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Beyond recognition: beliefs, attitudes, and help-seeking for depression and schizophrenia in Ghana

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ABSTRACT
Research on the beliefs and attitudes regarding specific mental disorders in Ghana is limited. A vignette study was conducted to examine the relationship between causal attributions, help-seeking, and stigma towards depression and schizophrenia using lay Ghanaians (N = 410). This adapted questionnaire presented two unlabelled vignettes about a hypothetical person with the above disorders for participants to provide their impressions. Next, participants answered questions on beliefs and attitudes regarding this person. The results showed that causal beliefs about mental disorders related to different treatment options, and stigma. Contrary to previous literature, religious belief did not negatively associate with professional help-seeking for the mental disorders. In conclusion, results suggest that integration of "idioms of distress' into mental health assessment and interventions may benefit Ghanaians. Our findings have implications for mental health literacy and anti-stigma campaigns in Ghana and other developing countries in the region.

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Stigma; mental health literacy; schizophrenia; depression; help-seeking; spiritual

Introduction

Mental disorders are common in most populations in the world; 25% of the World's population suffers from mental disorders at least once in their lifetime (World Health Organization [WHO], 2001). Approximately, 450 million people are affected by mental disorders worldwide, and most of these individuals are found in developing countries where access to mental health facilities are limited (WHO, 2013; Wig, 2000). Ghana, the focus of the current study, has a very limited public mental health care system. Available facilities are located primarily in the southern part of the country, and these include three psychiatric hospitals, and mental health units in regional hospitals (Asare, 2012). Studies have shown that even with accessibility to mental health facilities, individuals with mental disorders feel reluctant to seek treatments (Boenisch et al., 2012). Further, cross-cultural research reveals that the attitude and beliefs regarding mental disorders differ across cultures, and mental disorders are commonly stigmatized (see Adu et al., 2021; Kirmayer, 2001; Nersessova et al., 2019; Ryder et al., 2008). These beliefs and attitudes are likely

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related to causal attributions and treatment-seeking behaviours (Caplan et al., 2011; Jorm et al., 2005; Lauber et al., 2005; Taycan et al., 2015). For instance, the available literature provides a plethora of evidence on the relationship between beliefs about mental-illness and help-seeking: spiritual causal attribution of mental disorders positively related with spiritual help-seeking of mental-illness (see a review by Read & Doku, 2012). Spiritual and psychosocial causal attributions, as well as traditional and biomedical treatment preferences for mental disorders are found in the general population worldwide. Since beliefs and attitudes are influenced by cultural norms and are contextual, it is possible that certain perceptions towards mental disorders may be more salient in one cultural context over another. Specifically, it is established that compared to westernised and developed countries, spiritual causal attributions and traditional treatment preferences for mental illness are common in most developing countries (Kpobi et al., 2019; Kpobi & Swartz, 2018; Kpobi & Swartz, 2019). These differences in mental health literacy and cultural contexts render sophisticated universal models for mental health assessments and interventions extremely laborious.

While there are 297 disorders existing in the DSM-5 (American Psychological Association [APA], 2013) we will focus on two of them: Major Depression and Schizophrenia. The rationale behind the choice of these two disorders is that they are some of the most studied disorders in mental health literacy research (e.g., Adu et al., 2021; Nersessova et al., 2019), and they are likely universal, having been documented in most populations around the world (Thapa et al., 2014). These disorders are found to make a significant contribution to the world's economic burden, caregiver demands, and disability (Ahmed et al., 2018; WHO, 2001). Also, both disorders are found to be associated with stigma (e.g., see Adu et al., 2021; Nersessova et al., 2019; Upthegrove et al., 2017). In terms of symptoms, Major Depression is characterised by low mood, anhedonia, sleep disturbances, weight loss or weight gain. In contrast, Schizophrenia is marked by hallucinations, delusions, disorganised speech, and behaviour, as well as affective flattening and social isolation (APA, 2013). Nevertheless, the majority of Ghanaians conceptualise mental disorders as "*madness*' (*Ab ɔdam* in the Twi dialect). This term literally means brain dysfunction, and such a description in most cases refers to symptoms of psychosis and other severe mental health syndromes (Adu et al., 2021; Guardian, 2020; Salifu Yendork et al., 2016).

Help-seeking, stigma, and causal attributions

Research indicates that many individuals with mental illness in developing countries are known to first consult a traditional healer for mental health treatments; such individuals either resort to this type of treatment as a first point of contact in the pathway to biopsychosocial mental health services or as a sole option for mental health treatment (Uwakwe & Otakpor, 2014). Perhaps such a treatment pathway is driven by costs, beliefs, accessibility, and lack of availability of mental health facilities in these countries (Peprah et al., 2018).

Although there is limited literature on help-seeking for mental disorders in Ghana, the extant literature provides substantial evidence for an emphasis on traditional and spiritual help-seeking in Ghana including most African countries (Ibrahim et al., 2016; Kpobi et al., 2019; Kyei et al., 2014; Peprah et al., 2018; Tabi et al., 2006). For instance, a qualitative study reported that Pentecost clergy in Ghana engage in spiritual treatment (i.e.,

prayers) of people with mental disorders (Asamoah et al., 2014). Other forms of religious treatment include miraculous healing and healing through rituals (Dein, 2020). These results show that residing in a cultural context where religion is highly valued may influence treatment choices for various illnesses including mental disorders (Tabi et al., 2006).

Some studies report that many Africans on the continent attribute causes of mental disorders to supernatural phenomena. A survey in Malawi found out that about 82% of the sample attributed mental disorders to spiritual possession (Crabb et al., 2012; see also Adebowale & Ogunlesi, 1999; Gureje et al., 2005; Hugo et al., 2003). Researchers in two other studies discovered that most of the participants believed mental disorders are caused by supernatural beings (Ae-Ngibise et al., 2010; Edwards, 2014). Additionally, a study in Ghana revealed that compared to professional help-seeking, individuals preferred spiritual healing (e.g., prayers from a Christian pastor) when they were diagnosed with mental disorders (Edwards, 2014). One-hundred individuals sampled from those who were visiting three shrines in Kumasi (the second largest city in Ghana) all reported suffering from mental disorders, the majority (64%) suffering from depression, six with schizophrenia, and the others had different issues unrelated to mental disorders (Osei, 2001; see also Ae-Ngibise et al., 2010; Majodina & Johnson, 1983). A greater number of patients in Ghana reported consulting spiritual healers (i.e., pastors and traditional healers) than trained practitioners (Appiah-Poku et al., 2004). Notably, few participants in these studies had consulted mental health facilities in the country, but even if they did, such individuals had typically first visited a spiritual healer (see review by Read, 2012). Consequently, having reported the benefits associated with collaborative shared care delivery for mental health in Ghana, there have been efforts to formalise and standardise traditional medicine through a collaboration with modern medicine in Ghana (Gureje et al., 2020; Kpobi et al., 2019).

