RESEARCH ARTICLE

Complementary and alternative medicine use and its association with clinical features and functioning in patients with bipolar I disorder: A cross-sectional study

Gulin Ozdamar Unal[®], Inci Meltem Atay[®]

Suleyman Demirel University, Department of Psychiatry, Isparta, Turkiye

ABSTRACT

Objective: The use of complementary and alternative medicines (CAM) has increased recently among those with serious mental disorders. However, CAM use and associated factors for using CAM are less clear among patients with bipolar I disorder (BD-I). This study aimed to determine the prevalence and type of CAM use and the sociodemographic, clinical features, and functional areas that predicted CAM use.

Method: A total of 121 BD-I patients were included in the study. The sociodemographic and clinical characteristics of the patients and their usage of CAM were examined using a standard form. The Young Mania and Hamilton Depression Rating Scales were used to assess their symptoms during the interview. The Bipolar Disorder Functioning Questionnaire (BDFQ) was used to evaluate patients' functioning. We compared the data of CAM (+) and CAM (-). Univariate and multivariate logistic regression analyses were used to evaluate CAM use in BD-I patients.

Results: Of the BD-I patients, 63.6% reported at least one CAM use, and the most preferred modality was religious/spiritual healing (54.5%). Our findings showed that education level, history of hypomania, BDFQ, emotional functioning, stigma, and occupational functionality predicted CAM use in patients with BD-I.

Conclusion: The study results revealed that about 6 out of 10 patients used CAM. The use of CAM by patients may result in serious or deadly consequences and treatment nonadherence. Therefore, clinicians need to be aware of their patients' use of CAM. The descriptive findings of this study help complement the limited knowledge of CAM use among patients with BD-I.

Keywords: Bipolar disorder, complementary and alternative medicine, functionality, religious/spiritual healing, stigma

INTRODUCTION

Bipolar disorder (BD) is a severe mental disorder estimated to affect approximately 45 million people worldwide and is characterized by periods of relapse and remission, with a chronic course, and requires continuous treatment (1). Bipolar I disorder (BD-I), in which at least one manic episode is observed

throughout life, is a more common type of BD in which hypomania, depression, mixed episodes, and psychotic symptoms can be observed during the clinical course (2). According to a large cross-sectional study conducted in 11 countries, the overall lifetime prevalence of bipolar spectrum disorders was 2.4%, 0.6% for bipolar type I, and 0.4% for bipolar type II (3). However, the acute and maintenance treatments

The preliminary data of this study were presented at the First International/Fourth National Health Services Congress (2022 in Isparta, Turkiye).

How to cite this article: Ozdamar Unal G, Atay IM. Complementary and alternative medicine use and its association with clinical features and functioning in patients with bipolar I disorder: A cross-sectional study. Dusunen Adam J Psychiatr Neurol Sci 2022;35:121-129.

Correspondence: Gulin Ozdamar Unal, Suleyman Demirel University, Department of Psychiatry, Isparta, Turkiye

 $\textbf{E-mail:} gulin_ozdamar@hotmail.com$

Received: February 25, 2022; Revised: April 19, 2022; Accepted: June 01, 2022

applied in the pharmacotherapy of the disease, recurrence, relapses, subthreshold symptoms, and deterioration in functionality can be observed. This may decrease patients' motivation toward treatments, cause poor adherence to treatment, poor clinical course, a tendency to alternative treatments, and decreased quality of life (4).

Functional impairment in BD is observed not only during episodes but also during remissions (5). Patients' functionality in personal care, daily activities, family relationships, and social relationships may be impaired. Factors such as age at onset, frequency of cycles, subclinical symptoms, rapid cycle, comorbid psychiatric and medical disorders, alcohol and substance abuse, suicide history, social support, drug compliance, and treatment satisfaction affect the functioning of BD (6). Many patients resort to complementary and alternative therapies with successful treatment legends due to loss of function, stigmatization, and dissatisfaction with treatment.

Complementary and alternative medicines (CAM) are defined as a different group of practices that are not proven safe or effective as a part of conventional medicine (7). In the literature, about more than 50 types of CAM have been reported worldwide (e.g., spiritual healing, herbal medicine, acupuncture, massage, hydrotherapy, and yoga), and several types are still increasing depending on cultures despite their unknown efficacy (8).

