



Awareness and utilization of complimentary and alternative medicine (CAM) therapies in managing mentally ill patients at Dorayi psychiatric rehabilitation center, Kano, Nigeria

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ABSTRACT


The use of Complementary and Alternative Medicine (CAM) is growing among people in both developed and developing countries, including Nigeria, this study aims to explore the utilization of complementary and alternative therapy among mentally ill patients diagnose at Dorayi psychiatric rehabilitation center, Kano. The research used an explanatory mixed method design; 150 mentally ill patients at the Dorayi Psychiatric Rehabilitation Center in Kano were included in the quantitative study, and key informants, including psychiatrists and psychiatric nurses who treat mentally ill patients, were interviewed for the qualitative study. The findings of the study revealed that awareness of CAM therapies used by mentally ill patients at Dorayi psychiatric rehabilitation center, is poor since only 10% of the respondents were aware and its utilization was high as 87% of the respondents reported using some forms of CAM therapies. The study concludes that cultural and religious variables are the primary determinants of the high prevalence of CAM therapy utilization in the management of mentally ill patients. Herbal medication and prayer therapy—more especially, reciting and consuming the Qur'an (in the form of rubutu)—are the most often utilized among these treatments. To improve treatment outcomes, however, prayer therapy and recreational therapy must be incorporated into conventional mental health care to address the spiritual and emotional needs of mentally ill patients. The development of established guidelines, evidence-based research, partnerships with CAM practitioners, and training programs for psychiatric staff are the main goals of the strategies for incorporating complementary and alternative medicine into conventional. Therefore, the study recommends that during rehabilitation sessions, mentally ill patients and their relatives should receive health education about the various CAM therapy alternatives available for managing their illness. This is with view of increasing the level of awareness and enhancing treatment outcomes.

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Introduction

The term "complimentary and and alternative medicine" (CAM) has been used to refer to a variety of indigenous medical practices in Africa, including traditional bone setting, the use of imported CAM materials and procedures, such as chiropractic and acupuncture. Nigerians are also familiar with and frequently utilize traditional herbal medicines. The majority of CAM users utilize it to supplement conventional care in order to avoid illness. They also appreciate other features of CAM that are not typical of orthodox medicine like relatively lower cost, attention to patient's personal needs and cultural sensitivity [1]. The use of complementary and alternative medicine (CAM) therapies is widespread among those who suffer from mental health issues. The CAM use prevalence varies between 30 and 75% worldwide. Higher rates of CAM use have been seen in the North Western (84%) and South Western (90%) regions of Nigeria, according to certain other studies [2].

Mental illness has been dubbed the pandemic of the twenty-first century and the next great public health problem because it causes great suffering for people and significant expenditures for society. [3]. Despite mental illness has been estimated to cause one third of the disability of adult worldwide [4], In Nigeria, 1 in 4 that is about 50 million people are suffering from some sort of mental illness [5]. There is a high prevalence rate of mental illness in Kano-Nigerian population especially within the young population [6].

Based on research done by Nazir et al., [7]. There are different CAM therapies that purportedly help treat psychiatric illness or relieve psychiatric symptoms. The most common of which are herbal remedies (including St. John's Wort (*Hypericum perforatum*), S-adenosyl-L-methionine [SAMe]), vitamins, minerals or dietary supplements (including folate or omega-3 fatty acids), physical or mind-body therapies (such as light therapy, acupuncture and exercise) and mindfulness psychotherapies (including mindfulness-based cognitive behavioral therapy [MCBT]), meditation and prayers etc.

Findings of the study conducted on attitude, perception and utilization of complementary and alternative medicine among caregivers of the mentally challenged persons in ebonyi state [8] revealed that most participant (92%) had good knowledge of CAM and will encourage their mentally ill patients to use CAM, (89%) have either use CAM or used CAM on mentally ill relatives. CAM utilization was associated with good knowledge and referral by other users. The common therapies included herbals, spiritual intervention and alternative medical system such as homeopathic. It

was concluded that the informal caregivers for mentally ill patients knew about CAM and were using them. Studies on the effectiveness and safety of CAM were recommended to establish their benefit in treating mental illness [8].