Other studies demonstrated that the reasons underlying preferences in help-seeking for mental disorders in these countries related to several systemic and structural factors such as religious beliefs, cost, the prevalence of traditional healers, and a weak conventional healthcare system. For example, a qualitative study reported that the main reason for spiritual help-seeking for mental disorders was belief in spiritual causes of mental disorders (Read, 2012; Smolak et al., 2013; Tabi et al., 2006).

The findings above highlight some contextual variables, including beliefs and availability, related to the treatment selection for mental disorders. Although the current study is one of the examples of mental health literature in Ghana, most previous studies concentrated on mental disorders in general, with little emphasis on specific mental disorders; moreover, the findings on help-seeking preferences and beliefs were purely descriptive and exploration of specific correlations in the data were limited. It is possible that endorsement of a particular causal attribution or holding a particular religious belief may or may not relate to a particular treatment option, which is the focus of the current study. To date, few studies in Ghana were identified in the literature which made a specific reference to depression, schizophrenia, and PTSD exploring explanatory models of mental disorders, recognition rates and social stigma (Adu et al., 2021; Franke et al., 2019; Kpobi & Swartz, 2018). These studies reported that symptoms of schizophrenia were related to a preference for greater social distance among community participants, but this tendency was lower among females, and supernatural attribution of

mental disorders was dominant. The literature available has shown that beliefs regarding mental disorders may relate to knowledge systems and different types of stigmas (cf. Adu et al., 2021; see also a review by Schieman et al., 2013).

Relatedly, levels of general education have been found to predict better health behaviours and outcomes. Even when socioeconomic status and other demographic variables are controlled, higher education correlates with longer life expectancy, fewer offspring, and better health outcomes (e.g., Baker et al., 2008; de Walque et al., 2005). A field study in Ghana using 181 participants revealed that more educated individuals (i.e., more years of formal education) practice more health preventive measures related to HIV/AIDS (Peters et al., 2010). Other studies that concentrated on education and mental health knowledge reported strong relationships between mental health knowledge and education levels (see Adu et al., 2021; Grossman, 2000; Reavley et al., 2012). General education may provide individuals with corrective information on health-related issues through exposure to various information sources, as well as the ability to think more critically and access resources which may help them make decisions that impact their health more positively. Therefore, it is possible that the educated in Ghana may be less inclined to endorse supernatural causes of mental disorders as formal education does not emphasise such causes of illness.

Moreover, subjective knowledge and attitudes towards mental health are related to help-seeking and how individuals adhere to treatments (Angermeyer & Matschinger, 1994; Jorm et al., 1997; Jorm et al., 2005a; Lauber et al., 2005). Health literacy is found to related to better health outcome; for example, individuals' ability to identify the symptoms of mental disorders has been shown to facilitate different help-seeking options (Gulliver et al., 2010). Labels and attributions for mental disorders could result in the choice of a corresponding help-seeking option. A cultural study accessing the conception of the Akans (the major tribe) in Ghana revealed that a predominant belief about mental disorders was that they are caused by supernatural beings. Nevertheless, participants endorsed diverse help-seeking options (e.g., spiritual, professional, social support) for mental disorders (Kpobi & Swartz, 2018; Opare-Henaku & Utsey, 2017; see also Tawiah et al., 2015). Relatedly, in Cameroon, respondents endorsed both traditional/spiritual and biomedical treatment option, with traditional help-seeking being the most endorsed (Nguendo-Yongsi, 2022).

Thus, despite their spiritual beliefs, these participants may have had knowledge regarding evidence-based treatments and access to alternative treatment options as well, an indication of the complexities associated with mental health treatment and assessments. Kpobi and Swartz (2018) reported that although participants acknowledged psychological and social causes of mental disorders the predominant causal attribution was supernatural causes.

In contrast, research in Western and industrialised countries indicates different patterns of behaviour towards mental health issues. However, participants in this part of the world predominately endorse the so-called evidence-based treatment options for mental disorders. A community-based study conducted in Germany, Australia, and Austria revealed that participants endorsed more evidence-based causes of depression and schizophrenia (e.g., biological factors, psychosocial factors), consequentially participants exhibited preferences for modern Western and secularised help-seeking options for depression and schizophrenia (i.e., professional help-seeking and social support)

(Jorm et al., 2000; Yeap & Low, 2009). Similarly, among residents in Shanghai, the most common causes of depression and schizophrenia endorsed were biological and psychosocial factors (e.g., hereditary, negative life events etc.), and consulting a counsellor or psychiatrist were the two most endorsed help-seeking options (Wang et al., 2013). Notably, the associations that exist between mental disorders and the various types of help-seeking options is not properly understood in the extant literature, but the ongoing synthesis shows that possibly endorsing more evidence-based causal attributions could influence the acceptance of modern Western and secularised help-seeking preferences. Evidently, recent studies reported that evidence-based knowledge about mental disorders such as intra-psychic causal attributions of mental illness was associated with an increased likelihood of using mental health services (Cheng et al., 2018; see also Vanheusden et al., 2009).

Additionally, stigmatisation of mental disorders is found among lay individuals in many parts of the world. Stigma impedes proper mental health outcomes, as stigma prevents mentally ill patients from utilising mental health services, and participating in social activities (Amering & Schmolke, 2009; Barke et al., 2011; Satcher, 2000). Again, perceived beliefs regarding mental disorders are found to be associated with mental health stigma. In Uganda, mentally ill patients are sometimes abandoned by family members because of the belief that these patients are bewitched (Byaruhanga et al., 2008). A similar finding was also revealed among Latino immigrants in the US (Caplan et al., 2011; see also Kasoro et al., 2002; Quinn & Knifton, 2014).