CAM use is common among diseases such as cancer, dermatological disorders, and psychiatric disorders (9,10). Affective disorders, anxiety disorders, and psychotic disorders are the most common mental disorders that use CAM with or without conventional treatments (8,11,12). Recent research has also revealed CAM use to be popular among patients with severe mental disorders such as BD and schizophrenia (13).

Due to sociocultural differences, the prevalence of CAM use and preferred CAM type varies significantly across regions. There have been few studies examining the use of CAM among patients with severe mental disorders. The prevalence of CAM use in patients with BD has been reported at different frequencies (10%–40%) (13–15). In studies, patients report a wide variety of CAM use. While prayer/spiritual healing was the most preferred type of CAM in Kilbourne et al.'s study (13), it was observed that herbal medicines were the most common modality in Bahceci et al.'s study (15).

In particular, it is essential to understand how often and for what reasons persons with mental disorders use CAM. The associated factors for CAM use are contradictory for mental disorder patients, such as treatment dissatisfaction, perceived treatment effectiveness, and compliance to treatment (16,17).

Therefore, we hypothesize that patients with BD-I who are dissatisfied with their treatment and have poor functioning may be more likely to seek CAM. This study has two main objectives: (i) to present the relationship between CAM usage and clinical characteristics, sociodemographic factors, treatment satisfaction, and functionality in patients with BD-I, and (ii) to report the variables that predict CAM use. Besides, clinical features are limited about CAM use in BD-I, and, as far as we know, there have been no reports about the relation of CAM use with the effects of the disease on functionality, which may be another risk factor. Our findings contribute to the literature by providing current and reliable data on the prevalence of CAM use and related psychosocial characteristics of patients with BD-I.

METHOD

Study Design

This cross-sectional study was conducted between March 2014 and September 2014. This study was conducted with patients diagnosed with BD-I according to DSM-5 diagnostic criteria. Participants were recruited from the outpatient psychiatry clinic at Suleyman Demirel University Faculty of Medicine in Isparta, Turkey. It was determined whether participants met the inclusion criteria after being informed about the study and providing written consent. The Clinical Research Ethics Committee of Suleyman Demirel University Faculty of Medicine approved this study. This study was conducted in a framework that conforms to the Helsinki Declaration.

Participants

Inclusion criteria were being between the ages of 18 and 65 years, literate, in remission from BD-I according to DSM-5 diagnostic criteria for more than 6 months, being an outpatient follow-up patient, attending follow-ups regularly for at least 12 months, having no relapse of symptoms. The Hamilton Depression Rating Scale (HAM-D), total score of up to 7, and the Young Mania Rating Scale (YMRS) total score of up to 5 meet the criteria for remission. Exclusion criteria were being in an episode of mania, depression, or mixed features, any mental disorder other than BD-I, and not answering more than 5% of the questionnaire questions. The diagnoses were made

by a trained interviewer using the Diagnostic and Statistical Manual of Mental Disorders-5 Structured Clinical Interview (SCID-5). The trained interviewer also performed the interviews and decided whether the patients were in remission or had a mood episode. All patients were under treatment. Seven cases indicated an unwillingness to participate in the study. Three patients were excluded from the study because they filled no more than 5% of the questionnaires. Two patients were excluded from the study because they were in a depressive episode at the time of the evaluation, and 1 patient was in a mixed state. Thus, the study was conducted with 121 patients.

Main Outcome Measure

This study's data collection tools included the sociodemographic form, the form with CAM usage details, the Structured Clinical Interview for DSM-5 (SCID-5), YMRS, HAM-D, and Bipolar Disorder Functioning Questionnaire (BDFQ).

Sociodemographic Form

The sociodemographic form consisted of questions evaluating age, gender, education level, marital status, monthly income, place of residence, duration of illness, hospitalization, suicide history, and treatment satisfaction and was filled by the researcher. Treatment satisfaction was rated as not satisfied, less satisfied, and very satisfied.

