Original Article

Role of Nurse-Administered Cognitive Behaviour Therapy in Managing Pathological Manifestations Associated with Substance Abuse

Abstract

Background: The incorporation of empirically-supported psychotherapeutic approaches into clinical practice by mental health nurses (MHNs) is a requirement that has been recognised as part of ongoing initiatives to enhance mental health services on a global scale. The study aimed to assess the effect of nurse-led cognitive behavioral therapy in managing substance abuse among psychiatric patients in Ibadan Nigeria.

Methods: The study was quantitative research that adopted a two-group quasi-experimental design carried out onoutpatients attending mental health clinics. Purposive and proportional sampling techniques were used to select participants for the study. The study was carried out in three phases. Descriptive and inferential statistics were used to analyze the data collected.

Results: Therewere significant differences in the post-intervention knowledge of substance abuse between patients in the intervention and control group (Mean 11.26; t = 39.291; $p<$ .05); post-intervention knowledge of identification of signs and symptoms associated with substance abuse between patients in the intervention and control group (Mean difference = 8.48; t = 31.296; $p<$ .05); and the post-intervention knowledge of prevention and management of psychiatric-induced substance abuse between patients in the intervention and control group (Mean difference = 8.90; t = 33.750; $p<$ .05), all in favor of the intervention group.

Conclusion: The intervention increased the knowledge of substance abuse, knowledge of identification of signs and symptoms associated with substance abuse, and knowledge of prevention and management of psychiatric-induced substance abuse among out-patients in psychiatric units. The role is nurses is crucial in administering cognitive behavior therapy in the management of substance-induced psychiatric manifestations.

Keywords: Cognitive Behaviour Therapy, substance abuse, Nurse, Psychiatry, Nigeria

Introduction

There has being a change in developing in the administration of treatment services in general healthcare practice. Initially, the vast majority of treatment was done in specialized programs that treat substance use disorders, with little involvement from primary or general health care. Treatment through the regular health care system may be sufficient for people who are diagnosed with mild to moderate substance use disorders; however, those who are diagnosed with severe substance use disorders (addiction) may require treatment from a specialized facility as stated by the World Health Organization.[1]

Abuse of substances refers to the problematic or risky consumption of psychoactive substances such as alcoholic beverages and illegal drugs.[1]The use of psychoactive substances can lead to dependence syndrome, which is a cluster of behavioral, cognitive, and physiological phenomena that develop after repeated substance use and that typically include a strong desire to take the drug, difficulties in controlling its use, persistence in its use despite harmful consequences, a higher priority given to drug use than to other activities and obligations, increased tolerance, and sometimes, a physical withdrawal state. Psychoactive substance use can lead to dependence syndrome.[1]

Mental illnesses and disorders are one of the most significant threats to public health on a global scale, and they place a significant burden on both individuals and society as a whole. The therapeutic effectiveness of psychological therapies, in particular behavioral therapy (BT), across a wide variety of mental health disorders is supported by a substantial body of data.[2]Incorporating empirically-supported psychotherapeutic approaches into clinical practice by mental health nurses (MHNs) is a requirement that has been recognized as part of ongoing initiatives to enhance mental health services globally.[3]MHNs are anticipated to play a big role in the dissemination of effective psychological therapies in mental health services, as they make up the largest occupational group in the global health workforce. There has been some discussion over the role that MHNs should play in offering psychotherapy,[4] however mental health nurses can provide psychotherapy or apply psychotherapeutic abilities within the context of their nursing frameworks. One of the early papers addressed how psychotherapy and nursing fit together nicely,[5] and other research has also explored combinations of different forms of psychotherapy and several nursing models.[6,7]

CBT is a structured psychological intervention that aims to help individuals improve their adaptive and emotional functioning. It does this by identifying and substituting erroneous beliefs and/or maladaptive cognitions and actions that either cause or sustain dysfunction. Both in the short-term and the long-term treatment of a variety of mental diseases, behavioral therapy (BT) has repeatedly been proven to be effective.[8]

It is important to note that patients who suffer from mental problems frequently choose psychosocial treatment over pharmacological treatment.[9] Despite this, there is a widespread belief that the availability of cognitive behavioral therapy (CBT) for service users is severely restricted across the globe, mostly due to a shortage of qualified CBT therapists.[10,11]The cognitive method emphasizes how thoughts and feelings affect behaviors, as opposed to past

behavior therapies, which had virtually solely relied on associations, reinforcing, and punishments to improve behavior.