On the contrary, other studies reported a negative association between certain types of stigma and causal beliefs towards mental disorders. Among American participants who endorsed both biological causes of mental disorders exhibited less personal stigma, and endorsement of psychosocial causes was associated with social acceptance and less belief that depressed individuals are to be blamed (Goldstein & Rosselli, 2003). Similar trends are observed among patients with schizophrenia, and their families (Dain, 1992; Kadri et al., 2004). Evidently, findings available show that beliefs about causal attributions of mental disorders may have an association with certain types of stigmas (see also Nersessova et al., 2019).

Aims and hypotheses

Based on our review of the literature, we noticed certain patterns. Although in the African context, including Ghana, people rely on different models of help-seeking for mental disorders, endorsement of spiritual causes of mental disorders and traditional/spiritual help-seeking preferences dominate their preferences. In contrast, in Western, Educated, Industrialised, Rich and Democratic (i.e., WEIRD) societies (see Henrich et al., 2010) people tend to endorse biological and psychosocial attributions and related treatments. However, whether certain beliefs or causal attributions about mental disorders relate to help-seeking or stigma towards *specific* mental disorders is not properly understood within the Ghanaian culture, and few empirical findings on this topic are available for the African continent more generally. Therefore, the aim of this study is to examine the relations between various beliefs and help-seeking attitudes towards depression and schizophrenia within the Ghanaian context. The topic of our research may have theoretical, and as well as community and clinical implications, for Ghana, and beyond.

Accordingly, based on our literature review, we hypothesised that in Ghana: (H1) belief in spiritual causal attributions regarding mental disorders (depression and schizophrenia) would be positively related with spiritual help-seeking for both of these mental disorders; (H2) religious beliefs would be negatively associated with professional help-seeking for both depression and schizophrenia; (H3) education would be negatively associated with spiritual beliefs regarding causes of depression and schizophrenia; (H4) professional (i.e., Western focused) help-seeking for both depression and schizophrenia would be positively associated with (a) biological, and (b) psychosocial causal attributions for these mental disorders; and finally, (H5) perceived stigma for depression and schizophrenia would be positively related to spiritual causal attributions towards these mental disorders.

Method

Participants

The sample for this study was recruited from Ghana and included only those with formal education. That is, participants of this study completed at least Junior High School, previously known as Junior Secondary School. A total of 410 participants completed the study, of which 66% ($n = 266$) were men, 34% ($n = 138$) were women, and .3% ($n = 2$) did not specify their gender. The minimum and maximum age was 18 and 61, respectively ($M_{age} = 27.6$, $SD = 5.4$). Table 1 summarises demographic information.

Procedure

The Institutional Review Board of the researchers' university approved the study. Data was collected using snowball sampling. Various online communication mediums such as Facebook, WhatsApp, E-mail, Twitter, and Instagram were used. Although online data collection methods present some limitations, we relied on this method as it has been found to be useful in terms cost effectiveness; the approach allows for relatively rapid access to a data pool representing a diverse and geographically widely distributed population. Moreover, the African continent represents one of the fastest growing regions for mobile-cellular subscriptions approaching that of developed countries with an annual growth rate of 11% between 2010 and 2015 (GSMA Intelligence, 2016).

Even though there are many local dialects in Ghana, the questionnaire was presented in the English language only, because English is the official language in Ghana. Also, English is used as the medium of instruction at all levels of the education system in Ghana. Individuals and organisations who are currently residing in Ghana and known to the first author responded to the questionnaire; that is the researchers leveraged the connections of the principal investigator who was a former resident of Ghana. Participants were also encouraged to forward this anonymous survey to other individuals they knew. Participants completed some basic demographic information (gender, age, salary range, highest level of education completed, and religious affiliation) before proceeding to the measures.

The current study uses an archival dataset.[1] The authors previously published an earlier study with an overlapping but also different subset of items and variables using the same sample (Adu et al., 2021). The current paper is different from the previously published one

Table 1. Sociodemographic characteristics for participants ($N = 410$).

		Frequency	Percent (%)
Gender	Male	266	6.55
	Female	138	3.40
	Prefer not to specify	2	0.05
	Total	406	10
Religious Affiliation	Christian	391	9.65
	Muslim	13	0.32
	Traditional	1	0.03
	Total	405	10
Salary Range	GHS500 – below ($100 – below)	88	2.60
	GHS500 – GHS1000 ($100 – $200)	70	2.10
	GHS1000 – GHS2000 ($200 – $400)	112	3.40
	GHS2000 – GHS5000 ($400 – $1000)	49	1.50
	GHS5000 – above ($1000 – above)	15	0.40
	Total	334	10
Education	Junior High School leavers (JHS)	2	0.05
	Senior High School Graduates (vocation/ technical)	39	1.00
	Diploma/HND (Teaching and nursing training college/polytechnics)	71	1.80
	Bachelor's degree/ Higher National Diploma (HND) holders	226	5.70
	Master's degree	55	1.40
	PhD	5	0.05
	Total	398	10

as the previous study used disorder recognition rates as an outcome variable; researchers explored the association between recognition rates, stigma, religious belief, and education as a demographic variable. In contrast, in the current study, the outcome variable is help-seeking. Although the predictors partly overlap with the aforementioned study, two new variables were introduced in the current study: help-seeking, and causal beliefs.

Measures

Researchers adapted the online Computer-Assisted Telephone-Interview (CATI) Scale (Reavley & Jorm, 2011) to measure causes, help-seeking, and stigmatisation. Since the original version of the CATI Scale involves an interview, researchers of the current study modified the CATI Scale to a survey format uploaded to an internet-based platform (SelectSurvey.net). The fact that this questionnaire has been used in many international studies informed our decision to include it in the current study (e.g., Jorm et al., 2005; Yoshioka et al., 2014). Two vignettes (one for depression and the other for schizophrenia) portraying unlabelled mental disorder case histories of a hypothetical person were

presented to the same participants. The names "John" was used for depression vignette and "Peter" was used for the schizophrenia vignettes. After reading the scenarios, participants then answered questions regarding whether they could recognise the disorders (findings presented in Adu et al., 2021), their attitudes towards the hypothetical person and the disorders, in addition to causal attributions, and help-seeking recommendations. See Appendix for the full vignettes.