The majority of people with mental health issues use complementary and alternative medicine, according to research from the USA, Australia, and Norway. In addition, it is discovered that the usage is more prevalent in individuals receiving traditional medication and escalates with the severity of mental disease [9]. As seen in other parts of the world, CAM therapy is becoming more and more popular in Nigeria. This is due, among other things, to the serious side effects of conventional management, which include increased cost, decreased effectiveness, and difficulty accessing controlled substances, medication tolerance, and dependence.

The study conducted in Nigeria, particularly in Sokoto State, focused on the prevalence and factors influencing the use of complementary and alternative medicine (CAM) among mentally ill patients [10]. However, there is limited information available on the types of CAM therapies most commonly utilized among mentally ill patients and their frequency of use. Additionally, there is insufficient data on the effectiveness of CAM interventions in reducing or alleviating the symptoms associated with different mental health conditions.

Therefore, conducting a study on this will fill in the knowledge gap and will provide evidence-based CAM interventions that could complement conventional treatments. This will be of benefit to the mentally ill patients, their healthcare providers as well as policymakers.

Material and methods

A mixed-methods explanatory design was used in the study. A quantitative descriptive cross-sectional survey with patients who have been diagnosed with mental illness is part of the design. Subsequently, Qualitative interviews were conducted with key informants, comprising psychiatric doctors and nurses who treat patients with mental illnesses at the Dorayi Psychiatric Rehabilitation Center in Kano. The research ethics committee of ministry of health Kano granted ethical approval with reference number SHREC/2024/4669.

Target population

The target population for the quantitative survey are patients diagnose with mental illness whose

cognition are not impaired at Dorayi psychiatric rehabilitation center, kano. Qualitative interview was conducted with healthcare providers (psychiatric nurses and doctors) attending to mentally ill patients at Dorayi Psychiatric Rehabilitation Center, Kano.

Sample size and sampling technique

A sample of 150 participant was derived using Cochran formula $(n) = Z^2p(1-p)/d^2$ Where: n= sample size, p= prevalence rate, Z=z-statistic for 95% level of confidence=1.96, d=precision (5%) =0.05. The point prevalence rate of mental illness in the adult population at any given time is about 10% according to a study done in Karfi village, Kano by (Kabir et al.,, 2004).formula substitution is $(1.96)^2 \cdot 0.1(1-0.1)/0.05^2 = 3.8416 \cdot 0.1(0.9)/0.0025, =138.3$ approximately 138. The sample size was increased by 10% to 150 respondents in order to take care of attrition or possible non-response.

For the qualitative survey, four interviews were conducted (two psychiatric nurses and two psychiatric doctors) at Dorayi Psychiatric Rehabilitation Center, Kano.

A systematic random sampling technique was used to recruit consenting patients as they arrived at the outpatient clinic. The sampling interval was determined using the expected patient turnover based on previous records. Random number table was used to randomly select the first patient. Subsequent patients were obtained by adding that day's sampling interval to the previous patient's serial number. However, if selected respondent is not eligible, he/she will be excluded and the next eligible respondent will be recruited. This process

was done on daily bases for a period of two weeks when the required sample size was obtained.

Inclusion criteria

Mentally ill patients 18 years and above diagnosed at least 2 years prior to the study and still receiving treatment, whose cognition is not impaired and give voluntary informed consent to participate in the study both male and female at Dorayi Psychiatric Rehabilitation Center, Kano.

Exclusion criteria

Mentally ill patients age below 18years, diagnosed less than 2 years prior to the study, not receiving treatment, whose cognition is impaired and cannot give voluntary informed consent or refuse to participate in the study.

Study instrument

For the quantitative survey, an interviewer-administered questionnaire (IAQ) was used. The IAQ comprise of five (5) sections which include: bio data, factors influencing CAM use, CAM modalities most commonly utilizes, integration of CAM therapies alongside with conventional treatment of mental illness and effectiveness of CAM Therapies in managing mental illness.

