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To cite this article: Akosua Bema Debrah, Kwame Ohene Buabeng, Gordon Donnir & Irene Akwo Kretchy (2018) A caregiver perspective of complementary and alternative medicine use among patients with schizophrenia and bipolar disorders, International Journal of Mental Health, 47:4, 298-310, DOI: [10.1080/00207411.2018.1546097](https://doi.org/10.1080/00207411.2018.1546097)

To link to this article: <https://doi.org/10.1080/00207411.2018.1546097>



Published online: 04 Apr 2019.



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## A caregiver perspective of complementary and alternative medicine use among patients with schizophrenia and bipolar disorders

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### ABSTRACT

The World Health Organization estimates that about 40%–60% of patients with mental illness use Complementary and Alternative Medicine (CAM), but little is known about the types and outcomes of these CAM therapies in Ghana. This study therefore sought to describe the patterns of use and perceived outcome of CAM therapy among patients with schizophrenia and bipolar disorders in a health facility in Ghana. The qualitative study involved both clinical and family caregivers of patients with schizophrenia and bipolar disorders. Semi-structured interviews were conducted over a period of 3 months to identify the pattern of CAM use and perceived outcome from caregiver perspectives. The interviews were audio recorded, transcribed and analyzed thematically using NVivo 10. About 92% of family caregivers reported that their patients had used some form of CAM therapy. The therapies used included spiritual interventions (100%) herbal therapies (83%), dietary supplements (50%) and music therapies (6%). Both clinical and family caregivers perceived CAM therapies to be ineffective in resolving mental illness when used as an alternative to antipsychotic therapy. However when used as complementary, better outcomes were perceived. Spiritual interventions, herbal therapies, dietary supplements and music therapies were the types of CAM therapies used. Both negative and positive outcomes of CAM therapies were highlighted by caregivers. CAM use may therefore not be an alternative choice but rather complementary to mental health care.

### KEYWORDS

Complementary and alternative medicine; mental health outcomes; schizophrenia; bipolar disorder; Ghana

## Background

Schizophrenia and bipolar disorders are two debilitating mental health disorders associated with cognitive impairments. Schizophrenia and bipolar

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disorders comprise the most prevalent (51%) forms of mental disorders reported in the psychiatric units across Ghana [Roberts, Mogan, & Asare, 2014]. Patients present with clinical symptoms that hamper their physical, social, emotional as well as psychological well-being. In such patients, the quest for mental wellness and total recovery remains at the core of their health seeking behavior. Studies have reported that patients with mental disorders are twice as likely to resort to complementary and alternative practices to get total relief from their condition [Ravven et al., 2011; Kemper et al., 2013], but the question of whether they get the relief expected needs to be understood.

Caregiving is a critical resource to patients with chronic ailments and especially mental disorders. The caregivers provide emotional, physical, and professional assistance as well as a good social support system to the dependent [Yamashita, Amendola, Gaspar, Alvarenga, & Oliveira, 2013; Committee on Family Caregiving for Older Adults; Board on Health Care Services; Health & Medicine Division; National Academies of Sciences, Engineering, & Medicine, 2016]. The family/informal caregivers are unpaid family members, friends, or neighbors who provide care for the patients with schizophrenia and bipolar disorders to help them manage tasks such as bathing, dressing, and taking of orthodox and/or Complementary and Alternative Medicines (CAM). Clinical caregivers represent persons in the formal health facility who oversee every stage of the diagnostic and therapeutic process while paying attention to the experiences and challenges with orthodox medications and/or CAM usage of their patients.

CAM involves the use of diverse medical approaches that fall out of the mainstream orthodox therapies for treatment of all forms of ailments [NCCAM (National Center for Complementary and Alternative Medicine)]. These therapies have gained much recognition across various chronic ailments and more so in mental disorders. In Africa, and especially Ghana, herbal medicines, nutritional products, relaxation techniques, and spiritual healing form the bedrock of CAM practices [Okoronkwo, Onyia-Pat, Okpal, Agbo, & Ndu, 2014]. About 70% of the Ghanaian population depends on CAM for their healthcare with most of them being attended to by traditional medicine practitioners [Abdullahi, 2011]. The increasing patronage of CAM is strongly based on the perception that the therapies are more effective compared to conventional therapy [Bahall & Edwards, 2015]. Poor treatment tolerability, side effect profile of antipsychotics, lack of insight, health beliefs, problems with treatment access, embarrassment/stigma over illness, and no perceived benefit contribute to dissatisfaction with orthodox medication [Bahall & Edwards, 2015]. Primarily, patients who are dissatisfied with the orthodox antipsychotic therapy and psychotherapy outcomes often divert to CAM practices [Bahall & Edwards, 2015; Ventola, 2010].