Antecedent variables

Social Stigma. This scale measured participants' inclination to interrelate in a social context with the hypothetical person with the mental disorder portrayed in the scenario. It comprises five items that use a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*). The scale was part of the CATI Scale (Reavley & Jorm, 2011). A sample item is: "Would you be happy to go out with Peter/John on the weekend?" The current study yielded a good to excellent internal consistency for depression ($\omega = .88$; $M = 3.67$, $SD = .85$) and schizophrenia ($\omega = .89$; $M = 3.42$, $SD = .93$).

Personal Stigma. This scale measured the personal attitudes of participants towards the hypothetical person in the vignettes. It comprises eight items that use a five-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*). The scale was part of the CATI Scale (Reavley & Jorm, 2011). A sample item includes: *"John/Peter could recover if he wanted"*. The internal consistency for this scale was moderately reliable (i.e., according to Perry et al. [2004]) for depression ($\omega = .50$; $M = 2.74$, $SD = .52$), and for schizophrenia ($\omega = .60$; $M = 2.85$, $SD = .60$).

Perceived Stigma. This scale used the same statements like that of the personal stigma, however, the stems of the sentences started with "Most other people believe that … " That is to say, it assesses what participants perceive to be the attitudes of the larger society towards the hypothetical person portrayed in the vignettes. The scale comprises eight items that use a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*), and the scale adapted the CATI Scale (Reavley & Jorm, 2011). The internal reliability coefficients for depression and schizophrenia were acceptable (i.e., $\omega = .70$, $M = 3.16$, $SD = .67$, and $\omega = .74$, $M = 3.33$, $SD = .67$ respectively).

Causes. This adapted scale from the CATI Scale (Reavley & Jorm, 2011) measured causal attribution of mental disorders. Participants were asked to rank on a scale of 1 = *strongly disagree* to 5 = *strongly disagree* to what extent they think the problem described in the vignette is caused by specific events or underlying predispositions. The psychosocial subscale comprises four items. Specific items are: "Traumatic experiences (neglect, childhood abuse, etc.)", "Social disadvantages (poverty or debt)," "life stressors," and "not being able to think clearly." Three items explained biological causes: "a virus", "brain chemical imbalance", "biogenetics". Lastly, two items concerned spiritual explanations: "spiritual/demonic possession", "punishment from God". These subscales yielded moderate internal coefficients due to the limited number of items. For depression, internal consistency coefficients for the different explanations were: psychosocial ($\omega = .57$, $M = 3.37$, $SD = .72$), biological ($\omega = .57$, $M = 2.52$, $SD = .77$), and spiritual (Spearman-Brown reliability coefficient = .60, $M = 1.52$, $SD = .69$). For schizophrenia the coefficients were: psychosocial ($\omega = .67$, $M = 3.09$, $SD = .77$), biological ($\omega = .63$, $M = 2.72$, $SD = .77$), and spiritual (Spearman-Brown reliability coefficient = .42, $M = 2.04$, $SD = .91$).

Religiosity. An adapted form of the Centrality of Religiosity Scale (CRS-15 version) (Huber & Huber, 2012) was used to measure religiosity in the current study. Five items related to religious belief were selected for the study. A sample item included: "To what extent do you believe that God or something divine exist?" Responses were based on a five point 5-point Likert scale (1 = *not at all*, 5 = *very much so*). The internal consistency for the current scale was excellent ($\omega = .80$, $M = 2.49$, $SD = .80$) (Table 1).

Outcome variables

Help-seeking. An adopted scale from the CATI Scale (Reavley & Jorm, 2011) asked participants how certain individuals could be of help to the hypothetical person in the vignettes. These helpers were grouped into three categories: "spiritual helpers (pastor, herbalist, traditional healer [Odusini])", "professional helpers (psychiatrist, counsellor, psychologist, general practitioner/family doctor, nurse)", and "social support (lecturer/teacher, close friend, close family member/friend)". Participants were asked to rate their responses on a five-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*). Due to the limited number of items for the subscales, the internal reliability coefficients for these subscales ranged from adequate to good for depression (professional: $\omega = .74$; social support: $\omega = .72$; spiritual: Spearman-Brown reliability coefficient = .27), and schizophrenia (professional: $\omega = .85$; social support: $\omega = .81$; spiritual: Spearman-Brown reliability coefficient = .52).

Data analysis

The data from the online questionnaire were exported from the online survey software. Data were analysed using *Jamovi* (Version 1.2; The Jamovi Project, 2020). The Shapiro–Wilk test was used to test for normality of the data. The analysis did not use any imputation procedures for missing data, the applied default settings included simply excluding cases with missing variables. Bivariate correlations and general linear models were used to estimate the relationships.

Results

Preliminary analysis

The focal variables had distributions close to normal and did not show outliers. A paired samples *t*-test analysis revealed that overall, in the case of depression, spiritual help-seeking ($M = 2.79$, $SD = .83$) was the least preferred option compared with social support ($M = 3.81$, $SD = .72$), ($t[409] = 21.86$, $p < .001$, $d = 1.08$), and professional help-seeking ($M = 4.10$, $SD = .64$), ($t[409] = 28.65$, $p < .001$, $d = 1.42$). Also, professional help-seeking was more preferred than social support in the sample, $t(409) = 8.34$; $p < .001$, $d = .41$. Similarly, in the case of schizophrenia, spiritual help-seeking ($M = 2.98$, $SD = 1.05$) was the least preferred option compared with social support ($M = 3.41$, $SD = 1.\ 00$), ($t[408] = 6.44$; $p < .001$, $d = .32$), and professional help-seeking ($M = 3.86$, $SD = .89$) ($t[408] = 11.86$; $p < .001$, $d = .59$). Again, professional help-seeking was more preferred than social support in the sample, ($t[408] = 11.46$, $p < .001$, $d = .57$). Additionally, the effect size analysis indicated that the difference between the preference for spiritual

help-seeking and the preference for social support and professional help-seeking are about three times as stronger for depression (*ds* = 1.08 and 1.42) than schizophrenia (*ds* = .32 and .59). Bivariate correlations between the variables are available in Table 2.