One of the treatment modalities that has received the greatest research attention is cognitive behavioral therapy. It has been demonstrated to be useful in the treatment of a wide variety of mental diseases, including anxiety, depression, eating disorders, insomnia, obsessive-compulsive disorder, panic disorder, post-traumatic stress disorder, and substance use disorder, among others.[2]

The most effective evidence-based treatment for eating disorders, according to research, is cognitive behavioral therapy.[12] People who suffer from insomnia as well as those who have a medical condition that prevents them from sleeping, such as those who suffer from chronic pain or mood disorders like depression, have found that CBT is beneficial. It has been demonstrated via extensive research that cognitive behavioral therapy is an effective method for treating the symptoms of depression and anxiety in young people.

CBT was found to help alleviate symptoms in persons with anxiety and anxiety-related disorders, such as obsessive-compulsive disorder and post-traumatic stress disorder, according to a meta-analysis that included 41 separate research and was published in 2018.[13]

According to the National Institute on Drug Abuse (NIDA), cognitive behavioral therapy has a high level of empirical support for the treatment of substance use disorders. This therapy assists people who suffer from substance use disorders in improving their self-control, avoiding triggers, and developing coping mechanisms for day-to-day stressors. Because treatment is centered on very precise goals, and effects can be fairly simply quantified, cognitive behavioral therapy (CBT) is one of the types of therapy that has received the most attention from researchers.

The current study aimed to investigate the clinical usefulness of CBT administered by MHNs within the context of routine outpatient care.

Methodology

Research Design

The study was quantitative researchconducted on 124psychiatric out-patients,in State hospitals in Ibadan Oyo State Nigeria.

Instrumentation

Theinstrument used for the study was adopted from similar research, as a tool for collecting information from the respondents which was divided into three (3) sections as follows:

Section A: for socio-demographic data.

Section B: consists of 26 questions on knowledge of substance abuse. Poor knowledge scores ranged from 0 to 12, average knowledge scores from 13 to 18, while high knowledge scoreswere from 19 to 26.

Section C: consists of 18 questions on knowledge of identification of signs and symptoms associated with substance abuse. Poor knowledge scores ranged from 0 to 8, average knowledge scores from 9 to 12, while high knowledge scoreswere from 13 to 18.

Section D: consists of 21 questions on knowledge of prevention and management of psychiatric-induced substance abuse. Poor knowledge scores ranged from 0 to 10, average knowledge scores from 11 to 14, while high knowledge scoreswere from 15 to 21.

Procedure

Pre-intervention Phase

Involve the orientation and knowledge assessment of participants on drug abuse and its health complications. The initial responses were recorded. This was aimed at testing their basic knowledge before participant were exposed to training section.

Intervention phase

The session was divided into three sessions which included the following;

i. Session one. first week. Pre-test instruments were administered.

ii. Session two. second week. training on substance abuse and identification of signs and symptoms associated with substance abuse was done.

iii. Session three. third week of training. This session involves practical training on the prevention and management of psychiatric-induced substance abuse.

Post-intervention Phase

At the end of the intervention phase, administration of post-test was given to the respondents in the experimental group after two weeks to test the knowledge acquired during the intervention.

Post-test was also administered to the control group.

Method of Data Analysis

All the data collected were analyzedusing Statistical Package for Social Sciences (SPSS) Version 28. Descriptive and inferential statistics were used to analyze the data collected. The research questions were answered using frequency count, simple percentage, mean and standard deviation. All the hypotheses were tested using a t-test at a 0.05 level of significance.

Ethical Approval

Ethical approval for the study was obtained from the Ladoke Akintola University Research Ethical Committee.

Results

The respondents 9(12.5%) of the patients in the experimental group were less than 25years, 15(20.8%) were within 25-30 years, 36(50%) were within 31-35 years, while 12(16.7%) were above 35 years. The majority, 41(56.9%) were Yoruba tribe, 2(2.8%) were Hausa, 14(19.4%) were Igbo while others were 15(20.8%). The majority, 57(79.2%) were literate in the experimental group.

