ATTITUDE, PERCEPTION, AND UTILISATION OF COMPLEMENTARY AND ALTERNATIVE MEDICINE AMONG CAREGIVERS OF THE MENTALLY CHALLENGED PERSONS IN EBONYI STATE: A CROSS-SECTIONAL STUDY

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ABSTRACT: *Background: Experts have been consistent that the overall functioning and productivity of individuals depend on their mental health status. The rising cases of mental health challenges are fast becoming a threat to public health, particularly in developing countries. Evidence shows that over 35% of the global population suffers mental health issues. The burden is higher in Sub-Saharan Africa, with Nigeria accounting for 13% prevalence. Earlier studies have demonstrated that complementary and alternative medicine (CAM) could effectively treat mentally ill patients and other chronic health problems. However, little is known about the caregivers' attitudes, perceptions, and CAM utilisation in Nigeria. Method: 381 caregivers of mentally ill persons in Abakaliki were recruited into this study. The modified attitude toward Mental Illness Questionnaire was administered to the participants to elicit relevant information on CAM use. The data collected were analysed using descriptive statistics. Results: Most participants (92%) had good knowledge of CAM and would encourage their mentally ill relatives to use CAM. In comparison, 89% have either used CAM or used CAM on mentally ill relatives. CAM utilisation was associated with good knowledge and referral by other users. The common CAM therapies included herbal drugs, spiritual intervention, and alternative medical systems such as homeopathic medicine. 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 are required to establish their benefits in treating mental illness.*

KEYWORDS: complementary and alternative medicine, herbal medicine, caregivers, mental health, utilisation

BACKGROUND TO THE STUDY

According to American Psychological Association (APA), mental health illnesses are characterised by abnormalities in thought, mood, emotion, or behaviour (or any combination thereof) associated with distress and impaired functioning (CDC, 2013). Globally, it is estimated that over 56 million persons, representing 1 have one form of mental illness or the other (Health, 2016). These are higher among adolescents and younger adults. Among individuals with mental illness, research has shown that about 10-20 million of them present with suicidal attempts and ideations, while over 1 million of these individuals have committed suicides since 2004 (Organisation., 2014). The ability of this problem to change the mood of the affected individuals makes victims vulnerable to psychological symptoms such as depression, anxiety, delusion, hallucination, mood swing, and the associated suicidal or homicidal tendencies. This prevalence has been widely attributed to various factors-including genetics and environmental (Ashmore & Turner, 2020). The increasing use and abuse of psychotic substances among the youths may be an additional risk factor for mental ill-health, particularly in developing countries where neuropsychiatric centres and mental health support programmes may be lacking. By 2030, mental illness may be the second leading cause of disabilities worldwide, after heart disease. Nigeria's burden is as high as 13% of all disorders (Health, 2016).

Despite the high incidence of mental diseases (17.6% globally) (Gabra et al., 2020; Steel et al., 2014), they are frequently ignored (Bebbington, 2011), misunderstood (El Ahmed, 2008) and stigmatised(Mahmoud & Zaki, 2015). In Sub-Saharan Africa, caregiving for people with mental problems is primarily provided by families (Mahmoud & Zaki, 2015). However, frequently they are unable to help their mentally ill relatives because of their attitude and perception of the disorder (Shinde et al., 2014). African culture believes that mental diseases have a spiritual basis (Pridmore & Pasha, 2014). Nigeria has a wide range of complex beliefs and behaviours around mental illness (Bener et al., 2016).

In Nigeria, the complex beliefs about mental illness among caregivers often influence their choice of treatment options. Frequently, traditional or faith healers are frequently consulted to treat people with mental problems (Salem et al., 2019). Cultural beliefs about the role that demonic possession, witchcraft, and the evil eye play in precipitating the symptoms of mental illness play a vital role in this pattern of health-seeking behaviour (Kassem et al., 2015). Furthermore, due to the strong family relationships seen in Nigerian cultures, a patient's admission to a psychiatric hospital results in a stigmatizing label for the patient and every member of his or her family (Okasha et al., 2012). There is generally no interaction between medical experts and conventional healers in Nigeria.