Professional help-seeking for both depression and schizophrenia had a positive association with biological and psychosocial causes of both depression and schizophrenia. Also, social support as help-seeking for both depression and schizophrenia was positively related to psychosocial causes for both depression and schizophrenia. Moreover, spiritual help-seeking for depression and schizophrenia was positively associated with biological, and spiritual causes of depression and schizophrenia. Further, psychosocial causes of depression had a positive correlation with all the three components of stigma (personal, perceived, social), but psychosocial causes of schizophrenia were positively associated with only two of them: personal and social stigma for schizophrenia. Additionally, spiritual causal attributions of depression and schizophrenia were positively associated with perceived stigma for both depression and schizophrenia. Notably, personal and social stigma for depression, had a strong *positive* relation to endorsement of professional help-seeking for depression, but on the contrary, personal and social stigma for schizophrenia was negatively related with professional help-seeking. Endorsement of social support for depression was positively associated with personal, perceived, and social stigma for depression. However, social support endorsement for schizophrenia positively related to social stigma only. Furthermore, spiritual help-seeking had a *strong* positive relation with perceived, personal, and social stigma.

Certain demographic variables of interest had associations with some focal variables. In the case of depression, religious affiliation was found to relate positively to professional help-seeking, social support, psychosocial causes, and social stigma, but related negatively to biological causes. Regarding schizophrenia, religiosity was positively related to social support, professional help-seeking, and psychosocial causes of schizophrenia, whereas spiritual help-seeking and perceived stigma were negatively related to religiosity. Education was negatively related to spiritual causes for both depression and schizophrenia. Finally, there was a positive correlation between age and spiritual causes for both depression and schizophrenia.

Main analysis

General linear models were tested to determine the predictors of help-seeking for both depression and schizophrenia (see Table 3).

Depression: help-seeking

In the case of depression, psychosocial causes (*B*[95% *CI*] = .13 [.04, .23], $p = .004$), biological causes (*B*[95% *CI*] = .13 [.05, .22], p = , 003), perceived stigma (*B*[95% *CI*] = .16 [.06, .27], $p = .001$), and religiosity (*B*[95% *CI*] = .15 [.06, .25], $p = .002$) positively predicted professional help-seeking. Causal variables, stigma variables, and demographic variables accounted for 16% of the variance in explaining professional help-seeking for depression, $F(10, 358) = 6.85$, $p < .001$.

Again, psychosocial causes (*B*[95% *CI*] = .17[.07, .28], $p = .001$), perceived (*B*[95% *CI*] = .20[.08, .31], $p < .001$) and social stigma (*B*[95% *CI*] = .12[.03, .21], $p = .007$) predicted social support endorsement positively. Causal variables, stigma variables and

Table 2. Correlation matrix for the causes, help-seeking and stigmatisation of depression and schizophrenia ($N = 410$).

	1	2	3	4	5	6	7	8	9	10	11	12	13
Help-seeking variables													
1. Professional	–	.65***	−-.19***	.23***	.18***	−.20***	−.21***	−.10*	.03	.30***	.11*	.04	.09
2. Social support	.47***	–	.12*	.28***	.17***	−.04	−.07	−.05	.15**	.05	.07	.02	.06
3. Spiritual	.23***	.27***	–	.03	.17***	.36***	.27***	.20***	.04	−.14**	−.13*	−.03	−.02
Casual variables													
4. Psychosocial	.22***	.23***	.07	–	.48***	−.01	.04	.17***	.12*	.10*	.04	.01	−.01
5. Biological	.17***	.05	.16***	.20***	–	.12*	.06	.08	.01	.04	−.03	−.06	−.03
6. Spiritual	−.08	.02	.28***	.03	.25***	–	.34***	.08	−.07	−.04	−.16**	−.25***	−.04
Stigma variables													
7. Perceived	.08	.10*	.08	.22***	.05	.19***	–	.42***	.09	−.10*	−.12*	−.08	−.06
8. Personal	.22***	.24***	−.02	.22***	.08	−.01	.27***	–	.19***	−.06	−.09	−.05	−.10*
9. Social	.18***	.23***	−.01	.10*	−.03	−.08	.06	.26***	–	−.06	.02	.06	.04
Sociodemographic variables													
10. Religiosity	.18***	.12*	.01	.11*	−.01	−.11*	.04	.02	.12*	–	.06	−.02	−.09
11. Education	.08	.05	−.07	.06	−.05	−.12*	−.11*	−.01	.06	.06	–	.48***	.10*
12. Age	.06	−.06	−.05	.02	−.02	−.12*	−.07	−.10	.04	−.02	.48***	–	.17***
13. Gender (men = 1)	−.03	.02	−.01	−.01	−.05	−.04	.02	−.01	.07	−.09	.10*	.17***	–

Note: *$p < .05$, **$p < .01$, ***$p < .001$. Below diagonal – coefficients for depression, and above diagonal – coefficients for schizophrenia.

Table 3. Standardized estimates from the general linear models for the predictors of help-seeking for depression and schizophrenia ($N = 410$).

	Help-seeking for depression			Help-seeking for schizophrenia		
	Professional	Social support	Spiritual	Professional	Social support	Spiritual
Causes variables						
Psychosocial	.15**	.17**	.03	.16**	.22***	−.06
Biological	.16**	−.01	.07	.12*	.06	.15**
Spiritual	−.09	.05	.27***	−.15**	.01	.34***
Stigma variables						
Perceived	.17**	.18***	−.03	−.06	−.08	.12*
Personal	.01	−.01	.01	−.13*	−.08	.07
Social	.09	.14**	.02	.04	.15**	.02
Sociodemographic variables						
Religiosity	.16**	.07	.05	.27***	.04	−.09
Education	.06	.11	−.04	.05	.07	−.09
Age	.04	−.09	−.01	−.05	−.03	.11*
Gender (men = 1)	−.01	.03	.01	.09	.04	−.01
R^2	.16	.14	.09	.22	.11	.22

Note: *$p < .05$, **$p < .01$, ***$p < .001$.

demographic variables accounted for 14% variation in explaining social support for depression, $F(10, 358) = 5.75$, $p < .001$.