Despite the increasing patronage in CAM, little information is available regarding the various forms of CAM therapies patients resort to and the various outcomes they experience. Caregivers are better positioned to divulge information on CAM usage and subsequent outcomes in their patients. The aim of this study, therefore, was to describe the patterns of use and perceived outcome of CAM therapy among patients with schizophrenia and bipolar disorders.

## **Methods**

### ***Design***

This was a cross-sectional study using a phenomenological qualitative research design to understand the experiences of CAM use in patients with schizophrenia and bipolar disorders from the perspective of their family and clinical caregivers. An exploration of their perspectives was elicited using a face-to-face semi-structured interview guide. Demographic characteristics of the patients were also obtained from the family caregivers.

### ***Study setting***

The study was carried out at the Psychiatry Unit of the Komfo Anokye Teaching Hospital (KATH). The KATH is the second largest tertiary hospital in Ghana and is located in Kumasi, in the Ashanti Region of Ghana. The facility attends to referral cases mostly from the northern part of the country and some parts of the southern sector as well. The Psychiatry Unit was chosen because it is the main Psychiatric facility in the northern part of Ghana and the probability of reaching the target population will be high. The Unit offers both in-patient and out-patient services to mentally challenged individuals. Hospital records showed that schizophrenia and bipolar disorders were the most prevalent reported cases at the unit.

### ***Study participants***

Family caregivers who accompanied their patients for psychiatric checkup as well as clinical caregivers who took care of these patients in a formal setting were recruited for the study. A total of 51 participants were recruited using a convenience sampling method. Thirty-six of them were family caregivers, whereas the remaining 17 were clinical caregivers; comprising psychiatrists ( $n = 5$ ), psychologists ( $n = 2$ ), and psychiatric nurses ( $n = 10$ ). Family caregivers who were older than 18 years were primarily

responsible for taking care of patients with a diagnosis of schizophrenia or bipolar disorder according to DSM-V or ICD-10 criteria and had lived with the patient for not less than 2 years were included in the study.

### ***Study procedure and data collection***

After obtaining ethical clearance, the medical records of the patients were retrieved from the record system and reviewed to select those diagnosed with schizophrenia and bipolar disorders according to ICD-10 criteria or the DSM-V. Their family and clinical caregivers were approached and the study explained to them. Those who consented to partake in the study were recruited with an assurance of confidentiality. Interview sessions were held by the principal investigator to elicit the various practices of CAM utilized by their patients in the past year, the outcomes they recorded and their general perception of CAM in mental healthcare. The interviews were recorded using a digital audio recorder and transcribed into text for thematic analysis. Interesting patterns and word frequencies linked by a common idea were identified in the passages of the text and clustered into nodes and themes with the aid of NVivo 10 software.

### ***Ethical consideration***

The study protocol, patient consent forms and data collection instruments were reviewed and approved by the Committee on Human Research, Publications and Ethics (CHRPE) at the Kwame Nkrumah University of Science and Technology (KNUST), Kumasi with reference code CHRPE/AP/011/16. The study site approval was obtained from the Head of Department for the Psychiatry Unit at KATH. Permission was also sought from the Research and Development Unit of the Komfo Anokye Teaching Hospital. Study participants were assured of confidentiality and anonymity.

### ***Data analysis***

Qualitative data obtained from the audio recording were transcribed into text using Microsoft word. The transcribed data were imported and analyzed thematically using NVIVO 10 computer assisted qualitative data analysis software. The responses to each question were grouped and emerging themes coded by clustering them into nodes.

