District Uganda revealed r=0.723, which is positive with probability value p=0.000 < a=0.01 suggesting a significant correlation. This implies that pharmacotherapy intervention significantly positively correlates with perceived sobriety. Thus, a change in pharmacotherapy intervention positively affects perceived sobriety. These findings are by the Alternative hypothesis 2 and therefore, the Null hypothesis is rejected. This means that, if all the patients in the rehabilitation adhere to the treatment as well as the therapeutic relationship, there will be a minimum rate of perceived sobriety in the rehabilitation facilities.

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Similarly, Mann and Kiefer, (2009) revealed that detoxification seeks to provide safe withdrawal from alcohol and other drugs in a dignified and humane manner during which the patient becomes free from toxins under controlled conditions; in most patients, detoxification from alcohol takes three to five days. The time frame for detoxification from other drugs varies depending on the drug and the severity of addiction. Sometimes, alcohol addicts are detoxified without the provision of psychotherapy especially using cultural interventions, often resulting in relapse. The findings of the study confirmed the relevance of the above information discussed by the different scholars and the model hopes to encourage therapists to improve the quality of services in the treatment facilities.

However, Riper et al., (2014) argued that psychosocial therapies are important components of the treatment for AUDs, the range of psychosocial therapy is substantial and heterogeneous which makes it a scientific comparison; psychosocial interventions are difficult despite different countries using it as an intervention. For this reason, more evidence from Riper et al., (2014) is needed to assess the effectiveness of psychosocial interventions in the treatment of AUDs where treatment options should be offered to patients based on their individual needs and preferences. The newly established model whose target was to strengthen the level of interventions used in the treatment facilities encourages therapists to consider the use of other psychological interventions besides pharmacological interventions to reduce perceived sobriety to experience recovery; therapists need to consider individual differences in attending to patients since different people respond differently in the process of recovery.

Sachdeva et al., (2015) suggest that supportive care and repletion of nutrient, fluid, or mineral deficiencies play an important role in the treatment of alcohol withdrawal symptoms (AWS). This is so because vitamin deficiencies (Whitfield et al., 1978) are common in patients with heavy alcohol intake as the culture does not believe in addiction but believes that, the individual simply refused to regulate or control the self from using alcohol. However, medically, Sarai et al., (2013) view supplementation of B vitamins, including thiamine, to prevent the development of Wernicke-Korsakoff syndrome helps to sedate alcohol addicts to control agitation, anxiety, and related symptoms and prevent cardiovascular complications resulting from high blood pressure and a rapid pulse rate where Pharmacological treatment of withdrawals is pragmatic. The extent to which one has access to personal and recovery treatment is an important predictor of maintaining recovery (Best et al., 2010). The ISCAR model advocates for the use of integrated treatment modalities to usher recovery as the level of perceived sobriety is minimized.

However, the study findings revealed that the situation of perceived sobriety is on the increase evidenced by the overwhelming number of admissions in Butabika National Referral Hospital and set small numbers of clinical psychologists as well as counseling psychologists to help the patients address issues leading to addiction (Hasin et al., 2007). There are about 900 addicts expected to be counseled by 4 clinical psychologists meaning that the ratio of psychologists employed full-time as therapists in Butabika is 1:225. Consequently, many patients get discharged without seeing a therapist for counseling; and this is why the rate of relapse is high. In addition, many patients depend on medication (detoxification) other than psychological support said one of the therapists at Butabika National Referral Hospital during an interview. This is a very serious gap in the recovery process of an individual from perceived sobriety. There is a need for staff increment in the clinical psychology department.

Pharmacotherapy is an effective way to maximize efficacy in other drug use treatment programs dependent on therapeutic communities, where pharmacotherapy intervention has a negative significant direct effect on perceived sobriety (β=-0.137, P=0.0025 < 0.05). This means that increasing pharmacotherapy will lead to feasible recovery from perceived sobriety, which, in turn, is more successful than outpatient programs that provide only psychotherapy and counseling (Negrete and Grill, 2009). In addition, recovery interventions help keep more than 100,000 addicts off addictive behaviors, off welfare, and on the tax rolls as law-abiding, productive citizens. Furthermore, according to Marshall, (2009) therapeutic communities (TCs) are a popular form of rehabilitation in the longer term, community-based residential settings for individuals who need this level of care to work toward increased levels of responsibility in the community over time, although this service is affordable by few addicts. The findings revealed that the use of the ISCAR model may result in balancing pharmacotherapy with other factors resulting in feasible recovery with reduced sobriety.