Nonetheless, some mentally ill people have a high propensity to somatize their psychological symptoms and frequently see non-psychiatric healthcare providers before they visit psychiatric clinics or hospitals (Ashmore & Turner, 2020). This approach is consistent with the global decision to treat mental disorders according to the medical model to reduce stigma (Scher, 2022). The National Survey of Mental Disorders in Nigeria estimated that 14.93% of the adult population under study had mental disorders. In this study, mood disorders (6.43%), anxiety disorders (4.75%), and various disorders (4.72%) were the most prevalent disorders (Adeoye et al., 2022).

People with psychiatric disorders frequently face social rejection in Nigerian communities and are stigmatised (Pederson et al., 2020). In primary psychiatric care, complementary and alternative medicine (CAM) from traditional healers have a crucial role to play (Anjorin & Hassan Wada, 2022). Most people reside in rural areas, yet mental health facilities are mostly found in big cities. Hence, people are more inclined to use and practice traditional healing methods such as CAM due to the lack of mental health facilities in their localities (Ajala et al., 2019). Above all, there has not been any research done in South-Eastern Nigeria that has looked at the attitudes and perceptions of family caregivers of mentally ill patients about mental illness as well as how they go about finding care for their loved ones. This study assessed the attitude, perception, and utilisation of complementary and alternative medicine among caregivers of mentally ill patients at Alex-Ekwueme Federal University Teaching Hospital in South-East Nigeria.

MATERIALS AND METHODS

At Alex-Ekwueme Federal University Teaching Hospital, 381 caregivers of mentally ill patients participated in a cross-sectional study design. The sample size was estimated using a set of criteria that included a 5% error margin, a 95% confidence level, and an estimated proportion of 0.5 positive attitudes among caregivers. Inpatient and outpatient psychiatric departments were the locations where the study's caregivers were gathered using a purposeful non-probability sampling technique between 15th February 2022 and 15th November 2022.

After the participants gave written informed consent, caregivers who were 18 years or older; and who had been the patients' primary caregivers for at least 3months (taking care of their daily requirements, monitoring their medicine, bringing them to the hospital, remaining with them while they were there, and maintaining contact with hospital staff), were included in this study. In addition, according to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) (American Psychiatric Association., 2013), criteria were also included for patients who double as caregivers for themselves.

(a) **Study Instrument**

A semi-structured questionnaire with four sections was used 17 items on a three-point Likert scale make up the Modified Attitude Toward Mental Illness Questionnaire (agrees, neutral, and disagree). It assesses the participant's mental health literacy concerning the causes of mental illness, knowledge of those who suffer from it, attitudes toward those individuals, and methods for managing such patients—the more positive the attitudes and perception, the higher scores (Ashmore & Turner, 2020). The study used an English version of the instrument. The health-seeking behavior of the caregivers of those with mental illnesses; type of initial care sought (whether from a psychiatrist, non-psychiatric physician, or traditional healers); questions about the management style of traditional healers sought; length of time sought; and reasons for attending psychiatric outpatient clinics after seeking care from traditional healers and CAM use were elicited from the participants (Kamal et al., 2013). The average amount of time needed to complete each participant's questionnaire was 20 minutes. The researcher thoroughly explained any items that were misinterpreted to ensure that the respondents had a good knowledge of the questionnaire. Twenty caregivers, or about 5% of the sample, declined to answer the questions and were left out of the analysis.

(b) **Statistical Data Analysis**

The Statistical Package for Social Sciences (SPSS version 25.0) was employed for the analysis. Quantitative data was expressed using mean, standard deviation, and p-values ≤ 0.05 were considered as statistically significant. Modified Attitude towards Mental Illness Questionnaire reliability was also re-tested for reliability and internal consistency, and the result showed a Cronbach's alpha coefficient of 0.68. To determine the factors influencing attitude, perception and utilization of complementary and alternative medicine (CAM), a bivariate analysis was followed by a linear regression model (outcome variable).

RESULTS

Out of the 389 questionnaires distributed, 381 were filled and returned. This represents a response rate of 97.9%. The mean age of the respondents was 33.5±8.6years. The majority of the respondents were below 40 years, with higher proportions of married (66.4%) and females (64.8%) (Table 1).