Table 1: Socio-demographic Characteristics of Respondents

Socio-demographic characteristics	Experimental Group (N=72)		Control Group (N=52)	
	f	%	f	%
Age				
Less than 25 years	9	12.5	13	25.0
25 – 30 years	15	20.8	17	32.7
31 – 35 years	36	50.0	17	32.7
Above 35 years	12	16.7	5	9.6
Ethnicity				
Yoruba	41	56.9	42	80.8
Hausa	2	2.8	2	3.8
Igbo	14	19.4	2	3.8
Others	15	20.8	6	11.5
Educational Status				
Can't read nor write	15	20.8	14	19.4
Literate	57	79.2	38	52.8
Monthly Income				
Less than N10,000	3	4.2	4	7.7
N10,000 – N20,000	18	25.0	16	30.8
Above N20,000	51	70.8	32	61.5
Total	72	100.0	52	100.0

Source: Researcher Field Report 2022

Results from Table 2, 72 patients (100%) had low knowledge of substance abuse before the intervention, while only 13 patients (18.1%) had moderate knowledge of substance abuse post-intervention, and 59 patients (81.9%) had high knowledge of substance abuse post-intervention. Also,the control group's mean score on knowledge of substance misuse was 20.01±1.97, whereas the experimental group's score was 8.03±1.19. Participants in the experimental group scored a minimum of 4.00 and a maximum of 11.00 before and after the intervention, respectively. it is shown that before the intervention, all 52 respondents in the control group had very little knowledge of substance misuse. Similar results were seen post intervention as well. Participants in the control group had an average knowledge score of 8.02±1.28 before the intervention, but it had risen to 8.75±0.74 post intervention. The pre-intervention minimum and maximum scores were (4.00 and 11.00), and the post-intervention scores were (7.00 and 11.00). There was an average of 0.73 points of variation.

Table 2: Pre and post intervention knowledge of substance abuse among respondents

Knowledge of substance abuse	Category of scores	EXPERIMENTAL				CONTROL			
		Pre-intervention		Post-intervention		Pre-intervention		Post-intervention	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%
Low	1-12	72	100.0	0	0.0	52	100.0	52	100.0
Average	13-18	0	0.0	13	18.1	0	0.0	0	0.0
High	19-26	0	0.0	59	81.9	0	0.0	0	0.0
Total		72	100.0	72	100.0	52	100.0	52	100.0
Mean		8.03±1.19		20.01±1.97		8.02±1.28		8.75±0.74	
Percentage		30.88		76.96		30.84		33.65	
Mean difference		11.98				0.73			
Maximum		11.00		23.00		11.00		11.00	
Minimum		4.00		14.00		4.00		7.00	

Source: Researcher Field Report 2022

Table 3 shows that in the experimental group, 72(100%) patients had low knowledge of the identification of signs and symptoms associated with substance abuse at pre-intervention, and only 9(12.5%) had moderate knowledge of the identification of signs and symptoms associated with substance abuse at post-intervention, while 63(87.5%) had high knowledge post-intervention.

The mean score of knowledge of identification of signs and symptoms associated with substance abuse in the experimental group was 5.47± 0.96 pre-intervention as compared with the 14.54±1.56 post-intervention. The minimum and maximum scores of the participants in the experimental group were found to be 4.00 pre-intervention and 8.00, and post-intervention it was 10.00 and 18.00. The mean difference was 9.07.

Also,in the control group, all the respondents 52(100%) had low knowledge of the identification of signs and symptoms associated with substance abuse at pre-intervention. At post-intervention, 50(96.2%), and 2(3.8%) had average knowledge at post-intervention. The knowledge mean score of the participants in the control group was 5.35±1.01 pre-intervention, it increased in post-intervention to 6.06±1.38. The minimum and maximum scorespre-interventionwere (4.00 and 8.00) and post-intervention 4.00 and 9.00. The mean difference was 0.71.