It was also revealed that spiritual causes (B[95% CI] = .34[.21, .48], $p < .001$) uniquely predicted spiritual help-seeking, and all the variables accounted for 9% of the variance in explaining spiritual help-seeking for depression ($F(10, 358) = 3.74$, $p < .001$) (see Table 3).

Schizophrenia: help-seeking

On the other hand, regarding schizophrenia, psychosocial causes (B[95% CI] = .18 [.05, .30], $p = .005$), biological causes (B[95% CI] = .13 [.01, .26], $p = .032$), and religiosity as demographic variable (B[95% CI] = .37[.06, .24], $p < .001$) positively predicted professional help-seeking, whilst spiritual causes (B[95% CI] = -.15[-.25, -.05], $p = .004$), and personal stigma (B[95% CI] = -.19 [-.35, -.03], $p = .017$) negatively predicted professional help-seeking for schizophrenia. All the variables accounted for 22% variation in explaining professional help-seeking for schizophrenia, $F(10, 358) = 9.92$, $p < .001$.

Additionally, psychosocial causes of schizophrenia (B[95% CI] = .18 [.05, .30], $p < .001$), and social stigma (B[95% CI] = .16 [.05, .26], $p = .004$) positively predicted endorsement of social support as a form of help-seeking. Causes, stigma, and demographic variables accounted for 11% of the total variance in explaining social support for schizophrenia, $F(10, 358) = 4.53$, $p < .001$.

Lastly, biological causes (B[95% CI] = .20 [.06, .35], $p = .007$), spiritual causes (B[95% CI] = .40 [.28, .52], $p < .001$), perceived stigma (B[95% CI] = .20 [.03, .36], $p = .020$), and age (B[95% CI] = .02 [.01, .04], $p = .046$) predicted endorsement of spiritual help-seeking for schizophrenia. All the variables accounted for 22% variation in explaining spiritual helping for schizophrenia, $F(10, 358) = 9.82$, $p < .001$.

Discussion

The current study sought to explore the relationship between beliefs and attitudes regarding depression and schizophrenia using the Ghanaian population. Five (5)

hypotheses guided the study of which four (4) were fully supported, and one (1) was not supported. That is, respectively, there was a positive relation between spiritual causal attributions and spiritual help-seeking of both depression and schizophrenia (H1), education was negatively associated with spiritual causes of both depression and schizophrenia (H3), professional help-seeking was positively associated with biological, and psychosocial causal attributions of both depression and schizophrenia (H4), perceived stigma for depression and schizophrenia positively related with spiritual causal attributions towards depression and schizophrenia. (H5). However, religious affiliation was not negatively associated with professional help-seeking (H2). Counter to expectations, religiosity *positively* predicted professional help-seeking for both disorders.

Spiritual help-seeking

Hypothesis (1) was supported as spiritual causes of both depression and schizophrenia positively related to spiritual help-seeking. The possible explanation for this relation is that perhaps participants' knowledge of mental disorders is based on exposure to some form of exorcism or prayers, either at prayer camp or other places of worship (Peprah et al., 2018). This type of exposure may incline individuals to endorse spiritual causes of mental disorders and consequentially embrace spiritual help-seeking. Moreover, cultural beliefs are found to influence such relations (Motlana et al., 2004).

For instance, in Ghana, it is believed that our spiritual ancestors can inflict "*madness*" on "wicked" individuals in the community; this "*madness*" can only be cured by the chief priest or other traditional healers of the community (Edward, 2014). The current finding is in tandem with a study conducted in North India, where almost 74% of patients with schizophrenia had undergone some form of spiritual treatment, and these preferences were related to the belief that mental disorders are spiritually caused (Kulhara et al., 2000). Surprisingly, researchers found that this type of supernatural belief was even common among patients' relatives who are educated and from urban cities. A study conducted in South Africa reported similar results (Motlana et al., 2004; see also a review by Smolak et al., 2013; Tuliao, 2014). Similar findings were reported regarding depression (Trice & Bjorck, 2006).

Religiosity, and education and changing cultural contexts

Hypothesis (2) was not supported by the available data, as religious belief was not negatively associated with professional help-seeking for the mental disorders (depression and schizophrenia). Nevertheless, there was a strong *positive* correlation between these variables. That is in contrast with what was found in the African literature (Adebowale & Ogunlesi, 1999; Crabb et al., 2012; Gureje et al., 2005; Ikwuka, 2016). However, participants sampled for these earlier studies were less educated compared to the current study. It is also possible that currently the number of educated individuals in Ghana are increasing (e.g., maybe through the institution of the free Senior High School Policy in 2017) and education will counteract any effects of religiosity. It is also possible that younger spiritual leaders themselves will suggest alternative help-seeking preferences for their devotees.

Although we sampled lower levels of education (Junior High School leavers, Senior High School leavers), the majority (more than 50%) had either completed or were still

pursuing Tertiary education. This means that responses may have been influenced by pre-existing knowledge about mental disorders and not religiosity. Besides, perhaps more educated participants are able to discern scriptures and other rituals associated with religion better, and understand that religious figures can be helpful to some extent. For instance, in the Holy Bible (1 Peter 5:2-4) some duties of church leaders as carers and servers of church members are outlined (New International Version).

Evidently, our paired sample *t*-test for depression and schizophrenia showed that the most preferred help-seeking among participants was professional help-seeking. Surprisingly, the *t*-test further indicated that the difference between the endorsement for spiritual help-seeking, social support and professional help-seeking are about three times stronger for depression than for schizophrenia (see results above). Put simple, professional, and social support options to help-seeking were relatively less valued in schizophrenia compared to depression. The reverse of this result is mostly found in western and more industrialised samples (Angermeyer et al., 2001; Narikiyo & Kameoka, 1992). Differences in cultural settings could have accounted for such contradictory findings. That is, compared to the Western world, Ghana is known to represent collectivist cultural groups (Hofstede, 1983). It thus appears that professional options may be viewed as relatively less effective in a disorder such as Schizophrenia, a disorder marked by "bizarre" symptoms potentially perceived as less amenable to secular forms of healing. Perhaps this accounts for some of the reasons why developing countries are found to exhibit better recovery outcomes for certain mental disorders (McGruder, 2004).