Treatment in rehabilitation facilities is designed to help the alcohol addict reduce alcohol dependence and attain a higher level of physical, psychological, and social functioning. Pharmacotherapy intervention has a negative significant direct effect on perceived sobriety (β=-0.137, P=0.0025 < 0.05). This means that increasing pharmacotherapy will lead to feasible recovery from perceived sobriety. Incorporating the management of psychological problems as a component of any rehabilitation program is crucial to the ongoing success of alcoholic treatment. According to Faces and Voices of Recovery, (FAVR, 2012) rehabilitation and treatment can occur in both residential and outpatient settings, depending on the needs of the patient. In addition to that, the availability of different treatment options in rehabilitation facilities is important in achieving the overall goal of recovery interventions for perceived sobriety (Joe and Hill,

2010). Alcohol addicts reported responding differently to a particular modality of treatment that may work best for one individual but would not work for another and this is where the ISCAR model acts as a bridge to supporting the recovery process of an individual in the recovery facility to reduce sobriety and live a life of alcohol-free.

On the contrary, in Uganda, research on AUDs usually focuses on the causes and consequences and some on treatment, but little research has been done regarding, recovery intervention (Kalema et al., 2015). Based on the previous scholars, the evaluation of the existing recovery intervention is rarely researched which sparked the researcher to realize the gap existing within the recovery interventions used in rehabilitation facilities to gain insight and help caregivers offer effective individualized treatment that may meet the needs of the recovering alcohol addict in the implementation of ISCAR model into the recovery process to strengthen the interventions used in the treatment facilities. The lack of empirical research on recovery interventions in Uganda is troubling and the recovery of people with AUDs is extremely necessary for the country's well-being (Swahn et al., 2013). Furthermore, Uganda is limited in addressing issues of perceived sobriety (Kalema and Vander, Plasschen, 2015). This typically reflects the insufficient use of sociocultural interventions, and psychosocial and recovery factors alongside the pharmacological intervention leaving a gap in the recovery process, which the ISCAR model intends to address.

Unfortunately, Uganda is not in a position to implement policies and laws on alcohol abuse as Uganda Alcohol Status, (UAS, 2018) confirmed that alcohol policies and laws recommendations are not implemented by the government, giving way to continuous abuse of alcohol in Uganda, making it difficult to challenge the behavior of alcoholic addiction. However, Klimas et al., (2014) acknowledged that interventions help to enhance the alcoholic's motivation for recovery. Whereby Smedslund et al., (2011) affirmed that motivational interviewing (MI)helps to enhance intrinsic motivation and induce behavior change by helping alcoholics explore and resolve their ambivalence about change, although the overall effect sizes are small. ISCAR model establishes a target to engage the policy and lawmakers as well as the church authorities to implement it by sensitizing individuals, families, communities, churches, and organizations as well as the society to join together in the fight of reducing perceived sobriety and encourage abstinence after discharge from the treatment facility.

Conclusion

In conclusion, the study findings revealed that pharmacotherapy intervention has got a statistically significant effect on perceived sobriety. This means that detoxification (medication) greatly helps the addicts who present with serious tremors and other complications due to excessive use of alcohol to improve and better regain normal life and get to know the dangers associated with alcohol use.

Recommendation

The study recommended that the Ministry of Health (MoH) through the District Health Officers (DHO) should encourage psychiatric doctors and nurses to understand that one single intervention, which leads to pharmacotherapy, cannot facilitate recovery but rather treatment facilities should integrate and balance the application of the recovery interventions.

There is an urgent need for the Ministry of Health to increase human resources and increase the level of capacity building for the psychology department in Butabika as National Referral Hospital and the entire rehabilitation facilities in Uganda to improve the quality of service carry out community sensitization campaign against the dangers of excessive use of alcohol.

Involve Village Health Team, (VHTs) Systems, counseling, and psychotherapy to adopt the Integrative Self Community Awareness and Recovery model (ISCAR) to follow-up aftercare to support the recovering addicts in maintaining sobriety.