A structured interview guide was used to collect data from key informants i.e. the psychiatric nurses and doctors. The interview guide encompasses questions targeted at eliciting information on utilization of CAM therapies by mentally ill patients

Table 1. Correlation coefficient table for testing the reliability of the study.

subject	Text scores [x]	Retest scores [y]	X ²	Y ²	xy
1	1	2	1	4	2
2	0	0	0	0	0
3	2	5	4	25	10
4	0	0	0	0	0
5	4	5	16	25	20
6	3	5	9	25	15
7	0	0	0	0	0
8	2	3	4	9	6
9	5	4	25	16	20
10	1	3	1	9	3
11	0	2	0	4	0
12	0	0	0	0	0
13	0	0	0	0	0
14	1	3	1	9	3
15	1	4	1	16	4
total	20	36	62	142	85

Source: Dorayi psychiatric rehabilitation center Kano, 2024.

at Dorayi psychiatric rehabilitation center. A tape recorder was used to record the interview session, which lasted between 30 to 45 minutes. Data was collected within a period of two weeks.

Validity and reliability of the instrument

An evaluation of the instrument by 3 expert in the area of the study gave a face and content validity of 80%. Test and retest reliability was conducted using 10% of the total sample size. The internal consistency reliability test was compared and calculated using Pearson correlation coefficient. The result obtain was $0.8\sqrt{}$, which indicate an excellent test-retest reliability, thus stronger consistency of the instrument.

The product moment correlation coefficient is calculated as:

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

$$r = \frac{15(85) - (20)(36)}{\sqrt{[(15)(62) - (20)^2][15(142) - (36)^2]}}$$

$$r = 0.834$$

Data analysis

The data collected from this study was analyzed using statistical package for social science (SPSS) version 21. Quantitative data were presented using Descriptive statistics, simple frequency table and percentages. The mean and standard deviation for age of the respondents was computed Utilization of CAM therapies by mentally ill patients was presented using pie chart. Qualitative data was analyzed using Content analysis and presented in a triangulated format with the quantitative data.

Results

A total of 150 questionnaires were administered, completed and analyzed. Findings from the study revealed that 52 (34.7%) of the respondents are between the ages of 18-30years with a mean age of 28.30 ± 4.09 years. The table further revealed that 82(54.7%) of the respondent are females, 97 (64.7%) of the respondents are married, More than half i.e. 84(56%) of the respondents have no formal education and about 53(35.3%) of the respondents are self-employed.

The table further indicated that the vast majority 48 (32%) of respondents are suffering from substance abuse disorder and 59(39.3%) of the respondents are diagnose with the mental illness more than 10years ago.

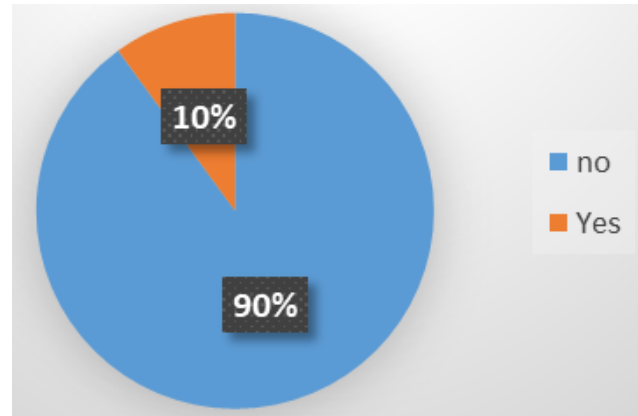


Figure 1: Awareness of CAM.

Figure 1 shows that about 135 (90.0%) of respondents were unaware of CAM therapies used by mentally ill patients. Only a minority 15(10.0%) of the respondents were aware of CAM therapies used in managing mentally ill patients.