The Form with CAM Usage Details

Participants were asked if they had used any of the 24 complementary and alternative therapies identified in Kessler et al.'s study (18). Complementary and alternative therapies in the survey were relaxation techniques, imagery, self-help groups, hypnosis, biofeedback, herbal medicine, megavitamins, homeopathy, naturopathy, massage, chiropractic, osteopathy, yoga, acupuncture, spiritual healing by others, dietary modifications, lifestyle diet, special diet for losing or gaining weight, energy healing, aromatherapy, folk remedies, laughter, other therapy to treat pain, and other lifestyle intervention programs.

The Structured Clinical Interview for DSM-5

SCID-5, a semistructured interview guide, is used for making the major DSM-5 diagnoses (19). Elbir et al. (20) conducted a study of the Turkish version's validity and reliability.

Young Mania Rating Scale

YMRS, developed by Young et al. (21), was used to evaluate mania symptoms. The Turkish validity and reliability study of the scale was performed by Karadag et al. (22).

Hamilton Depression Rating Scale

In evaluating depressive symptoms, the HAM-D, which was developed by Hamilton and whose Turkish validity and reliability study was performed by Akdemir et al., was used (23,24).

Bipolar Disorder Functioning Questionnaire

BDFQ is a Likert-type questionnaire developed by Aydemir et al. (25) to determine the functionality of bipolar patients consisting of 52 items, scored on a 1–3 point scale. Cutoff scores of the scale and subscales were not calculated. Higher scores from the scale and subscales indicate better functionality. BDFQ has 11 subscales as emotional functioning, intellectual functioning, sexual functioning, feelings of stigmatization, social withdrawal, household relations, relations with friends, participation in social activities, daily activities and hobbies, taking the initiative and self-sufficiency, and occupational functioning.

Statistical Analysis

SPSS 21.0 was used to conduct statistical analyses. Categorical variables were given as numbers and percentages in descriptive statistics. The mean and standard deviation (mean±SD) of continuous data were calculated. In addition to the Kolmogorov-Smirnov test, the histogram, skewness, and kurtosis were utilized to determine the normal distribution of quantitative data. The Mann-Whitney U-test was used for two-way group comparisons, and the chi-squared test was used for quantitative data. Univariate and multivariate logistic regression analyses were performed to evaluate the factors that increase the risk of using CAM in patients with BD-I. For all tests, p values less than 0.05 were considered significant. The Bonferroni correction was used to eliminate type 1 errors, and the significance threshold for the Bipolar Disorder Functioning Scale subscales was assessed to be p<0.004. This report was edited using the STROBE declaration.

RESULTS

Clinical Characteristics of the Study Sample

The study consisted of 121 euthymic outpatients, who were diagnosed with BD-I for more than 6 months. Of these patients, 63.6% (n=77) of the study sample used at least one kind of CAM method. Descriptive and clinical characteristics of cases are presented in Table 1. The mean age was 42.2±12.5 years. All patients were under psychotropic treatment for bipolar disorder. While there were no statistically significant differences in illness duration, suicide, or hospitalization history