## Results

### *Demographics of the patients*

#### *Trends in CAM Patronage*

Out of the 36 family caregivers interviewed, 92% of them reported of their patients using some form of CAM therapy. About 47% out of the 17 clinical caregivers interviewed were in support of the use of CAM therapy to complement therapy in their patients.

From the interview, the use of prayer and spiritual healers was the most common form of CAM used by their patients. Family caregivers reported going with their patients to see spiritual healers at shrines and other faith healers at prayer camps for healing. Herbal medicines were also reportedly used by some of these patients. Dietary supplements were the recommended CAM by clinical caregivers for their patients.

#### *Perspectives on the outcomes of CAM therapies*

Caregivers' perspectives on the outcomes of CAM therapies were both positive and negative. The negative outcomes perceived included the fact that CAM influenced non-adherence to conventional therapy and were ineffective in relieving patients of their symptoms. The positive perceptions included the fact that some modalities of CAM were effective though expensive and of limited patronage in Ghana. Some complementary therapies such as dietary supplements were also observed to boost the immune system of patients when used as complementary to antipsychotic therapy.

The themes have been supported by narratives from the respondents. The narratives have been put in parentheses in this study.

#### *Perspectives from clinical caregivers*

Clinical caregivers thought the CAM therapies influenced non-adherence:

Most of our patients resort to going to the prayer camps and other miracle working centers in the hope that they will get cured. Unfortunately most of them who go there put away the medicines that have been given and at the end of the day present with worsened forms of their condition. (Psychiatric nurse)

Some clinical caregivers also felt that some of the CAM therapies available for mental disorders were highly effective but were of limited patronage in Ghana. Some types that were credited as effective were acupuncture, Chinese medicine, dietary supplements and music therapy.

There are acupuncture points for treating schizophrenia and bipolar disorders in our legs i.e. between the big toe and the small toe. Certainly complementary medicine works especially in mental disorders because Chinese medicines and acupuncture are useful in treating conditions that one cannot investigate thoroughly. (Psychiatrist)

Supplements are beneficial especially omega-3 fatty acids which has been shown to help very much with patients with depression among others. I add some to my patients' prescriptions and they feel a lot better. (Psychiatrist)

Clinical respondents praised dietary supplements used as complementary to antipsychotics as having to boost patients' immune system;

The clinicians add some multivitamins and other supplements that would boost their immune system. (Psychiatric nurse)

Some multivitamins that do not interact with orthodox medicines are sometimes prescribed for some of the patients and it helps their brain health as well as general wellbeing. (Psychiatric nurse)

### *Perspectives from family caregivers*

The fear of a possible interaction between antipsychotics and CAM therapies was reported by family caregivers as a determinant for non-adherence among their patients:

Sometimes you cannot even tell if the herbal medications interact with the drugs the doctors have offered from the hospital. If it interacts then it means that the medicine will not work so in order to avoid this interaction the person stops taking the medicine from the doctor. (Mother-FCG)

Some family caregivers also reported of the effectiveness of some therapies their relatives had used:

Sometimes when she is feeling weak she just gets to the pharmacy to purchase some multivitamins and others to keep her going. (Spouse-FCG)

As a driver's mate when he starts feeling down, all he does is to switch on some hip-life or hip-hop music and nod to it. Within some few minutes he feels good. (Uncle-FCG)

There were some complains about the inability of CAM to resolve the symptoms their patients presented with, making those therapies ineffective:

You see, we serve the gods of my ancestors and sometimes use herbal preparations. When the condition started we used to consult them and used the herbal preparations a lot but it yielded no positive results. (Mother-FCG)

Initially I took her to a prayer center but when things weren't getting better I sent her to a herbal center but it never resolved or helped in any way. (Daughter-FCG)

## **Discussion**

This study explored the perspectives of family and clinical caregivers about the patterns of use and outcomes of CAM use in their patients with schizophrenia and bipolar disorders. From the results gathered, 92% of the

caregivers interviewed reported that their patients had used some form of CAM therapies. Prayer/spiritual intervention was the most prevalent form. In sub-Saharan African countries like Ghana, mental disorders are perceived to have a spiritual root hence the need to address issues concerning mental illness from the spiritual perspective.