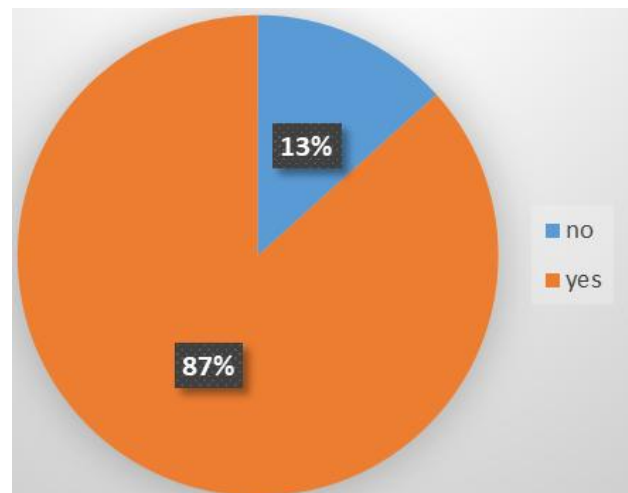


Figure 2: Utilization of CAM.

Figure 2 shows that about 130 (87.0%) of respondents utilized CAM therapies in managing their mental illness. Only a minority 20(13.0%) of the respondents do not utilize CAM in managing their mental illness.

In line with the quantitative study, findings from the qualitative study revealed that all the key informants stated that the level of awareness of utilization of CAM therapies in managing mentally ill patients is low. However, utilization is high and specific CAM therapies use are herbal medicine, aromatherapy, recreational therapy and prayer therapy with frequency of use on daily basis. Excerpt of responses is stated below;

"The level of awareness on CAM therapies in managing mental illness is really poor; the concept is not well known and understood in the field of psychiatric by both we the care-giver and the

Table 2: Distribution of respondents by Bio-demographic data N=150.

Variable	Frequency	Percentage (%)
Age		
18-30	52	34.7
31-40	43	28.7
41-50	16	10.6
50 and above	39	26
Mean \pm Standard deviation = 28.30 \pm 4.09		
Gender		
Male	68	45.3
Female	82	54.7
Marital status		
Single	35	23.3
Married	97	64.7
Divorced	08	5.3
Widowed	10	6.7
Educational qualification		
No formal education	84	56
Primary school	10	6.7
Secondary school	16	10.6
Tertiary school education	40	26.7
Employment status		
Employed	17	11.3
House wife	32	31.3
Self-employed	53	35.3
Unemployed	30	20
Retires	3	2
Student	15	10
Duration of mental illness		
Less than 2years		
2-5years	43	28.6
5-10years	48	32
More than 10years	59	39.3
Diagnosis of mental illness		
Substance abuse disorder	48	32
Depression	32	21.3
Mania	3	2
Schizophrenia	4	2.7
Postpartum psychosis	12	8
Epilepsy	14	9.3
Bipolar	7	4.7
Anxiety disorder	8	5.3
PTSD	6	4
Others	16	10.7
Total	150	100

Source: Dorayi psychiatric rehabilitation center Kano, 2024.

patients. However, patients on their own do utilized herbal medicine, prayer therapy, music therapy in form of Quran recitation. Yet most patients that utilized report using it on daily basis. (Key informant interview with psychiatrist).

Table 2 revealed that 47(31.3%) of the respondents stated that cultural or religious factors prompt them to use CAM therapies. other factors reported are seeking holistic approach to treatment account for 22(14.7%), recommendations from friends and

families account for 20(13.3%) of the respondents, desire for fewer side effect account for 18(12%) and 6(4%) of the respondents reported lack of access to conventional treatment as a factor.

Moreover, 37(24.7%) of the respondents reported barriers that hinders them to use CAM therapies in managing their mental illness, among the barriers are Lack of information about CAM therapies, Skepticism about effectiveness and Fear of adverse effects.

Table 3: Factors influencing CAM use.

Factors influencing use of CAM by mentally ill patient	Frequency	Percentage (%)
Cultural or religious factor	47	31.3
Desire for fewer side effect	18	12
Lack of access to conventional	6	4
Recommendations from friends and families	20	13.3
Seeking holistic approach	22	14.7
Barriers	37	24.7

Source: Dorayi psychiatric rehabilitation center Kano, 2024.