| | CAM (+) (n=77) | CAM (-) (n=44) | р | Total (n=12 |
|--|------------------|--|-------|-------------|
| Age (mean±SD)† | 41.4±12.1 | 43.5±13.2 | 0.362 | 42.2±12.5 |
| Gender, n (%) ^{††} | | | | |
| Men | 30 (39.0) | 25 (56.8) | 0.058 | 55 (45.5) |
| Women | 47 (61.0) | 19 (43.2) | 0.030 | 66 (54.5) |
| Education, n (%) ^{††} | (6.1.6) | . , (, | | 00 (0) |
| <high school<="" td=""><td>38 (49.4)</td><td>12 (27.3)</td><td>0.018</td><td>50 (41.3)</td></high> | 38 (49.4) | 12 (27.3) | 0.018 | 50 (41.3) |
| ≥High school | 39 (50.6) | 32 (72.7) | 0.010 | 71 (58.7) |
| Marital status, n (%) ^{††} | <i>55</i> (56.6) | J= (/ = 1/ / | | 7 . (5017) |
| Married | 42 (54.5) | 24 (54.5) | 1.000 | 66 (54.5) |
| Not married | 35 (45.5) | 20 (45.5) | | 55 (45.5) |
| Living together with, n (%) ^{††} | , , , | , | | , |
| Alone | 7 (9.1) | 2 (4.5) | 0.485 | 9 (7.4) |
| Not alone | 70 (90.9) | 42 (95.5) | | 112 (92.6) |
| Monthly income, n (%) ^{††} | , | (, | | (*, |
| ≤Minimum wage | 37 (48.1) | 17 (38.6) | 0.316 | 54 (44.6) |
| >Minimum wage | 40 (51.9) | 27 (61.4) | | 67 (55.4) |
| Place of residence, n (%) ^{††} | , | (** * / *** * / ** | | , |
| Rural | 40 (51.9) | 14 (31.8) | 0.032 | 54 (36.4) |
| Urban | 37 (48.1) | 30 (68.2) | | 67 (63.6) |
| Disease duration (years), n (%)†† | | | | |
| ≤4 | 17 (22.1) | 8 (18.2) | 0.611 | 25 (20.7) |
| ≥5 | 60 (77.9) | 36 (81.8) | | 96 (79.3) |
| The number of episodes, median (minimum-maximum)††† | | | | |
| Total episodes | 5 (1–25) | 5 (0–19) | 0.643 | 5 (0-25) |
| Depression | 2 (0–10) | 2 (0–15) | 0.670 | 2 (0–15) |
| Mania | 2 (0–13) | 1.5 (0–12) | 0.132 | 2 (0–13) |
| Hypomania | 0 (0–5) | 0 (0–2) | 0.002 | 0 (0-5) |
| Mixed | 0 (0–2) | 0 (0–2) | 0.077 | 0 (0-2) |
| Hospitalization (lifetime), n (%) ^{††} | | | | |
| No | 17 (22.1) | 12 (27.3) | 0.520 | 29 (24.0) |
| Yes | 60 (77.9) | 32 (72.7) | | 92 (76.0) |
| Suicide history (lifetime), n (%) ^{††} | | | | |
| No | 47 (61.0) | 34 (77.3) | 0.068 | 81 (66.9) |
| Yes | 30 (39.0) | 10 (22.3) | | 40 (33.1) |
| Treatment satisfaction, n (%) ^{††} | • | • | | • |
| Not satisfied | 21 (27.2) | 9 (20.5) | 0.010 | 30 (24.8) |
| Less satisfied | 20 (26.0) | 3 (6.8) | | 23 (19.0) |
| Satisfied | 36 (46.8) | 32 (72.9) | | 68 (56.2) |

Bold values indicate statistical significance. CAM: Complementary and alternative medicines; n: Number of participants; SD: Standard deviation; †: Independent samples t-test; ††: Chi-squared test; ††: Mann–Whitney U-test.

between the groups (p=0.611, p=0.068, p=0.520, respectively), we observed that CAM (+) reported lower satisfaction with treatment (p=0.010).

Prevalence and Factors Associated with CAM Use Spiritual healing by others (54.5%) was the most frequently used CAM by BD patients (Table 2).

Table 2: Complementary and alternative medicine (CAM) types used by patients and their frequencies

| CAM types | n | % |
|---|----|------|
| Relaxation techniques | 4 | 3.3 |
| Hypnosis | 1 | 8.0 |
| Herbal medicine | 13 | 10.7 |
| Spiritual healing by others | 66 | 54.5 |
| Dietary modifications | 2 | 1.7 |
| Lifestyle diet | 1 | 8.0 |
| Special diet for losing or gaining weight | 5 | 4.1 |
| Energy healing | 4 | 3.3 |
| Folk remedies | 7 | 5.8 |
| Other therapy to treat pain | 5 | 4.1 |
| Other lifestyle intervention programs | 1 | 0.8 |

CAM: Complementary and alternative medicines; n: Number of participants, n=121.

Herbal medicine (10.7%) was the second most preferred type of CAM.

The mean score of BDFQ in CAM (+) and CAM (-) was 97.1±17.3 and 105.2±18.1, respectively. The mean score of BDFQ in CAM (+) and CAM (-) was significantly different (p=0.014). A comparison of the subscales of BPFQ with CAM (+) and CAM (-) is presented in Table 3. Emotional functioning, stigmatization, and occupational functioning scores

were significantly different between the CAM (+) and CAM (-) (p<0.001, p=0.002, p<0.001, respectively).