Table 1: Socio-demographic data of respondent

Variables	Frequency (n=381)	Percentage
Age (years)		
20-29	145	38.1
30-39	145	38.1
40-49	74	19.4
50-59	17	4.5
Gender		
Female	247	64.8
Male	134	35.2
Religion		
Christian	253	66.4
Muslim	24	6.3
Traditional worshipers	104	27.3
Marital Status		
Married	253	66.4
Single	85	22.3
Divorced	24	6.3
Widow/Widower	19	5.0
Level of education		
Non formal education	66	17.3
Primary	94	24.7
Secondary	91	23.9
Tertiary	130	34.1
Employment status		
Employed	187	49.1
Unemployed	145	38.1
Part time	30	7.9
Others	19	5.0

Monthly Household income (N)

Less than 30,000	140	36.7
30,000 to <70,000	156	40.9
70,000 to <110,000	38	10.0
110,000 to <150,000	25	6.6
150,000 and above	22	5.8

Slightly less than half of the participants 187(49.1%) were employed, with the majority of the households 296(77.6%) earning a gross monthly income less than N70, 000 (Table 1).

On the attitudes of participants towards CAM, all the items except one demonstrated a mean score greater than cut off (2.50) and therefore were accepted (Table 2). Majority of the participants had positive attitudes towards CAM and were likely to encourage other mentally-ill patients and relatives to patronize CAM since they believed it was more efficient than conventional therapies used for the treatment of mental illness

Table 2: Attitude of caregiver towards complementary and alternative medicine (*n=381*)

Items	A	N	D	Weighed mean	Standard deviation	Decision
I use CAM for mentally challenged relative	275	17	88	2.79	0.85	Accepted
I prefer CAM to conventional therapy	216	5	160	2.63	0.89	Accepted
I would encourage other relatives and friends to use CAM	220	15	146	2.66	0.74	Accepted
My relative use CAM with conventional therapy	250	15	116	2.80	0.81	Accepted
My relative use CAM alone because it is more effective than conventional therapy	153	8	220	2.39	0.89	Rejected
I talk to my relative's physician about his/her CAM use	220	15	146	2.66	0.74	Accepted
				2.66	**0.55**	**Accepted**

Furthermore, the results of this study demonstrate that caregivers of persons with mental illnesses hold various perception about CAM. It was found that the majority of these caregivers perceive CAM as mere natural plants with numerous benefits for the treatment of both mental illness and other diseases. With this view, CAM is perceived to have fewer adverse effects as a natural remedy than conventional western therapies.

Contrary to this, a significant proportion of caregivers perceive CAM as unsafe and a threat to public health (Table 3). In addition, inadequate scientific data on CAM were reported as a barrier to CAM use for treating patients with mental illness.

Table 3: Perception about complementary and alternative medicine (*n=381*)

Items	SA	N	D	Weighed Mean	SD
CAM providers give good information on maintaining a healthy lifestyle	339	9	33	3.24	0.70
There is less side effect when taking natural remedies	262	13	106	2.82	0.77
CAM involves natural plant formulas which are more healthy than taking drugs by the medical doctor	242	20	119	2.92	0.94
CAM users are involved in their care than in conventional care	260	5	116	2.80	0.79
Adults believed that CAM build body's own defenses and promote self-training	240	7	134	2.80	0.84
Persons how believed in the physical, mental, and aspect of health arm or likely to us CAM	221	6	154	2.72	0.78
Persons who fear the discomfort of treatment from conventional therapy are more likely to use CAM	237	9	135	2.88	0.89
CAM use is unsafe and threat to public health	130	7	244	2.14	1.05
CAM is effective for some mental health issues	130	8	143	2.71	0.87
Lack of scientific evidence is a barrier to CAM use	270	19	92	2.89	0.76
CAM use can lead to non-adherence to conventional therapy	200	7	174	2.63	0.91
				2.78	**0.37**

Also, the results demonstrate that 71.9% of caregivers of patients with mental illness used CAM for their patients. However, only 29.9% told their doctors that they had exposed their patients to CAM before presentation in the hospital or concurrently while in the hospital. In addition, 52% reported that their patients were taking CAM therapies, even while in the hospital. Also, at least 70% of the caregivers had used at least one form of CAM therapy or the other 12 months prior to this study (Table 4). Many caregivers reported challenges with conventional hospital medications compelled them to use CAM. Among these challenges were that hospital medications were very expensive 218(57.2%), ineffective in treating mental illnesses 271(71.1%), and had a lot of side effects 285(74.8%). In addition, the majority 316(82.9%), of the caregivers reported that their patients' mental health problems improved after CAM administration. In comparison, 273(71.7%) reported no change, and 144(37.8%) reported worsened mental health problems. Nonetheless, several factors were found to significantly influence the utilization of CAM among caregivers of patients with mental illness. These include age ($p<0.001$), level of education ($p=0.008$), and average household income ($p<0.001$).