Most of these patients sought care from faith healers including Christian prayer camps, the shrines, and other traditional healers with the hope of being cured from the mental illness [Carey, 2015; Read, Adiibokah, & Nyame, 2009]. Findings are similar to perceptions and practices amongst Africans Ghanaians in other studies [Arias, Taylor, Ofori-Atta, & Bradley, 2016; Kumi, Osafo, & Agyapong, 2014].

For many years, the traditional view of the cause and treatment of mental disorders had been from the biological, psychological, and social dimensions [Cardoso, 2013]. The addition of a spiritual dimension is expedient to facilitate and empower people in the treatment of their ailment. Caregivers are active key players in the healthcare of mentally ill patients. It is, therefore, important for clinicians to consider and appreciate the cultural and belief systems of their patients and family caregivers during the therapeutic processes specific to the possibility orthodox and/or CAM use.

The next most frequently used CAM therapy was herbal medicine. Plant-based medicines are perceived to have no side effect profile compared to the psychotropic medicines [Okoronkwo et al., 2014]. Although evidence supports the use of some herbal medicine in mental disorders [Bremfi, 2017], generalization about their efficacy in these disorders is largely unclear. Ghana has regulatory bodies such as the Food and Drugs Authority, the Traditional Medicine Practitioners Council, and the Pharmacy Council, but there is yet to be an entrenched regulation of some of these herbal medicines [Sarris, Kavanagh, & Byrne, 2010]. Once this gap is bridged and substantial pharmacovigilance is mounted, potentially good products and practices will be ascertained based on scientific evidence.

Dietary supplements were another form of CAM therapy used to complement antipsychotic therapy. A number of supplements are recognized as effective in the management of mood disorders and for managing symptoms of mental health. Omega-3 fatty acids, Ginkgo biloba, folic acid, Zinc, and a combination of other multivitamin products are seen to help alleviate symptoms of bipolar and schizophrenia [Sarris et al., 2010].

Music therapy was also reported to be employed occasionally as a form of therapy. According to caregivers, their patients often listened to their favorite music which helped to regulate their mood and get them going. This practice as described by their family caregivers was not administered by a therapist but was self-administered. Studies have shown that patients who connect positively to a piece of music are most likely to get elated and

cope better with their condition [Carr, Odell-Miller, & Priebe, 2013]. A systematic review of music therapy practice among psychiatric patients depicted positive outcomes leading to a reduction in positive and negative symptoms, with increased interpersonal functioning [Carr et al., 2013].

In understanding the outcome of CAM therapies amongst the patients, both clinical and family caregivers gave remarks that pointed to increased relapses. Family caregivers reported that most patients were not able to strictly adhere to their medications when using CAM therapies. Clinical caregivers also noted that patients who defaulted therapy often reported with worsened forms of their condition. Non-adherence to antipsychotics was associated with relapses and worsening of patients' condition in this study. Existing literature however has not been consistent in determining whether CAM use influences non-adherence in patients [Kretchy, Owusu-Daaku, & Danquah, 2014; Jarman, Perron, Kilbourne, & Teh, 2010]. Non-adherence to antipsychotic therapy therefore may or may not have any correlation with the use of complementary and alternative medicine. Scientific research to draw the line in the Ghanaian setting will be beneficial.

Clinical caregivers explained that not all CAM therapies were effective in alleviating patients' symptoms but the services of those which were effective are limited in Ghana. In resource constrained settings such as Ghana, the choice for the type of CAM therapy to use bothers around available funding. CAM is generally considered cost-effective, though there is little evidence on the economic implications of the several types of CAM therapies. Therapies including acupuncture, chiropractic therapy, aromatherapy, homoeopathy, and a few others are considered expensive since they are neither covered by health insurance schemes nor government programs [Davis, 2015]. However, the majority of patients suffering from mental illness in Ghana come from poor homes and are often unemployed and cannot afford such treatments [Debrah, 2016; Kuruvilla & Jacob, 2007]. In the study, therapies such as acupuncture were deemed effective in treating mental illness by clinical caregivers. The technique, which employs the insertion of fine needles into the skin at specific points considered to be lines of energy, has proven to be therapeutic in mental disorders [Hempel, Taylor, Solloway, et al., 2014]. Unfortunately, the services may be out of range for the ordinary Ghanaian with a mental disorder due to their inability to afford such services.