Analysis of Risk Factors Associated with CAM Use in Bipolar Disorder

The results of univariate and multivariate logistic regression analyses performed to evaluate the factors that increase the risk of using CAM in BD-I patients are shown in Table 4. The model was statistically significant $[\chi^2(118.133)=41.752, p<0.001]$ with Nagelkerke's R² value of 0.38. Education level (OR=2.875; 95% CI=1.051-7.862; p=0.040), the number of hypomanic episodes (OR=3.203; 95% CI=1.205-8.516; p=0.020), BDFQ total score (OR=0.957; 95% CI=0.916-0.999; p=0.047), emotional functioning (OR=0.716; 95% CI=0.520-0.987; p=0.042), feelings of stigmatization (OR=0.731; 95% CI=0.573-0.932; p=0.011), and occupational functioning subscale (OR=0.754; 95% CI=0.609-0.934; p=0.010) scores of BDFQ were statistically significant in increasing the risk of using CAM in patients with BD.

DISCUSSION

It is notable that the prevalence of CAM usage among BD patients in this study is substantially greater than in other studies. In this study, 63.6% of patients used at least one

| Table 3: Comparison of questionnaires scores between groups | | | | | |
|---|------------------------------|------------------------------|----------------|--|--|
| | CAM (+) (n=77) Mean±SD | CAM (-) (n=44) Mean±SD | p [†] | | |
| BDFQ Total Score | | | | | |
| BDFQ Subscales | 97.1±17.3 | 105.2±18.1 | 0.014 | | |
| Emotional functioning | 5.7±1.8 | 7.0±1.7 | <0.001 | | |
| Intellectual functioning | 8.8±2.5 | 9.5±2.4 | 0.136 | | |
| Sexual functioning | 7.4±2.7 | 8.1±2.9 | 0.213 | | |
| Feelings of stigmatization | 7.3±2.5 | 8.8±2.4 | 0.002 | | |
| Social withdrawal | 5.8±1.8 | 6.2±1.6 | 0.195 | | |
| Household relations | 12.6±3.3 | 13.1±3.5 | 0.391 | | |
| Relations with friends | 9.9±2.8 | 10.3±2.5 | 0.440 | | |
| Participation in social activities | 14.8±5.2 | 14.0±5.1 | 0.385 | | |
| Daily activities and hobbies | 11.9±3.1 | 13.1±2.9 | 0.048 | | |
| Taking initiative and self-sufficiency | 5.3±1.6 | 5.1±1.6 | 0.385 | | |
| Occupational functioning | 7.5±2.4 | 9.2±2.5 | <0.001 | | |
| Young Mania Rating Scale | 2.1±0.8 | 2.3±1.0 | 0.293 | | |
| Hamilton Depression Rating Scale | 2.4±0.8 | 2.4±1.0 | 0.616 | | |

Bold values indicate statistical significance. †: Mann–Whitney U-test. Bonferroni correction was performed to reduce the type 1 error, and the significance level was determined as p<0.004 for the subscales of the Bipolar Disorder Functioning Scale. CAM: Complementary and alternative medicines; BDFQ: Bipolar Disorder Functioning Questionnaire, n: Number of participants; SD: Standard deviation.

| Table 4: Univariate and stepwise multivariate regression analysis for potential predictors of CAM use | | | | | | |
|---|------------|--------|---------------------------|--------|-------|---------------------|
| | Univariate | | Multivariate ^a | | | |
| Variables | β | Sig. | exp(B) [95% CI] | β | Sig. | exp(B) [95% CI] |
| ≤High school | 0.995 | 0.019 | 2.598 (1.168–5.782) | 1.056 | 0.040 | 2.875 (1.051–7.862) |
| Rural | 0.840 | 0.034 | 2.317 (1.066-5.034) | 0.538 | 0.263 | 1.713 (0.667–4.396) |
| The number of hypomanic episodes | 0.996 | 0.011 | 2.706 (1.254–5.840) | 1.164 | 0.020 | 3.203 (1.205-8.516) |
| BDFQ total score | -0.026 | 0.020 | 0.974 (0.952-0.996) | -0.044 | 0.047 | 0.957 (0.916-0.999) |
| Emotional functioning | -0.418 | <0.001 | 0.658 (0.523-0.829) | -0.333 | 0.042 | 0.716 (0.520-0.987) |
| Feelings of stigmatization | -0.226 | 0.003 | 0.798 (0.686-0.927) | -0.314 | 0.011 | 0.731 (0.573-0.932) |
| Occupational functioning | -0.280 | 0.001 | 0.755 (0.644-0.887) | -0.283 | 0.010 | 0.754 (0.609-0.934) |

Bold value indicate statistical significance. BDFQ: Bipolar Disorder Functioning Questionnaire; 95% CI: 95% confidence interval; a: Results from forward stepwise logistic regression. Model summary: $\chi^2(118.133)$ =41.752, p<0.001. Percent correct classification 74% with R²=0.38.