Table 4: CAM integration in to conventional.

Variable	Frequency	Percentage (%)
CAM should be integrated in to conventional	-	-
Yes, I strongly believed	21	14
Yes, to some extent	109	72.7
I'm unsure	11	7.3
No, I don't think	09	6
Specific CAM therapies to be integrated		
Prayer therapy only	68	45.3
Prayer therapy and recreational therapy	82	54.7
Potential benefit of integrating CAM therapies in to conventional		
Addressing spiritual and emotional need	97	64.7
Enhance treatment outcomes	35	23.3
Reduced side effect	08	5.3
More holistic approach to treatment	10	6.7
Improvement notice when CAM is combined with conventional		
Yes, I experience significant improvement	10	6.7
Yes, I noticed some improvement	84	56
No, I didn't notice any change	40	26.7
I haven't tried combining	16	10.6
Total	150	100

Source: Dorayi psychiatric rehabilitation center Kano, 2024.

Table 5: Effectiveness of CAM.

Variable	Frequency	Percentage (%)
Effectiveness of CAM therapies		
Very effective	-	-
somewhat effective	78	52
Not effective	72	48
Specific improvement		
Yes	78	52
No	72	48
Not sure	-	-
Continue and recommending CAM to others		
Yes	82	54.7
No	68	45.3
Not sure	-	-
Total	150	100

Source: Dorayi psychiatric rehabilitation center Kano, 2024.

The key informant interviews also revealed that cultural/religious factor, peer influence, misconception about the disease causation are mostly what prompted the mentally ill patients to seek for CAM therapies.

"There are numerous factors that influenced the mentally ill patients to use CAM therapies, in the form of herbal medicine or prayer therapy, the main factor is cultural or religious belief, recommendations from friends and families, seeking more holistic approach to treatment as some of the conventional mental treatments are

taking for lifelong" (Key informant interview with psychiatrist).

Table 3: indicated that an overwhelming majority 109(72.7%) of the respondents reported that yes, to some extent CAM therapies should be integrated in to conventional mental treatment, 82(54.7%) of the respondents stated that prayer therapy and recreational therapy are the specific CAM therapies to be integrated in to conventional treatment.

The vast majority of the respondents stated that the potential benefit of integrating CAM therapies in to conventional is to address the spiritual and emotional need of the mentally ill patients accounting for 97(64.7%), and 84(56%) of the respondents reported yes, to some extent they notice improvement when CAM therapies is combined with the conventional treatment.

The qualitative survey revealed that strategies to could effectively integrate CAM alongside conventional are: Training programs for psychiatric workers, Collaborations with CAM practitioners, developing standardized guidelines and evidence-based research are the strategies revealed by the key informant on integrating CAM therapies alongside conventional mental treatment.

Table 4 indicated that 78 (52%) the respondents reported that CAM therapies are somewhat effective in managing their mental illness while 72(48%) report not effective. 78(52%) respondents also stated that yes, they experience specific improvement in their mental health as a result of using CAM therapies while 72(48%) reported No. The vast majority of the respondent 82(54.7%) revealed that they will continue and recommend others to use CAM therapies in managing their mental illness.

Discussion

This study is unique to similar studies due to use of a mixed research method and triangulation Findings from the study revealed that a reasonable proportion of the respondents are young adults and females, which may be link to their risk-taking behavior, inadequate living condition and unhealthy family dynamic. Therefore, there is a need to tailor more attention towards adolescent and young adult mental health, both preventive and promotive measures, since they are the majority. This Finding are similar to that of studies conducted by Nwoke et al., [8].

The findings further indicated that majority of the respondents were married and a reasonable proportion of the respondents have no formal

education, this shows marriage and illiteracy are among the perpetuating factor of mental illness that needs to be address. This is consistent to a similar study in Ebonyi [8]. In addition, a significant proportion of the respondents were self-employed, followed by full time housewives and unemployed which are contradictory with that revealed by Nwoke et al., [8]. Substance abuse disorder and depression is the diagnosis of more than half of the respondents and were diagnose atleast 2years back and above. Therefore, there is need to identify risk factors associated with the condition and prompt measures should be put in place to curtail the prevalent. This is consistent with a study conducted in Abakaliki [11].