Table 4: Utilization of Complementary and Alternative Medicine among caregivers of mentally ill patients (*n=381*)

Items	Agree	Neutral	Disagree
1. You used CAM before	274 (71.9%)	33(8.7%)	74(19.4%)
2. You used CAM for			
Treating illness	209(54.9%)	40(10.5%)	132(34.6%)
Preventing illness	317(83.2%)	14(3.7%)	50(13.1%)
Promoting health	219(57.5%)	18(4.7%)	144(37.8%)
I have never used CAM	274(71.9%)	33(8.7%)	74(19.4%)
Others	116(30.4%)	188(49.3%)	77(20.2%)
3. CAM therapy used in the past 12 months for your patient?			
Biological product	293(76.9%)	18(4.7%)	70(18.4%)
Mind and body therapy	287(75.3%)	14(3.7%)	80(21.0%)
Alternative medicine, eg herbs	244(64.0%)	36(9.4%)	101(26.5%)
Ritual therapy	269(70.6%)	22(5.8%)	90(23.6%)
Energy health therapy	102(71.9%)	69(18.1%)	210(55.1%)
None	96(25.2%)	87(22.8%)	98(25.7%)
4. My mentally ill patient is currently taking conventional therapy with CAM?	198(52.0%)	83(21.8%)	100(26.2%)
5. Challenges with hospital medications for patients with mental illness			
No challenge	52(13.6%)	16(4.2%)	313(82.2%)
It is very expensive	218(57.2%)	18(4.7%)	145(38.1%)
It is ineffective	271(71.1%)	34(8.9%)	76(19.9%)
Has a lot of side effects	285(74.8%)	14(3.7%)	82(21.5%)
6. Is your physician aware that you use CAM for your mentally challenged relative?	114(29.9%)	23(6.0%)	54(14.2%)
7. In comparison to when he/she started taking CAM, how has his/her health status been?			
Better	316(82.9%)	16(4.2%)	49(12.9%)
Somewhat better	219(57.5%)	18(4.7%)	144(37.8%)
About the same	273(71.7%)	33(8.7%)	75(19.7%)
Worse	144(37.8%)	82(21.5%)	155(40.7%)

Furthermore, various factors were found to significantly influence the attitude of the caregivers of the mentally ill patients about CAM. These include religion (*p=0.000*), level of education (*p<0.001*), and income (*p=0.003*) (Table 5).

Table 5: Factors influencing caregivers Attitude of CAM for the mentally ill patients (n=381)

Variables	f	Mean	SD	χ^2	P-value
Age (years)					
20-29	145	2.79	0.40	2.253[a]	0.082
30-39	145	2.74	0.33		
40-49	74	2.86	0.29		
50-59	17	2.69	0.65		
Sex					
Male	134	2.78	0.43	0.194[b]	0.846
Female	247	2.78	0.34		
Religion					
Christian	253	3.49	0.33	6.926[a]	0.000
Muslim	24	2.37	0.48		
Traditional worshipers	104	2.73	0.32		
Level of education					
Non-formal education	66	2.87	0.38	17.367[a]	<0.001
Primary	94	2.57	0.43		
Secondary	91	2.92	0.30		
Tertiary	130	2.78	0.31		
Income status					
Less than 30,000	140	2.77	0.36	4.826[b]	0.003
30,000 to <70,000	156	2.77	0.33		
70,000 to <110,000	38	2.89	0.48		
110,000 to <150,000	25	2.82	0.32		
150,000 and above	22	2.63	0.54		

[a]*Analysis of Variance (ANOVA) test used*   [b]*t-test used*

More so, the perception of CAM among caregivers of patients with mental illness was found to be significantly influenced by some variables. Key to these variables was gender (p=0.001) and level of education (p=0.019) (Table 6).