Table 3: Pre and post intervention knowledge of identification of signs and symptoms associated with substance abuse

Knowledge of identification of signs and symptoms associated with substance abuse	Category of scores	EXPERIMENTAL				CONTROL			
		Pre-intervention		Post-intervention		Pre-intervention		Post-intervention	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%
Low	1-8	72	100.0	0	0.0	52	100.0	50	96.2
Average	9-12	0	0.0	9	12.5	0	0.0	2	3.8
High	13-18	0	0.0	63	87.5	0	0.0	0	0.0
Total		72	100.0	72	100.0	52	100.0	52	100.0
Mean		5.47±0.96		14.54±1.56		5.35±1.01		6.06±1.38	
Percentage		30.39		80.78		29.72		33.67	
Mean difference		9.07				0.71			
Maximum		8.00		18.00		8.00		9.00	
Minimum		4.00		10.00		4.00		4.00	

Source: Researcher's field Report 2022

Table 4 shows that in the experimental group, 72(100%) patients had low knowledge of the prevention and management of psychiatric-induced substance abuse at pre-intervention, and only 10(13.9%) had average knowledge of prevention and management of psychiatric-induced substance abuse at post-intervention, while 62(86.1%) had high score post-intervention. It was also observed in the table that the mean score on knowledge of prevention and management of psychiatric-induced substance abuse in the experimental group was 7.01±0.78 as compared with the 15.90±1.54. The minimum and maximum scores of the participants in the experimental group were found to be 5.00 pre-intervention and 9.00, and post-intervention it was 14.00 and 20.00. The mean difference was 8.89.

Also, in the control group, all the respondents 52(100%) had low knowledge of the prevention and management of psychiatric-induced substance abuse at pre-intervention. At post-intervention, it was a similar score. The knowledge mean score of the participants in the control group was 6.48±0.98 pre-intervention, it increased in post-intervention to 7.00±1.31. The minimum and maximum scorespre-interventionwere (4.00 and 8.00) and post-intervention 5.00 and 9.00. The mean difference was 0.52.

Table 4: Pre- and post-intervention knowledge of prevention and management of psychiatric-induced substance abuse

Knowledge of prevention and management of psychiatric-induced substance abuse	Category of scores	EXPERIMENTAL				CONTROL			
		Pre-intervention		Post-intervention		Pre-intervention		Post-intervention	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%
Low	1-10	72	100.0	0	0.0	52	100.0	52	100.0
Average	11-14	0	0.0	10	13.9	0	0.0	0	0.0
High	15-21	0	0.0	62	86.1	0	0.0	0	0.0
Total		72	100.0	72	100.0	52	100.0	52	100.0
Mean		7.01±0.78		15.90±1.54		6.48±0.98		7.00±1.31	
Percentage		33.38		75.71		30.86		33.33	
Mean difference		8.89				0.52			
Maximum		9.00		20.00		8.00		9.00	
Minimum		5.00		14.00		4.00		5.00	

Source: Researcher's field Report 2022

The post-intervention knowledge of substance abuse between patients in the intervention and control group indicates a significant difference in the post-intervention knowledge of substance abuse between patients in the intervention and control group (Mean difference = 11.26; t = 39.291; p< .05. There is a difference in the post-intervention knowledge of substance abuse between the intervention group (20.01) and the control group (8.75). Table 5a

Table 5b shows the result of the text of significant difference in the post-intervention knowledge of identification of signs and symptoms associated with substance abuse between patients in the intervention and control group indicate a significant difference in the post-intervention knowledge of identification of signs and symptoms associated with substance abuse between patients in the intervention and control group (Mean difference = 8.48; t = 31.296; p< .05).

There is a difference in the post intervention knowledge of the identification of signs and symptoms associated with the substance abuse intervention group (14.54) and the control group (6.06). The earlier set hypothesis was rejected. Table 5b

Table 5c also shows the result of significant in the post-intervention knowledge of prevention and management of psychiatric-induced substance abuse between patients in the intervention and control group indicate a significant difference in the post-intervention knowledge of prevention and management of psychiatric-induced substance abuse between patients in the intervention and

control group (Mean difference = 8.90; t = 33.750; p< .05). Going through the knowledge mean scores as shown above, one can say that there is difference in the post-intervention knowledge of prevention and management of psychiatric-induced substance abuse between intervention group (15.90) and the control group (7.00). The earlier set hypothesis was rejected.