Additionally, it is possible that different interventions on health services (e.g., Health Professions Regulatory Bodies Act, 2013; Mental Health Act, 2012) with the Ghanaian community have exposed individuals to different sources of help-seeking for mental health. These proactive programmes and changes may have altered the perceptions of the general population regarding mental disorders, along with the increased access to various online learning platforms in recent years (Adu et al., 2021).

Relatedly, education correlated negatively with spiritual causes of both depression and schizophrenia as we had expected in the current study (H3). This finding is in accord with what is consistently reported in the literature: a strong positive relation between education and better health information (see Grossman, 2000, 2005 for review on education and health). Previous studies reported that higher levels of education relate to greater mental health literacy (Adu et al., 2021; Gorczynski et al., 2017; O'Keeffe et al., 2015; Realvey et al., 2011). Perhaps more educated individuals are more likely to read and acquire general information from a number of sources, as a result, obtaining information on mental health more specifically. A study conducted in Ghana reported that cognitive abilities, numeracy, and decision-making abilities increase as a result of schooling, and these enhanced abilities mediate the effect of education on better health information (Peter et al., 2010). Perhaps the current findings suggest that the relatively widely documented spiritual attributions among the Ghanaian populace is less applicable to the highly educated in this country.

Professional help-seeking

Moreover, it was observed that professional help-seeking for depression and schizophrenia were *positively* associated with biological, and psychosocial causes of both depression and

schizophrenia (H4), congruent with previous research (Jorm et al., 2000; Yeap & Low, 2009). This result suggests that participants may have been exposed to Western explanations of mental disorders, resulting in a preference for professional help-seeking which emphasise biological and psychosocial causal attributions of both depression and schizophrenia (see Cavanagh et al., 2022). It appears that existing literature especially in Western and Industrialised countries provides considerable evidence for this relation (Chan & Mark, 2008; Williams & Healy, 2001). For instance, Altweck et al. (2015) reported that higher endorsement of psychosocial causes (e.g., stress) for depression and schizophrenia related positively with professional help-seeking for the disorders. Again, researchers in China found that participants who endorsed biological and psychosocial causes of depression and schizophrenia (e.g., hereditary, stressful life event) also preferred to contact psychologists, psychiatrists, and counsellors when faced with mental disorders (Jingyi et al., 2013). Even one of the first studies that assessed an educated sample in Ghana, revealed that endorsement of biological and psychosocial factors as causes of depression and schizophrenia was related to preferences for professional help-seeking (Franke et al., 2018).

Spiritual and psychosocial causal attributions and stigma

We found a positive relationship between perceived stigma for the mental disorders (depression and schizophrenia) and spiritual causes for both depression and schizophrenia (H5). Like-minded individuals may interact more frequently with each other (Hibbing & Thesis-Morse, 2002), and people may develop a sense of awareness about how those with mental disorders are treated in society. Thus, perhaps participants who endorsed spiritual beliefs for the mental disorders are also aware of how others in their circles also hold either similar beliefs or react towards individuals with mental disorders. A similar study reported a significant relationship between perceived stigma and spiritual causes regarding depression among Latinos (Caplan et al., 2011). In the case of schizophrenia, spiritual attribution mostly related to social distance (Byaruhanga et al., 2008; Quinn & Knifton, 2014). Our study extends the extant literature by documenting the relationship between perceived stigma and spiritual causes of schizophrenia.

We recognise that Westernised conceptualizations of depression and schizophrenia (i.e., psychosocial attributions) have been associated with more "literal" or more accepting attitudes towards these mental disorders (Dain, 1992; Goldstein & Rosselli, 2003). However, our study indicated that psychosocial explanations were unfortunately also associated with various forms of stigma in our sample. It is thus possible that Western or more mechanistic conceptualizations do not consistently act as buffers against stigma (see also Nersessova et al., 2019). Educators should therefore not assume that a Western or "scientific" understanding will lead to destigmatization of particular disorders.

Strengths and limitations

Our study is one of the few studies conducted on mental health literacy in Ghana to date (cf. Adu et al., 2021). The current study is the first to our knowledge to combine and explore the interrelatedness between help-seeking, causal attributions, and attitudes (stigma) regarding specific mental disorders (depression and schizophrenia) in a single study. As a result, we hope it contributes to a better theoretical understanding of these

variables in sub-Saharan Africa, especially regarding the growing desire to integrate traditional/spiritual healing into biomedicine, and inspires much needed replication research.

A number of limitations warrant consideration. Firstly, since the study used a convenient sample through online snowballing sampling and was dominated by those with access to the internet, and some were potentially known to the lead researcher; hence, the sample was not representative of the Ghanaian population. Many adults in Ghana do not have accounts on many social media platforms which was the major medium for data collection.

Next, our vignettes were constricted to male vignettes only, and the sample was largely male (i.e., men are more educated than women in Ghana), which notably is a contrast to many Western studies. Perhaps results could have been different if a more balanced sample was used or gender was counter-balanced in the vignettes. Furthermore, a greater percentage of our sample were Christians; however, this is consistent with the fact that the Christian religion is predominant in Ghana. Furthermore, there is the issue of ecological validity with the use of vignettes, as participants may have responded differently in real-life compared to a hypothetical person (Suhail, 2005). A recent review of mental health literacy studies revealed that diagnostic vignettes fail to include all the components of mental health literacy as vignettes fail to distinguish between simple symptoms and full syndromes of disorders or simple daily distress for individuals (Kutcher et al., 2016; Pescosolido et al., 2008).

Finally, the use of a cross-sectional correlational design makes it difficult to extract cause and effect and the nature of the relationships. For instance, perhaps certain biological explanations lead to the endorsement of professional help-seeking, but earlier help-seeking experiences may have led participants to view biological models as more plausible.

Implications and future directions

In recent years, clinical psychiatrists and psychologists emphasise the integration of anthropological and cultural techniques in the diagnoses and treatments of mental disorders as the validity and the reliability of earlier methods which emphasised universalism of characteristic of mental disorders were greatly biased towards WEIRD societies (see Berry, 2022; Henrich et al., 2010; Ryder et al., 2011; Ryder et al., 2021). Therefore, our study is broadly consistent with the importance of taking a contextual approach when attempting to understand relations between explanations, stigma formation, and help-seeking for mental disorders.