Table 6: Factors that influence the perception of CAM among caregivers of patients with mental illness

Socio-demographic Variables	Perception Status		χ^2	P-value
	Poor (n=40)	Good (n=341)		
Age (years)				
20-29	15(10.3%)	130(89.7%)	7.389	0.060
30-39	20(13.8%)	125(86.2%)		
40-49	2 (2.7%)	72 (97.3%)		
50-59	3 (17.6%)	14 (82.4%)		
Gender				
Male	24(17.9%)	110(82.1%)	12.084	0.001
Female	16 (6.5%)	231(93.5%)		

Level of education				
Non formal education	10(15.2%)	56 (84.8%)	9.971	0.019
Primary	16(17.0%)	78 (83.0%)		
Secondary	5 (5.5%)	86 (94.5%)		
Tertiary	9 (6.9%)	121(93.1%)		
Household per month (₦)				
Less than 30,000	18(12.9%)	122(87.1%)	6.320*	0.157
30,000 to <70,000	13 (8.3%)	143(91.7%)		
70,000 to <110,000	6 (15.8%)	32 (84.2%)		
110,000 to <150,000	0 (0.0%)	25 (100%)		
150,000 and above	3 (13.6%)	19 (86.4%)		

Fisher's exact test used

Similarly, a multivariate logistic regression analysis that evaluated the relationship between perception and utilization of CAM among caregivers of patients with mental illnesses found that positive perception was significantly associated with utilization of CAM therapies (p=0.001).

DISCUSSION

The negative attitudes and perceptions about mental illness are widespread. In the present study, the studied caregivers had negative perceptions toward mental illness (14.90 ± 4.22) compared to a similar study earlier conducted on Omani relatives of mentally ill patients (23.66 ± 4.88) (Gabra et al., 2020). Similarly, in Iran, most families of schizophrenic patients had a negative attitude toward mental illness (88.90%) (Rahmani et al., 2015). Also, in a study conducted in Uganda, 60% of bipolar illness patients who contacted psychiatric clinics had first sought treatment from faith healers (Sherra et al., 2017).

In the African culture, seeking treatment from traditional healers for mentally ill individuals aligns with age-long-held cultural beliefs (Assad et al., 2015). This becomes more prevalent due to various misconceptions regarding the causes of mental illness. In the current study, more than 70% of the caregivers initially sought treatment for their mentally ill relatives from traditional healers before going to psychiatrists. This high patronage of complementary and alternative medicine further put culture as an important factor in determining our societies' attitudes and perceptions of mental illness. Traditional healing is firmly believed in Nigeria and passed down to generations.

The use of traditional medicine as a tool for treating psychiatric patients is not limited to Sub-Saharan Africa. Traditional medicine, referred to as complementary and alternative medicine (CAM), is used worldwide. Several studies conducted in Asian countries such as Singapore and Europe such as Norway and Germany have reported using CAM (Das & Phookun, 2013; Mehrotra et al., 2018). Similarly, the research results in Malay showed that 44% of mentally ill Singaporeans contacted traditional healers as their initial point of contact (Salem et al., 2019). In a similar study in Norway, 31% of Norwegian and 50% of Sámi mental patients utilized alternative and complementary therapies to treat their psychological issues. This was attributed to the increased prominence of religion and spirituality and to discontent with public psychiatric care hospitals, particularly in the Sámi community (Gabra et al., 2020).

Furthermore, in a study conducted at a public hospital in Germany, traditional or complementary medicine was used concurrently with psychiatric treatment by 50% of the patients, and patients from migrant backgrounds tended to use traditional forms of healing more frequently than German patients did (Das & Phookun, 2013).The factors shown to predict caregivers' attitudes and perceptions about mental illness in various research (Das & Phookun, 2013; Mehrotra et al., 2018) include caregivers' educational level, socioeconomic status, place of residence, and patients' conduct. This study's caregivers' age significantly predicted their perception and unfavorable attitudes toward mental illness (P = 0.001, ß = 0.045). Non-educated caregivers had more positive perceptions and a more hostile attitude toward mental disease (ß = 1.301, P = 0.009). Compared to non-literate persons, respondents who were literate in Nigeria were seven times more likely to have a favorable attitude toward those who were mentally ill. This supports the findings of a study in Greece, where highly-educated caregivers were reported to have a more positive view of mental illness and attributed mental illness to biological causes rather than the wrath of God (Svensson & Hansson, 2016). An earlier study that assessed additional factors for unfavourable attitudes and perception of mental illness demonstrated that the violent behavior of the mentally ill patient was a predictor of the caregivers' bad perception and unfavorable attitude toward mental illness (P = 0.002, ß = 1.434) (Mehrotra et al., 2018). According to the study, negative attitudes were worsening in the domain of deviant behavior, which included odd behavior, inadequate cognitive control, and unrestrained aggression.