Table 5a: Independent t-test showing the difference in the post-intervention knowledge of substance abuse

	N	Mean	Std. Deviation	df	T	Mean diff	Sig
Intervention Group	72	20.01	1.97	122	39.291*	11.26	0.000
Control Group	52	8.75	0.74				

*Significance level of 0.05

Table 5b: Independent t-test showing the difference in the post-intervention knowledge ofidentification of signs and symptoms associated with substanceabuse

	N	Mean	Std. Deviation	df	T	Mean diff	Sig
Intervention Group	72	14.54	1.56	122	31.296*	8.48	.000
Control Group	52	6.06	1.38				

*Significance level 0.05

Table 5c: Independent t-test showing the difference in the post-interventionknowledge ofprevention and management of psychiatric-induced substanceabuse

	N	Mean	Std. Deviation	df	T	Mean diff	Sig
Intervention Group	72	15.90	1.54	122	33.750*	8.90	.000
Control Group	52	7.00	1.31				

*Significance level 0.05

Discussion

The study revealed that respondents' knowledge of substance abuse among out-patients in the psychiatric unit was low at the pre-intervention stage for both the experimental group and the control group. However, the knowledge increased significantly in the immediate post-intervention for the experimental group. It could be deduced from these findings that the difference observed between post intervention mean scores could not have been by chance but as a result of the intervention or training the participants were exposed to.

The present study revealed that knowledge of identification of signs and symptoms associated with substance abuse among out-patients in psychiatric units was low at the pre-intervention stage for both the experimental group and the control group. However, the knowledge increased significantly at the immediate post-intervention for the experimental group with a mean difference of 9.07 while the control group remained almost the same with a mean difference of 0.71.

Also, it was revealed that there was a significant difference in the post intervention knowledge of the identification of signs and symptoms associated with substance abuse between patients in the intervention and control group in favor of the intervention group. It could be deduced from these findings that the difference observed between post intervention knowledge of identification of signs and symptoms was as a result of the intervention.

This finding is corroborated by Jaworowski et al[14] who found that the average level of knowledge of identification of signs and symptoms demonstrated by the test takers across all groups was lower than 55%.

The present study revealed that knowledge of prevention and management of psychiatric-induced substance abuse among out-patients in psychiatric units was low at the pre-intervention stage for both the experimental group and the control group. However, the knowledge increased significantly at the immediate post-intervention for the experimental group with a mean difference of 8.89 while the control group remained almost the same with a mean difference of 0.52.

Therewas a significant difference in the post-intervention knowledge of prevention and management of psychiatric-induced substance abuse between patients in the intervention and control group in favor of the intervention group. This is in line with the report of Al-Ghamdi[15], as 70.47% of people had an average level of knowledge regarding the prevention of substance abuse.

Edalati and Conrod[16] conducted a study on the intervention and prevention of substance misuse in adolescents. They found that drug abuse and dependency pose a major threat to public health and continue to endanger the health and socioeconomic fabric of societies all over the world, particularly affecting adolescents and young adults. The researchers concluded that interventions and prevention programs for substance misuse in adolescents are needed.

This study demonstrated the effectiveness of a nurse-led cognitive-behavior therapy in managing pathological manifestations associated with substance abuse among patients inthe psychiatric-department. The study concluded that intervention increased the knowledge of substance abuse, knowledge of identification of signs and symptoms associated with substance abuse, and knowledge of prevention and management of psychiatric-induced substance abuse among out-patients in psychiatric units. This was demonstrated in the intervention group exposed to nurse-led cognitive-behavior therapy.

Conclusion

It is safe to conclude that regular nurse-led therapy is needed to influence the knowledge of out-patients in psychiatric units in managing pathological manifestations associated with substance abuse.The intervention increased the knowledge of substance abuse, knowledge of identification of signs and symptoms associated with substance abuse, and knowledge of prevention and management of psychiatric-induced substance abuse among out-patients in psychiatric units. The role is nurses is crucial in administering cognitive behavior therapy in the management of substance-induced psychiatry manifestations.

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