Mental health interventions should first access the cultural definitions, formulations, awareness, and attitudes regarding mental disorders and their related issues (see Kirmayer et al., 2008). Since different cultures express symptoms of mental disorders differently (e.g., Heine, 2015; Jurcik et al., 2013; Kirmayer et al., 2008; Ryder et al., 2008), using culturally specific vignettes may help elicit specific information for proper and appropriate interventions as researchers discovered that many cultures lack a word for "depressed" (Thakker & Ward, 1998; see also Cavanagh et al., 2021). For instance, most of the local dialects in Ghana (e.g., "*Akan Twi*", widely spoken local dialect in Ghana) lack a *specific* word to describe depression, however, depressed individuals mostly express a syndrome of

symptoms that can be broadly conceptualised as "depression" from a Western perspective.

Notwithstanding, future studies may consider exploring the cultural conceptualisation of mental disorders (APA, 2013) in the various tribes in Ghana as differences exist between these tribes. This may help provide insights into how different mental disorders are perceived, and besides, by so doing, we extend beyond the usual reliance on research from industrialised countries (see Henrich et al., 2010). However, even between Western countries there is considerable diversity in how explanations of mental disorders may be understood: in a flagship British psychiatric journal there was a greater emphasis on psychosocial correlates of psychosis, while in the American equivalent the emphasis was more on biological factors (Jarvis et al., 2015). These findings remind us of the importance of fully appreciating cultural nuances and context in understanding psychiatric and psychological research (Jurcik et al., 2014). We should therefore equally not assume that people in the various regions, tribes or differently educated populations in Ghana or elsewhere in the region would respond the same way to the causal attributions in our survey.

Next, formal education could be used as a medium to promote mental health literacy as educational levels related negatively with spiritual attributions for both disorders. Our findings suggest that religious belief may not always be negatively related to Western secular treatments of mental disorders. Thus, our study revealed a positive relationship between religiosity and professional help-seeking. The endorsement of multiple help-seeking preferences for the mental disorders within the current context in our study highlight the importance of the potential benefits of a possible integration and collaboration of both traditional faith-based help-seeking options and Western approaches in the health care system in Ghana (Gureje et al., 2020).

Mental health literacy research could consider further investigating the effects and understandings of biomedical idioms of distress for mental disorders in various contexts as purportedly scientific sounding information can also be misleading. For instance, "chemical imbalance" as a cause may represent an incorrect understanding of depression, inconsistent with the scientific literature (Lacasse & Leo, 2005). Belief in such a concept does not necessarily mean a real causal mechanism of depression even if it is propagated by some authorities and has permeated a lay understanding of this syndrome in the West (see Lacasse & Leo, 2005), nor does such an endorsement necessarily relate to less stigma (see Cook & Wang, 2011).

Given some of the negative attitudes towards mental illness that our study highlighted, our findings suggest the need for an anti-stigma campaign to help potentially modify beliefs and attitudes regarding mental disorders among respondents. One anti-stigma campaign found to be effective is the contact-based approach (Stuart, 2016). This approach provides opportunities for the public to interact with people with mental illness (see review by Corrigan & Penn, 1999). Moreover, the use of Time to Change Global anti-stigma programme (Henderson et al., 2017) could help reduce negative attitudes towards mental disorders. For instance, Potts and Henderson (2021) found that among Ghanaian participants living in Accra, stigma attitudes towards mental illness changed favourably after the social media campaign launch, similar to an earlier study conducted in England (Henderson & Thornicroft, 2009). However, in the same study, Potts and Henderson (2021) found out that participants from Nairobi, Kenya exhibited

no change in mental health stigma attitudes. Finally, formal education is found to play a key role in this area as it relates to positive attitudes towards mental disorders (Adu et al., 2021; Potts & Henderson, 2021).

Future studies may also consider using a more sophisticated method to obtain a more representative sample when replicating the current study, with respect to education levels, religion, age, and gender. Such variables may potentially interact with our predictor variables; for instance, there are gender differences between how mental disorders may be perceived and various stereotypes between males and females exist in Ghana (Bosak et al., 2018). Also, for the sake of ecological validity, examining public beliefs and attitudes regarding these disorders in real-World situations could be helpful.

Conclusion

Our study attempted to examine the interconnections between help-seeking, causal attributions, and stigma among Ghanaians. Results from our study revealed that causal beliefs held about mental disorders were related to help-seeking options and stigma. Thus, spiritual causal attributions related positively with spiritual help-seeking and perceived stigma for the mental disorders, whilst biological, and psychosocial causal attribution was associated with professional help-seeking. Interestingly and contrary to previous literature, we observed that religious belief may not always negatively relate to biomedical help-seeking preferences for mental disorders. We discovered that education may have provided participants with information on the popularised westernised conceptualisations of mental disorders, as the current study provided evidence for the negative association between education and spiritual causal attributions such as those related to punishment from a deity. Concurrently, religiosity was not a barrier to endorsing professional help-seeking, suggesting that Western secular and religious approaches may co-exist. Our group continues to research mental health literacy variables in non-Western populations to provide insights into how mental disorders are perceived in under-studied populations (Adu et al., 2021; Cavanagh et al., 2021; Nersessova et al., 2019).

Note

1. Due to space limitation for manuscripts, all variables analysed in the original thesis could not be presented in a single article.

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Appendix

Specific vignettes used in this study.

Schizophrenia vignettes

Peter is a 20-year-old who lives at home with his parents. He has been attending his course irregularly over the past year and has recently stopped attending altogether. Over the past six months he has stopped seeing his friends and begun locking himself in his bedroom and refusing to eat with the family or to have a bath. His parents also hear him walking about in his bedroom at night while they are in bed. Even though they know he is alone, they have heard him shouting and arguing as if someone else is there. When they try to encourage him to do more things, he whispers that he won't leave home because he is being spied upon by the neighbour. They realise he is not taking drugs because he never sees anyone or goes anywhere.

Depression vignettes

John is a 21-year-old who has been feeling unusually sad and miserable for the last few weeks. He is tired all the time and has trouble sleeping at night. John doesn't feel like eating and has lost weight. He can't keep his mind on his studies and his marks have dropped. He puts off making any decisions and even day-to-day tasks seem too much for him. His parents and friends are very concerned about him. John feels he will never be happy again and believes his family would be better off without him. John has been so desperate; he has been thinking of ways to end his life.