Nonetheless, this study found that early psychiatric intervention significantly predicted positive attitudes and favorable perceptions of mental illness among caregivers (P = 0.000). In agreement with this discovery, a meta-analysis of 27 studies among the general population found that participants' views toward obtaining mental health treatment and stigmatising attitudes toward those with a mental illness were linked to less active psychiatric help-seeking actions (Schnyder et al., 2017).

CONCLUSION

The studied caregivers had poor perceptions and negative attitudes toward their mentally ill patients' relatives. Most of them consulted traditional healers as the first help for caring for their mentally ill relatives. The consulted traditional healers administered CAM and referred only a small percentage of patients to psychiatric care. As a result, it is strongly advised to raise public understanding about the nature of mental illness and how to treat it. Doing so may encourage people to seek psychiatric care immediately and reduce the need for traditional healers. The need to assist traditional healers in recognizing the seriousness of the mental disease and promptly referring patients with mental illnesses to psychiatrists should be emphasized more. A further study evaluating the impact of caregivers' attitudes and perceptions on the patient's illness outcome should be conducted. In order to help caregivers of mentally ill patients learn more about and develop a more positive attitude toward mental illness, as well as how to deal with their relatives' aggressive behavior, psychiatric institutions should offer educational programs to this group of people.

LIMITATIONS OF THE STUDY

The study was conducted at a psychiatric hospital in AE-FUTH and used purposive sampling. This limits the generalizability of the results to all caregivers of mentally ill patients in Nigerian communities. Moreover, the cross-sectional nature of the study may mitigate the inference of the causal relationship between determinants and outcomes.

AVAILABILITY OF DATA AND MATERIALS

The data sets generated and analyzed during the current study are available from the corresponding author upon reasonable request.

ABBREVIATIONS

CAM: Complementary and alternative medicine

AE-FUTHA : Alex-Ekwueme Federal University Teaching Hospital, Abakaliki

APA: American Psychological Association

SPSS: Statistical Package for Social Sciences

REFERENCES

Adeoye, I. A., Sogbesan, A., & Esan, O. (2022). Prevalence, associated factors and perinatal outcomes of antepartum depression in Ibadan Nigeria. *BMC Pregnancy and Childbirth*, *7*, 1–11. https://doi.org/10.1186/s12884-022-04549-7

Ajala, A. O., Kolawole, E. A., Adefolaju, T., Owolabi, A. O., Ajiboye, B. O., Adeyonu, A. G., Akangbe, J. A., Obaniyi, K. S., Adebimpe, A. T., & Adeniyi, V. (2019). Traditional medicine practices in Nigeria: A SWOT analysis. *International Journal of Mechanical Engineering and Technology*, *10*(2), 117–126.

American Psychiatric Association. (2013). *American psychiatric association: diagnostic and statistical manual of mental disorder* (fifth edit). Arlington, VA.

Anjorin, O., & Hassan Wada, Y. (2022). Impact of traditional healers in the provision of mental health services in Nigeria. *Annals of Medicine and Surgery*, *82*(September), 104755. https://doi.org/10.1016/j.amsu.2022.104755

Ashmore, R., & Turner, J. (2020). Labinjo, T., Serrant, L., Perceptions, attitudes and cultural understandings of mental health in Nigeria: A scoping review of published literature. *Mental Health, Religion & Culture*, *23*(7), 606-624.

Assad, T., Okasha, T., Ramy, H., Goueli, T., El-Shinnawy, H., Nasr, M., & Al, E. (2015). Role of traditional healers in the pathway to care of patients with bipolar disorder in Egypt. *Int J Soc Psychiatry*, *61*(6), 583–590.

Bebbington, P. (2011). The World Health Report 2011. *Soc Psychiatry Psychiatr Epidemiol*, *36*, 473–474. https://doi.org/https://doi.org/10.1007/s001270170010

Bener, A., El-Rufaie, O., Kamran, S., Georgievski, A., & Farooq. (2016). Disability,

depression and somatization in a low back pain population. Rheumatol. 9(3): *APLAR J*, *9*(3), 257–263.

CDC. (2013). *Mental health basics*. Centers for Disease Control and Prevention. https://www.cdc.gov/mentalhealth/basics.htm

Das, S., & Phookun, H. (2013). Knowledge, attitude, perception, and belief (KABP) of patients' relatives towards mental illness; Association with socio-demographic characteristics. *Delhi Psychiatr J.*, *16*(1), 98–107.