CAM method. BD-I patients most commonly used spiritual healing (54.5%). Herbal medicine (10.7%) was the second most popular CAM use. In addition, our findings showed that education level, BDFQ, emotional functioning, stigma, and occupational functionality, which are subscales of BDFQ, were effective in predicting CAM use in patients with BD-I.

This study revealed a higher rate (63.6%) of CAM use in BD patients than in other studies. In the study of Strejilevich et al. (26), 36.2% of BD patients reported using CAM before their first contact with the health system, and 46.7% reported using it together with psychiatric treatment. A study conducted in Turkey determined that 46% of individuals with psychiatric disorders, including BD-I patients, showed nonmedical help-seeking behavior (27). Generally, all studies investigating CAM use in mental disorders highlight the higher prevalence in severe mental disorders (i.e., BD and psychotic disorders) than depression and anxiety disorders, but the reports are limited to different cultures (13,15). This higher rate than other studies could be attributed to differences in diagnosis rates of different cultures, cultural beliefs, myths, taboos, socioeconomic status differences and demographic factors, and participants being at various stages and phases of the disease.

Similar to Kilbourne et al.'s (13) study, the most common type of CAM used in our study was religious/ spiritual healing. Bahceci et al. (15) reported herbal therapy as the most frequently used CAM modality in patients with mental disorders, but this study did not compare CAM modalities for BD-I. In a study conducted in the USA, it was observed that the most frequently used CAM method by individuals with mental disorders who reported using the CAM method was prayer/spiritual healing (28). Religious/spiritual healing was also the most frequently reported type of CAM among adults with a

serious mental disorder (29). We suggest that the results of our study might be associated with different social perspectives on serious mental disorders in Turkey. Because there is a common belief in a culture that serious mental disorders might be due to "sorcery or jinn." Therefore, our higher rates for CAM use and religious/spiritual healing may result from this religious and sociocultural background with regional differences.

Our study determined that the second most commonly used type of CAM was herbal medicine. There are insufficient data on the efficacy and potential unrecognized side effects of herbal medicine in the treatment of BD-I (30). For this reason, mental health professionals who care for these patients should be knowledgeable about herbal medicine other than the traditional treatment used by patients.

According to our results, rural residents and those with low education levels had statistically significantly higher rates of CAM use. Additionally, a low level of education was an important predictor of CAM use. The factors that influence CAM usage differ by region, and some research indicates that CAM use is more prevalent among individuals with low levels of education and those who live in rural areas (31–33). It has been reported that patients living in rural areas have difficulties accessing health services due to economical and geographical difficulties; not being able to benefit from health services adequately contributes to their use of CAM (34). Those with a low level of education may be less likely to attribute their mental complaints to their diseases and be aware of the need for treatment. Lack of insight into their illness may lead them to use CAM to alleviate their symptoms. It is possible that the frequency of CAM use, as well as the preferred type of CAM, may differ in studies to be conducted in historically or geographically different cultures. Due to the popularity of techniques such as yoga, meditation, massage, and homeopathy in cosmopolitan cities, these methods may be preferred more in urban areas than in rural areas. Further research is needed to evaluate more prominent sociocultural and interpersonal factors that may contribute to the increased use of CAM in rural areas.

Hypomania was also a predictor of CAM usage, according to our findings. The novelty-seeking behavior observed in the hypomanic episode of BD-I is likely to lead patients to turn to the use of CAM to treat or ameliorate their symptoms (30). Hypomania periods are characterized by an increase in patients' mystical pursuits. Spiritual healing, one of the most popular forms of CAM, may be associated with this condition.