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List of abbreviations

AA	Alcohol Addicts
AA	Alcohol Anonymous
AARI	Alcohol Addiction Recovery Interventions
AUDs	Alcohol Use Disorders
BNRH	Butabika National Referral Hospital
CAGE	Cut, Annoyed, Guilty, and Eye
CBT	Cognitive Behaviour Therapy
CIU	Clarke International University

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CIURE Clarke International University Research Ethics
DHO District Health Officer
FAVR Faces and Voices of Recovery
FGD-Focused Group Discussion
GOU Government of Uganda
HIV Human Immune Virus
HT Hypothesis Testing
IP Identify Patient.
ISCAR Integrative Self-Community Awareness and Recovery
MET Motivational Enhancement Therapy
MI Motivational interviewing
MoH Ministry of Health
MSE Mental Status Examination
NH Null Hypothesis
PA Path Analysis
PI Pharmacological Intervention
PPMCC Pearson Product Moment Correlation Coefficient
PS Perceived Sobriety
PsI Psychosocial Intervention
QDA Qualitative Data Analysis
QDA Quantitative Data Analysis
REC Research Ethical Considerations
RF Recovery Factors
SCI Socio-cultural Intervention
SDGs Sustainable Development Goals
SEM Structural Equation Model
SM Statistical Methods
SPSRNU School of Postgraduate Studies and Research Nkumba University
SRC Serenity Rehabilitation Centre
UAS Uganda Alcohol Status,
UG-REC Uganda Research Ethics Committee
UN United Nations
UNCST National Council Science and Technology
UYDL Uganda Youth Development Link
VHT Village Health Team
WHO World Health Organization

Conflict of interest

Too many treatment facilities have been established in Uganda in the name of providing treatment for addicts however it seemed to have very little effect but the majority of addicts after 3, 6 to 9 months stay in the treatment facilities still relapsed and even got worse than before. Rehabilitation facilities seem to have become business centers rather than treatment places. There is a high cost of about 75,000/= to 90,000/= 20 to 24 USD charged per day per client, yet the majority of the population abusing alcohol cannot afford such an amount. Or at the list of those who have gone through rehabilitation maintain sobriety rather than relapse, but the majority keep relapsing.

The external validity of the study results

This study might contribute to a better understanding of the consequences of perceived sobriety and the factors associated with the addiction recovery process thereby improving healthy livelihood in Uganda.

The study findings might encourage policy makers to seriously implement policies set to control excessive use of alcohol thereby, reducing the prevalence of alcohol addiction in Uganda and beyond.

The study findings would help government and humanitarian organizations to intensify the campaign against local brewery industries and to give more support to private rehabilitation centers. In conformity with GOU et al, (2011) the government of Uganda recognized its responsibility to protect society against the harmful use of alcohol and supports the efforts by researchers, individuals, families, communities, and institutions to prevent the harmful use of alcohol.

The findings of the study would pave the way for all the professionally trained psychological counselors to focus on addressing the whole person, not a fragmented piece. This would help Butabika National Hospital and Serenity Rehabilitation Centre to improve their services in addressing issues related to perceived sobriety.

All the rehabilitation centers and psychological counselors in Uganda might be encouraged to adopt and apply this newly initiated alcohol addiction recovery intervention model to address issues related to perceived sobriety to see meaning in life. This would encourage psychological counselor training institutions to revive their skills, techniques, and interventions as they work with clients. Although, (Kalema et al, 2015) reported that the bulk of health professionals lack sufficient skill to diagnose and treat individuals with perceived sobriety as well as (Kalema et al, 2017) reported that patients with perceived sobriety were managed in primary health facilities yet there is lack of pharmacotherapy and psychosocial interventions (PsI)and the services.

The study could influence therapists to gain a better understanding and empower families and communities to support the individuals using alcohol on a positive sense of living and keeping responsible sobriety or abstinence and even voluntarily seeking rehabilitation or treatment in cases of relapse from alcohol and other alcohol-related problems.

Alcohol undermined commitment to achieve number 13 of 17 United Nations Sustainable Development Goals (SDGs) by impacting health-related challenges such as liver cirrhosis, and road injuries as well as economic challenges and social development WHO, 2018. This would help enablers, and co-dependents to receive healing, and recovery as well hence the promotion of wellness. This policy will contribute to the achievement of alcohol-related strategic development goals targeting number 3.4 on the

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reduction of mortality due to non-communicable diseases by 2030.

Author Biography

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