El Ahmed, N. (2008). *Knowledge, attitudes and behaviors of psychiatric patients and families in relation to psychiatric patients' rights.* Alexandria University.

Gabra, R. H., Ebrahim, O. S., Osman, D. M. M., & Al-attar, G. S. T. (2020). *Knowledge, attitude and health-seeking behavior among family caregivers of mentally ill patients at Assiut University Hospitals : a cross-sectional study*. 6, 4–11.

Health, N. C. C. and I. (2016). *National Center Complementary and Integrative Health, U.S Department of Health and Human Service (2016). CAM: What's in a Name?* U.S Department of Health and Human Service. https://doi.org/http//nccih.nih.gov/health/integrative.

Kamal, A., Abd Elhameed, M., & Siddik, M. (2013). A study on nonpsychiatric management of psychiatric patients in Minia governorate. *Egypt. Egypt J Psychiatry*, *34*(2), 128.

Kassem, A., Clifton, S., McDonald, M., Lipski, R., & Al, E. (2015). Sewilam AM, Watson AMM, Suggested avenues to reduce the stigma of mental illness in the Middle East. *Int J Soc Psychiatry.*, *61*(2), 111–120.

Mahmoud, S., & Zaki, R. (2015). Internalized Stigma of Mental Illness among Schizophrenic Patients and Their Families (Comparative Study). *Journal of Education and Practice*, *6*(12), 82-98.

Mehrotra, K., Nautiyal, S., & Raguram, A. (2018). Mental health literacy in family caregivers: a comparative analysis. *Asian J Psychiatr.*, *31*, 58–62.

Okasha, A., Karam, E., & Okasha, T. (2012). Mental health services and research in the Arab world. *World Psychiatry.*, *11*, 52–54.

Organization., W. H. (2014). World Health Organization.(2014) WHO Traditional Medicine Strategy 2014-2023, Geneva. In *HO Traditional Medicine Strategy 2014-2023*.

Pederson, A. B., Burnett-Zeigler, I., Fokuo, J. K., Wisner, K. L., Zumpf, K., & Oshodi, Y. (2020). Mental health stigma among university health care students in Nigeria: A cross-sectional observational study. *Pan African Medical Journal*, *37*(5), 1–13. https://doi.org/10.11604/pamj.2020.37.5.24898

Pridmore, S., & Pasha, M. (2014). Religion and spirituality: Psychiatry and Islam. *Australasian Psychiatry, 12*(4), 381-385.

Rahmani, F., Ranjbar, F., Ebrahimi, H., & Hosseinzadeh, M. (2015). The effects of group psychoeducational programme on attitude toward mental illness in families of patients with schizophrenia, 2014. *J Caring Sci.*, *4*(3), 243–251.

Salem, M., Saleh, B., & SSS, Y. (2019). Help-seeking behaviour of patients attending the psychiatric service in a sample of the United Arab Emirates population. Psychiatry. *Int J Soc*, *55*(2), 141–148.

Scher, M. S. (2022). A Bio-Social Model during the First 1000 Days Optimizes Healthcare for Children with Developmental Disabilities. , 10(12),. *Biomedicines*, *10*(12), 3290.

Schnyder, N., Panczak, R., Groth, N., & Schultze-Lutter, F. (2017). Association between mental health-related stigma and active help-seeking: systematic review and meta-analysis. *Br J Psychiatry.*, *210*(4), 261–268.

Sherra, K., Shahda, M., & Khalil, D. (2017). The role of culture and faith healers in the

treatment of mood disorders in rural versus urban areas in the United Arab Emirates. *Egypt J Psychiatry.*, *38*(2), 79.

Shinde, M., Desai, A., & Pawar, S. (2014). Knowledge, attitudes, and practices among caregivers of patients with schizophrenia in Western Maharashtra. *Int J Sci Res*, *3*(5), 516–22.

Steel, Z., Marnane, C., Iranpour, C., Chey, T., Jackson, J., Patel, V., & Al, E. (2014). The global prevalence of common mental disorders: a systematic review and meta-analysis 1980-2013. *Int J Epidemiol.*, *43*(2), 476–493.

Svensson, B., & Hansson, L. (2016). How mental health literacy and experience of mental illness relate to stigmatizing attitudes and social distance towards people with depression or psychosis: a cross-sectional study. *Nord J Psychiatry.*, *70*(4), 309–313.