Our results showed dissatisfaction with treatment was higher among CAM (+) than CAM (-). However, dissatisfaction with traditional medicine was not a predictor factor in the use of CAM. It has been reported that poor tolerability to treatment, problems with access to treatment, lack of perceived benefit, and side effects caused by psychotropic drugs may lead to treatment dissatisfaction and may be among the factors associated with the use of CAM in patients with BD-I (35). On the other hand, there are opinions that CAM therapies are not due to dissatisfaction with traditional medicine (30).

In our study, patients with a lower level of functionality were more likely to use CAM. According to our findings, emotional functioning, stigma, and occupational functioning are all factors that predict the use of CAM in BD-I patients. Emotional functioning is a functional domain that includes emotion regulation, awareness, differentiation, and expression of emotions. Maladaptive emotion functionality is related to poorer social relationships, diminished self-esteem, reduced life satisfaction, and poorer coping strategies (36). Patients with impaired emotional functioning may seek alternative therapy options to improve their functioning. Studies evaluating the occupational functioning of patients with BD-I reported that they exhibit decreased work performance associated with work problems, days off, poor social support, low pre-illness functioning, and disease characteristics (37). The decrease in the occupational functioning of the patients may lead them to use CAM in addition to traditional treatments to increase their occupational productivity and functional capacity. The stigma associated with a mental disorder has significantly influenced an individual's decision to seek therapy, delaying or avoiding treatment and pursuing other treatment techniques. Patients may feel shame and embarrassment when their illness is known to others (38). This may lead them to explain their illness with culturally variable factors and seek treatment accordingly.

This study has several strengths. First, our research focuses on patients with BD-I, one of the severe mental disorders, who are likely to use CAM to improve mental health. Second, to the best of our knowledge, this is the first study conducted in Turkey on the relationship between the use of CAM in patients with BD-I and their functionality and treatment satisfaction. The study's limitations include the possibility of sample selection bias, as all individuals were recruited through an outpatient clinic. Due to the study's cross-sectional nature, a causal relationship between the data acquired cannot be established. The study population was composed of patients who lived in locations close to the study center. Due to regional cultural differences, the conclusions of this study cannot be generalized. Due to the possibility of recall bias, the duration and frequency of usage of the CAM method were not taken into account. In addition, treatment compliance, current medications, and doses that are likely to contribute to the use of CAM were not analyzed. Therefore, qualitative approaches will be prudent for future research on the frequency, persistence, results, and relationship to treatment compliance of CAM use in patients with BD-I. Despite these limitations, this study's findings contribute to a better knowledge of the factors related to using CAM in individuals with BD-I.

To conclude, the findings of this study show that more than half of the BD-I patients use CAM, mostly preferring a religious/spiritual healer. Patients with lower levels of education and those living in rural regions were more likely to use CAM. CAM use was related to decreased emotional and occupational functioning and stigma in terms of functionality. Medication incompatibility may lead to a poor clinical course of the disease. Therefore, mental health professionals should be aware that many BD-I patients can use CAM and should inform their patients about the possible benefits and risks of CAM use. Such efforts will aid in a better understanding of patients with various views on therapeutic approaches and provide appropriate counseling on the need for caution while using CAM.

| Contribution Categories | | Author Initials | | |
|-------------------------|-----------------------------------|-----------------|--|--|
| | Concept/Design | G.O.U., I.M.A. | | |
| Category 1 | Data acquisition | G.O.U. | | |
| | Data analysis/Interpretation | G.O.U., I.M.A. | | |
| Cataman, 2 | Drafting manuscript | G.O.U., I.M.A. | | |
| Category 2 | Critical revision of manuscript | G.O.U., I.M.A. | | |
| Category 3 | Final approval and accountability | G.O.U., I.M.A. | | |
| | Technical or material support | G.O.U. | | |
| Other | Supervision | I.M.A. | | |
| | Securing funding (if applicable) | G.O.U., I.M.A. | | |

Ethical Approval: The Suleyman Demirel University Faculty of Medicine Ethics Committee granted approval for this study (date: 04.12.2013, number: 2013/223).

Informed Consent: Informed consent was obtained form all participants.

Peer-review: Externally peer-reviewed.

Conflict of Interest: The authors declare that they have no conflict of interest.

Financial Disclosure: The authors declare that they have no financial support.

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