Some family and clinical caregivers expressed discontent over the clinical outcomes of some of the types of CAM their patients had resorted to. They witnessed the unpleasant experiences patients had suffered while using CAM therapies like prayer/spiritual intervention as well as herbal medications. A study by [James & Peltzer, 2012] in Jamaica reported that most patients were more amenable to traditional and alternative therapy yet their

outcomes were not advantageous over conventional treatment. Other studies in the western countries have, however, reported of some herbal medicines being beneficial. St. John's Worts, melatonin, and others contain certain bioactive ingredients effective for the treatment of major depression [Freeman et al., 2010]. Research in phytomedicine could lead to discovery of plant extracts in Ghana that are effective as remedy for these mental disorders. Resorting to prayer camps, taking traditional herbal medicine, among others, have proven futile in alleviating the symptoms of their patients [Read et al., 2009].

Few clinical caregivers reported that some CAM therapies boosted the immune system of their patients. Scientific evidence suggests that some forms of CAM therapies employed augment the body's natural immune and endocrine response to stress and other markers [Satija & Bhatnagar, 2017]. This finding is consistent with studies that suggest that supplements are vital nutrients that help to effectively reduce patients' symptoms. Most of these dietary supplements contain amino acids, which are essential in the biosynthesis of neurotransmitters that alleviate depression and other mental disorders [Jacka, 2017]. Promoting these beneficial forms of CAM is expedient for positive therapeutic outcomes.

## **Conclusion**

The findings from this study suggests that patients with schizophrenia and bipolar disorders are likely to resort to prayer camps and faith centers, use herbal medicines, dietary supplements, as well as music therapy in managing their condition. Some outcomes included the fact that CAM therapies were ineffective and that the use of CAM influenced non-adherence to conventional therapy. Generally, caregivers reported that CAM therapies were entrenched by the belief systems of patients and this may be considered for integration with patient care.

## **Declaration**

### ***Ethics approval and consent to participate***

Study site approval was obtained from the Head of Department for the Psychiatry Unit at KATH. Permission was also sought from the Research and Development Unit of the Komfo Anokye Teaching Hospital. The study protocol, patient consent forms, and data collection instruments were also reviewed and approved by the Committee on Human Research, Publications, and Ethics (CHRPE) at the Kwame Nkrumah University of Science and Technology, Kumasi with reference code CHRPE/AP/011/16. Written consent was also sought from all participants where they were

**Table 1.** Demographic characteristics of patients whose caregivers were recruited for the study ( $n=36$ ). Reprinted from Debrah (2016).

Variable	<i>n</i>	%
Sex		
Male	15	43
Female	21	57
Age		
18–25	5	14
26–35	11	30
36–55	15	42
56–65	5	14
Relationship of caregiver to patient		
Parent	17	47
Sibling	9	26
Child	4	11
Spouse	3	8
Other (Non-nuclear relation)	3	8

**Table 2.** Trends in CAM Patronage ( $n=36$ ). Reprinted from Debrah (2016).

Variable	<i>n</i>	%
CAM use		
Yes	33	92
No	3	8
Types of CAM used		
Herbal medicine	30	83
Prayer/Spiritual healing	36	100
Dietary supplements	18	50
Music therapy	2	6

made aware that participation was voluntary and were also assured of the confidentiality of the study with no risks involved.

### Acknowledgments

The authors are grateful to the patients with schizophrenia and bipolar disorders, their family, and clinical caregivers who participated in this research and the health facility used for the study.

### Disclosure statement

The authors declare that they have no competing interests.

### Authors' contributions

DAB conceived the study, designed the study protocol, was responsible for acquisition of data, analyzed data, and drafted the manuscript. BKO helped in designing the study protocol, provided overall supervision of the research, and provided comments on the

manuscript. DG helped in acquisition of data and provided supervision of the research. KIA helped in the drafting of the manuscript, provided general supervision of the research, and provided comments on the manuscript. All authors read, made critical reviews, and approved the final manuscript.

## Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on request.

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