Awareness of Complementary and alternative therapy used in managing mentally ill patients at Dorayi psychiatric rehabilitation center is poor since only a minority of the respondents were aware of it. on the other hand, utilization is high and specific CAM therapy utilized as reported by the respondents are herbal therapy, aromatherapy, prayer therapy in form of qur'anic recitation and consumption(rubutu) which more than half revealed to utilized them on daily basis. This indicate the need for health education on different forms of CAM therapy available for managing symptoms of mental health condition, as knowledge should come first before the use of anything. The findings are in line with the study conducted [8][10][11][12] but awareness of CAM was not specifically reported.

Vast majority of the respondents reported that cultural and religious factors is the main reason that prompt them to seek for CAM therapy. Therefore, this indicates the need to respect the patients' cultural or religious belief in order to enhance treatment outcomes for the mentally ill patient. others factor are recommendation from friends and family, desire for fewer side effect and seeking a holistic approach to treatment, this is not consistent with a study conducted in Sokoto state [10] which reported cost as factor influencing use of CAM. However, the study is not also similar to a study conducted by Tangkiatcumjai et al. [13], which reported having an expectation of benefits of CAM, dissatisfaction with conventional medicine and perceived safety of CAM as the reasons behind CAM use.

The respondents that reported not using CAM started that skepticism about its effectiveness and fear of adverse effect are among the reasons that hinders them to use CAM. This indicated a need for more experimental research on the effectiveness of the CAM therapies used.

A distinct trend toward the integration of complementary and alternative medicine (CAM)

therapies with the practice of conventional medicine is occurring. Majority of the respondents stated that to some extent CAM therapies can be integrated in to convention, and specific CAM therapies to be integrated are recreational and prayer therapy in order to address spiritual and emotional need which will yield some improvement in managing the mentally ill patients.

The key informant stated that strategies toward integrating CAM therapies alongside conventional mental treatment are: Training programs for psychiatric workers, Collaborations with CAM practitioners, developing standardized guidelines and evidence-based research are the strategies revealed by the key informant on integrating CAM therapies alongside conventional mental treatment. This finding are not consistent with a study conducted in Sokoto state by [10] which recommends the need for psychiatrist to pay more attention to CAM use among their psychiatrist patients as a factor that could affect patient management and outcome. Because the study paid emphasis only to use of herbal medicine as a form of CAM therapy neglecting other forms of CAM therapies.

Vast majority of the respondent reported that CAM therapies are somewhat effective as they have noticed some improvement in their mental health and they recommend and continue to use CAM therapies in managing their mental health condition. This revealed the necessity of integration with the conventional mental health treatment. This is consistent with a study conducted by Barman et al.[14] which concluded that Certain CAM interventions might be effective as monotherapies and/or as adjunctive treatments for psychiatric conditions. However, they may also have safety risks, contraindications, and/or interactions with medications. It is therefore important for physicians and other mental health care professionals to inquire about patient use of CAM and to understand the indications, safety, and dosing of these therapies.

Conclusion

The study concludes that cultural and religious variables are the primary determinants of the high prevalence of CAM therapy utilization in the management of mentally ill patients. The most widely used of these treatments are herbal remedies and prayer therapy, particularly through Qur'anic recitation and ingestion (in the form of rubutu). To improve treatment outcomes, however, prayer therapy and recreational therapy must be incorporated into conventional mental health care to address the spiritual and emotional needs of mentally ill patients. The development of

established guidelines, evidence-based research, partnerships with CAM practitioners, and training programs for psychiatric staff are the main goals of the strategies for incorporating complementary and alternative medicine (CAM) therapies into conventional mental health therapy.

Contribution of authors

The author contributed to do the entire research work.

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